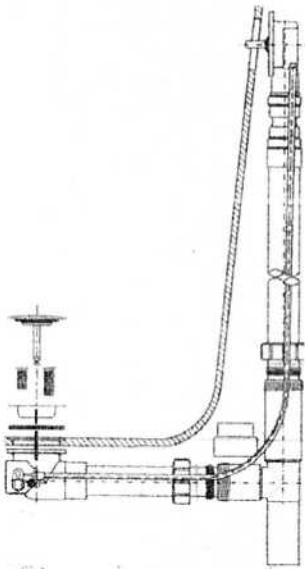
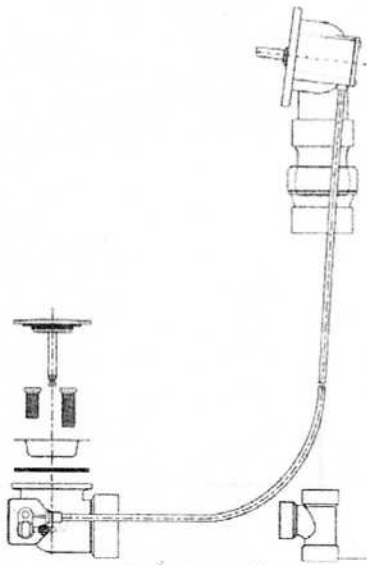


Installation Instructions

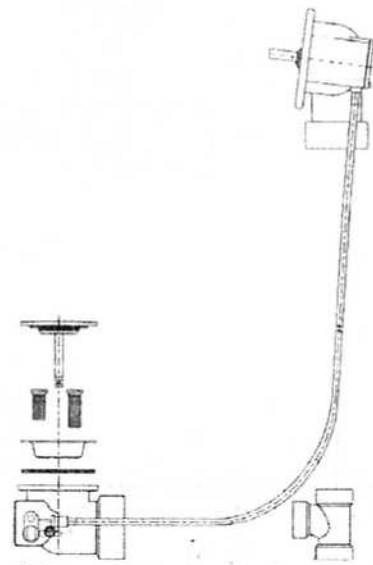
for Bath Waste and Overflows



BDR20S2/2



BWO40S ABS/PVC (2)



BWO40R ABS/PVC (2)

This guide provides installation instructions for the following units:

BDR20S Units

- BDR20S22/2 - fits tubs 12" to 22" in depth with a cable length of 27". Horizontal reach up to 12".
- BDR20S27/2 - fits tubs 23" to 27" in depth with a cable length of 39". Horizontal reach up to 12".
- BDR20S35/2 - has a vertical pipe of 26" and horizontal pipe of 19" with a cable length of 39".
- BDR20S45/2 - has a vertical pipe of 26" and horizontal pipe of 27" with a cable length of 39".
- BDR20S61/2 - has a vertical pipe of 30" and horizontal pipe of 32" with a cable length of 50".

BWO40R Units

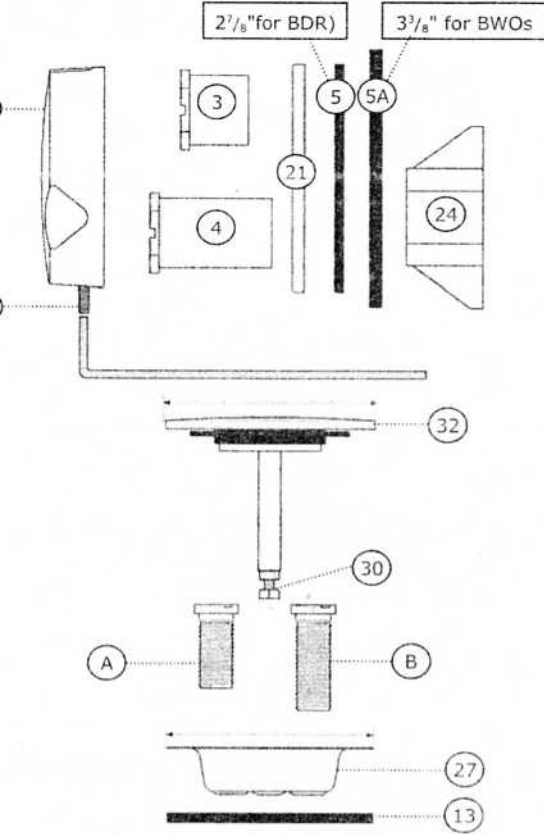
- BWO40R22 ABS/PVC (2) - fits tubs 12" to 22" in depth with a cable length of 27". Horizontal reach up to 12".
- BWO40R45 ABS/PVC (2) - fits tubs that are 23" to 27" in depth. Horizontal reach up to 27". Cable length 39". **Pipe is supplied by the installer.**
- BWO40R61 ABS/PVC (2) - fits tubs that are 28" to 33" in depth with a cable length of 50". Horizontal reach up to 32". **Pipe is supplied by the installer.**

