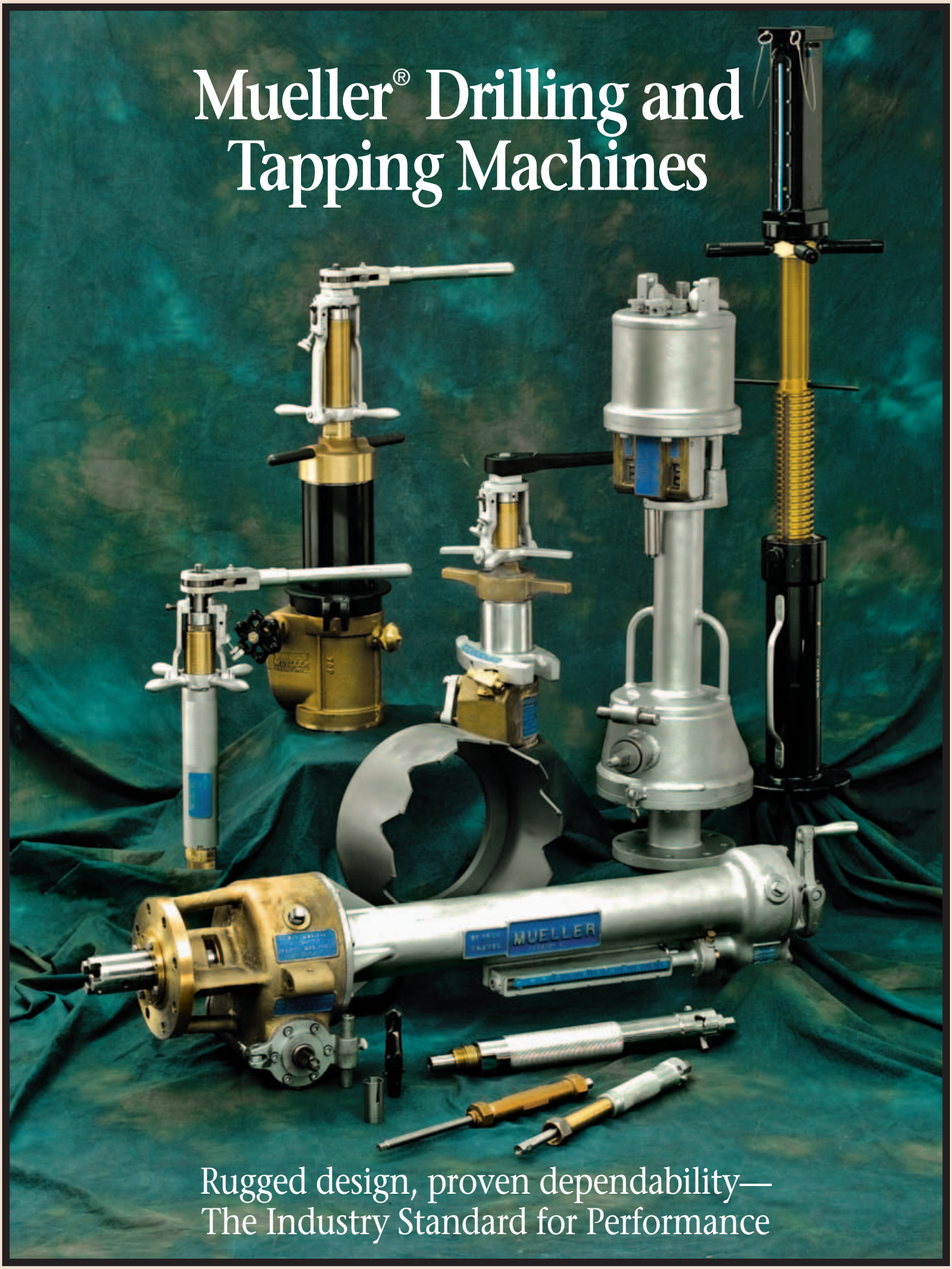
Mueller® Drilling and Tapping Machines

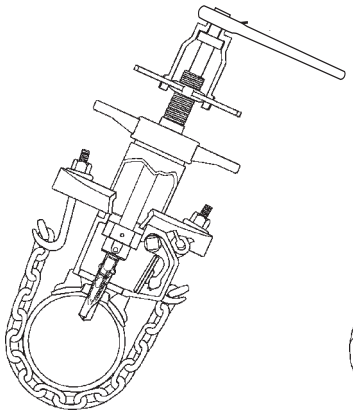


Rugged design, proven dependability—
The Industry Standard for Performance

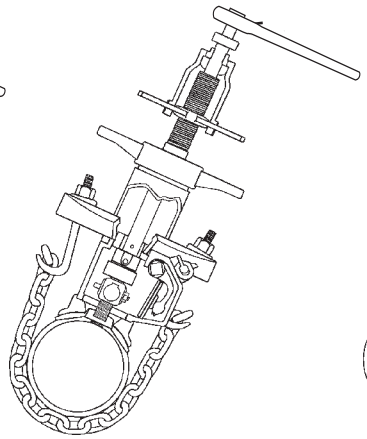
Mueller Co.

Mueller® offers a complete selection of drilling and tapping machines, and small and large drilling machines, for installing water services and extending mains on virtually every type and size of pipe. Their rugged design, accuracy and proven dependability deliver superior overall performance on both dry and pressurized lines.

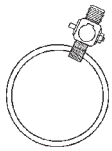
Drilling and Tapping Machines



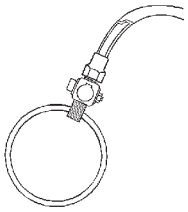
The Mueller Machine drills and taps a hole in a pressurized main without water escaping.



