



- G. Place chain hooks and swivels into slots on both sides of the chamber.
- H. Connect the chain to one of the chain hooks, bring chain under the pipe and connect on the other side to the nearest link. Do not twist or create kinks in the chain.
- I. Hand tighten nuts.

NOTE:

Use additional chain extensions and clevis for diameters over 16".

3. Position chamber at desired angle.

Tighten down chain nuts evenly, using REED CW12 adjustable wrench.

- A. Ensure the gaskets make good contact.
- B. Verify chain holds the machine securely on the pipe and saddle.

4. Insert tool into Boring Bar.

- A. Push knockout pin in Boring Bar to its holding position. (Toward flat side of bearing)
- B. Insert shank end of drill tap and align pin with slots in bar end.
- C. Make sure tool is securely seated and lightly tighten the tool retaining screw.
- D. Retract tool end of Boring Bar all the way into the top cap.
- E. Generously coat tap with REED #98425 Tapping Compound.

5. Assemble top and bottom halves

- A. Verify:
 - a. Swing valve open.
 - b. Upper ball valve shut.
 - c. Needle valve (with star knob) shut.
- B. Screw Boring Bar top cap hand tight onto the top chamber (1 3/4 Turns).
- C. Push down Boring Bar slowly until bit touches the pipe.
- D. Install the thrust bearing.
- E. Place the Yoke over the bearing. Adjust the Star Feed as necessary. Ensure Boring Bar rests in a position past the detent pins. This will ensure the Yoke fully engages the Bearing.
- F. Put ratchet wrench on top of Boring Bar.

6. Drilling and Tapping

- A. Preparing to Drill
 - a. Manually: Adjust the ratchet wrench to turn clockwise.
 - b. Power Drive: Reed 98427 Power Drive Adapter (#98427) will fit onto RIDGID® brand 700 or the Collins® power drives. When using this adapter, the operator can control the feed rate for drilling.
- B. Drill through the pipe by pulling the ratchet wrench clockwise and turning the star feed clockwise in a smooth and consistent manner. An easily turning Boring Bar and star feed indicates one has completed drilling through the pipe wall.
- C. If appropriate, open the ball valve to allow flushing of chips while drilling.
- D. Feed drill tap down until feeling resistance. One will feel resistance when the tapping threads contact the pipe wall.
- E. Begin tapping by rotating the ratchet wrench.
- F. Continuously turn the feed housing. Rotate in a smooth and constant manner. DO NOT FORCE the star feed. Forcing the star feed will strip off the threads.
- G. Continue tapping until start of the 3/32" wide groove in the Boring Bar sits flush with the Main Body. This depth should result in a satisfactory tap. Resharpened drill taps may require two additional turns. Other manufacturer's drill taps may vary. Consult drill tap manufacturer's instructions.

Consider conducting dry taps to determine a depth that works best for you.

7. Tool Removal

- A. Reverse the ratchet detent lever (or Power Drive Switch) and carefully back the tool out of the tapped hole using a counterclockwise rotation.
- B. Once the tap is free of the pipe, retract the Boring Bar to its uppermost position.
- C. Close the swing valve by pushing down on the handle and turning it 90 degrees counterclockwise.
- D. Open the pressure relief valve on the top chamber to release pressure, then close it again.
- E. Unscrew the top cap assembly from the valve chamber.
- F. Loosen the tool retaining screw and strike the end of the knockout pin to release the drill tap.

8. Attaching Corporation Stop to Boring Bar

- A. Verify the selected corp stop matches the size intended and the drill tap size.
- B. Shut the corp stop.
- C. Screw the corp stop and corp adapter together. Screw the adapter shank to the corp adapter.
- B. Push knockout pin in Boring Bar to its holding position. (Toward flat side of bearing sleeve.)
- C. Insert tapered end of the adapter shank into the Boring Bar and align the pin with the slots in the bar end. Tighten the tool retaining screw.
- D. Make sure the Boring Bar retracts all the way into the top cap. Apply non-toxic pipe dope to corp inlet threads.
- E. Screw assembly into the valve chamber.

9. Inserting the Corp Stop

- A. Attach the ratchet wrench onto the Boring Bar and set it for clockwise rotation.
- B. Turn the star knob counterclockwise 1 turn to balance the pressure.
- C. Push down on the swing valve handle and turn 90 degrees clockwise.
- D. Push the Boring Bar down until the corp stop threads touch the pipe.
- E. If not already done, swing Yoke over the Boring Bar to engage the bearing. Feed the bar as needed.
- F. To start the engagement, rotate the Boring Bar clockwise while carefully turning the feed housing clockwise. Once the threads are engaged, disengage the Yoke. Continue rotating until the corporation stop feels solid. Do not attempt to permanently tighten the corporation stop with the machine

10. Releasing the Corporation Adapter

- A. Reverse the ratchet to turn counterclockwise.
- B. Remove play from the ratchet wrench with one hand, and strike the wrench handle with the other hand to disengage the corporation adapter from the adapter shank.
- D. Rotate the ratchet wrench counterclockwise until the adapter shank is completely free.
- E. Verify quality of corp stop seal by opening the chip flush valve and attempting to release pressure in the chamber. If pressure does not drop and water continues to flow, re-engage to corp stop with the boring bar and attempt to tighten the corp stop further.

