Gas-Free Service Renewal
Safe T Stopper

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Safe T Stopper Background

Why?

"The American Gas Association (AGA) and its member companies are committed to promoting positive safety cultures among their employees throughout the natural gas distribution industry. All employees, as well as contractors and suppliers providing services to AGA members, are expected to place the highest priority on employee, customer, public, and pipeline safety."

In the early 2000s, many distribution companies introduced new regulations prohibiting pinning off a service tee with a steel pin or wooden dowel.

The mandate leads to the mandatory use of line stoppers, increasing the cost of service renewals and abandonment projects. This is expensive.

SOLUTION: THE SAFE T STOPPER

- Removes operator's exposure to working on live gas while saving money.
- In 2005 – Safe T Stopper introduced.
- From 2009 to Present – Worker feedback paved the way for numerous enhancements.
- Gas-Free tools have broadened capabilities for use.
- Today – There are 1000+ tools in the Canada & US

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Challenges Have Solutions

CHALLENGE		SOLUTION
Many different tees in the ground make repair difficult using standard equipment.	=>	Works on many tees using specialized adapters.
Many old tees do not have an internal stopper to shut down the service branch. Now companies must employ expensive line-stopper procedures to comply.	=>	Stops off open-gut tees in a standard excavation, saving money while enhancing safety.
Increases in pipeline pressures due to population growth cause leaks on outdated service tees that need renewal.	=>	Now, gas operators have a tool in the engineering arsenal to repair thousands of outdated services safely.
Tool implementation can be perceived as expensive rather than an investment in safety.	=>	Many achieve cost savings after one or two tool uses. At the same time, complying with reduce methane emissions mandates.

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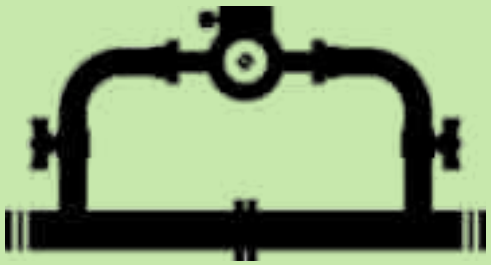
$avings

Reduces excavation costs by only uncovering the working area.

No wasted service calls from reports of gas odors.



Reduces costs by eliminating bypass procedures.

There is no need for a personal air supply, saving bottled air costs and periodic OQ.

Compatible Tees

1.

¾"-2" Cap Tees

Welded & On Saddle

2.

¾"-2" Plug Tee

On a Welded Coupling or Saddle

3.

¾"-1 ¼" Elbow Service

On a Welded Coupling or TOE Nipple

4.

¾"-1 1/4" Mueller Tees

Missing Completion Plug

5.

1/2"-1 1/4" Punch Tee

On a Saddle

How Does it Work?

First, identify the type of tee, either a cap or a plug tee.

Cap tees are sealed under the cap, and plug tees are sealed around the plug.

How Does it Work?

1. The tool attaches a ball valve on top of the tee. It creates a seal under a cap or around a plug.

Special tools and adapters stop the gas.

2. Remove the cap or plug

3. To Stop the Gas.

A. Insert a rubber stopper below the branch.

B. Tighten a self-tap lug into the main.

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Tool Structure

Base Tool

Choose Adapter Tee Packages

¾" – 2" Pipe Type "Homemade" Tees

¾" – 1 ¼" Street Tees on a welded coupling / threadolet / saddle

¾"-1 ¼" Elbow Services

¾" – 1 ¼" Mueller H 17500 Tees missing completion plug

1-1/4" Flapper Tees.

1/2" – 1 ¼" Continental / Dresser / Mueller Saddle Punch Tees.