BWO40S Units

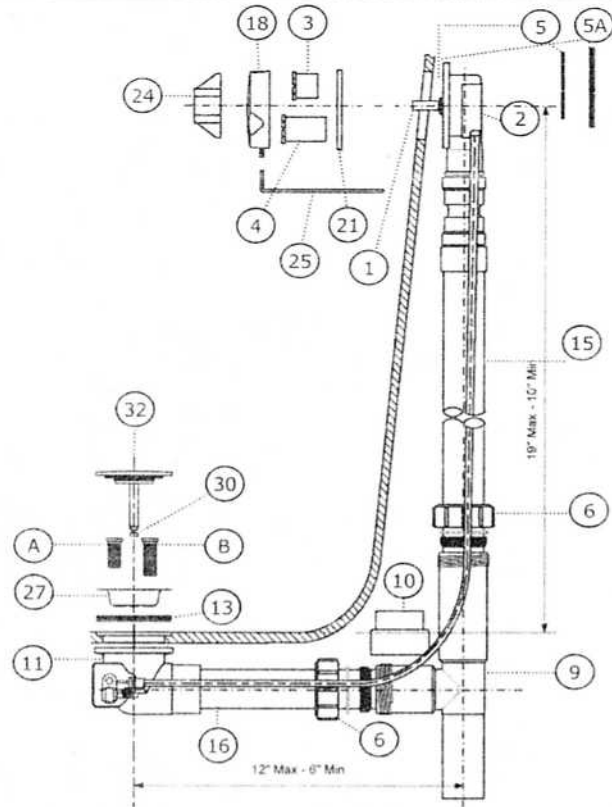
- BWO40S22 ABS/PVC (2) - fits tubs 12" to 22" in depth with a cable length of 27". Horizontal reach up to 12".
- BWO40S45 ABS/PVC (2) - fits tubs that are 23" to 27" in depth. Horizontal reach up to 27". Cable length 39". **Pipe is supplied by the installer.**
- BWO40S61 ABS/PVC (2) - fits tubs that are 28" to 33" in depth with a cable length of 50". Horizontal reach up to 32". **Pipe is supplied by the installer.**

Note: Horizontal lengths will vary due to the distance and location of the tub drain in larger-sized tubs.

