

**CONVENTIONAL PORTABLE ELECTRIC DRILLS
DESCRIPTION, CARE, USE
AND MAINTENANCE**

1. GENERAL

1.01 This section describes the care, use and maintenance of the standard 3/8 and 1/2 inch grounded frame electric drills. (1/4-inch electric drills are not standard.) It further provides information regarding the type of cordage to be used with each drill and the maximum distance allowable from the source of power.

1.02 This section is reissued to:

- Revise title.
- Clarify that 1/4-inch electric drills are not standard.
- Clarify text to define type of electric drills included.
- Re-word method of using and attaching chuck key.

2. DESCRIPTION

2.01 Table 1 shows data for the types of conventional grounded frame electric drills now in use.

TABLE 1

Type Drill	Volts AC/DC	AMPS		Chuck Size	Speed No. Load	Cord Length
		Full Load	Chuck Size			
B	115	2	3/8"	700 rpm	25 Ft.	
C	115	4	1/2"	600 rpm	7 Ft.	
Heavy Duty	115	5 or 6	1/2"	450 rpm	7 Ft.	

2.02 Trigger switches should be of the non-locking type. If they are not, return the drill to Western Electric to have the locking pin removed.

2.03 All C and heavy duty drills should have a switch to reverse the direction of the drill bit.

2.04 All 3/8-inch drills have a pistol-grip. The C and heavy duty types have a spade handle and a removable tubular handle which can be installed on either side of the drill.

2.05 All conventional electric drills shall be equipped with 3 wire cords and 3 pronged plugs having a "U" shaped grounding blade. One conductor (green) connects the grounding blade of the plug to the frame of the drill.

3. CARE

3.01 Use only the chuck key to tighten or loosen the chuck. No other tool should be used. Hand tighten the drill chuck prior to tightening with chuck key.

3.02 Use the key in all three holes of the chuck body when tightening it.

3.03 Use the chuck key holder or any method that will not result in damage to the cord insulation.

3.04 Keep the outside of the housing clean.

3.05 Keep the ventilating slots free of dirt.

3.06 When not in use keep drills in a carrying case or safely stored in a designated location.

3.07 NEVER carry a drill by the cord — use the handle.

3.08 Occasionally check the drill case screws for tightness.

4. USE

4.01 The 3/8 inch drill is usually used by the installation, maintenance, and central office forces. It is used to drill small holes in brick, masonry, metal, or wood. It is not designed for continuous running for long periods of time.

4.02 Use the C or other approved heavy duty electric drills, for heavy duty continuous work operations.

5. EXTENSION CORDS

5.01 All extension cords must be 3-conductor type SJO cordage with a "U" grounding-type plug cap on one end and a "U" grounding-type connector body on the other.

5.02 The standard C extension cord is adequate for one B drill for a maximum of 200 feet.

5.03 Where it is feasible to use short lengths of extension cords, the D extension cord should be used with the heavy duty type drills.

5.04 When long extensions are needed, use the three conductor KS-19167 cordage in 100 foot increments.

5.05 For C or Heavy Duty Drills, use gauges of cordage as follows:

<u>GAUGE</u>	<u>MAXIMUM LENGTH</u>	<u>NUMBER OF HEAVY DUTY DRILLS</u>
14	200 feet	1 or 2
12	400 feet	1 or 2

6. USE OF TEMPORARY COMMERCIAL A.C. POWER SUPPLY

6.01 Before connecting to the temporary commercial power supply, use the B-voltage tester to test for voltage on the ground wire, meter box or conduit. See Section 620-105-010.

6.02 Check to be sure that the ground wire is connected to a suitable ground. The clamp is normally located about 6 inches above the ground line on a driven pipe or rod.

6.03 At the temporary service pole, the standard fused "Y" connector shall be plugged directly into a 115 to 125 volt, 20 ampere outlet. DO NOT connect to adapters, extension cords, or "Y"s owned by others.

7. INSPECTION AND MAINTENANCE

7.01 Before using, inspect the drill and extension cords for any damage to the insulation or connectors.

7.02 Do not make temporary repairs of any kind. Never tape over defects in the cordage. Return damaged cords to the Western Electric Company for repairs.

7.03 A supervisor or a designated person should make the following tests monthly with a KS 16990 — List 1 or the installer's Insulation Test set.

(a) Test the continuity of the ground (green) conductor of the cord from the ground blade of the plug to the case of the drill.

(b) Test the black and white cord wires to assure that neither is crossed with the case of the drill. Operate the trigger switch when making this test.

7.04 Return any drill that fails either of the above tests to the Western Electric Company for repair.

8. SAFETY PRECAUTIONS

8.01 Always wear safety glasses.

8.02 Hold the drill so the hands will not be pinched in the event the bit binds in the hole or hits a knot or nail.

8.03 Do not push the bit into the wood, let the lead screw pull it.

8.04 Keep clear of all conduits, and pipes.

8.05 Disconnect the "Y" from the power source when replacing a fuse.

8.06 Be careful that loose clothing does not become entangled in the turning drill bit.

8.07 Always have a firm, dry footing when using portable electric tools.