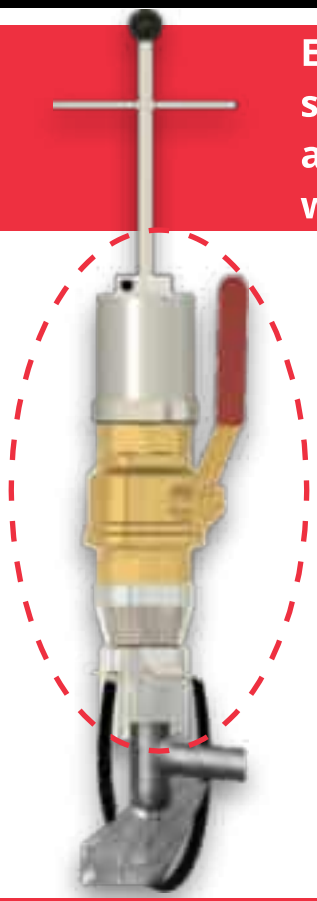
Adaptable for custom applications.

Pressure Rating

1. Contingent on tee style and configuration
2. Abandonment / Renewal Procedure
   - 80 PSI – Most common Homemade / Manufactured Tee with a cap or a plug. A detachable rubber stopper or self-tapping plug stops the gas. The tee is then cut and capped or removed.
   - 125 PSI—Special Tool Package: A homemade or manufactured Tee with a cap or a plug.
   - 60 PSI - Special Situations:– Street Tees on a Coupling and Bolt-On PE Tees where the tee is removed and replaced with a plug.

Key Safety Features

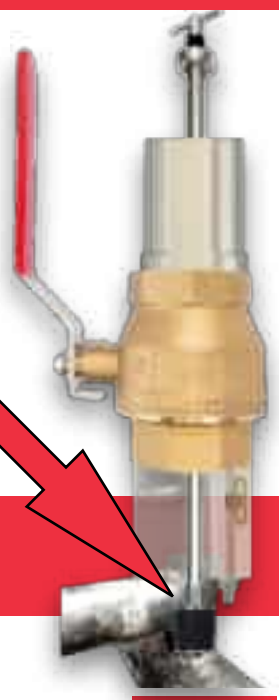
Each Housing is equipped with a shaft brake to prevent accidental upward movement when under pressure.



Rigid Modular Base

Enclosed Gas-Free Installation System

Included sight glass to view inside the tee.



Easy to Install Stoppers

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Self Tap Plugs

Tighten into a round hole in steel pipe to stop the flow of gas.

24 TPI 4140 Nitride Harden Steel

- No tapping required. Plugs cut their own threads.
- Use with the Safe T Stopper for gas-free service tee abandonment.
- Hex head for easy tightening.
- Available in many sizes and lengths.

Tighten into a pipe to plug the hole.

Short plugs available to leave a low profile within the pipe.

Part#	Description	Hex
MTP 250375E	SELF TAP PLUG 0.125"-0.375" HEX 1/4", 7/8"L	1/4"
MTP375	SELF TAP PLUG 0.250"-0.350" HEX 5/16"	5/16"
MTP500375	SELF TAP PLUG 0.125"-0.450" HEX 5/16" (PLUG LENGTH 1.00", POINTED)	5/16"
MTP625375	SELF TAP PLUG 0.125"-0.580" HEX 1/2" X 1.69"L, POINTED)	1/2"
MTP625750	SELF TAP PLUG.500"-0.710" HEX 1/2" X 1”L	1/2"
MTP750875	SELF TAP PLUG 0.625"-0.830" HEX 1/2" X 1”L	1/2"
MTP12501000	SELF TAP PLUG 0.850-1.255 HEX 1/2" (LENGTH 1.25")	1/2"
MTP11251375	SELF TAP PLG 1.125-1.375 7/8" HEX	7/8"
MTP12501500	SELF TAP PLUG 1.250-1.500 7/8" HEX	7/8"

Rubber Expansion Plugs

Specially designed to temporarily seal and stop off metallic or PE pipe remotely for fitting renewal or service line maintenance.

Reusable, rugged, and lightweight made from Nitrile rubber and plated steel

Two steel washers compressed together by tightening the central bolt using the Safe T Stopper Expander Tool.

