

# ENGINEERING COMMUNIQUÉ

JAY R. SMITH MFG. CO.® ♦ JULY, 2013 ♦ VOLUME 3-ISSUE 3



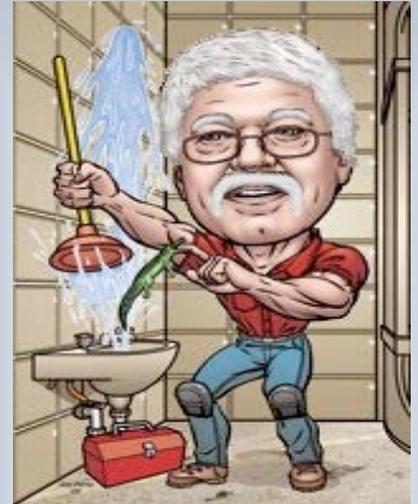
**From:  
THE SMITH ENGINEERING GROUP**

## **PRODUCT ALERT: Type 2 & Type 2M Couplings for use with Floor Mounted Back Outlet Bowls.**

The back outlet floor mounted toilet bowl has become popular with architects and engineering specifiers for hospitals and related projects. The key reason is apprehension over using off the floor (wall hung) bowls due to the potential use by bariatric patients. Since the load on the bowl is transferred directly to the floor, there is less chance of related failure. Also, by using a back outlet bowl (versus a floor mounted, bottom outlet), the piping is kept above the floor and in the pipe chase eliminating additional holes in the floor. Usually a figure number 0674Y stack fitting is used with the back outlet bowls. The 0674Y requires a type 2 coupling and gasket. The type 2 coupling has 'ears' on the right and left side with a vertical slot 6" on center. This aligns with the holes in the back of the bowl and the threaded rod is extended through the bowl, gasket, coupling and is tightened to achieve a watertight connection.

The type 2 coupling is oblong in shape but the discharge area and threaded portion is concentric for proper alignment to the horn on the rear of the bowl. The oblong shape with a 1" vertical slots in the 'ears' allows for a ½" adjustment up or down for variation in the finished floor elevation. This is an adjustment the competitors do not offer. Please see attached submittal.

Most times when a fixture manufacturer makes a change to a fixture whether it is a lavatory, urinal, water closet and so forth, we do not learn of it until the fixture is installed in the field and there is a problem.



## **TYPE 2 COUPLING & 0200 SERIES WC SUPPORT**

In conjunction with the discussion regarding floor mounted back outlet bowls, type 2 couplings and 0674Y stack fittings, it has also become popular to use the regular 0200 series WC support with the floor mounted back outlet bowls. In some designs/layout, the use of a horizontal adjustable fitting is required to keep the piping above the floor in a horizontal battery. The 0200 series can be supplied with a type 2 coupling by ordering an 0100N03KP-2, 0100N03KP-2-M58, 0100N08KP-2 or 0100N08KP-2-M58 nipple kit.

Recently it was brought to our attention, one of the bowl manufacturers had redesigned the rear of their back outlet bowl. An oval (void) was cut out of the bottom below the outlet connection sealing surface. See photo 1. This can create a possible problem if the installer does not rough the outlet at the exact rough-in dimension of 4" for this particular bowl. Variations in the finished floor elevation created by the tile installation can skew the rough-in dimension allowing it to drop into the void area where a leak may potentially occur. The presence of this void reduces the sealing surface by approximately 5/8 inch.

The impregnated felt gasket has been regularly furnished for 60 years with immeasurable success. After extensive testing, it is our confirmed determination that a neoprene type gasket is better suited for this situation where the sealing surface has been reduced and if the actual field roughing-in dimension is less than the 4" established by the fixture manufacturer. Therefore, the impregnated felt gasket will be replaced by a molded neoprene gasket.

It is our interpretation of the vitreous china fixture standard that the outlet horn dimensions shall be concentric. This was confirmed by a testing technician at one of the large third party testing laboratories. The horn dimensions must be concentric for proper mating to the nipple/coupling.

The sealing surface must be adequate around the horn to compensate for roughing-in dimensions above or below the recommended roughing-in dimensions upon field situations such as the aforementioned variation in the floor tile thickness.

Upon investigation, we found no other bowl manufacturer had modified the back of their bowl at this time.

The purpose of this information is to alert you to the potential of a field complaint for this situation and the remedy if it is encountered.



