

# GRIP TIGHT<sup>®</sup> REVERSE PRESSURE

Test Flange to Pipe Weld Connections Axially & Radially

## Technical Brief - EST Group



### DESCRIPTION

EST Group's GripTight Reverse Pressure (GTRP) Test Plug is engineered to ensure that full radial, hoop and axial stress is applied to the weld during testing.

The Result: Concern over inadequate axial joint stress is eliminated.

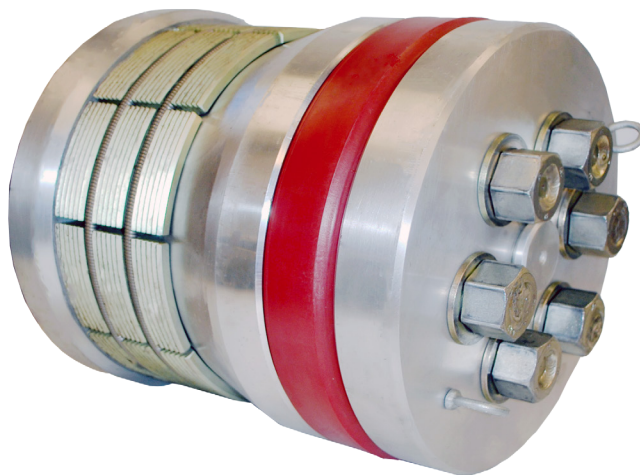
Pressure testing flange-to-pipe welds with EST Group's GTRP eliminates the need to blind, fill, and pressurize the entire piping system, which in turn eliminates the need to properly handle and dispose of potentially contaminated test fluids. Testing performed with the GTRP is quick, easy, safe and meets the requirements of ASME/ANSI B16.5

### BASIC OPERATIONS

- Install the GTRP within the pipe upstream of the flange being tested. The GTRP Installation Tool (sold separately) is required for plug sizes ranging from 1 1/2" to 6" (DN40 - DN150).
- Bolt the modified test blind flange (sold separately) to the welded flange. the modified test flange is equipped with a fill and vent port.
- Fill the cavity between the GTRP and flange with water, exhaust any residual air and pressurize.
- Hydrostatically test the isolated area in accordance with ASME/ANSI B16.5.

### FEATURES AND BENEFITS

- The plug and test flange act independently of each other so that the weld joint is subjected to real world stresses during pressure testing.
- Flange to pipe welds are tested without needing to pressurize the entire system.
- Available for pipe sizes ranging from 3/4" to 24" (DN20 - DN600). Custom sizes available upon request.
- Suitable for testing pressures up to 2250 PsiG (155 BarG) between the flange and GTRP Test Plug.
- Safe Operation; Upstream pressure rating up to 1500 PsiG (103 BarG) in sizes ranging from 3/4" - 6" (DN20 - DN150). Sizes ranging from 8" - 24" (DN200 - DN600) safely vent upstream pressure.



## SPECS/MATERIALS

Standard material for single shaft GTRP plugs [3/4" - 6" (DN20-DN150)] is plated carbon steel with urethane seals.  
Standard material for multi-shaft GTRP plugs [8" - 24" (DN200 - DN600)] is aluminum with urethane seals.

