

**706.3** Horizontal drainage lines connecting with other horizontal drainage lines shall enter through wye branches equal to 0.8 radian (45 degrees), combination wye and 1/8 bend branches, or other approved fittings of equivalent sweep.

**706.4** Vertical drainage lines connecting with horizontal drainage lines shall enter through wye branches equal to 0.8 radian (45 degrees), combination wye and 1/8 bend branches, or other approved fittings of equivalent sweep. Branches or offsets equal to 1.1 radian (60 degrees) shall be permitted to be used only when installed in a true vertical position.

#### **707.0 Cleanouts.**

**707.1** Each cleanout fitting shall consist of an approved plug and shall be not less in size than as specified in Table 7-5. Plugs shall have raised square heads or approved countersunk rectangular slots.

**707.2** Cleanouts shall be designed to be gas- and water-tight.

**707.3** Each horizontal drainage pipe shall be provided with a cleanout at its upper terminal, and each run of piping exceeding 30m (100 ft.) in total developed length, shall be provided with a cleanout for each 30m (100 ft.), or fraction thereof, in length of such piping. An additional clean-out shall be provided in a drainage line for each aggregate horizontal change of direction exceeding 2.4 radian (135 degrees).

##### **Exceptions:**

- (1) Cleanouts shall be permitted to be omitted on a horizontal drain line less than 1.5m (5 ft.) in length, unless such line is serving sinks or urinals.
- (2) Cleanouts shall be permitted to be omitted on any horizontal drainage pipe installed on a slope, equal to 1.3 radian (72 degrees) or less from the vertical angle (1/5 bend).
- (3) Excepting the building drain and its horizontal branches, a cleanout shall not be required on any pipe or piping that is above the floor level of the lowest floor of the building.
- (4) An approved type of two-way cleanout fitting, installed inside the building wall near the connection between the building drain and the building sewer or installed outside of a building at the lower end of a shall be permitted to be substituted for an upper terminal cleanout.

**707.4** Each cleanout shall be installed so that it opens to allow cleaning in the direction of flow of the soil or waste or at right angles thereto and, except in the

case of wye branch and end-of-line cleanouts, shall be installed vertically above the flow line of the pipe.

**707.5** Each cleanout extension shall be considered as drainage piping and each cleanout extension equal to 1.6 radian (90 degrees) shall be extended from a wye-type fitting or other approved fitting of equivalent sweep.

**707.6** Each cleanout for an interceptor shall be outside of such interceptor.

**707.7** Each cleanout, unless installed under an approved cover plate, shall be above grade, readily accessible, and so located as to serve the purpose for which it is intended. Cleanouts located under cover plates shall be so installed as to provide the clearances and accessibility required by this section.

**707.8** Each cleanout in piping of 50mm (2 in.) or less in size shall be so installed that there is a clearance of not less than 30cm (12 in.) in front of the cleanout. Cleanouts in piping exceeding 50mm (2 in.) shall have a clearance of not less than 50cm (18 in.) in front of the cleanout. Cleanouts in under-floor piping shall be extended to or above the finished floor or shall be extended outside of the building when there is less than 50cm (18 in.) vertical overall, allowing for obstructions such as ducts, beams, and piping, and 80cm (30 in.) of horizontal clearance from the means of access to such cleanout. No under-floor cleanout shall be located exceeding 6m (20 ft.) from an access door, trap door, or crawl hole.

**707.9** Cleanouts shall be provided for pressure drainage systems as classified under Section 710.7.

**707.10** Countersunk cleanout plugs shall be installed where raised heads cause a hazard.

**707.11** Cleanouts for trap arms shall be installed in accordance with Section 1002.3.

#### **708.0 Grade of Horizontal Drainage Piping.**

Horizontal drainage piping shall be run in practical alignment and a uniform slope of not less than 20mm/m (1/4 in./ft.) or 2 percent toward the point of disposal, provided that, where it is impractical due to the depth of the street sewer or to the structural features or to the arrangement of any building or structure to obtain a slope of 20mm/m (1/4

**TABLE 7-5  
Cleanouts**

Size of Pipe mm	Size of Cleanout mm	Threads (per 25mm)
40	40	11
50	40	11
65	65	8
80	65	8
100 & larger	90	8

SI: 1mm = 0.04 in.