All warranties, expressed or implied, for Mueller Drilling Machines are rendered null and void if the machines are used with shell cutters or equipment manufactured by someone other than Mueller Co.
DH-5 DRILLING MACHINE

Capacity and Use
The DH-5 Drilling Machine is a hand or power operated machine used for drilling holes 1/8” to 2 1/8” inclusive, in any size or kind of pipe (Under certain conditions the maximum size may be increased to 3 3/4”).

For complete information on the uses of this machine and the tools and equipment required for its use see the latest Mueller Gas Catalog at muellergas.com.

Working Pressure and Temperature Rating
• 1200psig (8273 kPa) Maximum Working Pressure
• 100° F (38° C) Max. Temp. Rating

The working pressure or temperature rating is reduced accordingly if any attachment, valve, or fitting subjected to pressure or temperature during the drilling operation has a maximum working pressure or temperature rating different than that specified above.

Equipment Furnished
• Wooden Storage Chest
• Reversible Ratchet Handle
• Body Gasket
• Adjustable Wrench
• Double Open-end Wrench
• Cutting Grease
• Operating Instruction Manual

The machine adapter, cutter arbor, shell cutter and pilot drill shown at right are not included in the equipment furnished with this machine. These items must be ordered according to the size and type required.

Length of Travel
DH-5 Drilling Machine has 14” (356 mm) Boring Bar Travel.

NOTE: For Operating Instructions see pages 4 and 5. For DH-5 Drilling Machine Parts see page 6.
EH-5 DRILLING MACHINE

Capacity and Use
The EH-5 Drilling Machine is a hand or power operated machine used for drilling holes 1/8” to 2 1/8” inclusive, in any size or kind of pipe (Under certain conditions the maximum size may be increased to 3 3/4”).

For complete information on the uses of these machines and the equipment and attachments required for their use see the latest MuellerGas Catalog at muellergas.com.

Working Pressure and Temperature Rating
• 1200psig (8273 kPa) Maximum Working Pressure
• 100° F (38° C) Max. Temp. Rating

The working pressure or temperature rating is reduced accordingly if any attachment, valve, or fitting subjected to pressure or temperature during the drilling operation has a maximum working pressure or temperature rating different than that specified above.

Equipment Furnished
• Wooden Storage Chest
• Reversible Ratchet Handle
• Body Gasket
• Adjustable Wrench
• 2 – Double Open-end Wrench
  – 9/16” x 11/16”
  – 3/4” x 13/16”
• Cutting Grease
• Operating Instruction Manual

The machine adapter, drill holder and drill shown at right are not included in the equipment furnished with this machine. These items must be ordered according to the size and type required.

Length of Travel
EH-5 Drilling Machine has 12 1/8” (308 mm) Boring Bar Travel.

NOTE: For Operating Instructions see pages 4 and 5. For EH-5 Drilling Machine Parts see page 7.

Machine Weight Chart

<table>
<thead>
<tr>
<th>DESCRIPTION</th>
<th>EH-5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Machine &amp; equipment shipped in wooden storage</td>
<td>52 lb (23.5 kg)</td>
</tr>
<tr>
<td>chest</td>
<td></td>
</tr>
<tr>
<td>MACHINE ONLY</td>
<td>24 lb (10.8 kg)</td>
</tr>
</tbody>
</table>
OPERATION

1. Oil all working parts, especially the collar on the boring bar. Keep oil treated surfaces and boring bar well lubricated and free from dirt and foreign material. (Invert the DH-5 or EH-5 Machine and lubricate it through both lower and top oil holes in addition to the points mentioned previously.)

DH-5 and EH-5 Machines are equipped with O-ring packing. Under normal conditions the only maintenance required for these O-rings is lubrication. If the O-rings should become excessively worn they should be replaced.

**NOTE: Avoid using petroleum-based lubricants.**

2. Advance boring bar until drilling tools may be attached.

3. Attach drilling tools to boring bar. If drilling tools to be used will not pass completely through the machine adapter to be used, attach the machine adapter before attaching the drilling tools (see instruction no. 5).

4. Apply a small amount of Mueller® cutting grease to the leading edges of the shell cutter and/or drill.

5. Attach proper size machine adapter to the body of the machine making sure that the body gasket or washer is in place and in good condition.

6. Retract boring bar to its rearmost position.

7. Attach drilling machine and machine adapter to the valve that is to be drilled through.

8. Open valve being used.

9. Advance boring until drill or pilot drill contacts the pipe to be drilled.

10. Retract boring bar a slight amount.

11. Adjust feed tube and yoke so that the yoke is engaged with the top of the friction collar on boring bar. Raise pivot arm of locking mechanism on side of yoke so that it is positioned under friction collar and lock in place with operating screw. Close bleeder located at bottom of the machine before drilling operation is begun.

