



Kleiss MCS Natural Gas Flow Stopping Systems

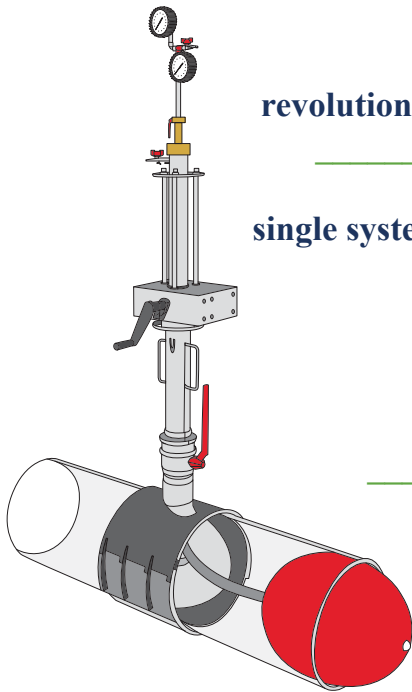
revolutionary, patented MDS Stopper

single system for multiple applications

- PE / steel / cast iron / PVC -
 - range of pipe diameters -
-

user friendly, simple design

lightweight and portable

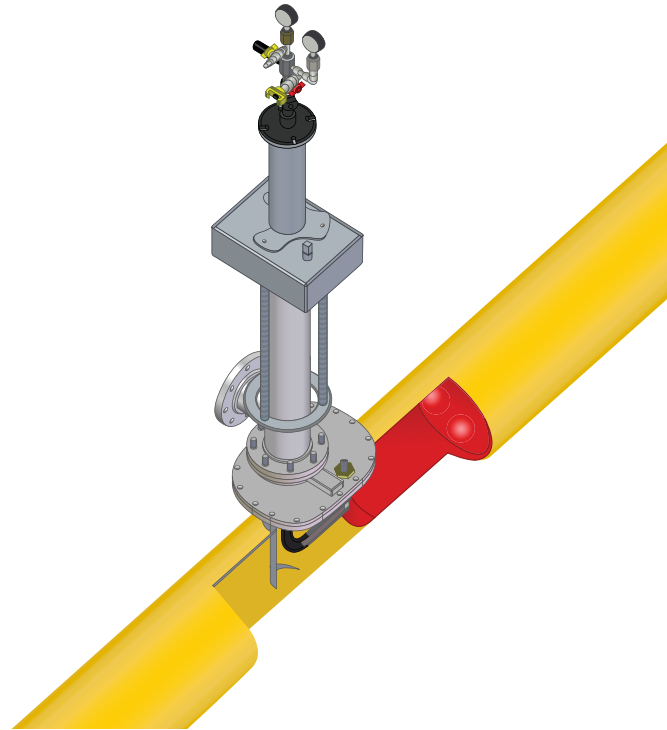


Our Company

In 1998, Kleiss & Co. developed an industry-changing flow stopping system for the natural gas industry. Sixteen years later, Mainline Control Systems was formed to bring these unique systems to North America.

What makes the systems unique is the use of a revolutionary, patented sealing component – MDS Stopper – and the systems’ ability to work on a range of pipe diameters and multiple pipe materials (polyethylene, steel, cast iron, PVC).

Take a look at this revolutionary flow stopping technology and the advantages these systems offer to the natural gas industry.



Current Systems

Our current systems span a wide range of pipe sizes and pressures, as indicated below, and have been lab and field tested by the Gas Technology Institute. If you don’t see something that meets your needs, check with us. We continually expand the depth of systems and tools offered.

System	Nominal Pipe Size	Maximum System Pressure	Pipe Materials
Kleiss MCS60-38	3” - 8”	60 psi	polyethylene, steel, cast iron, PVC
Kleiss MCS60-1016	10” - 16” (18” PE)	60 psi	polyethylene, steel, cast iron, PVC
Kleiss MCS15-1824	18” - 24”	15 psi	steel, cast iron
Kleiss MCS60-2	2”	60 psi	PVC (PE pending)
Kleiss MCS15-316	3” - 16”	15 psi	polyethylene, steel, cast iron, PVC
Kleiss MCS7-2PVC	2”	7.5 psi	PVC
Kleiss MCS120-24	2” - 4”	120 psi	steel

Lab and field tested for the North American gas market by Gas Technology Institute (GTI) under sponsorship of Operations Technology Development (OTD).

