



ADJUSTABLE FLOOR-LEVEL CLEANOUTS TECHNICAL DATA

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 Material	Outlet Type Body Type	Ease Of Removal Type Of Seal

SELECTION OF TOP

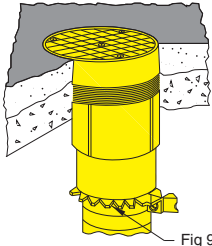


Fig. 1 Round Nickel Bronze Top

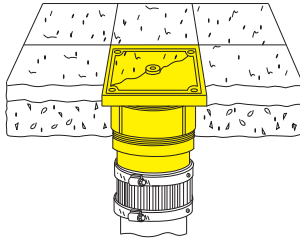


Fig. 2 Square Nickel Bronze Top with Tile Recess

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.

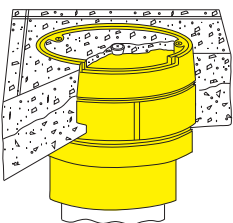


Fig. 3 Terrazzo Top



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 offers 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 or 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

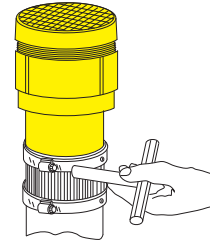


Fig. 5 NO-HUB Outlet Y stipulations.

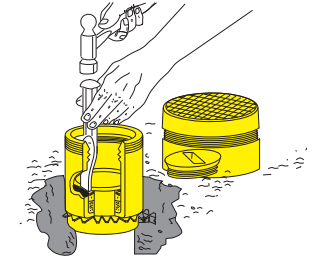


Fig. 6 Inside Caulk Outlet C

NO-HUB outlet bodies (Fig. 5) are provided with a cut-off groove for added adjustment. 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 Neoprene Gasket, will slide over a NO-HUB, service weight or extra heavy bald end soil pipe stub. Tops from Fig. 4020 thru 4250 series can be used with a Speedi-Set body to achieve the desired cleanout assembly.

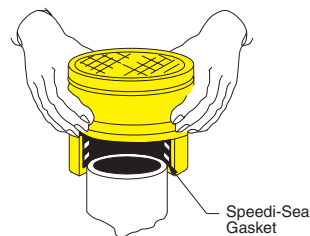


Fig. 7 Speedi-Set Body L

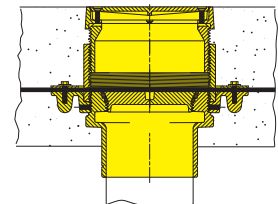


Fig. 8 With Flange -F and Flashing Clamp -C

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).

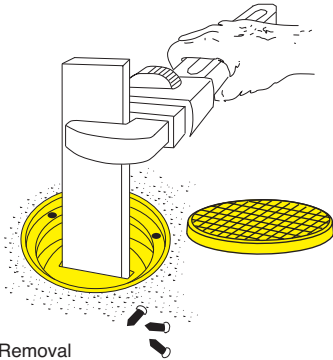


Fig. 9 Slotted Plug Removal

Type of Seal - All closures are gas-tight and watertight. 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.

