

MASONRY DRILLS AND DRILL HOLDERS DESCRIPTION AND USE

1. GENERAL

- 1.01 This practice provides the description of masonry drills and drill holders which are used to drill holes in masonry for the anchoring devices that secure the various building attachments associated with drop and block wiring, house and block cables, and underground cables.

2. DESCRIPTION

- 2.01 The drill holder consists of a length of round tool steel with a tapered socket in one end to accommodate the drill shank and a beveled striking head on the other end. A soft rubber grip is molded around the holder to facilitate holding and turning during the hand drilling operations. An elongated hole located in the socket end is for inserting the ejector to remove the drill from the socket. See Figure 1.

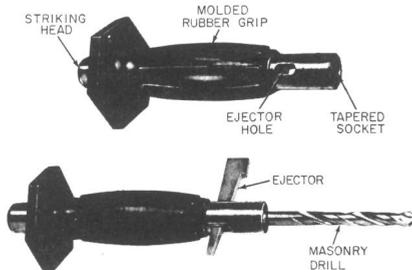


FIGURE 1. Drill Holder

- 2.02 The masonry drill has a spiral fluting similar to that in twist drills used for drilling metal. The shank of the drill is tapered to fit the socket of the drill holder. See Figure 2.

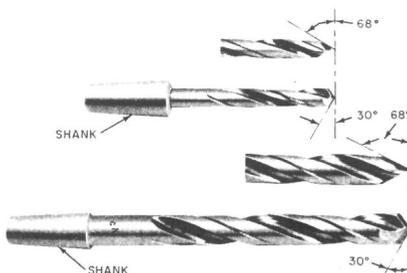


FIGURE 2. Masonry Drills

3. PRECAUTIONS

- 3.01 Eye protection must be worn during drilling operations in masonry to protect the eyes from flying chips.
- 3.02 Protective gloves should be worn to protect the hands from flying particles of metal or masonry caused by the drilling.
- 3.03 Before performing any drilling operations in manholes, the procedures outlined in CTSP 490-150-100 must be performed.
- 3.04 Do not use a drill holder with a badly mushroomed head. Refer to paragraph 5 to correct this condition.

4. USE

- 4.01 When drilling in masonry walls, apply light hammer blows and turn the drill slightly between blows for best result. This procedure will require less physical effort and results in faster and cleaner hole drilling.
- 4.02 Masonry drills give best results when in good condition. If cutting edges are dull, the drilling will be slow and laborious. If cutting edges are not of equal length or the point is off center, the drill will jam and produce a hole larger than the drill size.
- 4.03 Masonry drills clean the holes while drilling and when removed, the anchors or expansion shields can be inserted.
- 4.04 To remove a masonry drill from the drill holder, insert the small end of the ejector into the elongated hole at the socket end of the holder so the flat side is in contact with the end of the drill. Push the ejector into the hole until it is seated handtight against the shank of the drill in the socket. A sharp tap with the drilling hammer is usually sufficient to unseat the drill in the socket for easy removal. Direct the point of the drill downward to prevent injury in case the drill is ejected too sharply.

5. MAINTENANCE

- 5.01 Each craftsman should assume responsibility for the working condition of the drill holder and drills assigned to him.
- 5.02 The striking head of the drill holder is made purposely softer than the head of the drilling hammer; therefore, with continued use it will spread over or mushroom. When this occurs, the mushroomed edges may be removed and the head redressed on an electric grinder.

CAUTION: Eye protection must be worn when using an electric grinder.

- 5.03 When the mushrooming begins to show signs of cracking, the holder is considered unsafe for further use and should be replaced.

- 5.04 The following defects impair the drilling efficiency of masonry drills:
- a. Dull or badly nicked cutting edges.
 - b. Cutting edges of unequal length and the angle formed with the axis of the drill not uniform.
 - c. Bent drills.
 - d. Broken points.
 - e. Diameter reduced by wear to the point where the drilled hole is too small for anchor.
- 5.05 Dull or unequal length cutting edges may be restored to efficiency on an electric grinder. Maintain the same angle on the point as originally sharpened. See Figure 2. For all other defects, the drills should be replaced in accordance with local procedures.