Bayonet Mount

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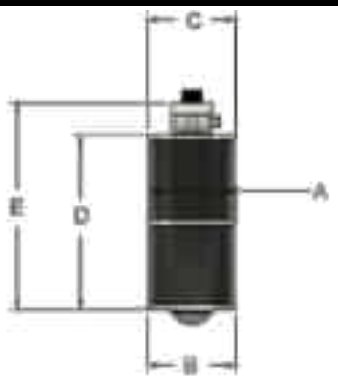
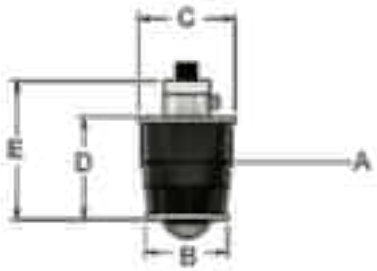
Rubber Expansion Plugs





Plated Steel & Nitrile Rubber		B	C	*Dimensions (in)*		E	D	A	A
Size	**Wt.**	**Min Washer**	**Max Washer**	**Min Pipe ID**	**Maxi Pipe ID**	**Plug Length**	**Rubber Length**	**Rubber Min Dia.**	**Rubber Max Dia.**
1/2" CTS	0.10	0.25	0.300	0.439	0.550	1.750	1.130	0.594	0.781
1/2" IPS	0.10	0.375	0.438	0.594	0.622	1.750	1.130	0.594	0.781
3/4" IPS	0.10	0.625	0.740	0.813	0.824	1.750	1.130	0.813	1.130
3/4" CTS	0.10	0.500	0.718	0.685	0.742	1.750	1.130	0.685	1.000
1" IPS	0.10	0.781	0.875	0.875	1.049	1.750	1.130	0.875	1.250
1" CTS	0.10	0.781	0.875	0.750	1.000	1.750	1.130	0.719	1.000
1 1/4" IPS	0.20	1.031	1.125	1.130	1.380	1.875	1.188	1.130	1.440
1 1/4" CTS	0.20	1.125	1.281	1.281	1.380	1.875	1.188	1.130	1.440
1 1/2" IPS	0.30	1.375	1.375	1.380	1.610	1.810	1.188	1.380	1.750
2" IPS	0.30	1.820	1.910	1.940	2.067	1.880	1.188	1.940	2.310
3/4"	0.13	0.625	0.740	0.813	0.824	2.500	2.063	0.813	0.824
1" CTS	0.13	0.781	0.875	0.750	1.000	2.500	2.063	0.719	1.000
1" IPS	0.13	1.031	1.031	0.875	1.029	2.500	2.219	0.875	1.250
1 1/4" IPS	0.25	1.281	1.281	1.281	1.360	2.625	2.375	1.250	1.360
1 1/2" IPS	0.38	1.375	1.375	1.375	1.590	2.625	2.375	1.375	1.590
2" IPS	0.38	1.820	1.820	1.820	2.047	2.625	2.375	1.750	2.047

Tapered Weld Plugs

Steel weld plugs to permanently seal off gas services or pipe ends.

Quickly abandon pipe ends. ***Weld into place in minutes.*** ***Perfect for service cut offs.***

Insert into opening. ***Knock into place.*** ***Weld around edges to seal pipe.***

