Pressure Testing & Isolation Plugs

- GripTight®
- GripTight MAX®
- GripTight® Elbow
- GripTight® Isolation Plug
- Double Block and Bleed
- GripTight® Reverse Pressure
- High Lift Flange Weld Test Plug
- OD GripTight®
- GripTight® PE
- SQ2
- Socket Weld (SQS)
- LW100
EST GROUP

Established in 1968 and headquartered in Hatfield Pennsylvania, Curtiss-Wright EST Group specializes in the development, manufacture and marketing of highly-engineered pressure testing & isolation plugs that greatly simplify and expedite pressure testing and/or isolation of piping, tubing, valves, pressure vessels and a multitude of special applications.

EST Group Field Services provides a full range of pipe and pressure vessel inspection and testing services. Capabilities include testing and certification of pipe and pressure vessels and field testing of flange-to-pipe and flange-to-nozzle welds, as well as on-site training for all EST Group products. All tests are carried out to meet ANSI B16.5 requirements.

Core products include:
• GripTight® Test Plugs - for high pressure hydrostatic testing of pipe, pipelines and pressure vessels. Safe and effective at working pressures to 15000 PsiG (1034 BarG). Pipe OD and ID sealing solutions available
• High Lift Flange Weld Test Plugs - for isolating and hydrostatically testing weld joints of any welded flange to pipe connection
• Double Block & Bleed Isolation Plugs – positively isolate pipe end hot work from potentially explosive upstream vapors; then weld and test the flange to pipe connection all with one tool.

EST Group serves the power generation; petrochemical and refining; fine chemical and pharmaceutical; shipbuilding; oil and gas production; and engineering and construction industries worldwide.

Curtiss-Wright has a long history of solving tough problems that begins with a passion for understanding customer needs. Add to that unparalleled technical expertise, the highest standards of quality and a long heritage of innovative thinking. For nearly a century Curtiss-Wright’s Industrial Division has been doing things the Wright way.
**GripTight®**

Uses test pressure to seal more securely against the pipe's inner diameter and will not loosen or eject under high pressure. The result is a quicker installation, better sealing and all around safer testing.

**Test Pressure**
Up to 14000 PsiG (965 BarG)*
Rated to 80% of yield for ASTM A-106 Grade B Pipe

**Size Range**
1” to 42” NPS (DN25 to DN1050)
Larger/smaller sizes available upon request

**Standard Seal Material**
Urethane**

**Features**
- Uses test pressure to grip more securely - plug cannot be ejected under pressure when properly installed
- Eliminates weld caps: No welding or cutting required. Reduces test times up to 80%
- Test plug is reusable and compatible with hydrostatic or pneumatic testing

---

**GripTight MAX®**

Highly effective in applications such as down hole / well-head piping, high pressure steam systems and in the replacement of older piping with newer high alloy hardened pipe materials used in refineries and chemical plants. Contact Customer Service for testing non-metallic materials such as FRP and GRE pipe systems.

**Test Pressure**
Up to 15000 PsiG (1034 BarG)*

**Size Range**
3/8” to 24” NPS (DN10 to DN600)
Larger/smaller sizes available upon request

**Standard Seal Material**
Urethane**

**Features**
- Patent-pending dual-serrated gripper design provides more gripping points on inside pipe surfaces
- New hardened shaft increases durability, extends service life, and reduces wear.
- Designed to work up to HRC 32 hardness and all types of hardened pipe used in hydraulic fracking

---

**GripTight® Elbow**

New plug designed for testing long radius elbows.
GripTight MAX® Dual-Serrated grippers provide a safe and effective solution for pipe spools and piping systems terminating in long radius elbows.