The drilling and tapping tool is extracted and replaced by a corporation valve on the boring bar for insertion into the main.

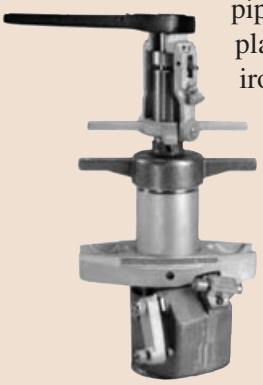


The closed corporation valve is installed, ready for the service pipe to be connected.



The connection is complete and the corporation valve opened.

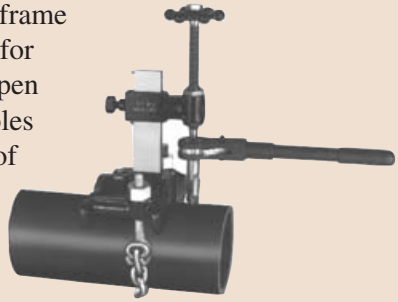
B-101™ Drilling and Tapping Machine
The B-101 Machine is designed for hand or power operation. It will drill and tap a main under pressure or dry, insert or extract corporation valves up to 1" and pipe plugs to 2 1/2". It can be used on all pipe from 2" through 48", including plain and cement lined cast iron or ductile iron, PVC, asbestos-cement and steel.



