



Limited One Year Warranty

T&S warrants to the original purchaser (other than for purposes of resale) that such product is free from defects in material and workmanship for a period of one (1) year from the date of purchase. During this one-year warranty period, if the product is found to be defective, T&S shall, at its options, repair and/or replace it. To obtain warranty service, products must be returned to...

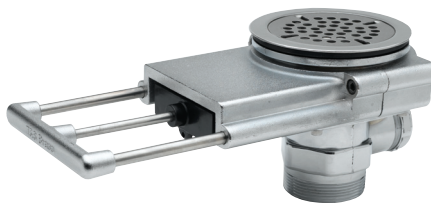
*T&S Brass and Bronze Works, Inc.
Attn: Warranty Repair Department
2 Saddleback Cove
Travelers Rest, SC 29690*

Shipping, freight, insurance, and other transportation charges of the product to T&S and the return of repaired or replaced product to the purchaser are the responsibility of the purchaser. Repair and/or replacement shall be made within a reasonable time after receipt by T&S of the returned product. This warranty does not cover items which have received secondary finishing or have been altered or modified after purchase, or for defects caused by physical abuse to or misuse of the product, or shipment of the products.

Any express warranty not provided herein, and any remedy for Breach of Contract which might arise, is hereby excluded and disclaimed. Any implied warranties of merchantability or fitness for a particular purpose are limited to one year in duration. Under no circumstances shall T&S be liable for loss of use or any special consequential costs, expenses or damages.

Some states do not allow limitations on how long an implied warranty lasts or the exclusion or limitation of incidental or consequential damages, so the above limitations or exclusions may not apply to you. Specific rights under this warranty and other rights vary from state to state.

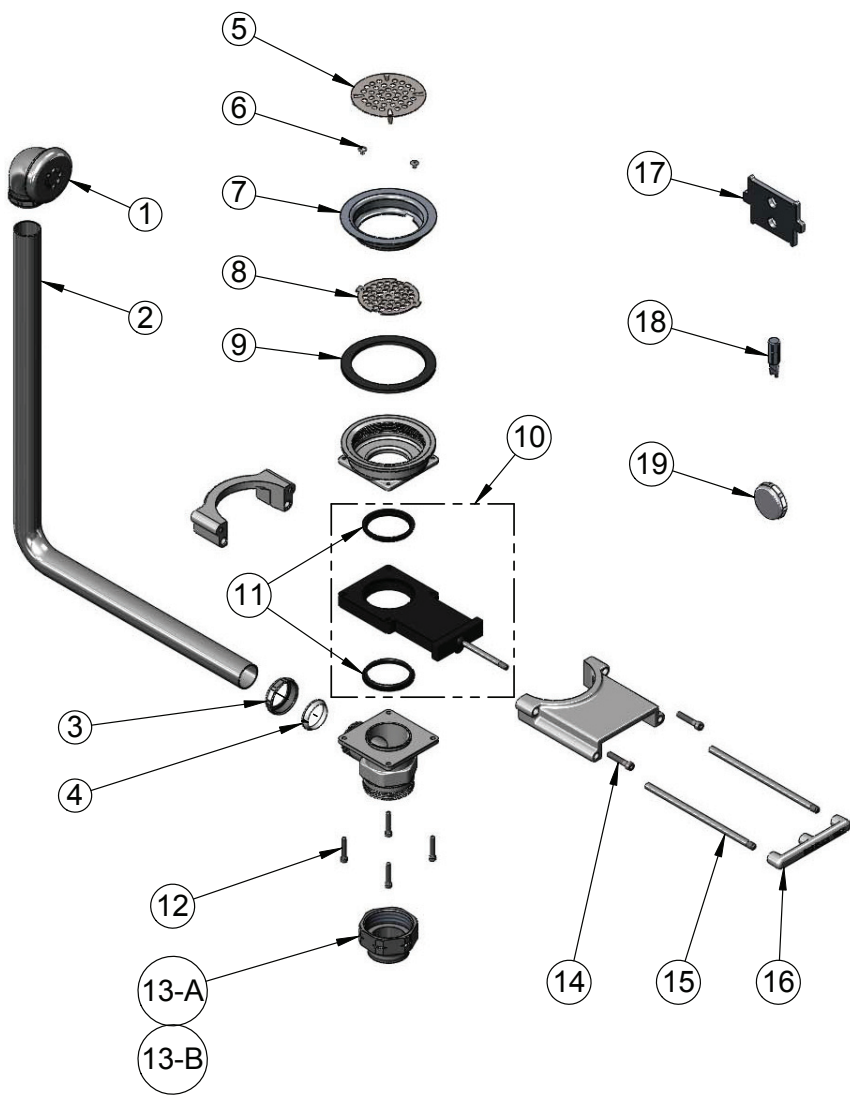
Installation and Maintenance Instructions