[results are available at www.MainlineControlSystems.com]



System Features and Advantages

- Patented MDS Stopper creates a gas-tight seal
- Lightweight and portable equipment makes it easy to handle
- User friendly, simple design
 - Each system has one tapping/completion tool and one stopping tool
 - Same basic procedures between systems minimize operator training
 - Same tools are used for multiple pipe materials (polyethylene, steel, cast iron, PVC)
 - Same tools are used for each system's range of pipe sizes and pressures
- Single tap with one stopping tool provides multiple functions
 - System line pressure monitoring
 - Downstream pressure monitoring
 - MDS Stopper inflation and monitoring
 - Pipeline purging/evacuating and venting
- All critical components have a 3X safety factor
- Reduced operational expenses on every stop



MDS Stopper Technology

- Flexible pneumatic device
- Creates a seal even over uneven areas inside the pipe
- Each stopper has a wide diameter range and can be used with any wall thickness

In the Kleiss MCS flow stopping systems, the revolutionary, patented sealing component is the MDS (Multi-Dimensional Safety) Stopper. The MDS Stopper is a pneumatic device, consisting of a fiber reinforced elastomer inflatable stopper with high flexibility. The seamless design of the MDS Stopper provides a gas tight seal over the entire diameter range. This lengthy sealing area creates a perfect seal even when placed over a seam weld or other uneven areas inside the pipe.

An additional advantage of the MDS Stopper is that it can be used on a wide diameter range and any wall thickness, and, in some cases, adjacent nominal diameters. This offers opportunities for inventory reduction, simplified training, and cost savings.

By using high-quality materials, implementation of strict production requirements, and a 3X safety factor, the MDS Stopper offers the optimum security when working on pressurized pipes. Each MDS Stopper is individually tested after production to ensure optimal performance.



System Components

Prior to using the system's components, an appropriate fitting is selected for the job – polyethylene, steel, cast iron, or PVC.

Tapping Tool

With the use of one tapping tool, you are able to tap into any pipe material. The cutter will vary depending upon the pipe material, but the procedures are identical.

Stopping Tool / MDS Stopper

The stopping tool houses the launch tower plus the appropriate sized chute which positions the MDS Stopper in the center of the gas pipeline.

The stopping tool's gauge rod connects to the MDS Stopper and is used to move the stopper into the pipeline and inflate it to its working pressure. Two gauges at the upper end of the rod are used to monitor the pressure in the MDS Stopper as well as the pressure in the pipeline.

Completion Tool

When the job is finished, the completion tool is used to insert the plug into the fitting.



*Tapping Tool for
Kleiss MCS60-38*



*Stopping Tool for
Kleiss MCS60-38*



*Completion Tool for
Kleiss MCS60-38*





PE Fitting



Steel Fitting



Stainless Steel Saddle Fitting

Fittings

With the change of a fitting, the Kleiss MCS tapping and stopping tools work with multiple pipe materials. The polyethylene and stainless steel saddle fittings are designed to be size specific while the steel fitting covers the system's full range of pipe sizes.

Accessories

The many standard features of the Kleiss MCS Systems allow for purging, by-passing, back pressuring, and monitoring of system pressures all through the single tap. A sampling of the available accessories is shown below.