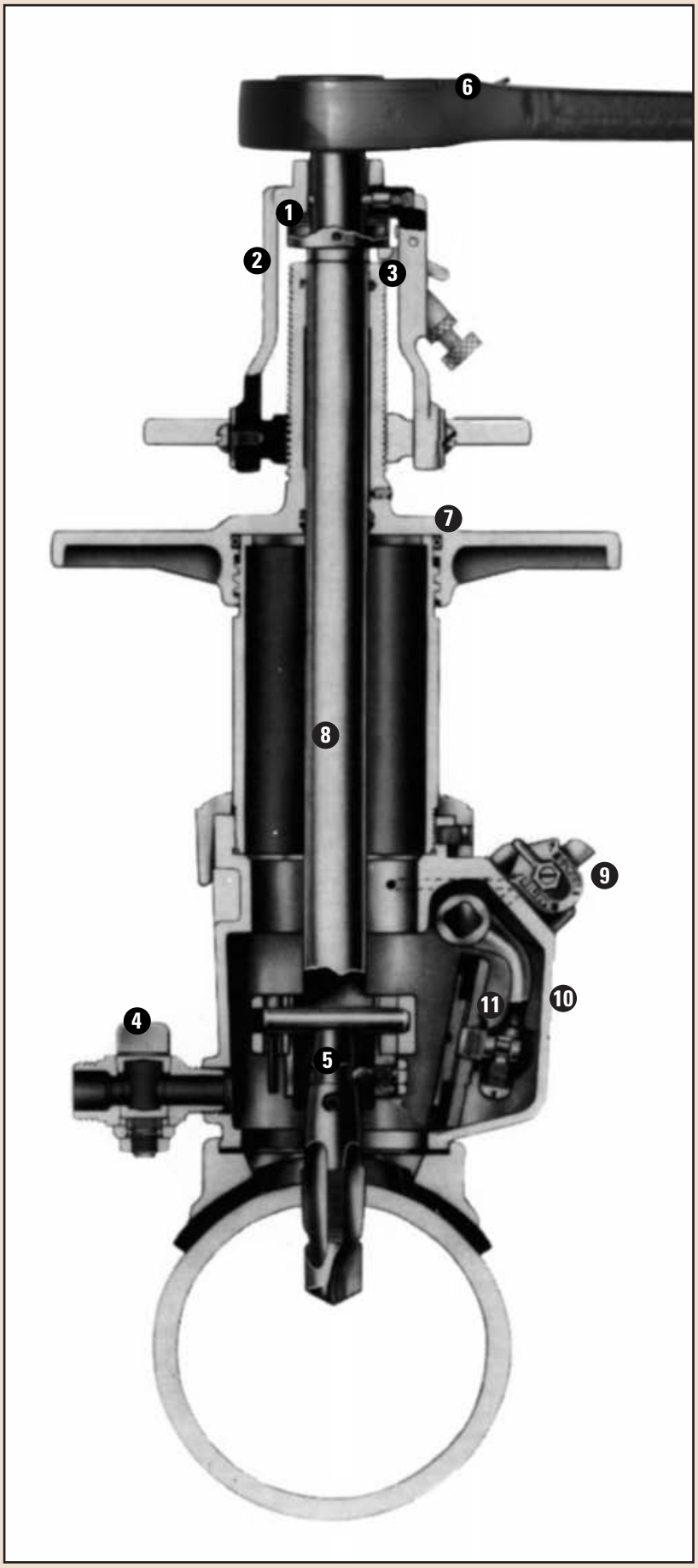
A special mechanism on the B-101 Machine permits the boring bar to be locked to the feed yoke. This prevents the drill from spiraling into the hole before the cut has been completed, and the tool cannot drop to the threaded portion and cause breakage. This locking mechanism is especially useful for work on low pressure mains. Maximum working pressure is 90 psig (250 psig with optional Power Clevis).

A-3™ Drilling and Tapping Machine
Similar to the B-101 Machine, the A-3 Machine is designed to tap water mains and insert or extract larger corporation valves ranging from 1" to 2" and pipe plugs from 1" to 2 1/2". It can be used with all pipe in sizes 2" through 48" and has the additional versatility of being able to use "B" Machine tools. Maximum working pressure is 90 psig (250 psig with optional Power Clevis).

"J"™ Drilling and Tapping Machine
The "J" Machine is an open frame machine designed primarily for drilling and tapping dry or open mains. It can drill and tap holes from 1/4" to 3" on all types of pipe. Although developed for use on water mains, it can also drill and tap any machinable metal object to which it can be attached, such as columns, boilers and structural steel.



B-101™ Drilling and Tapping Machines



1 Anti-friction thrust collar — Fluorocarbon impregnated steel bearing sealed in steel case; no lubrication needed, resists galling under power operation.

2 Feed nut and yoke — Spring detents hold feed yoke securely in place around boring bar; square shank on feed yoke fits power operator for automatic feed.