B-3990 Series Modular Waste Drain (PATENTS PENDING)

P/N: 098-017918-45
Date: 04-01-10
Drawn: TEH
Checked: GEF 04-09-10
Approved: JHB 04-20-10

Exploded View



Part Number Guide

B-3990 Series Modular Waste Drain Replacement Parts

1	Head Asm, Overflow Tube	011356-45
2	Tube, Overflow Elbow	011355-45
3	Nut, Coupling for Overflow Tube Connection	010391-45
4	Ferrule, Overflow Tube	010390-45
5	Strainer, 3-1/2" Snap-In Removable	010386-45
6	Vandal Resistant Screw, 8-32 x 1/4" S.S.	016654-45
7	Flange, 3-1/2" Face	010384-45
8	Guard, 3-1/2" Vandal Resistant Drain	017694-45
9	Gasket, 3-1/2" Face Flange	010382-45
10	Valve Body Assembly w/ (2) Seals	017219-45
11	Valve Body Seal Kit, Pkg of (2) Seals	017698-45K
12	Cap Screw, 10-32 x 1-1/8", S.S.	017669-45
13-A	Outlet Adapter, 2" NPT Female x 1-1/2" NPT Male	B-3945
13-B	Outlet Adapter, 2" NPT Female x 1-1/2" BSP Male	B-3945-BSP
14	Cap Screw, 1/4-20 x 1-1/4", S.S.	017454-45
15	Support Rod	017451-20
16	Handle	017448-45
17	Waste Drain Installation Tool (Sink Flange Tool)	017670-45
18	Spanner Bit for Vandal Resistant Screw	014734-45
19	Seal Cap, No Overflow Tube Used	012640-45

(Some parts may not apply to all models)

General Instructions

Introduction

The Series B-3990 Modular Waste Drains are designed to fit sinks with a 3-1/2" drain opening. Versions with and without overflow tubes and various outlets adapters are available.

Series B-3990 Waste Drains operate by a push/pull motion of the handle to close and open the drain.

Features

- Low maintenance gate valve assembly
- Clear 2" diameter drain passage for fast draining and easy clog removal from sink
- Easy maintenance and replacement of service parts with out removal from sink
- Handle guard assembly for exposed applications for protection against damage from mop buckets, push carts, etc.
- Modular design for configurability and serviceability
- Optional handle length extensions available
- Vandal resistant drain guard provided to keep unsafe or unintended objects out of the drain passage
- Multi-purpose sink flange tool provided for easy installation