PHOTO 1 – AMER STANDARD



PHOTO 2 – KOHLER 4386



PHOTO 3 - CRANE



PHOTO 4 – GERBER

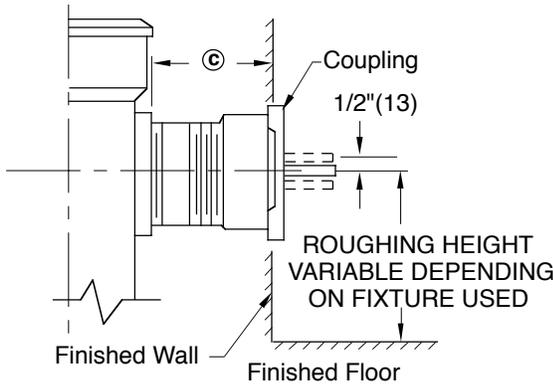


PHOTO 5 - KOHLER 4352

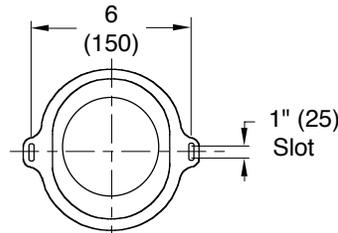
C  
 DRAWING NUMBER S0100-2  
 SIZE A  
 SCALE: NONE  
 DATE: 7-24-86  
 APPROVED BY: JD  
 CHECKED BY: JD  
 DRAWN BY: CMB  
**TYPE NO. 2 OUTLET CONN.**  
 DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE  
 FIGURE NUMBER

WE CAN ASSUME NO RESPONSIBILITY FOR USE OF SUPERSEDED OR VOID DATA

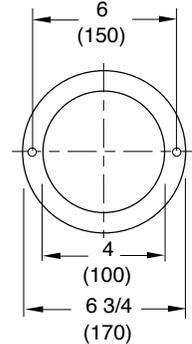
## TYPE NO. 2 NIPPLE AND COUPLING OUTLET CONNECTION



**SIDE VIEW**



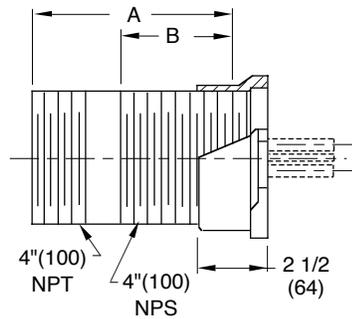
**FRONT VIEW**



**CLOSET OUTLET GASKET**

**NOTES:**

The 4" (100) adjustable coupling is provided with vertical slotted ears which permits a 1/2" (13) adjustment up or down for variation in finished floor height.  
 Coupling should extend beyond the wall adequately to apply sufficient and uniform pressure on the gasket to produce a watertight seal. It is the Installer's responsibility to make this final adjustment.  
 Smith furnishes the Type No. 2 outlet connection for use with floor mounted back outlet bowls. The Type No. 2 connection and coupling arrangement whose length is specified by © dimension.  
 © dimension is the measurement from the face of the fitting to the finished wall.



**NIPPLE LENGTHS AVAILABLE**

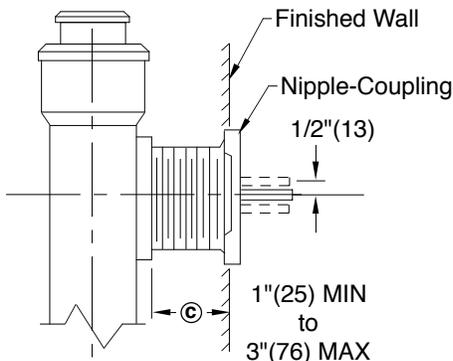
A	MIN	©	MAX
2 1/2(64)	2 3/4(70)	3 3/4(95)	
3 1/4(83)	3(76)	4 1/2(115)	
4 1/2(115)	4 1/4(110)	5 3/4(145)	
5 1/4(135)	5(125)	6 1/2(165)	
6 1/4(160)	6(150)	7 1/2(190)	
7(180)	6 3/4(170)	8 1/4(210)	
8 1/4(210)	8(205)	9 1/2(240)	
10(255)	9 3/4(250)	11 1/4(285)	
12(305)	11 3/4(300)	13 1/4(335)	
15(380)	14 3/4(375)	16 1/4(415)	
18(455)	17 3/4(450)	19 1/4(490)	

**NOTE ON CUTTING**

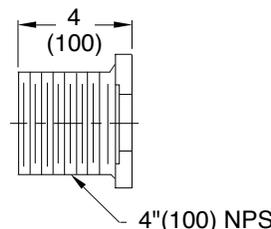
Nipple lengths shown in chart are standard lengths available. When a non-standard nipple length is required, the next longer size can be cut. A cutting charge will be added for nipples cut at plant.  
 Nipples can be field cut if necessary. Sufficient length of straight thread (as shown in chart) is supplied for this purpose

