

## GDT 27

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### A. Scope

For a complete list of GDTs, see the Table of Contents.

Use this test method of test both in the laboratory and in the field for determining consistency of concrete.

**NOTE: Do not use this test for nonplastic and noncohesive concrete.**

### B. Apparatus

The apparatus consists of the following:

1. Mold (see [Figure 27-1](#)): Form the test specimen in a mold made of metal not thinner than No.16 (1.66 mm) gage and not readily corroded by the cement paste. The mold's form should have a lateral surface of the frustum of a cone with the base 8 in (200 mm) diameter, the top 4 in (100 mm) diameter, and the height 12 in (300 mm).  
Ensure the base and the top are open and parallel to each other and at right angles to the axis of the cone. The mold must have foot pieces and handles (WC-4).
2. Tamping Rod: Use a round, straight steel rod, 5/8 in (16 mm) diameter, approximately 24 in (600 mm) long with 1 end rounded to a hemispherical tip that is 5/8 in (16 mm) diameter (WR-7).
3. Scoop: (WS-03)
4. Measuring Device: Use a ruler or other measure at least 12 in (300 mm) long, graduated in inches (millimeters).

### C. Sample Size and Preparation

Obtain the sample of freshly mixed concrete according to [GSP 17](#).

### D. Procedures

**NOTE: Complete the entire test without interruption, from filling the mold through removing the mold, within 2-1/2 minutes.**

1. Dampen the mold and place it on a flat, moist, nonabsorbent, rigid surface.
2. From the sample of concrete obtained as described in [Sample Size and Preparation](#), fill the mold immediately in three layers, each approximately 1/3 the volume of the mold.
3. In placing each scoop full of concrete, move the scoop around the top edge of the mold as the concrete slides from it. This will ensure symmetrical distribution of concrete within the mold.
4. Rod each layer 25 strokes with the tamping rod.
  - a. Distribute the strokes in a uniform manner over the cross section of the mold.
  - b. Ensure each stroke penetrates the underlying layer.
  - c. Rod the bottom layer throughout its depth.
5. After rodding the top layer, strike off the surface of the concrete with the tamping rod in a screeding motion so that the mold is exactly filled.
6. Remove the mold immediately from the concrete by raising it carefully in a vertical direction. Steadily lift the mold with no lateral or torsional motion.
7. Immediately measure the slump. Measure the height difference between the top of the mold and the displaced original center of the top surface of the specimen.  
If part of the specimen has fallen away or sheared from the mass, disregard the test. Start a new test on another portion of the sample.
8. Record the slump to the nearest 1/4 in (5 mm) of subsidence of the specimen during the test:  
Slump = 12 in (300 mm) – (the inches (millimeters) of height after subsidence)

**E. Calculations**

No calculations are required for this test.

**F. Report**

Report the slump on Form 319 and Form 525 to the nearest 1/4 in. (5 mm).

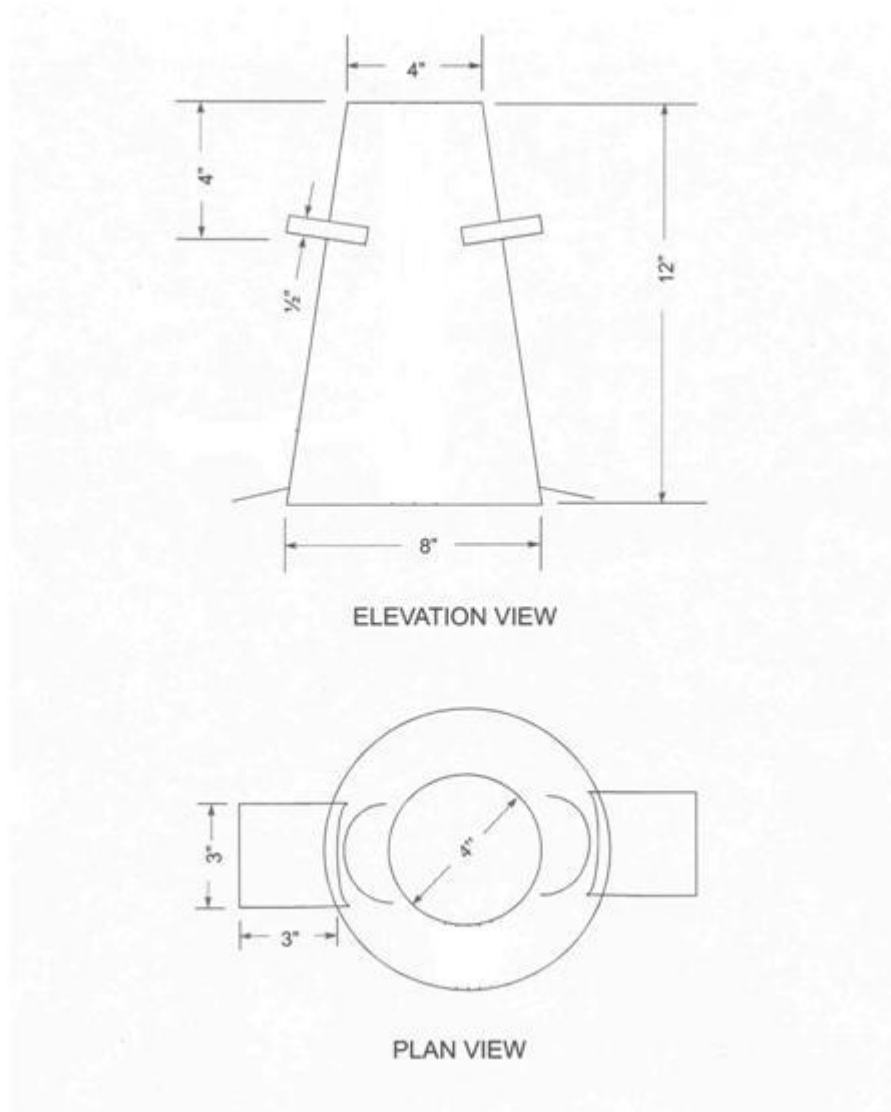


Figure 27-1