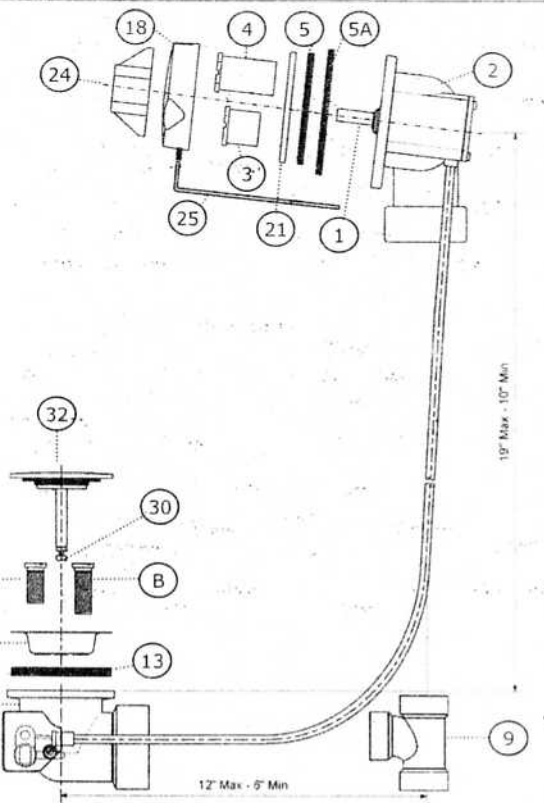
Trim Kit



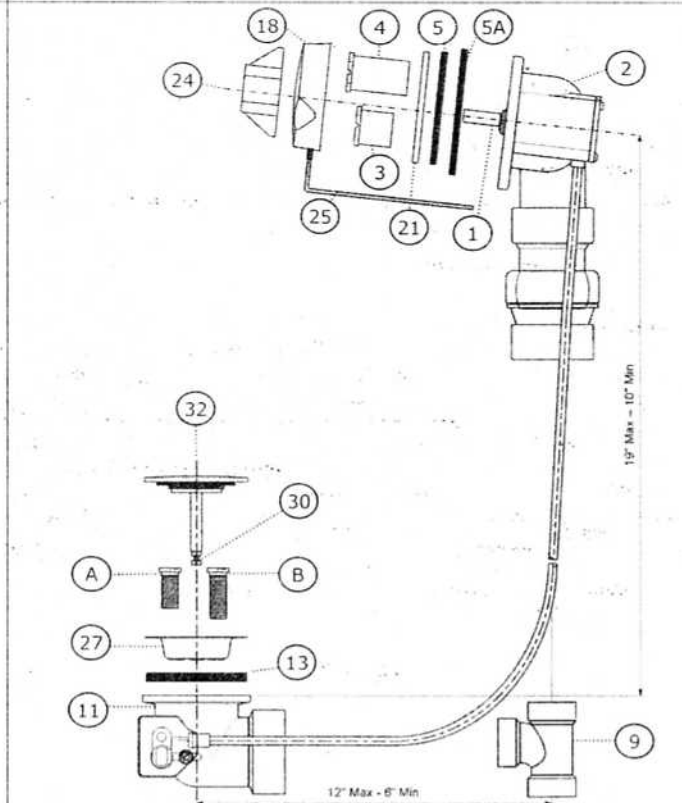
BDR20S2/2



BWO40R ABS/PVC (2)



BWO40S ABS/PVC (2)



Pre-Installation Check List

- Ensure the bath is level before assembly.
- Do not disconnect any factory-assembled parts.
- Check the movement of the pop-up mechanism when assembled loose.
- Check that the bath is supported.
- DO NOT overtighten the ferrules at the overflow or drain area.
- **If the underside of the tub is not smooth, it is OK to place a bead of non-acid type silicone sealant around the drain shoe seal and overflow head seal to ensure a good connection.**
- Before boxing/sealing in the bathtub, check that all joints are watertight.
- Adaptor (10) can be used on model **BDR20S/2** to convert pipe to Schedule 40 by solvent-welding the adaptor to the outlet on the tee piece (9).
- **Do not pour any caustic acids down drain!**

Recommended Installation Instructions

1. Loosely assemble (without solvent) all parts to the bathtub as shown in the drawing.
2. For model **BDR20S/2** only, measure and mark how much pipe is required to be cut from both vertical pipe (15) and horizontal pipe (16).
Note: Make sure there is at least 1.5" of vertical (15) and horizontal (16) to connect into the tee piece (9).
Cut the pipe at the mark and remove any rough edges.
3. Do the following to make joints permanent:
 - For models **BWO40SA2** and **BWO40RA2**, use suitable ABS solvent cement to make both horizontal and vertical pipe joints permanent with the tee piece (9).
 - For models **BWO40SP2** and **BWO40RP2**, use suitable PVC solvent cement to make both horizontal and vertical pipe joints permanent with the tee piece (9).
 - For model **BDR20S/2**, insert vertical pipe (15) and horizontal pipe (16) into the tee piece (9) and then tighten the two slip nuts (6): **hand-tight plus a quarter turn only.**
Note: If needed, you can also solvent-weld model BDR20S/2 by attaching vertical pipe (15) to tee piece (9) and horizontal pipe (16) to tee piece (9) by using a suitable ABS solvent cement.
4. Fit seal (13) onto drain shoe (11). **DO NOT USE PLUMBER'S PUTTY.** Place a small bead of non-acid type silicone sealant under the drain flange lip (27).
5. Assemble the drain shoe (11) and secure the flange (27) to the bath tub by using the specified ferrule (A or B).
See explanation below:
 - For tubs which are 1/8" to 9/16" thick, use the 1-1/8" ferrule (A). Found in Assembly Kit.
 - For tubs which are 5/8" to 3/4" thick, use the 1-3/8" ferrule (B). Found in Trim Box.Then tighten ferrule selected for the installation **hand-tight plus a quarter turn** by using a flat-head screw driver.



