ADJUSTABLE FLOOR-LEVEL CLEANOUTS TECHNICAL DATA

SMITH®
CUSTOMER DRIVEN

HOW TO SELECT A FLOOR CLEANOUT

To make the proper "Cleanout Assembly" selection, the following steps are recommended.

SELECTION OF TOP	SELECTION OF BODY	SELECTION OF CLOSURE PLUG
Shape		
Style		
Traffic Function	Outlet Type	Ease Of Removal
Material	Body Type	Type Of Seal

SELECTION OF TOP

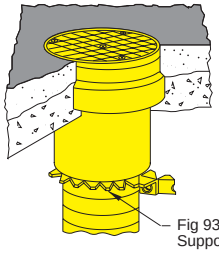


Fig. 1 Round Nickel Bronze Top

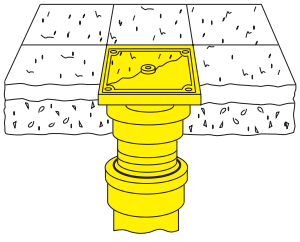


Fig. 2 Square Nickel Bronze Top with Tile Recess

Shape - The first step is to select a top which is compatible with the surrounding area. The exposed tops of floor-level cleanouts are considered as pieces of architectural trim. All Smith tops are carefully engineered for easy, fast and safe cover removal for quick access to the closure plug. Cleanout tops should be of the correct shape to blend with the surrounding floor and wall area.

A round top (Fig. 1) is easiest to orient in most floors since it will not conflict with most floor designs or require alignment to adjacent walls.

The square nickel bronze top (Fig. 2) is particularly adaptable to floors that are finished with materials of a square or straight line pattern.

Style - All floors in areas or rooms which have finished decorative floors and walls, will require finished floor cleanouts. Examples are offices, hospitals, banks, showrooms and many modern manufacturing areas.

A regular secured nickel bronze scoriated top (Fig. 1) is recommended for most finished floor areas. Nickel bronze non-skid tops blend with most finished floors. In floors where a minimum amount of metal is desired to be shown, cleanout tops are available with a recess to receive the floor materials. Tops are available with a shallow depression to receive vinyl or similar types of floor tile (Fig. 2) or with a lock-in design to receive terrazzo or ceramic tile fill (Fig. 3). All three types of finished floor tops are available in round or square patterns.

Most floors are considered finished floors and nickel bronze tops are recommended; however, there are some areas such as boiler rooms, warehouses and heavy manufacturing areas which may use heavy duty, cast iron tops. In these areas, strength and utility are of prime importance and beauty is a secondary consideration.

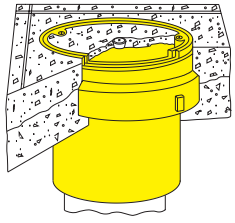


Fig. 3 Terrazzo Top

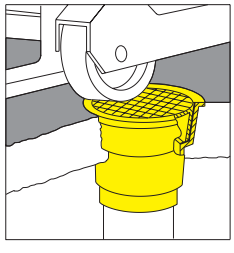


Fig. 4 Tractor-Type Heavy Duty Covers

Traffic Function - The top specified must be strong enough to safely carry the loads of anticipated traffic. The regular Smith nickel bronze top is a heavy duty design and can be used for all finished floor areas subject to foot and light vehicular traffic. For finished floors, where heavy traffic is anticipated, such as equipment showrooms, convention areas, etc., Smith offers heavy duty nickel bronze tops. For unfinished floors, subject to heavy vehicular traffic, round, heavy duty cast iron tops should be specified. Smith has available cast iron tops in heavy duty design and non-tilt tractor-type covers. The tractor-type cover (Fig. 4) cannot be tilted out of the cleanout top due to heavy vehicular traffic moving over it.

Material - For most finished floors, the Smith scoriated non-skid nickel bronze tops are recommended. Nickel bronze has excellent corrosion resistant qualities, is extremely serviceable, will not discolor and has an attractive surface. Nickel bronze tops will not rust stain the surrounding finished floor area as cast iron tops sometimes do. The "scuff-buff" action of foot traffic passing over a nickel bronze top will actually add to its appearance, giving it a soft silvery patina. Tops are available in special polished cast bronze, for use where tops must blend with other architectural trim.

SELECTION OF BODY

Outlet Type - Bodies which are used with adjustable floor-level cleanout assemblies are available with four types of outlet connections, spigot, Inside Caulk, NO-HUB and Speedi-Set which can be effectively used, depending on the type of connection desired for piping used in the system and compliance with plumbing code stipulations.