Hand Pump



By-Pass Gauge Tree



By-Pass Vent Adapter



Air Hose Adapter



Coupon Remover



Vent Stack



By-Pass Cap



By-Pass Tree Assembly

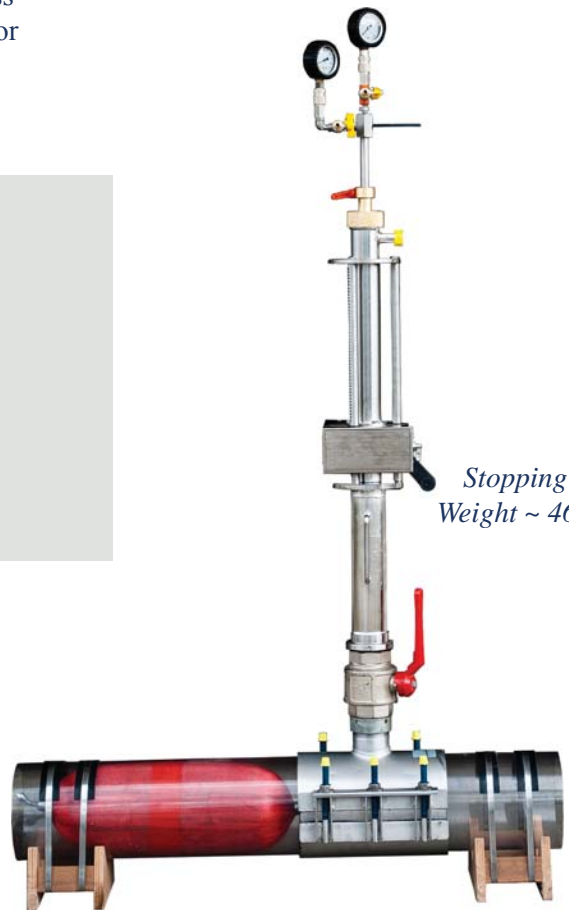
Kleiss MCS60-38

Flow Stopping System / 3" - 8" up to 60 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for pipe diameters ranging from 3" to 8"
- Use with pressures up to 60 psi
- Designed for multiple pipe materials (polyethylene, steel, cast iron, PVC)



*Stopping Tool
Weight ~ 46 lbs.*

Kleiss MCS60-38

Flow Stopping System / 3" - 6" up to 60 psi



Tapping / Completion Tool Case

KEY COMPONENTS
Hand Ratchet
Air Motor
Tapping Device / Hot Tap Tool
Drilling Dome
Drilling Rod
PE and PVC Cutter
Steel and Cast Iron Cutter
Pilot Drills
Plug Spindle
Adapters, Wrenches, Grease, Etc.



Stopping Tool Case

KEY COMPONENTS
Flow Stopping Tower MCS60-38
Inflation Pressure Gauge (-15 to 120 psi)
Pipeline Pressure Gauge (0 to 60 psi)
Chute # 1
Chute # 2
Full Bore Ball Valve
Adapters, Wrenches, Grease, Etc.

PE | Steel | Stainless Steel Saddle

Fittings

Same tools for each job, just select the appropriate fitting for your pipe material - polyethylene, steel, cast iron, PVC.

Kleiss MCS60-1016

Flow Stopping System / 10" - 16" (18" PE) up to 60 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for pipe diameters ranging from 10" to 16" and up to 18" for PE pipe
- Use with pressures up to 60 psi
- Designed for multiple pipe materials (polyethylene, steel, cast iron, PVC)



Kleiss MCS60-1016

Flow Stopping System / 10" - 16" (18" PE) up to 60 psi



Stopping Tool Case



Tapping / Completion Tool Case

KEY COMPONENTS
Flow Stopping Tower MCS60-1016
Gear Box Air Ratchet
By-Pass / Vent Port / Test Fitting
Bolts, Etc.

KEY COMPONENTS
Hand Ratchet
Air Motor
Tapping Device / Hot Tap Tool
Drilling Dome
Drilling Rod
PE and PVC Cutter
Steel and Cast Iron Cutter
Pilot Drills
Feeding Rod with Bridge
Bridge Stands
Service Rod Assembly for Plugging
Adapters, Wrenches, Grease, Etc.



Stopping Accessories Case

KEY COMPONENTS
Inflation Pressure Gauge (-15 to 160 psi)
Pipeline Pressure Gauge (0 to 60 psi)
Chute # 1
Chute # 2
Chute # 3
Slide Gate Valve
Adapters, Wrenches, Grease, Etc.



Fittings

Same tools for each job, just select the appropriate fitting for your pipe material - polyethylene, steel, cast iron, PVC.

Kleiss MCS15-1824

Flow Stopping System / 18" - 24" up to 15 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for pipe diameters ranging from 18" to 24"
- Use with pressures up to 15 psi
- Designed for steel and cast iron pipe materials



*Stopping Tool
Weight ~ 124 lbs.*

Kleiss MCS15-1824

Flow Stopping System / 18" - 24" up to 15 psi



Tapping / Completion Tool Case

KEY COMPONENTS
Hand Ratchet
Air Motor
Tapping Device / Hot Tap Tool
Drilling Dome
Drilling Rod
Drilling Flange
Steel and Cast Iron Cutter
Steel and Cast Iron Pilot Drill
Magnetic Spindle with Handle
Feeding Rod with Bridge
Bridge Stands
Service Rod Assembly for Plugging
Completion Tool Adapter
Adapters, Wrenches, Grease, Etc.