Installation

Figure 1 shows an explosion of the waste drain installation

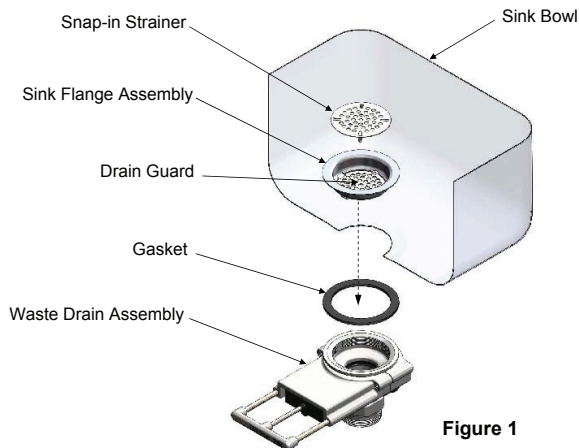


Figure 1

General Instructions

1. Remove the Snap-in Strainer and unscrew the Sink Flange Assembly from the Waste Drain Assembly. Apply a bead of Plumber's Putty to the bottom of the Sink Flange Assembly where it contacts the sink bowl. (Keep the Drain Guard installed in the Sink Flange Assembly at all times. Remove it only when clog maintenance is needed and install it again when finished).
2. Make sure the underside and inside mating surfaces of the sink bowl in the area of the drain are clean.
3. Install the Waste Drain Assembly and Gasket from below the sink.
4. Install the Sink Flange Assembly thru the sink drain opening and screw it into the Waste Drain Assembly below.
5. Before tightening, position the waste drain Handle to the desired location. Tighten the Sink Flange Assembly securely with the Sink Flange Tool provided. (Figure 2)

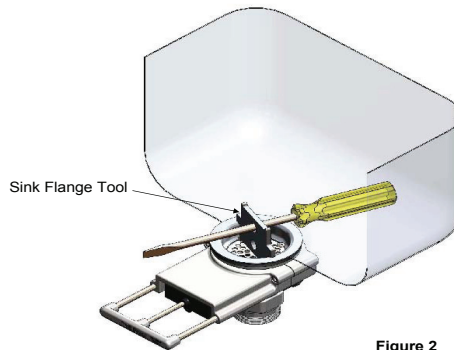


Figure 2

6. If Overflow is used (Figure 3) – Install the Overflow Head in the sink. The modular design of the waste drain allows the overflow port on the Outlet to be positioned Left, Right or Back. To change positions, remove the (4) cap screws with a 5/32" hex key wrench and rotate the Outlet to the desired position. If the Outlet has been removed, ensure the Valve Seal is either in the Valve Body correctly or installed on the Outlet lip correctly. Install the (4) cap screws and tighten. Measure and cut the overflow tube to fit into the Overflow Head and Overflow Port on the waste drain Outlet. Install the Coupling Nuts and Seals on the overflow tube. Install the overflow tube and tighten the connections.

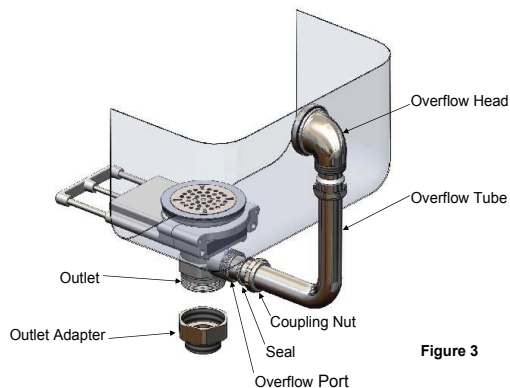


Figure 3

General Instructions

7. Connect the drain line to the waste drain Outlet. If Outlet Adapters are used, seal all threaded connections with pipe sealant.
8. Open and close the waste drain several times to check the operation. Check for leaks.

Maintenance

Figure 4 shows a maintenance explosion of the Modular Waste Drain.

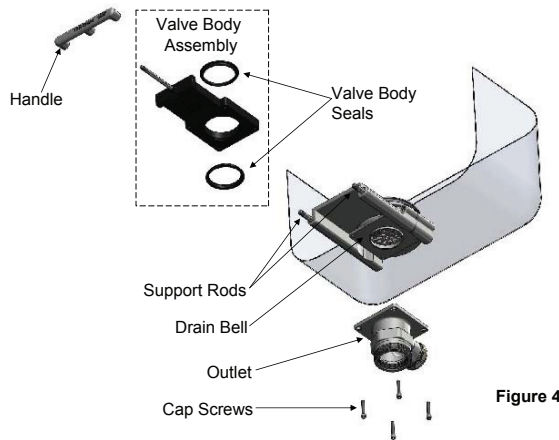


Figure 4

Under normal operation, the anticipated service parts of a B-3990 Series waste drain are the Valve Body Assembly and/or Valve Body Seals. These parts can usually be serviced or replaced without removing the waste drain from the sink or disconnecting the drain line from the waste drain. The Valve Body Assembly is a non-serviceable part and is simply replaced if repair is needed. The replacement Valve Body Assembly comes with (2) Valve Body Seals. A Valve Body Seal Kit containing (2) seals is also available if only seal replacement is needed.