**NOTE:** Dimensions shown in parentheses are shown in millimeters.

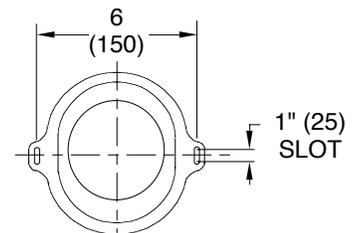
### FOR SMALLER © DIMENSION TYPE 2M COMBINATION NIPPLE COUPLING IN AVAILABLE WHEN SPECIFIED



**SIDE VIEW**



**SIDE VIEW**



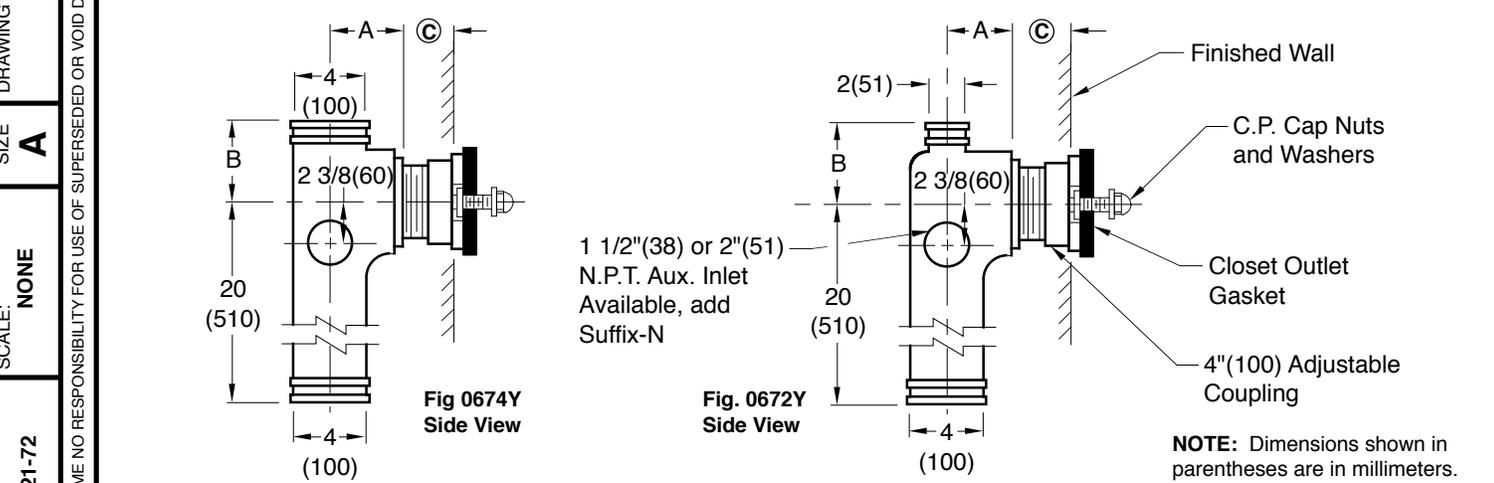
**FRONT VIEW**

Type 2M is regularly furnished 4" (100) long, cut 1" (25) off end of coupling when used for © of 1 1/2" (38) or less.

C	2-27-12	Revised Notes REVISED DIMENSIONS REVISED TYPESETTING	TBW	AM	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER <b>TYPE NO. 2 OUTLET CONN.</b>
B	4-11-95		CMB	BS			
A	7-24-86		CM				
REV.	DATE	DESCRIPTION	BY	CKD. BY			