3 Locking mechanism — Secures the boring bar to the feed yoke to prevent the drill spiraling into pipe before the hole is completely drilled. Helps prevent tool breakage.

4 Chip flushing valve — Continually flushes away chips during drilling and tapping operations on all kinds of pipe; threaded outlet for attaching hose to direct flush water out of ditch.

5 Tool holding method — Transmits force evenly through drive pins on tool for smooth drilling and tapping. Retaining screw holds tool tightly in boring bar socket for precise alignment of tool with boring bar. Convenient knock-out pin allows easy tool removal.

6 Ratchet handle — Fully enclosed ratchet; permanently lubricated; quick-reverse button.

7 Feed sleeve and cap — Acme threads require only 2 1/2 turns to remove sleeve and cap for fast disassembly; long bearing surfaces provide exceptional boring bar rigidity; positive metal-to-metal contact with upper barrel maintains boring bar alignment; O-ring seals.

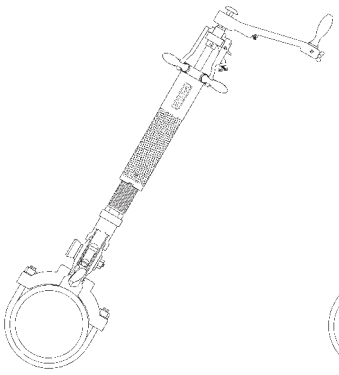
8 Boring bar — Chrome plated to resist corrosion; helps assure long life of O-ring seals.

9 Relief/bypass valve — O-rings assure positive seal; allow smooth, easy push/pull operation.

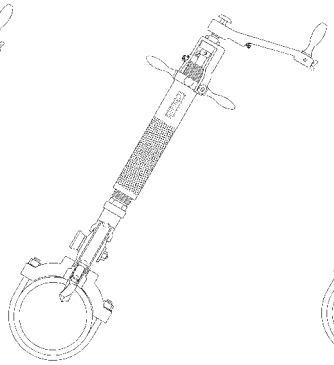
10 Offset body — Reduces collection of chips around flop valve when machine is in horizontal or inclined position; increased diameter gives adequate clearance for inserting greater variety of 1" valves.

11 Flop valve — Seats with pressure, self-aligning, molded neoprene washer; lever handle has positive lock—open or closed—with position indicator; O-ring on flop valve stem provides reliable seal.

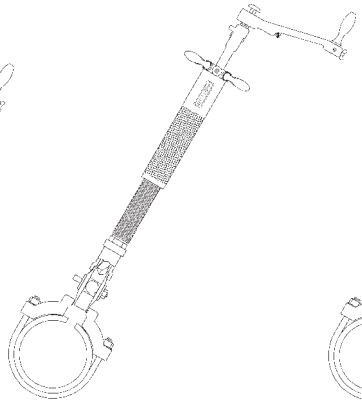
Drilling Machines



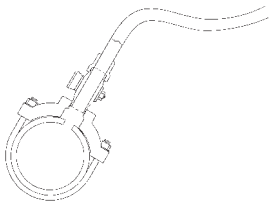
With the service clamp attached to the main, the corporation valve is threaded into the clamp and tightened securely. The machine is then mounted on the corporation valve using an adapter nipple, and the valve is opened.



The drill penetrates the main without water escaping.



The boring bar is retracted and the corporation valve closed. The valve now controls the water.



The machine is removed, the service line connected and the corporation valve re-opened to activate the water service.

D-5™ Drilling Machine

Hand or power operated, the D-5 Machine drills holes under pressure from 5/8" to 2" in almost any type of main. When using a service clamp and corporation valve, the D-5 Machine is used to drill through the pipe to activate the service. Length of travel is 14". A combined feed nut and yoke provides positive feed for the full boring bar travel, and makes it possible to disengage the feed to permit the boring bar to be positioned quickly. The long feed tube helps protect the acme threads and automatically cleans them as the feed tube is rotated. A special mechanism on the feed yoke locks the boring bar to the yoke to prevent the drill from spiraling into the hole prematurely. Maximum working pressure is 500 psig at 100°F or 250 psig at 375°F.