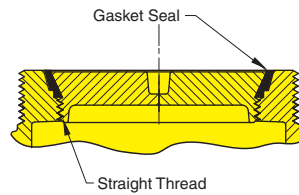


Fig. 10 Gasket Seal Closure

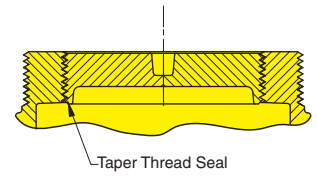


Fig. 11 Taper Thread Closure

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

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

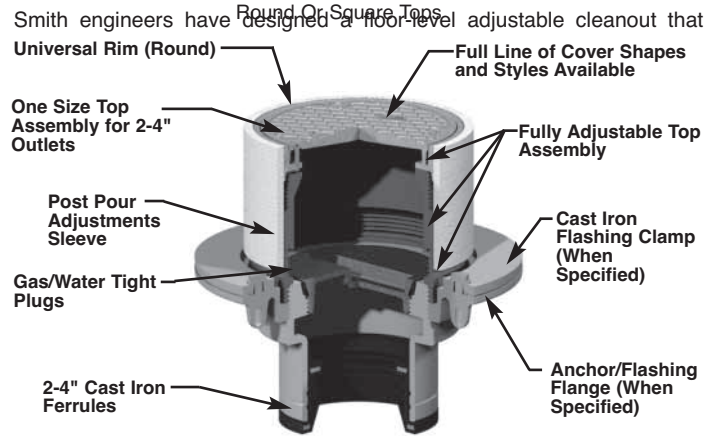
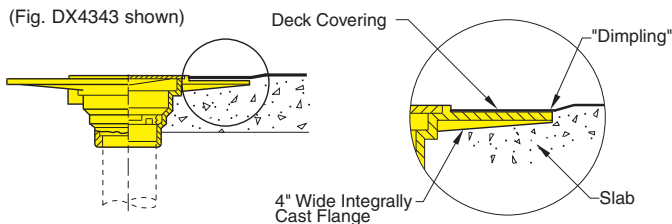


Fig. 12 The Twis-To-Floor® Cleanout

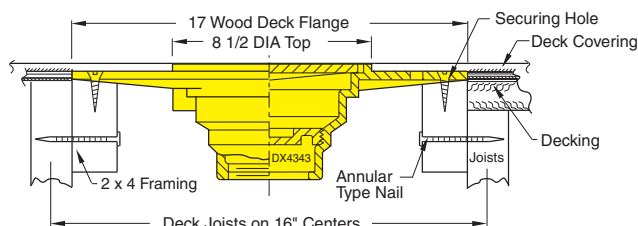
WIDE FLANGE CLEANOUTS

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 a 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.



WOOD DECK INSTALLATION



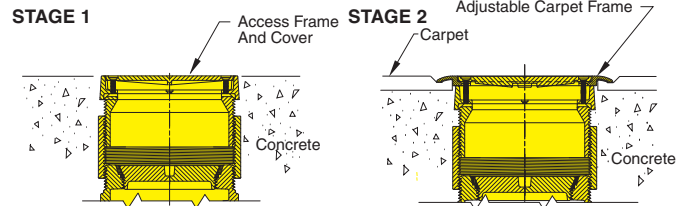
NOTE: For Concrete Deck Installation See Pg. 1-04

features the "Twis-To-Floor"® concept (Fig. 12).

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

INSTALLATION



NOTE: Cover installed in lower frame at this stage. NOTE: Cover removed from stage No. 1 and used with carpet frame.

removed. Carpet is clamped against slab with "Carpet Clamping Frame." Cover is then installed and secured in clamping 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

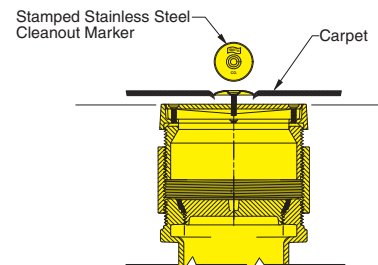


Fig. 15

ACCESS COVERS TECHNICAL DATA



In researching and developing access covers, Smith design engineers recognized that modern buildings require access through walls, floors and ceilings in order to inspect and maintain concealed items such as valves, cleanout plugs, controls and other equipment. To meet the demands and requirements of this construction necessity, the designers have gone the extra mile to produce access covers, that include the following design features:

- A specific design for each requirement
- Accessibility
- Strength and appearance
- Safety

WALL ACCESS COVERS

Wall Access Covers - Cleanout plugs are installed in many concealed vertical stacks, and access to these plugs can be provided by wall access covers. Wall access covers do not have frames and are installed in a "face-of-wall" type application. After the finished wall is completed, selection of proper size is determined by the amount of area to be covered. Covers are secured by means of a center screw which is threaded into a tapping in the head of the plug. Shallow covers are suitable for most installations (Fig. 1). Wall access covers can be used for any type of wall, but

Fig. 4532

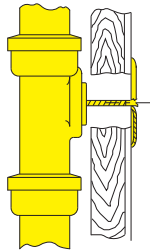


Fig. 1
Shallow Cover

should never be used on floors.