**Test Pressure**
3350 PsiG (231 BarG)*

**Size Range**
2” to 24” NPS (DN50 - DN600)
Larger/smaller sizes available upon request

**Standard Seal Material**
Urethane**

**Features**
- Orientation free installation - no need to align with elbow
- Dual-serrated GripTight MAX™ grippers (patent-pending)
- Fits all long radius elbows (45°, 90°, 180°)

---

*Higher pressures available upon request
**Alternative seal materials are available including Neoprene, Fluoroelastomer, Silicone, EPDM, Natural Rubber, Nitrile Buna-N, SBR Buna-S, Urethane
GripTight® Isolation Plug

Positively isolate and monitor potentially explosive vapors during "hot work", then effectively hydrotest the new weld connection with one tool. The dual cavity port creates a complete air-free barrier between the seals - safely isolating the hot work from any residual upstream gases. The GripTight® Isolation Test Plug integrates a Double Block and Bleed Test plug with GripTight® Grippers. Enhanced operational safety, minimizing the risk of blowout / expulsion due to unexpected upstream pressure in the line.

Test Pressure
2250 PsiG (155 BarG) between the seals &
Upstream pressures up to 1500 PsiG (103 BarG)*

Size Range
3/4" to 24" NPS (DN20 to DN600)
Larger/smaller sizes available upon request

Standard Seal Material
Urethane**

Features
- Monitors potentially explosive vapors during hot work
- Minimizes the risk of accidental blowout/expulsion due to improper use or unexpected upstream pressure
- Uses less than a gallon (3.785 liters) of water, reducing waste water, treatment expenses, and facilitates testing in remote areas of the facility

Double Block and Bleed

Positively isolate and monitor potentially explosive vapors during hot work, then effectively hydrotest the new weld connection with one easy-to-use tool. The dual cavity port creates a complete air-free barrier between the seals - safely isolating the hot work from any residual upstream gases. The volume of water required is so small that testing can be accomplished using a simple hand pump. Easily facilitates testing in remote areas of the facility.

Test Pressure
2250 PsiG (155 BarG)*

Size Range
3/4" to 24" NPS (DN20 to DN600)
Larger/smaller sizes available upon request

Standard Seal Material
Urethane**

Features
- Monitors potentially explosive vapors during hot work
- Uses less than a gallon (3.785 liters) of water, reducing waste water, treatment expenses, and facilitates testing in remote areas of the facility
- Lightweight, aluminum and steel construction

GripTight® Reverse Pressure

Pressure test flange-to-pipe welds with full radial, hoop and axial stresses – equivalent to the stresses that would be produced when using a blind to pressurize the entire piping system. Pressure testing can effectively verify the weld integrity providing the user confidence that the flange and weld will properly function when placed into service.

Test Pressure
2250 PsiG (155 BarG)*

Size Range
2" to 12" NPS (DN50 to DN300)
Larger/smaller sizes available upon request

Standard Seal Material
Urethane**

Features
- Subjects the flange-to-pipe weld to full radial, hoop and axial stresses during hydrostatic testing
- Flange-to-pipe welds are tested without needing to pressurize the entire system
- Optional lanyard assembly acts as visual plug movement indicator allowing the operator to monitor the plug position during testing and halt work if improper installation occurred
High Lift Flange Weld Test Plug

Monitor upstream conditions, isolate and purge the weld area, perform the weld, and hydro test the weld joint with one easy tool. No blind flanging upstream, no vacuum truck for evacuating the line, and no X-raying. Each test requires a minimum amount of water, no need to fill the entire line. You will use less water and minimize your environmental impact. Operating pressures to ANSI B16.5 requirements.

Test Pressure
1125 PsIG (78 BarG)

Size Range
3/4” to 24” NPS (DN20 to DN600)
Flange classes 150 to 600#
Higher flange classes available

Standard Seal Material
Urethane**

Features
• Designed to function in four distinct ways: as a purge dam, weld fixture, test plug, and a weld isolation plug
• Flange-to-pipe welds are tested without needing to pressurize the entire system
• Ported center shaft allows for upstream monitoring
• Interchangeable seal/washer sets available to quickly modify plug for alternative pipe schedules
• Segmented compression tube design allows for the adjustment of the distance between the flange and seal

O.D. GripTight®

Test open or plain end pipe and tube by sealing the O.D. Patented design allows for the bore of the sealing element to be larger than the pipe O.D. during installation, preventing damage to the seal.