**Do NOT use power tools. Do NOT over-tighten ferrules to connect flange to drain shoe.
DAMAGE TO YOUR UNIT WILL OCCUR IN TIME IF OVERTIGHTENED!**

Note: If the tub is 7/8" or thicker, you may need to order an extension kit (BDRCAM-EXT1) from the dealer.

6. Adjust the hex screw (30) fitted to the drain plug (32) until the plug sits up from the top of the flange (27) approximately 1/2" when in the draining position. Make sure locking nut for #30 is tightened securely.

Recommended Installation Instructions (Continued from Page 3)

- Assemble the overflow head (2), by using overflow seal (5) for the BDR models or (5A) for the BWO models (**see diagrams**) and press against back side of tub. Place metal overflow grid (21) against inside of tub and choose the specified ferrule (3 or 4).

See explanation below:

- For tubs which are 1/8" to 9/16" thick, use the 1" ferrule nut (3). Found in Assembly Kit.
- For tubs which are 5/8" to 3/4" thick, use the 1-5/8" ferrule nut (4). Found in Trim Box.

Then tighten ferrule selected for the installation **hand-tight plus a quarter turn by ONLY USING** the plastic spanner wrench (24) provided in the Assembly Kit.

Do NOT use pliers, wrenches, or socket wrenches to tighten the overflow assembly.

Tighten the ferrule at the waste outlet (drain shoe) last because this will ensure the assembly is stress free.

With the drain plug in the down position and water is still trickling out, check the rubber seal underneath the drain plug (32) to see if it is reversed and/or check the adjusting screw (30) position. The screw may have to be slightly adjusted upward into the stem to allow the plug to sit further down into the drain flange. Make sure locking nut for the adjusting screw (30) is tightened securely.

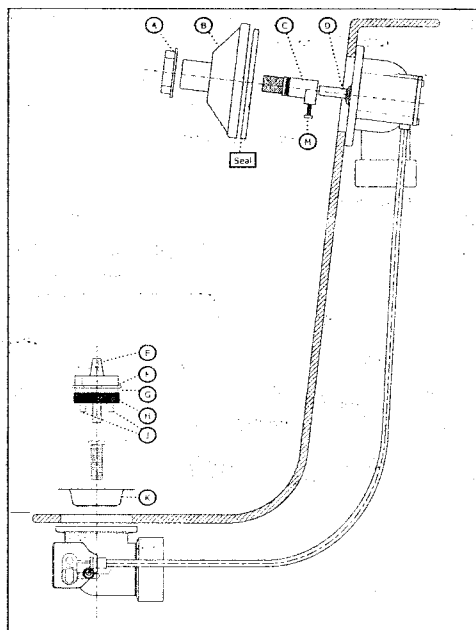
- Place the control knob (18) onto the protruding shaft (1) at the overflow with the small hole in the control knob facing the bottom of the bathtub.

Put the Allen key (25) through the small hole in the control knob into the set screw inside and tighten to secure the control knob onto the shaft.

If the control knob does not stay on the shaft after tightening, make sure the correct ferrule nut was used. All tub thicknesses vary at the drain and overflow opening. If the control knob does not stay on after reviewing the steps above, call the toll-free number, 888-222-9140, for technical support.

Pressure Test Kit

Available by Special Order Part # BDR/TESTKIT1



Mountain Plumbing Products, a McAlpine Company

1351 Metropolitan Avenue, West Deptford, NJ 08088

Phone: 888-222-9140

Fax: 856-853-6114