Wall and Ceiling Access Covers with Frames - Frame selection is determined first by the type of wall or ceiling construction and secondly by

Fig. 4553

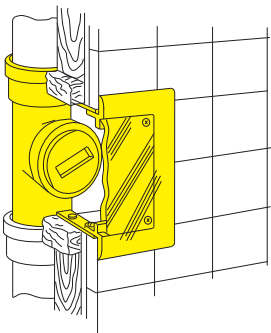


Fig. 2
Face-Of-Wall

Fig. 4558

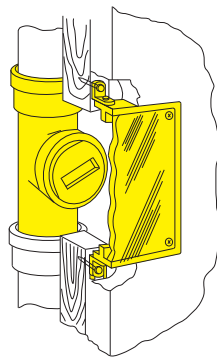


Fig. 3
Flush-With-Wall

the wall surface.

Tile, brick, block or wallboard require a face flange to hide the rough wall opening. This is known as the "Face-of-Wall" type (Fig. 2). Wet walls such as terrazzo and concrete require a plaster ground flange to hold the frame

solidly in the wall. A face flange is undesirable for this application since it would create a roughing problem. This type is called the "Flush-

with-Wall" design (Fig. 3). Wall covers with frames can be used to gain access to concealed cleanout closures, valves, controls or special devices.

Selection of Materials - Most Smith wall access covers with frames are regularly furnished in chrome plated bronze because highly finished walls such as tile and terrazzo are aesthetically improved by the appearance of this finish. This finish is also highly resistant to tarnishing and corrosion and requires little attention to maintain its appearance.

Polished bronze and polished nickel bronze are also available to match the decor of other architectural trim. Selected access covers and boxes are available in prime coated steel for painted walls so that these may be painted the same color as the surrounding wall, presenting an unobtrusive appearance.

FLOOR ACCESS COVERS

When selecting floor access covers, the following points must be considered:

- Selection of Top Shape
- Selection of Top Type
- Selection for Traffic Load
- Selection of Material

Selection of Top Shape - The top shape selected, either round, square or rectangular, is determined by the floor pattern surrounding the frame. In general, round scoriated covers will blend with most poured floors. Square and rectangular tops should be used where the floor pattern is a straight line design such as tile.

Selection of Top Type - For general use the floor access covers are secured with countersunk screws. Where required, these screws may be of the vandal proof variety and should be specified by using the suffix -U. Some floor access covers are available with recess for either floor tile or terrazzo. These covers should be used when it is desired to show a minimum of metal in the finished floor.

Selection for Traffic Load - All floor access covers are subject to some sort of traffic. For most indoor areas which are subject to foot and light traffic, the regular scoriated nickel bronze top is recommended.

Selection of Material - Since most floor areas are of the finished type, polished scoriated nickel bronze tops are recommended. In areas where blending with surrounding architectural trim is a requirement, polished bronze is available. CHROME PLATED BRONZE ACCESS COVERS AND FRAMES ARE NEVER RECOMMENDED FOR FLOOR APPLICA-

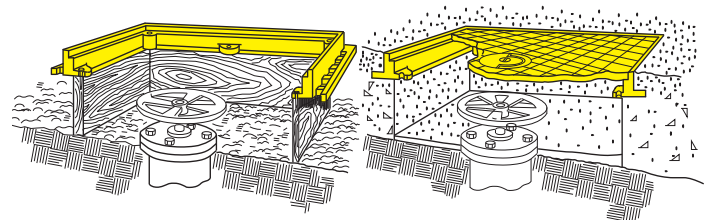


Fig. 4
Before Pour

Fig. 5
After Pour

TIONS. For unfinished areas, heavy duty cast iron tops are recommended.

Particular attention should be given to the Smith 4910 Series of square and rectangular frames with secured covers (Fig. 4). These are cast in aluminum. The great variety of shapes and sizes available in these covers makes them particularly suitable for all sorts of access applications in both