Gate Valve Case



Stopping Tool Case

KEY COMPONENTS
Flow Stopping Tower MCS15-1824
Inflation Pressure Gauge (-15 to 160 psi)
Pipeline Pressure Gauge (0 to 30 psi)
Wrenches, Grease, Etc.

Steel | Stainless Steel Saddle

Fittings

Same tools for each job, just select the appropriate fitting for your pipe material - steel, cast iron.

Kleiss MCS60-2

Flow Stopping System / 2" up to 60 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for 2" pipe diameters
- Use with pressures up to 60 psi
- Designed for PVC pipe material (PE pending)



*Stopping Tool
Weight ~ 20 lbs.*



Fittings

Same tools for each job, just select the appropriate PVC pipe fitting.



Steel Saddle

Kleiss MCS15-316

Flow Stopping System / 3" - 16" up to 15 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for pipe diameters ranging from 3" to 16"
- Use with pressures up to 15 psi
- Designed for multiple pipe materials (polyethylene, steel, cast iron, PVC)

*Stopping Tool
Weight ~ 30 lbs.*



PE | Steel | Stainless Steel Saddle

Fittings

Same tools for each job, just select the appropriate fitting for your pipe material - polyethylene, steel, cast iron, PVC.

Kleiss MCS7-2PVC

Flow Stopping System / 2" PVC up to 7.5 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.

System Specifications

- Sized for 2" pipe diameters
- Use with pressures up to 7.5 psi
- Designed for PVC pipe material



(comes in 1 compact case)



*Stopping Tool
Weight ~ 8 lbs.*

Fittings

Same tools for each job, just select the appropriate PVC pipe fitting.



Brass Saddle

Kleiss MCS120-24

Flow Stopping System / 2" - 4" up to 120 psi

Each flow stopping system has one tapping/completion tool and one stopping tool. The basic procedures are the same for all Kleiss MCS systems, making them user friendly and minimizing operator training. The lightweight and portable tooling makes the systems easy to handle. All critical components have a 3X safety factor.



*Stopping Tool
Weight ~ 31 lbs.*

System Specifications

- Sized for pipe diameters ranging from 2" to 4"
- Use with pressures up to 120 psi
- Designed for steel pipe material



Steel

Fittings

Same tools for each job, just select the system's steel pipe fitting.



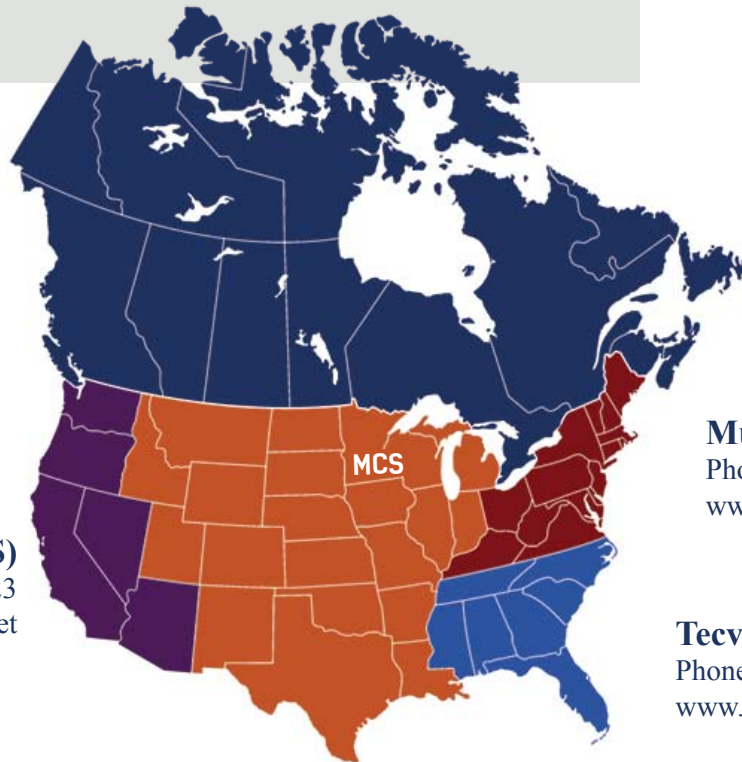
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Check us out online!  

From www.MainlineControlSystems.com, find out what MCS is up to.

MCS Distributor Network

To learn more or request a demonstration,
contact Mainline Control Systems or a distributor located near you.



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