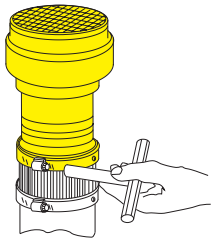


Fig. 5 NO-HUB Outlet Y

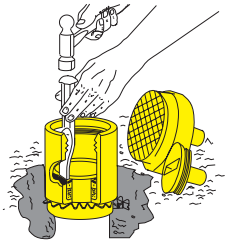


Fig. 6 Inside Caulk Outlet C

Spigot outlet bodies (Fig. 5) are provided with cut-off grooves for added adjustment. They are compatible with the "NO-HUB" joining method. Inside caulk outlet bodies (Fig. 6) are desirable when outside access to the joint is cramped or inaccessible. The inside caulk body also permits the use of bald end soil pipe pieces, thus effectively using random lengths of soil pipe without hub. Another advantage is that during the rough-in stage, odd lengths can be run up above the cut-off length and left until later. When cut-off elevation is finally established, these can then be snap-cut and the cleanout body caulked in place.

"Speedi-Set" cleanouts (Fig. 7) are the easiest type to install. The "Speedi-Set" incorporates an inverted hub, and "Speedi-Seal"® Neoprene Gasket, which will slide over a NO-HUB, Service Weight or Extra Heavy bald end soil pipe stub. Tops from Fig. 4020 thru 4285 series can be used with a "Speedi-Set" body to achieve the desired cleanout assembly.

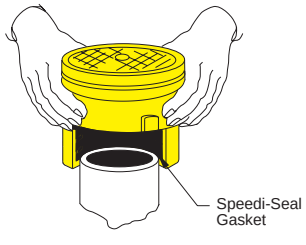


Fig. 7 Speedi-Set Body L

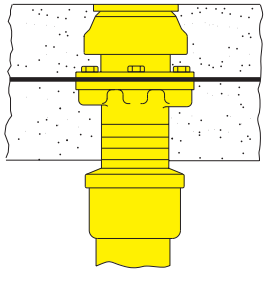


Fig. 8 With Flange -F and Flashing Clamp -C

Body Type - Occasionally cleanouts must be installed in areas where a continuous waterproof membrane is used. All variations of Smith Adjustable Floor-Level Cleanouts can be furnished with an integrally cast flange with a flashing clamp (Fig. 8). However, it must be noted that seepage control cannot be provided since cleanouts must be gas tight units. A flange is also desirable as it rigidly anchors the cleanout body in the concrete slab.

SELECTION OF CLOSURE PLUG

Ease of Removal - All Smith cleanout closures feature extra heavy plugs. The Smith countersunk type of design is regularly furnished and recommended. This type of plug has a slot sized to receive a piece of 1/2" bar stock, which eliminates the need for any special tools or wrenches (Fig. 9).

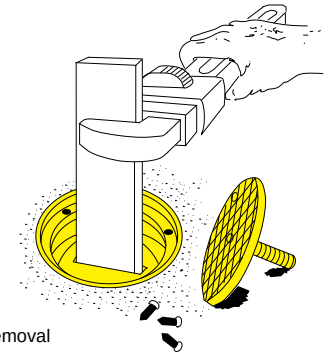


Fig. 9 Slotted Plug Removal

Type of Seal - All closures are gas tight and water tight. The gasket seal closure (Fig. 10) features a seal which is formed by the shoulder of the plug and the gasket seal. The taper thread type (Fig. 11) relies on the make up of the thread for the seal.

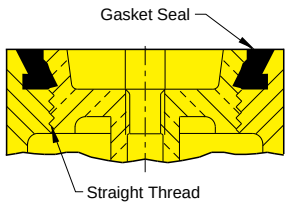


Fig. 10 Gasket Seal Closure

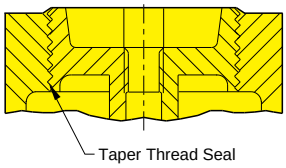


Fig. 11 Taper Thread Closure

FEATURES OF THE "TWIS-TO-FLOOR"® DESIGN

Smith engineers have designed a floor-level adjustable cleanout which features the "Twis-To-Floor" ® concept (Fig. 12).

