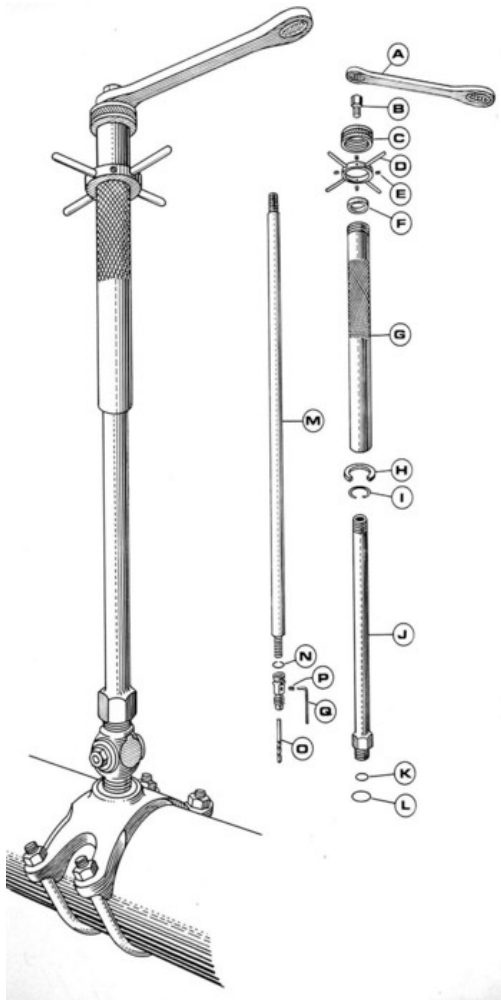


APAC 901 DrillMaster Instructions



1. The APAC 901 Drilling Machine is for use after a saddle take-off (corporation stop or gate valve) has been installed on a main line.
2. Select the proper adapter to couple the machine to the saddle. Be sure it fits to the male threads outlet (either IP or Copper Tubing Threads).
3. Select proper shell cutter for the pipe to be drilled.
4. Screw adapter onto the drilling machine's at lower end of "J". Tighten carefully, O-ring "L" will seal under modest tightening.
5. If the shaft "M" does not extend out of the adapter, grasp the brass body "J" with one hand, and rotate the brass feed tube "G" by turning the feed hand wheel "D" clockwise until the shaft shoulder is exposed. Install the pilot drill and screw shell cutter onto shaft "M". Use a wrench on the flat of the shaft to keep the shaft from turning while the cutter is tightened.
6. Reverse #5 above, backing the shell cutter into adapter until it flushes with the adapter end.
7. Fully open the valve (corporation stop).
8. Install the adapter (with machine) on the valve and tighten snugly.
9. Rotate the hand feed wheel "D", moving pilot drill and shell cutter down through the open valve until the pilot drill contacts the pipe. Stop feeding at this point. Be careful not to force the drill too hard against the main pipe.
10. Place the ratchet "A" on hex drive nut "B". Making certain that the wrench drives in a clockwise direction (turning the wrench over will reverse the direction of the drive).
11. Grasping the feed wheel in your left hand and the ratchet in your right hand, you are ready to drill.
12. Turn the ratchet wrench in full 360 degree turn, or work the ratchet back and forth, to start drilling. As the wrench begins to turn freely, advance the feed by turning the feed wheel clockwise until some resistance is felt in the wrench.

NOTE: A little practice will make it easy to balance the feed. If the feed wheel is turned too much, the drill and shell cutter will jam and the ratchet wrench cannot be moved: back the feed wheel off until ratchet moves with normal effort and start again. DO NOT use both hands to pull on the ratchet wrench.

13. Work the ratchet and feed until both operate freely, indicating that the hole is completed.
14. Back the feed up. Turn the feed wheel counterclockwise until it is all the way back to its original position, or the stop on the shaft contacts to the brass body "J" of the machine. We recommend that rotation of the ratchet wrench initially be continued to assist in coupon retention (see item 18) and cutter retraction.
15. Close the valve and remove the drilling machine, complete with the adapter.
16. Open the valve slightly to wash out any fine chips that might be left.
17. Remove the "coupon" (piece of pipe removed by cutting the hole). Run the shell cutter out of the adapter with the feed, until the cutter is completely exposed. Then insert a small punch or small screwdriver in the side slots of the cutter above the coupon, pry the coupon out of the cutter and off the pilot drill. If you experience difficulty, remove the cutter from the machine and drive the coupon out.

Moving the Drilling Machine with attached shell cutter:
RETRACT THE SHELL CUTTER FULLY INTO THE ADAPTER.

NOTE: Take extra care when drilling plastic pipe to avoid splitting or fracturing the pipe:

- _ Be sure the shell cutter is sharp.
- _ Do not apply excessive feed pressure on the pipe while drilling.
- _ Minimize pipe stress by manually turning the ratchet wrench in a slow to medium speed, rather than using the ratchet feature of the wrench.