Excavation
The excavation must be sufficient to allow a minimum 4" concrete pour below, and on both sides of the trench drain. Excavation for a catch basin must allow for 4" of concrete below the basin.

Layout
Dead Level trench drains are generally shipped with channels assembled to the corresponding frames. A channel can be disengaged from the frame by sliding it approximately 4" in either direction, and pulling the channel and frame in opposite directions (Fig. A). Working from the deepest outlet connection(s) back upstream, lay the trench drain sections in order of installation along side the open trench. Each channel and frame section is marked with arrows, indicating the direction of flow. The installer may wish to run a string line along the trench to indicate the desired finished grade.

Catch Basins & Piping Connections
Catch basins, if used, should be set first. Using a reciprocating or hole saw, remove the circular pipe connection cut-out(s) where the basin will connect to discharge piping. Invert the catch basin on a flat surface, and butt the corresponding channels against the pattern on the basin. Use a reciprocating saw to remove the cutout on the basin. With the cutout correctly removed, the channel tongue should slide inside the hole in the basin, with the channel flange flush against basin’s exterior wall (Fig. B). If a catch basin is not used, pipe connections are made to the bottom of the channel, or to an end cap. Drill through the molded pipe hub with a 4" hole saw or reciprocating saw, taking care not to rake the inside wall of the hub. Make No Hub pipe connections with a suitable coupling (by others).

Rebar Anchoring & Leveling
Starting from the outlet or catch basin, align the structural frames along the excavated trench. Drive a minimum of 4 pieces 1/2" #4 rebar to support each frame section. The rebar should reach a depth sufficient to provide stability for the system, and prevent floating during the concrete pour. Level the system by sliding the frame ears along the rebar. Secure the frame to the rebar using 3/8" hex bolts (Fig. C).

Joint Connections
Making sure all sections are aligned with flow arrows pointing towards the outlet, connect channels and end caps through the flanges using 1" flanged hex bolts (Fig. D). Using frame connectors F-L, join the frames from the top using 3/8" hex bolts (Fig. E). It is usually unnecessary to seal channel joints in on-grade installations. If corrosive solutions are present, or sealed joints are otherwise desired, use a small bead of silicone caulk to seal each channel joint.
Grate Installation
Grates should always be installed prior to the concrete pour. If used, install Frames Guards prior to setting the grates (Fig. F). Install grates along the length of the trench, and secure with hex head or countersunk lock bolts provided (Fig. G). Position Construction Covers over the grates, with the flange between the grate and frame (Fig. H).

Concrete Pour
Check the entire trench system for proper anchoring, alignment, and leveling, prior to pouring concrete. Although the Dead Level frame-anchored design dramatically reduces the risk of floating, a poorly anchored system can shift during the pour. Check the excavation to be sure a minimum of 4” of concrete can be poured under, and on all sides of the channels. The concrete must be adequately vibrated as it is placed, to ensure complete filling of all potential voids around the trench. The top edge of the trench frame should be approx. 1/16” below grade after finish troweling to keep the frame at or below grade after the concrete is fully cured.

Final Inspection
After the concrete is dry, remove the construction covers, and re-tighten the grate lock downs. If construction covers will not pry out easily, cut the cover, and loosen the grate lock down to free the sides of the cover.

Retro-Fit or Suspended Installations
Cut the existing slab or form a cavity which will enable a 4” concrete pour below and around the Dead Level system. Cut 2x4’s at least 30” in length to span the cavity, and align 2x4’s with the cross bars in the trench frame. Drill 1/2” holes to secure the 2x4’s to the frame cross bars, using 3/8-16x4-1/2” (minimum) bolts and washers (Fig. K). Insert a thin shim between 2x4’s and the frame to ensure the trench will sit slightly below finished grade after the pour. Securely anchor the 2x4’s to grade to prevent floating. Once the concrete is initially set, remove 2x4’s and complete unfinished areas with concrete. Install the grates & lock downs.

Limited Warranty
Watts Regulator Co. (the “Company”) warrants each product to be free from defects in material and workmanship under normal usage for a period of one year from the date of original shipment. In the event of such defects within the warranty period, the Company will, at its option, replace or recondition the product without charge.

The remedy described in the first paragraph of this warranty shall constitute the sole and exclusive remedy for breach of warranty, and the Company shall not be responsible for any incidental, special or consequential damages, including without limitation, lost profits or the cost of repairing or replacing other property which is damaged if this product does not work properly, other costs resulting from labor charges, delays, vandalism, negligence, fouling caused by foreign material, damage from adverse water conditions, chemical, or any other circumstances over which the Company has no control. This warranty shall be invalidated by any abuse, misuse, misapplication, improper installation or improper maintenance or alteration of the product. Same States do not allow limitations on how long an implied warranty lasts, and some States do not allow the exclusion or limitation of incidental or consequential damages. Therefore the above limitations may not apply to you.

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