PART#	DESCRIPTION	A	B	C	D	E	MATERIAL	STD PIPE ID
MSTS 1012A	3/4" SCH 40 WELD PLUG	0.875	0.750	0.750	0.439	0.625	1018 STEEL	0.824
MSTS 1013A	3/4" SCH 80 WELD PLUG	0.750	0.750	0.688	0.439	0.500	1018 STEEL	0.742
MSTS 1012B	1" SCH 40 WELD PLUG	1.063	0.750	0.971	0.439	0.625	1018 STEEL	1.049
MSTS 1013B	1" SCH 80 WELD PLUG	1.000	0.750	0.875	0.439	0.688	1018 STEEL	0.957
MSTS 1012C	1 1/4" SCH 40 WELD PLUG	1.438	0.750	1.375	0.439	0.688	1018 STEEL	1.380
MSTS 1013C	1 1/4" SCH 80 WELD PLUG	1.313	0.750	1.188	0.439	0.688	1018 STEEL	1.278
MSTS 1013D	1 1/2" SCH 40 WELD PLUG	1.625	0.750	1.500	0.439	1.250	1018 STEEL	1.610
MSTS 1012D	1 1/2" SCH 80 WELD PLUG	1.563	0.750	1.438	0.439	1.125	1018 STEEL	1.500
MSTS 1012E	2" SCH 40 WELD PLUG	2.125	0.750	1.938	0.439	1.875	1018 STEEL	2.067
MSTS 1013E	2" SCH 80 WELD PLUG	2.375	0.750	1.875	0.439	1.750	1018 STEEL	1.939

1,000's of tools in Use throughout North America and growing. (Canada)

Aecon Energy Solutions Inc.

Atco Gas

Atco Pipelines

B & B Heavy Civil Construction

Battle River Gas Co-Op

Canadian Utility Construction

Can-Con Industries C/0 Emco Corporation

Chief Mountain Gas Co-Op Ltd.

Ck Underground Welding Ltd.

County Of Vermillion River Gas

Cr Wall

Dw Wilson Services

Emb Management Ltd

Enbridge

Five Star Utility

Fortisbc Energy Inc.

Interior Gas Utility

Kti Utility Services Inc

Lac Labiche County

Marwest Group

Meota Gas Co Op

Meridian Utilities

Metercor Inc.

Natural Gas Technologies Centre

Neuterra Ventures Ltd.

Norgasco Inc.

Pacific Northern Gas Ltd.

Penna'S Welding

Rocky Gas Go Op

Rockyview Gas Co Op Ltd.

Rph Distributors Ltd.

Saskenergy Inc.

Ste. Anne Gas Co Op

Town Of Smoky Lake

Two Hills Gas

Valour Mechanical

Western Leakage Services Ltd.

1,000's of tools in Use throughout North America and growing. (US)

Ameren
Atmos Energy
Benton-Georgia
Black Hills Energy
Border States Electric
Centerpoint Energy
Citizen Energy
Columbia Gas (Nisource)
Consolidated Edison
Dominion Energy
Driver Pipeline Co - Corp
Eversource
Hawkeye Construction
HIS Pipeline
Infrasource
KS Energy Service
Liberty Utilities
Liberty Utilities MidstatesMo
LM Endeavor LLC
Madison Gas & Electric
Meade Electric
Miller Pipeline
MJ Sheridan Of Texas
Montana-Dakota Utilities Co
MP Nexlevel LLC
National Grid
New Jersey Natural Gas Co.
New Mexico Gas Company
North Shore Gas
North WestEnergy
Northern Pipeline Construction
Northwestern Energy
Ohio Valley Gas
Onegas- Texas Gas Service
Pacific Gas & Electric
Public Service Electric & Gas
Q3 Contracting
Ritter Plumbing
Ronald Cline Trenching
SJ Industries - Elizabethtown Gas
Southern Pipeline Construction
Spire
Summit Utilities
Superior Light
Tom Loftin Construction Co.
Vectren / Centerpoint
Waker Plumbing
Washington Gas
Wayne Holden & Company
We Energies
Wichita Construction Inc.
Xcel Energy