E-5™ Drilling Machine

Similar in design and operation to the D-5 Machine, this machine will bore holes from 7/16" to 1" in most types of pipe. Boring bar travel is 12 1/8". Maximum working pressure is 500 psig at 100°F or 250 psig at 375°F.

Mega-Cut™ Drilling Machine

Robust, yet lightweight and easy to use, the Mega-Cut Machine will drill holes from 7/16" to 1" on pressurized mains. Designed primarily for use on PVC, it can also be used on cast iron, ductile iron or steel mains. It has a manual feed sleeve for independent control of the cutting speed and the tool feed rate. The boring bar can be disengaged from the feed sleeve for quick repositioning. The drive nut accepts a 7/8" socket wrench. The Mega-Cut Machine is compatible with E-5 Machine tools, as well as Mueller two-tooth shell cutters for PVC pipe. Boring bar travel is 12 1/8". Maximum working pressure is 200 psig at 100°F.

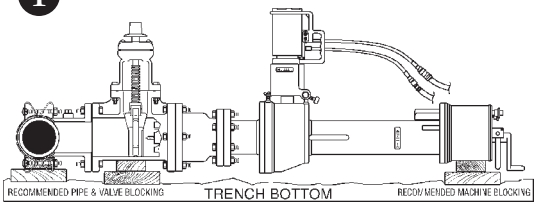
Tru-Cut™ Drilling Machine

Similar in design but smaller and lighter than the Mega-Cut Machine, the Tru-Cut Machine is designed specifically to drill 11/16" and 7/8" holes in PVC pipe. Its drive nut accepts both a 3/8" drive ratchet and a 3/4" socket/box wrench. The Tru-Cut Machine uses the same cutters and adapters as the PL-2 Machine. Boring bar travel is 7". Maximum working pressure is 200 psig at 100°F.

PL-2™ Drilling Machine

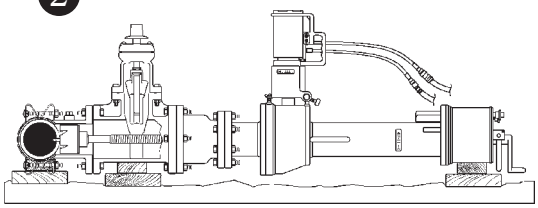
The PL-2 Machine is used to drill 11/16" or 7/8" holes in PE or PVC plastic pipe under pressure. It has a 7" travel. A special feature permits the boring bar to be easily disengaged from the feed mechanism. The PL-2 Machine is operated with a standard 3/8" drive ratchet and 7/16" socket.Maximum working pressure is 200 psig at 100°F.

1



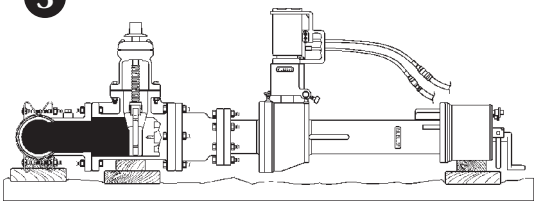
The Mueller® Tapping Sleeve and Valve are attached to the main. Then the drilling machine, with a shell cutter and pilot drill fastened to its boring bar, is attached to the tapping valve using an adapter.

2



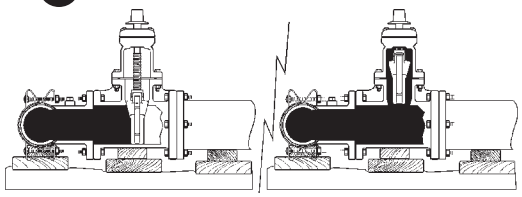
With the tapping valve open, the boring bar advances the shell cutter to cut the main.

3



The boring bar is retracted and the tapping valve closed to control the water pressure.

4



With the machine removed, the lateral is connected and the tapping valve opened to pressurize the lateral and place it in service.