Test Pressure
5000 PsIG (345 BarG)

Size Range
1/4” to 4” ANSI pipe sizes (DN8 to DN100) &
1/2” to 3½” (12.7mm to 88.9mm) OD tube sizes

Standard Seal Material
Urethane with Fluoroelastomer O-ring*

Features
• One plug can be used for a range of pipe schedule sizes
• Patented design prevents damage to the seal during installation and removal
• Lightweight aircraft aluminum construction
• Metric pipe and tubing sizes available

GripTight® PE

Designed to pressure test polyethylene applications. Testing can be performed on reels, in open trenches, on installed pipe and joined pipe sections. Can also be used as a night cap to keep open pipe ends sealed and clean overnight or during work intervals.

Test Pressure
375 PsIG (26 BarG)

Size Range
2”, 3”, 4”, and 6” (DN50 to DN150)
Plug sizes to cover 9 to 17 SDR applications in either HDPE or MDPE

Standard Seal Material
Urethane with Fluoroelastomer and Nitrile/Buna-N O-rings*

Features
• Easily installed by hand; no special tools required
• Patented dual seal design
• Conservatively rated to 150% of maximum operating pressure required under 49 CFR 192.513
High pressure testing is faster and easier thanks to the SQ2 high pressure test plug. The twin cone design allows SQ2 plugs to be easily installed and removed without causing extensive damage to the pipe wall surface. Ideal for pressure testing heat exchanger tubing and small bore piping.

**Test Pressure**
6500 PsiG (448 BarG)

**Size Range**
1/2" to 1" NPS (DN15 to DN25)

**Standard Seal Material**
Urethane**

**Features**
- Uses test pressure to grip more securely - plug cannot be ejected under pressure when properly installed
- Eliminates weld caps: No welding or cutting required. Reduces test times up to 80%
- Test plug is reusable and compatible with hydrostatic or pneumatic testing
**Safety Gag**

Designed to prevent damage which may occur due to incorrectly installed plugs ejecting from the pipe during pressurization. Gags are designed to quickly fasten to OD and plug inlet and will deflect the plug if ejection occurs.

**GripTight® Vent Assembly**

Safely fill and drain pipes during hydrostatic testing. Vents are installed with tubes at high and low points in the area being tested in order to fill with test medium and displace air/gases in the pipe being tested.

**Test Plug Lifting Arm**

Designed to work with larger test plugs to provide safe and easy placement and installation of plug into pipes. Lifting Arm fastens to test plugs and can be lifted into place with a crane, fork-lift or other lifting mechanism designed to hold the weight of the plug and lifting tool.

**Operating Pressure**

Reference Test/Isolation Plug Pressure Rating

**Size Range**

1/2" to 24" NPS (DN15 to DN600)
Larger sizes through 42" NPS (DN1050) available

**Standard Material**

Zinc Plated Carbon Steel

**Features**

- Bolt on clamp for easy installation and removal
- Provides enhanced safety during testing
- Safe, reliable, and easy to use

**Weight Limit:**

1500 lbs (680 kg)

**Operating Pressure**

Reference Test/Isolation Plug Pressure Rating

**Size Range**

1¼" to 8" NPS (DN32 to DN200)

**Standard Material**

Zinc Plated Carbon Steel Body with Polyethylene Tube

**Features**

- Increases safety by keeping test medium off scaffolding and other walking surfaces
- Gives the ability to easily control test medium
- Contaminated fluids can be handled safely
- Allows operators to collect any special test medium such as glycol

**Size Range**

10" to 24" NPS (DN250 to DN600)
Larger sizes available upon request

**Standard Material**

Powder Coated Carbon Steel

**Features**

- Improves safety and installation time
- Special sizes available upon request for up to 42" NPS (DN1150) plug sizes
- Can be adapted for use with Special Test/Isolation Plugs.

*Higher pressures available upon request*

**Alternative seal materials are available including Neoprene, Fluoroelastomer, Silicone, EPDM, Natural Rubber, Nitrile Buna-N, SBR Buna-S, Urethane**