Valve Body / Valve Seal replacement (Figure 4)

1. If Overflow is used – Loosen the overflow tube connection at the overflow port on the Outlet of the waste drain. It may not be necessary to remove the overflow tube.
2. Open the waste drain valve by fully extending the Handle.
3. Loosen and unscrew the (2) Support Rods attached to the ends of the Handle. Push them back into the Handle Guard to get them out of the way.
4. Remove the (4) cap screws that attach the Outlet to the waste drain assembly.
5. Pull the Outlet free from the waste drain assembly. There is usually enough play in the drain line and overflow tube to separate the Outlet from the drain assembly.
6. The Valve Body Assembly with the Handle will pull clear of the waste drain once enough separation of the parts has occurred.

General Instructions

7. Remove the Valve Body Seals. These may be in the Valve Body Assembly or stuck on the lips of the Drain Bell above or Outlet below.
8. If Valve Body Seal replacement is the only service being done, replace the old seals with the new ones and reassemble in reverse order above. It works best to install the new seals on the lips of the Drain Bell and Outlet rather than put them in the Valve Body Assembly.
9. To replace the Valve Body Assembly, unscrew the Handle from the old Valve Body Assembly and screw it on to the new one. The Valve Body Assembly needs to be installed with the T&S logo visible from below. Install the new seals and assemble as in step 8.

Clearing a clogged drain line thru a B-3990 Series waste drain

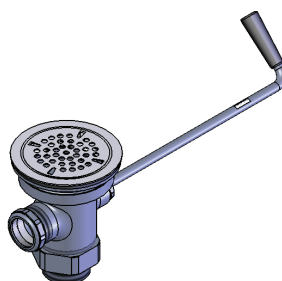
Efforts should be made to clear clogged drain lines thru clean-out ports in the drain system. Should it become necessary to clear a clog thru the waste drain passage, access can be done in the following way:

1. Close the waste drain to prevent losing any loose objects.
2. Remove the Snap-in Strainer.
3. Remove the Drain Guard by loosening the (2) Vandal Resistant screws with the Spanner Bit provided (the screws only need to be loosened and not removed). Rotate the Drain Guard so the Screws align with the notches in the Flange. Lift out the Drain Guard. **For safety reasons, never put hands or fingers in the drain passage when the Drain Guard is removed.**
4. Perform the needed maintenance.
5. Close the waste drain and install the Drain Guard. Ensure the Drain Guard is installed correctly and securely.
6. Install the Snap-in Strainer.

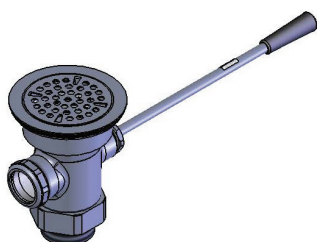
RELATED T&S BRASS PRODUCT LINE



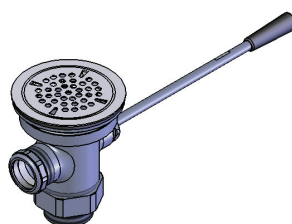
B-3940 Series
Rotary Waste Valve
3" Sink Opening



B-3950 Series
Rotary Waste Valve
3-1/2" Sink Opening



B-3960 Series
Waste Drain Valve
3" Sink Opening



B-3970 Series
Waste Drain Valve
3-1/2" Sink Opening

T&S BRASS AND BRONZE WORKS, INC.

A firm commitment to application-engineered plumbing products

2 Saddleback Cove, P.O. Box 1088,
Travelers Rest, SC 29690

Phone: (864) 834-4102

Fax: (864) 834-3518

E-mail: tsbrass@tsbrass.com

T & S Brass-Europe
'De Veenhoeve'
Oude Nieuwveenseweg 84
2441 CW Nieuwveen

The Netherlands



RELIABILITY BUILT IN™