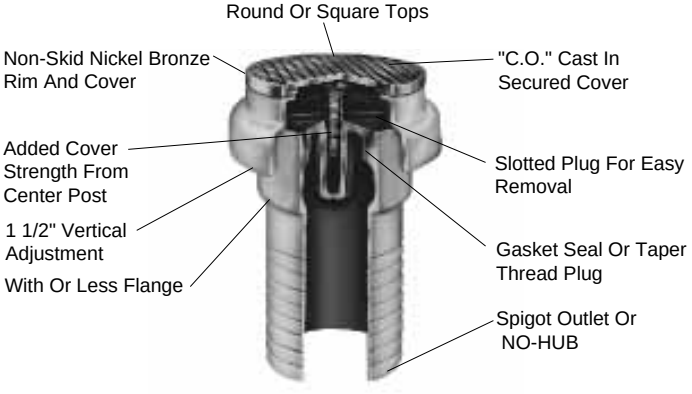


Fig. 12 The Twis-To-Floor® Cleanout

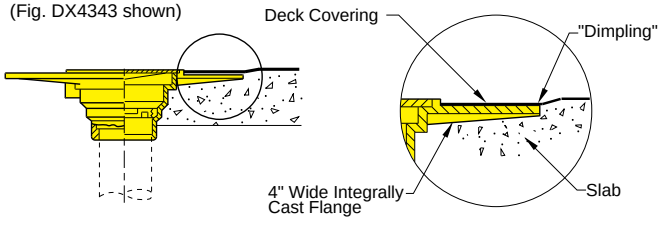
WIDE FLANGE CLEANOUTS

Prefix DX - Designates a wide flange that can be furnished on certain Smith Cleanouts. This flange receives and serves as a bonding base for the membranes and coatings of waterproof floor covering systems. These coverings consist of thin coatings which are applied in a series of trowel coats. The covering forms its own membrane, flashing and durable traffic surface. The wide DX flange is regularly furnished 4" in width. The usual covering is approximately 3/16" thick and may be applied over many subsurfaces such as concrete, gypsum or wood decks. Such coverings are particularly adaptable to areaways, plazas, floors and corridors.

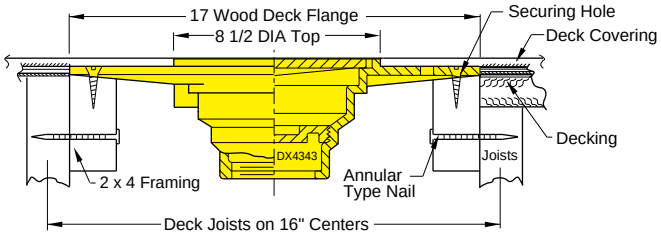
When DX flange is required on cleanouts other than those shown in this section, the prefix DX must be used with the figure number and the lip dimension must be specified. If waterproof deck covering thickness is greater (or less) than 3/16, the lip dimension must be specified. Cleanout body should be set to compensate for the variation in thickness. Cleanout body should be set low enough to permit "dimpling" of area surrounding drain.

Illustrated is a typical waterproof traffic bearing floor covering installation and an example of the "dimpling" effect.

(Fig. DX4343 shown)



WOOD DECK INSTALLATION



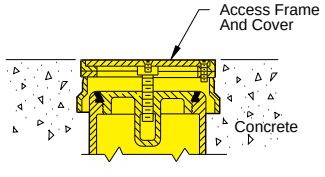
NOTE: For Concrete Deck Installation See Pg. 1-04

CARPETED FLOOR CLEANOUTS

Suffix -X - Carpet Clamping Frame (4020, 4025 and 4031 Series only). Adjustable cleanout assembly is installed with nickel bronze frame and secured cover flush with concrete slab (Fig. 13). This serves as a functional, safe, "Flush-with-Floor" cleanout, during period prior to carpet installation. Carpet is cut to fit around lower cleanout frame and cover is removed. Carpet is clamped against slab with "Carpet Clamping Frame." Cover is then installed and secured in clamping frame (Fig. 14).

INSTALLATION

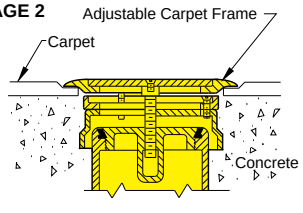
STAGE 1



NOTE: Cover installed in lower frame at this stage.

Fig. 13

STAGE 2



NOTE: Cover removed from stage No. 1 and used with carpet frame.

Fig. 14

Suffix -Y - Carpet cleanout Marker (Fig. 15) - Used with 4020 and 4025 series cleanouts, 1 1/2" diameter stainless steel marker serves as cleanout locator in carpeted floors. When access to drain line is required, marker locates cleanout. Carpet over cleanout is cut for accessibility to closure plug. After drain line is cleaned, carpet is replaced and marker re-installed.

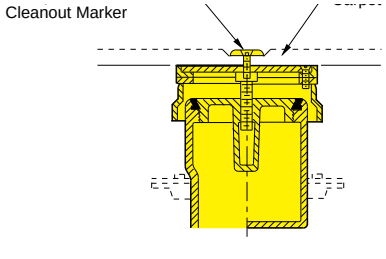


Fig. 15