11. Machine Removal

- A. Loosen the chain hook nuts and unhook the chain. Remove hooks from the machine.
- B. Carefully remove the machine, saddle, and gaskets and place them on a clean surface.
- C. Tighten the corporation stop, using a suitable wrench on the inlet thread side.
- D. Remove the corp adapter using the REED CW18 provided.

DM1100 / DM2100

Operating Instructions:

1. Select proper tools necessary to perform drilling operation.

- A. Service saddle
- B. Corporation stop
- C. Drill size and drill adapter to match corporation stop bore
- D. Corp adapter with flush valve
- E. For 1 1/2" and 2", install 99301 sleeve (See figures 2 & 3)
 - a. Retract set screw in bearing assembly, slide off bearing assembly
 - b. Slide sleeve in place, (hole must line up)
 - c. Install bearing assembly
- F. Any other necessary accessories to meet operating requirements

2. Assemble saddle to the pipe.

- A. Clean area of pipe where tap is to be performed. REED DS12 (#08000) or DS36 (#08006) may be used.
- B. Assemble service saddle on the pipe where desired and tighten securely.

3. Insert corporation stop into saddle threads.

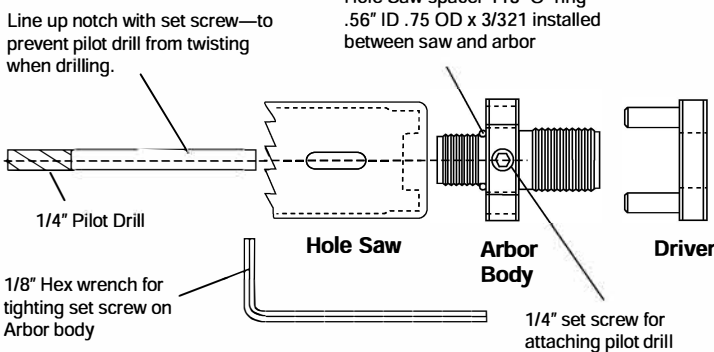
- A. Thread sealant may be used.
 - B. Tighten corporation stop with an adjustable wrench.
- Note:** Make sure corporation stop valve is open.

4. Screw threaded body into the corp adapter.

5. Assemble drill adapter and appropriate drill into boring bar.

A. If you are using the unit for drilling 1 1/2" or 2", the hole saw adapter and hole saws with pilot drills are needed. Screw the hole saw onto the arbor body and line up holes after hand tightening. Assemble the driver into the body and hole saw. Insert the pilot drill into the arbor body. Allow a maximum of 1/4" of the drill tip to protrude from the hole saw. Line up the slot in the drill with the set screw and tighten with the hex key wrench provided. (When using on PVC, a pilot drill is not necessary.) See Figure 1 below.

Figure 1



Note: Do not use pilot when drilling PVC pipe.

6. Screw corp adapter onto corporation stop.

7. Drilling

- A. Run drill bit down until it touches the pipe.
- B. Swing cam handle and tighten.
- C. Attach ratchet wrench on square drive and turn drill clock wise while turning the feed housing to feed the drill.

NOTE: Do not attempt to overfeed and force the drill.

- D. Open the ball valve on the side of the corp adapter to allow the flushing of chips.
- E. Once the drill is completely through the pipe, release the cam handle to allow the boring bar to return to its uppermost position.

NOTE: Put downward pressure on the boring bar to keep it from traveling too fast upward and potentially damaging the machine.

8. Close off the corporation stop using an adjustable wrench.

9. Disassemble machine from corporation stop.

10. Assemble tubing to corporation stop per tubing and fitting manufacturer's specs.

Maintenance Instructions:

CDTM1100, CDTM2100, TM1100, DM1100, DM2100

Before Using

1. Clean and oil all bearing and wear surfaces and threads.
2. Inspect and clean tapping bits, and remove chips and scale. Chips and scale may prevent proper function of the tool.
3. Inspect and clean the Boring Bar tool end. Chips and scale may interfere with the insertion of the tapping bit or adapter shank.

After Using

1. Clean the machine and oil the machined surfaces. If necessary, the top and bottom chambers can be easily disassembled to clean more thoroughly.
2. Lubricate the tool holding area of the boring bar with REED #98425 Tapping Compound.
3. If necessary, flush the bottom chamber with a water hose to remove any chips. DO NOT hammer frames to remove chips or debris - Handle Carefully!
4. Protect threaded pieces by assembling them with their mating parts.
5. Periodically, inspect the Boring Bar's o-ring seals and replace if worn.
6. Carefully, place the tool back in the toolbox for storage.

Figure 2

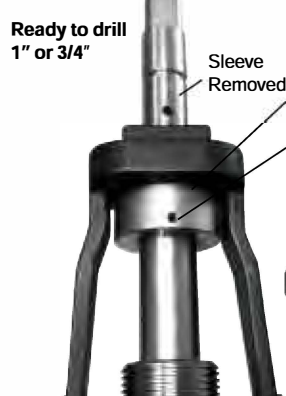


Figure 3