Mega-Lite® Drilling Machine

At just 65 pounds, the Mega-Lite Drilling Machine has been optimized to drill mains quickly, yet be light enough for one person to handle easily and still rugged enough to give years of dependable field service. The machine can be operated by air or hydraulic power. Its boring bar is controlled at all times, and can be quickly and easily advanced or retracted by hand, reducing the time needed for the drilling process. The Mega-Lite machine can cut through valves 4" to 12" in size and be used on plain or cement-lined ductile or cast iron, A/C, steel, PVC or HDPE pipe. Maximum working pressure is 250 psig at 125° F.

CL-12™ Drilling Machine

The CL-12 Machine cuts holes from 2" to 12", under pressure, for lateral connections in all types of pipe. While it may be operated manually, most users prefer faster, easier power operation. An automatic tool position indicator shows the position of the pilot drill and shell cutter at all times. Automatic feed control can be set for any 12" of the total 25" boring bar travel. The feed travel indicator automatically subtracts, showing the amount of travel remaining, so the operator always knows how much of the cut remains to be made. When the feed control reaches the preset amount, the feed automatically disengages. To prevent damage, the tool feed also disengages automatically at the maximum 25" machine travel. Maximum working pressure is 250 psi at 100°F or 150 psi at 500°F.

C1-36-99002™ Drilling Machine

For cutting holes to 18 1/2", the C1-36-99002 Machine incorporates many of the same operation and performance features as the CL-12 Machine. With 36" boring bar travel, it makes cuts through tapping valves from 2" to 24" in all types of pipe. Maximum working pressure is 500 psi at 100°F or 250 psi at 500°F.

Tools and accessories

- Power operators ease machine operation and help to optimize machine performance, reducing stress on both machines and tools. This can significantly extend their useful life and reduce the need for repair. Air, electric and hydraulic powered operators are available (refer to sections 1 through 3 of the Mueller® Water Products Catalog for each machine's specific compatibility with power operation).
- Mueller® cutting grease is a must for all drilling, tapping and cutting operations on metallic and PVC pipe materials to help assure cutting tools provide the long service life designed into them. Available in conveniently sized cans.

For Drilling and Tapping Machines

- Combined shell cutters and taps. Require less torque when making larger taps. Also allow the recovery of a coupon which can be used to determine pipe condition.
- Combined drills and taps. Available in a range of sizes for all popular types of pipe.
- Tools for inserting and extracting corporation valves. Steep pitched acme threads permit these tools to perform their function without hanging up. Available to fit all sizes of corporation valves and plugs within each machine's range.
- Saddles adapt machines to a wide range of pipe sizes and materials. Using the proper saddle helps maintain the machine's rigidity on the pipe for accurate tool alignment.
- Special equipment extends drilling and tapping machine use. Selection includes ratchet handle extension for greater leverage and a power clevis to force the boring bar down when drilling higher pressure mains. Chain spreaders, extension chains and several other accessories are available.