12. Measure and mark the travel required to complete the drilling operation. (Mark the point on the body that the feed tube will reach when drilling is completed.)

13. **DRILL MAIN – POWER OPERATED METHOD USING H-604 AIR OR H-704 HYDRAULIC POWERED OPERATOR.**

The DH-5 and EH-5 Drilling Machines have been designed to permit the addition of a power operator. The power operator will drive the tools and provide automatic feed during the drilling operation.

**IMPORTANT:** When using H-604 air motor power operator, maintain pressure of 90psi. We recommend the use of a gage at the throttle to determine the actual pressure of air at the motor.

The gear case attaches to the machine by the means of two sockets. The inner or small socket drives the boring bar. The outer or large socket drives the feed yoke through a gear reduction as the boring bar is rotated. The resulting feed on the drill is .010” per revolution of the boring bar.

The operator takes the torque of the motor resulting from the drilling operation, so the motors are equipped with a squeeze-type trigger throttle. If for any reason a drill should stick, the motor can be shut off quickly.

a) Place the gear case and motor on the drilling machine aligning the sockets with the square shank on the boring bar and feed yoke. Socket which controls feed yoke should be closed and wing nut tightened securely.

b) Set position of air switch to give **clockwise** rotation of boring bar.
13A. DRILL MAIN – HAND OPERATED METHOD

Drill the hole by operating the ratchet handle clockwise and turning the feed tube and yoke clockwise a little at a time. Use a light, even feed at the start, then a heavier feed and finish with a light, even feed. Due to the balanced pressure design of these machines, the line pressure thrust load will not be transmitted to the boring bar. The special locking mechanism that locks the boring bar to the feed yoke prevents the drill from spiraling into the hole before the hole is completely drilled. To prevent over-feeding when drilling small holes and also when starting to drill larger holes, apply the feed by gripping the knurled section of the feed tube instead of the feed handles. This will apply a light, even feed. Feed handles should be used to apply a heavier feed.

NOTE: When nearing the completion of the cut, DO NOT over-feed or the cutting tools may be forced through before all the metal is drilled or cut out.

The EH-5 Machine is furnished with a combination ratchet and crank handle. When drilling small holes, the crank handle should be turned upward and rotated in continuous circles instead of ratcheting.

14. Continue drilling operation until pipe is drilled through completely. This can be determined by the feel of the feeding mechanism, the pull on the ratchet handle or by measuring the advance of the boring bar. If drilling is not completed, retract boring bar slightly and ratchet and feed slowly to remove the remaining metal a little at a time.

15. When drilling operation is completed, turn operating screw on locking mechanism counterclockwise to unlock pivot arm. Remove feed yoke from friction collar and retract boring bar to its rearmost position. Be sure that the drill or pilot drill clears the valve gate.

CAUTION: DO NOT reverse rotation of ratchet handle when retracting the boring bar.

16. Close valve being used. Open bleeder valve located at bottom of machine to bleed gas from machine before adapter and machine are removed from valve.

17. Remove drilling machine and machine adapter as a unit.

18. Advance boring bar and remove machine adapter and drilling tools from machine.

19. After being used, clean dirt and foreign material from machine and equipment. Lubricate machine and give drilling tools a light coat of oil to protect them from rust. When not in use, the machine and equipment furnished with each machine should be stored in the box furnished. The machines should be disassembled periodically, and the boring bar and machine body thoroughly cleaned both inside and out. By doing this, any grit, chips, or other foreign material that might have possibly accumulated on the boring bar or in the body of the machine may be detected and removed before any damage is done. An accumulation of foreign material on either the boring bar or inside the body will restrict the reverse travel of the boring bar.

SPECIAL NOTE: In general, the machines should be lubricated as described in instruction No. 1. However, due to extreme conditions in some areas (dust, sand, etc.) it may be advisable not to lubricate the feed sleeve or threaded ports of these machines since it would tend to increase the abrasive or wearing action. This procedure, of course, must be at the discretion of the operator.
TO ORDER: Specify Part Number and Part Name (including catalog number and model number of machine)

NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. Mueller Co. offers a machine repair service. Contact Mueller Customer Service Center for details.

*Order both parts when replacing either one.
NOTE: These illustrations are for parts identification only. DO NOT use these illustrations for assembly or disassembly of machine. Mueller Co. offers a machine repair service. Contact Mueller Customer Service Center for details.

TO ORDER: Specify Part Number and Part Name (including catalog number and model number of machine)