



PIPE TOOLS & VISES
SINCE 1896

Instructions For Tapping AWWA C900 PVC with REED DT75P & DT100P Drill Taps

1. Follow procedures in compliance with all occupational health and safety regulations in your area, as well as any procedures recommended by the pipe or corporation stop manufacturer, and your local codes. Refer also to <https://www.uni-bell.org/> and find PVC Pressure Pipe Tapping Guide published by PVC Pipe Association. TEL: 972.243.3902 or info@uni-bell.org.
2. Direct tapping AWWA C900 PVC is recommended by pipe manufacturers in DR18 and DR14 classes only, for sizes 6" (150mm) up to 12" (300mm) diameter up to 1" (25mm) in thickness. Direct tapping is not recommended for any class of 4" (100mm), or any size of Class 100 (DR25) pipes. Use corporation stops only with AWWA thread complying with AWWA C800.
3. Use proper equipment including safety goggles and heavy protection blanket. The blanket should be about 1.2m x 1.8m (4' x 6') in size and should have a hole in the center to permit installation and operation of machine.
4. REED drill taps are designed to fit REED® TM1100, Mueller® B100/101, Hays® B1 or Footage Tools® Main Line Tap Machine. **A practical dry tap is necessary to recalibrate the stop mark** in accordance with pipe and corporation stop manufacturers' recommendations, which is different than the stop mark used for tapping ductile pipe. The tap depth is correct if one to three threads remain showing after corporation torqued to 27 ft. pounds. Install the roll pin in the shank of the drill tap if the machine (such as REED TM1100 or Mueller® B101) requires it.
5. A modification to the Mueller® B Machine (predecessor to B100/B101) to insert P.T.F.E. washers or adapting the B100 thrust bearing between the plain collar and feed yoke is recommended. This helps isolate the feed from cutting motion. Also recommended is the removal of the handles from the feed wheel to reduce the tendency to feed the cutter too fast. However, if the machine is to be used later to tap ductile pipe, handle removal would not be desirable.
6. Also required is a standard torque wrench (0-100 ft. pound/0-135 Joules) and a 13/16" (20mm) 8 point socket for proper installation of the corporation stop.
7. **Don't over tighten the machine on the pipe**, especially pipe that is warmed by the sun. Tighten both sides evenly.

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8. **Apply REED Tapping Compound (#99140 or #98425)** or other food grade grease to sharp core cutter and tap threads. Firmly secure the drill tap in the tap holder. Check for loose motion in the spindle and tap, as this will cause problems.
9. **Cut and thread – slow and steady.** Turn feed yoke wheel approximately **1/8 of a turn for each full revolution of the spindle**. Resistance to cutting will be minimal compared to cutting ductile pipe, but do NOT exceed the recommended feed rate. Use **light, one-finger pressure** on the feed wheel. When threading begins (after about 2 revolutions of tap engagement) allow the tap to feed itself.
10. **CAUTION:** When removing, do not stand over the end of the spindle, as it will be forced up by the amount of water pressure in the line when the tap comes out of the pipe. Restrain the spindle and release it slowly to avoid personal injury or damage. After the flap valve is close and pressure is released, the spindle and drill tap can be removed.
11. **Remove the coupon** of PVC from the cutter **and examine it**. Straight, smooth sides and a clean edge are signs of proper cutting. Grooves on the side of the coupon or signs of flaring out at the end, creating shape like a crown, are indications of either the feed rate being too fast or the cutter being dull. Correct these conditions.
12. **Use P.T.F.E tape on corporation stop threads**, wrapping it in a clockwise direction at least twice around. Do NOT use any form of liquid sealer on PVC. The corporation stop valve shall be closed during installation.
13. Reinsert spindle with corporation stop (only AWWA tapered threads), open equalizing valve and push the spindle down. Engage feed yoke to the spindle and turn ratchet while gently turning the feed nut. Once about three threads have started, disengage the feed yoke. When tightening corporation stop, **tighten with a torque wrench to an indicated 27 ft. pounds**. Snap reversing of the spindle will disengage corporation stop from the E-Z release screw plug. Remove the machine from the pipe. If there are any signs of leakage, increase torque to 35 ft. pounds. If leak persists, depressurize then retape the corporation stop and retighten to 27 ft. pounds.
14. **SHARPENING:** Notice when the cutter is new that the end of the hole cutter is not flat across. The front and outside edge of the 3 teeth are higher, and the surface behind these teeth is relieved. This relief is important and needs to be preserved when sharpening. Therefore, it is recommended you not try to sharpen this cutting tool, rather take it to a professional tool grinder for re-sharpening.

NOTE: The term “spindle” used in these instructions is equivalent to the term “boring bar.”