For Small Drilling Machines

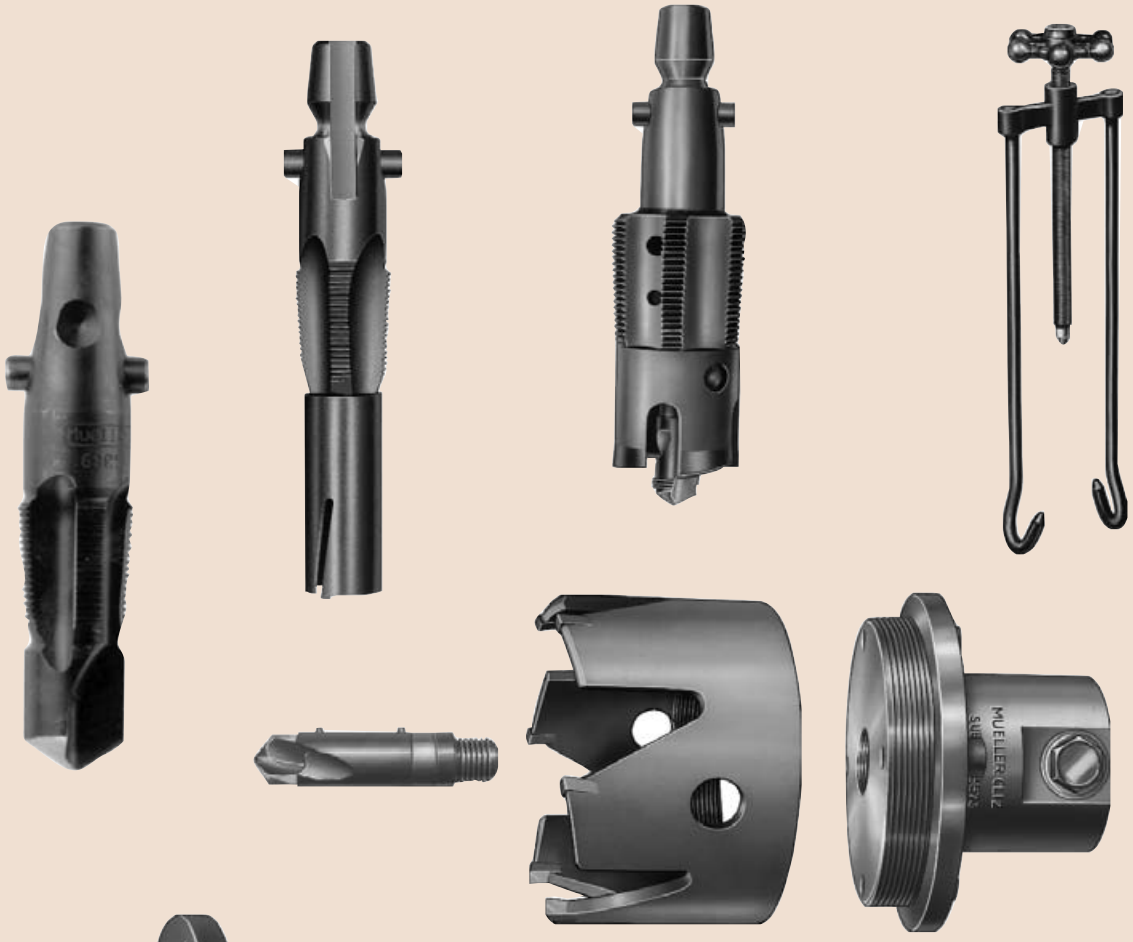
- Drills for all popular types of pipe.
- Shell cutters for plastic pipe. Two-tooth design provides smoother cutting on plastic and helps avoid splitting the pipe.
- Nipples adapt machines to corporation valves. They permit the machine to be used with all types and sizes of Mueller corporation valves within the machine's range.

For Large Drilling Machines

- Drills for small holes in most types of pipe. Different types of drills are available for use on various pipe materials.
- Shell cutters, pilot drills and center hubs are available for larger holes on a variety of pipe materials
- Adapters required to attach machines to valves and fittings are available for all popular end connections.

The Mueller® Thread Story

The capability to drill and tap a hole in a pipe to attach a corporation valve without leakage depends to a great extent upon the quality of the threads cut in the pipe by the machine. Mueller tapping tools are designed to cut a thread with a special profile designed to complement the threads on Mueller corporation valves. When the threads on the valve engage those in the pipe, they form a tight metal-to-metal seal that resists leakage without the need for undue tightening. Using Mueller tapping tools to install Mueller corporation valves is your only assurance of gaining this special benefit.



Mueller® Repair Service

Mueller Co. offers a complete repair service for most of its machines and tools. Machines are restored to like new condition and backed by a full warranty. Drilling, tapping and cutting tools are restored to like new condition, including resharpening to specifications and replacing chipped or missing carbide teeth. Only Mueller knows all the critical resharpening parameters to assure tools perform smoothly and to specs. This also avoids undue stress and wear on machines, allows machines to operate at design speeds, and extends the life of tools and machines.

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All products must be installed and maintained in accordance with applicable instructions and/or standards.

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