## FAQ

**Q Can one GripTight Reverse Pressure Test Plug be used to test multiple pipe sizes?**

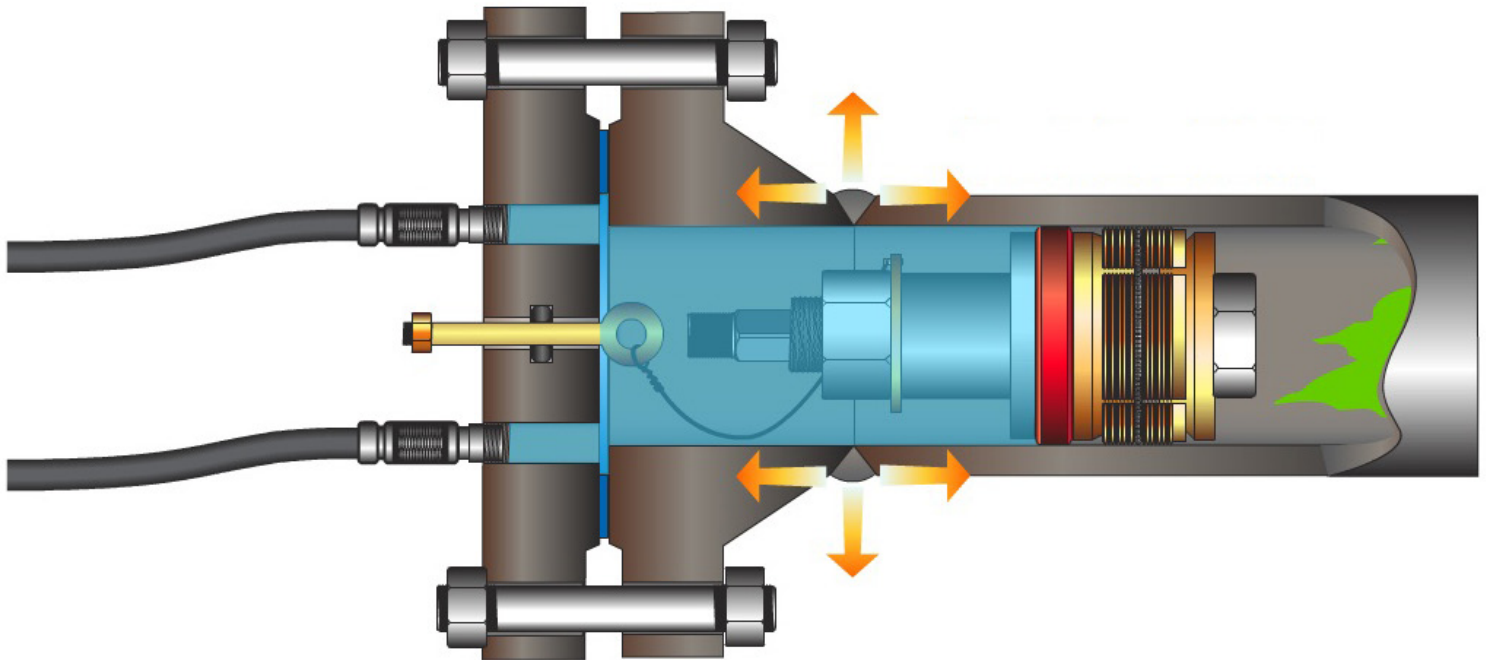
A No. GripTight Reverse Pressure Test Plugs are size specific to the schedule of the pipe.

**Q What is the desired test medium to be used with the GripTight Reverse Pressure Test Plug?**

A Hydrostatic testing is the safest means for accomplishing a pressure test since water is a non-compressible medium. However, the GripTight Reverse Pressure Test Plug does not recognize a difference in the test medium.

**Q Is there visible marring from the Grippers after the test has been completed?**

A At high pressure, minimal marring of the pipe can occur due to the gripper engagement. Customers have reported that gripper indentations may range in depth from 0.005" to 0.015" (0.13 - 0.38 mm), significantly less than the depth of a pipe imperfection that would require a weld repair.



**North America / Central & South America**  
Corporate Office  
2701 Township Line Rd  
Hatfield, PA 19440-1770 USA  
(P) +1 215.721.1100  
+1 800.355.7044  
(F) +1 215.721.1101  
est-info@curtisswright.com  
<http://estgroup.cwfc.com>

**Europe / Middle East / Africa**  
EST Group B.V.  
Hoorn 312a  
2404 HL, Alphen aan den Rijn  
The Netherlands  
(P) +31.172.418841  
(F) +31.172.418849  
est-emea@curtisswright.com

**Asia Pacific**  
EST Group Asia  
35 Tannery Rd, #11-10 Tannery Block  
Ruby Industrial Complex  
Singapore 347740  
(P) +65.6745.8560  
(F) +65.6742.8700  
est-asia@curtisswright.com

**CURTISS  
WRIGHT**  
Flow Control Company  
EST Group