3/4-2''Cap Tee Tool Package

Seals Under Cap

Removes Cap Gas-Free

View Inside Tee

Stop Gas with a Rubber Plug or Steel Self Tap Plug

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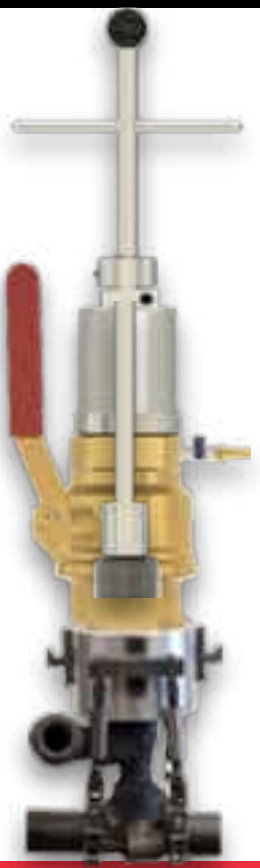
3/4''-2''Plug Tee Tool Package

1. Disc with O-ring Seals, Around the Plug

2. Install Base and Ball Valve



3. Romove Plug

4. View InsideTee

Stop Gas with a Rubber Plug or Stell Self Tap Plug

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H17500 Mueller Tee Tool Package

3/4''-1 1/4'' Old Mueller Tees Missing the Completion Plug

Seals Under Cap

Special Four Slot Cap Removal Adapter

View Inside Tee

Install or Remove Completion Plugs

Optional Threaded Adapter when Completion Plug is in the Tee.

Stop Gas with a Rubber Plug or Steel Self Tap Plug

3/4''-1 1/4'' Elbow Service Tool Package

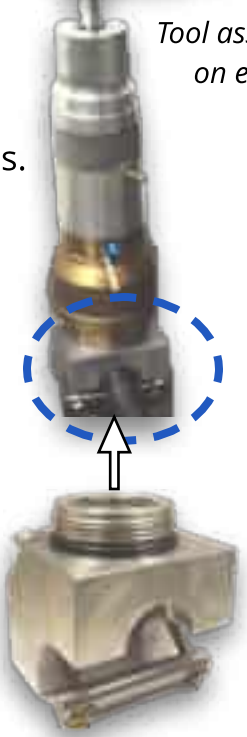
Removes troublesome elbow swing services within 30 minutes

- Simple clamp-on assembly.
- No blowing gas, keeping workers safe.
- No need for expensive by-pass operations.
- Compact, only need a standard excavation.
- 60 psi rating.

Tool assembled on elbow.

OPERATION

1. Drill through the backside of the elbow.
2. Insert rubber stopper into nipple or elbow to stop the flow of gas.
3. Abandon service.



Clamp-on housing provides seal and rock steady base.

Abandons these fitting configurations.

		
1. Elbow on TOE Nipple	**2. Street Elbow on a TOE Nipple**	**3. Street Elbow on a Coupling**

Top view: Hole drilled and rubber plug inserted to stop the flow of gas.

1/2''-1 1/4'' Punch Tee on a Saddle Tool

PROBLEM: *Since the tee is on a Saddle, running the tapper down will not stop the gas.*

SOLUTION: *Special Punch Tee Adapter Removes Tapper. Then a Self Tap Plug is installed into the main. Stopping the gas to remove the tee.*

Punch Removal Tool

Bolt-On PE Tee Abandonment

A gas-free tool to abandon leaking Mechanical PE Service Tees operating at a maximum of 60 psi on 1-1/4”-6” main without squeeze off procedures.

- Removes tee safely and Gas-Free.
- No squeeze-off.
- Sturdy lightweight construction.
- Fast and easy to install.
- Minimal training.
- Includes a safety clamp to ensure the tee is always held securely on the main during operation.

Operation

1. Install Safety Clamp

2. Install Adapter.

3. Remove Cutter.

4. Remove Sleeve.

5. Insert Plug.

6. Plug is in the main.

7. Operation Complete

Field Photos

Field Photos

Field Photos

Summary

Gas-Free tools provide a safer work environment.

The technology available accommodates tee and fitting variation using semi-standard equipment while employing an efficient operation.

Service projects do not require expensive stopple and by-pass procedures.

Reduces excavation cost.

No blowing gas saves on service calls fo maintains good public relations with th

Cost savings on bottled air and the time it takes to suit up.

Reduces methane emissions.

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