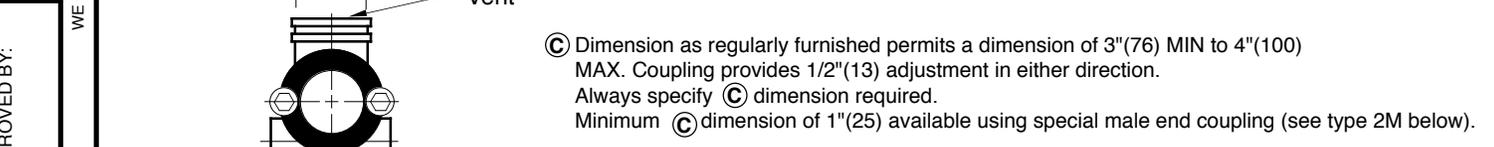
# NO-HUB INLET STACK FITTINGS

**FUNCTION:** Recommended for use with a floor mounted back outlet water closet.



**NOTE:** Dimensions shown in parentheses are in millimeters.

1 1/2"(38) or 2"(51) N.P.T. Aux. Inlet Available, add Suffix-N



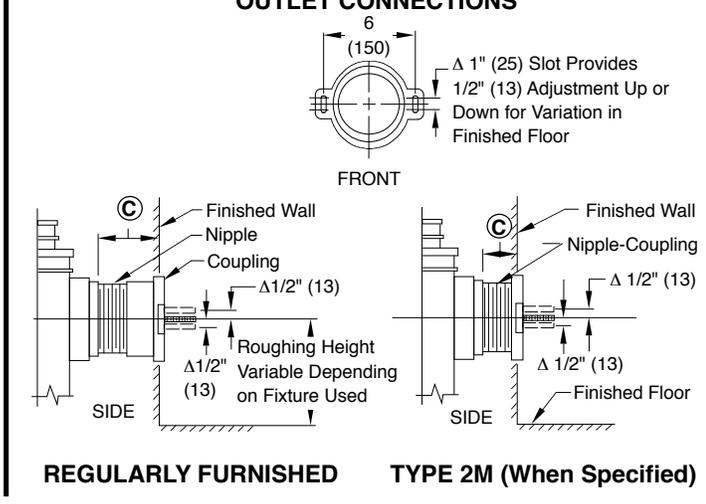
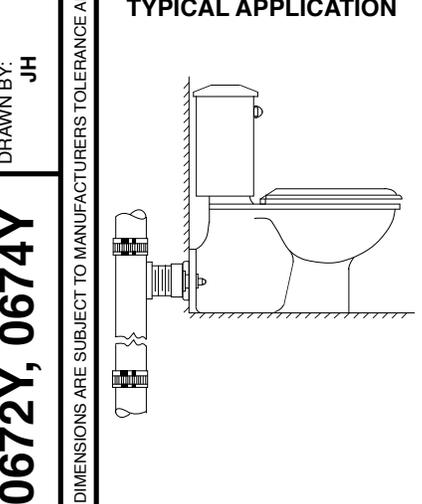
Ⓒ Dimension as regularly furnished permits a dimension of 3"(76) MIN to 4"(100) MAX. Coupling provides 1/2"(13) adjustment in either direction. Always specify Ⓒ dimension required. Minimum Ⓒ dimension of 1"(25) available using special male end coupling (see type 2M below).

**NOTE:** When required a 2"(51) NO-HUB Aux. inlet adapter is available specify suffix-NY

FIG NO	A	B
0672Y	4(100)	7(180)
0674Y	4(100)	5(125)

The water closet gasket regularly furnished is designed to fit water closet outlet dimensions and configurations shown in ANSI Standard A112.19.2. If gasket is not found to be compatible to fixture due to nonconformance of said fixture to ANSI A112.19.2, then fixture manufacturer shall be consulted for a suitable gasket recommendation. Jay R. Smith assumes no liability for connections to fixtures which do not conform to these standards.

**0672Y, 0674Y** **TYPICAL APPLICATION** **OUTLET CONNECTIONS** **NIPPLE LENGTHS AVAILABLE**



NIPPLE LENGTH	NIPPLE LENGTHS AVAILABLE		
	MIN	Ⓒ	MAX
2 1/2 (64)	2 3/4 (70)	3 3/4 (95)	
3 1/4 (83)	3 (76)	4 1/2 (115)	
4 1/2 (115)	4 1/4 (110)	5 3/4 (145)	
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12 (305)	11 3/4 (300)	13 1/4 (335)	
15 (380)	14 3/4 (375)	16 1/4 (415)	
18 (455)	17 3/4 (450)	19 1/4 (490)	

\* Regularly Furnished

REV.	DATE	DESCRIPTION	BY	CKD. BY	WEIGHT POUNDS	VOLUME CUBIC FEET	FIGURE NUMBER
	5-13-13	Revised Text	TBW	CL			0672Y, 0674Y
	3-6-97	Added Millimeters	EMB	BS			
	6-22-94	Revised	EMB	BS			

DRAWING NUMBER: S0672Y  
 SIZE: A  
 SCALE: NONE  
 DATE: 8-21-72  
 APPROVED BY: RP  
 CHECKED BY: JH  
 DRAWN BY: JH

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DIMENSIONS ARE SUBJECT TO MANUFACTURERS TOLERANCE AND CHANGE WITHOUT NOTICE