AquaTray®
Leak Barrier Ceiling System

STANDARD CEILING INSTALLATION INSTRUCTIONS

Note: One (1) 1-1/6″ arbor hole saw and bit is provided to aid in the installation of bulkhead fittings within AquaTray® Drainage Panels or AquaTray® Raised Flat Panel – See Step 1-A

STANDARD CEILING
INSTALLATION INSTRUCTIONS

STEP 1 – PREPARE TRAYS

A – BULKHEAD HOLES AND FITTINGS

1. AquaTray® Drainage Panels - Drill bulkhead drainage holes in the proper locations in (1) to (4) sides of the AquaTray® Drainage Panel. Use 1-1/16″ arbor and hole saw.

   NOTE: Develop a project plan or shop drawing to arrange the trays in the proper pattern to adequately cover the protected equipment or area also to show how the trays interconnect and where the final drains are located.

   NOTE: Center-punch locations are formed into the AquaTray® panels to insure the proper drilling locations.

2. AquaTray® Raised Flat Panels – Cut to size, assemble and drill bulkhead drainage holes (if provided) in the proper locations in the top and bottom panels of the AquaTray® Raised Flat Panel. Use 1-1/16″ arbor and hole saw for the top and a 2″ arbor and hole saw for the bottom.

   NOTE: AquaTray® Raised Flat Panels are provided in kits of (2) 2x4 panels each (top generic plastic panel, middle foam core, and bottom AquaTray® Flat panel) and when cut and assembled allow the ceiling contractor to provide cut tiles or full tiles allowing ceiling elements (sprinklers speakers etc.) within the area of leak protection. These Raised Flat Panels can be provided with drainage fittings or left to overflow into adjacent panels.

   NOTE: See Raised Flat Panel Kit instructions for assembly information.

3. Install bulkhead fittings into bulkhead holes with the threads to the inside of the panel and the gasket on the outside of the panel. Tighten the jam nut firmly.

B – SUPPORT BRACKETS

1. Cut 6″ long angle brackets from 7/8″ x 7/8″ standard wall track.
   NOTE: Nip the corners of each flange to reduce sharp edges.
2. Position the cut brackets in (4) locations, 6″ from the corners of the AquaTray® panel to the center of the bracket.
3. Drill or punch (2) 1/8″ holes through the AquaTray® panel flange and each bracket.
4. Install standard ceiling pop-rivets to secure the brackets to the AquaTray® panel.
5. Drill or punch (1) 1/8″ hole through the top center of each bracket. This will provide the location for the wire grid supports.

STEP 2 – PREPARE GRID

A – CEILING ELEMENTS

1. For new ceilings leave out the ceiling tiles in the area of protection. For existing ceilings remove the ceiling tiles within the footprint of protection
2. For new ceilings install any ceiling elements outside the footprint of protection. For existing ceilings remove any ceiling elements within the footprint of protection (Lighting fixtures, diffusers, grilles, sprinkler heads, smoke detectors, speakers etc.)

   NOTE: Employ the services of appropriate trade contractors for the removal and re-installation (outside of the protected footprint) of the various ceiling elements.

   NOTE: New light fixtures may need to be provided using surface mounted fixtures powered from below the ceiling if required to light the area within the protected footprint.

B – CEILING SUPPORTS

1. Temporarily remove or leave un-installed the ceiling grid hanger wires within the protection footprint until after Step-3-B (Install T-Grid Flashing). Work in sections for large ceiling areas.

2. Check with the grid manufacturer for proper support design (wire size, spacing, twists per inch etc.) and be sure to install in strict accord with manufacturer and industry recommendations.

NOTE: Provide temporary ceiling support from below if a long span of ceiling is being installed prior to flashing and supporting.

STEP-3 – INSTALL TRAYS

A – INSTALL AQUATRAY® PANELS

1. Use the project plan to progressively install trays in the proper pattern with the appropriate bulkhead fitting layout.

2. Connect tray to tray with AquaTray® clear tubing and clamp tight with AquaTray® tube clamps.

3. For drainage Trays drill through each AquaTray® support bracket (Installed in Step-1B – Support Brackets) and then through the T-grid then through the adjoining support bracket (if applicable). This will provide holes for support wire after the T-grid flashing is installed.

4. For raised flat panel trays support brackets are not needed when installed according to instruction since they produce a minimum of developed weight during a leak event.

B – INSTALL T-GRID FLASHING

1. After installation of a section of AquaTray® drainage panel, place AquaTray® T-Grid Flashing Boots (4-sided, 3-sided or 2-sided) at the corners of each panel.

2. AquaTray® raised flat panels do not require T-Grid Boots since installation of flashing tape at raised panels is much easier than for the drainage trays.

NOTE: AquaTray® T-Grid Boots are supplied 4-sided (one boot per AquaTray® panel). The installer cuts the boot as needed for 3-sided and 2-sided locations

3. Install All Weather Flashing Tape up and over the T-grid and firmly adhere the tape to the top of the AquaTray® panels. DO NOT STRETCH THE TAPE IN ANY WAY DURING INSTALLATION AS THIS REDUCES THE LONG TERM LEAK PROTECTION.

NOTE: Use 6″ wide tape where AquaTray® panels are adjacent to each other. Use 4″ wide tape where AquaTray® panels are adjacent to the remainder of the ceiling.

4. Install additional strips of flashing tape at flashing boots to seal the tape at the inside corners of the boot and to seal the notched flat corner of the boot to the top of the AquaTray® panels.

NOTE: It is <u>VERY</u> important to insure that there are no gaps in the flashing tape and that the edges of the tape are smooth and firmly adhered <u>WITHOUT</u> stretching, to provide leak integrity.

C – INSTALL TRAY AND GRID SUPPORTS

1. Poke 12 gauge wire hangers through the flashing and through the holes in tray support brackets/t-grid/adjoining support brackets (if applicable). Twist tight then install to the building supports.

2. Poke wire hangers through the flashing and through the holes in the T-grid for the normal grid supports.

3. Install additional strips of flashing tape at the wire "Poke-Thru" locations to seal tight.

D – DRAINAGE PIPING

1. Install plumbing drainage piping between any trays separated by a distance greater than the clear tubing.

2. At the end of a section of trays run final drainage piping to a suitable floor drain or sink.

NOTE: Employ the services of a plumbing contractor for proper pipe materials, sizing and installation to comply with local codes.

NOTE: It is strongly recommended to provide a leak detection system into the trays or the tray drainage system to alert personnel in the event of an overhead.

<u>NOTE: THE IMPROPER INSTALLATION OF ANY COMPONENT OF THE SYSTEM WILL VOID THE MANUFACTURER'S WARRANTY</u>.

AquaTray® – 2x4 Leak Barrier Ceiling System (48 square feet) with PVC drain pipe to Janitor's Sink (in next room)

U.S. Patent No's 6,640,502 and 7,017,313, Canadian Patent No. 2,476,898

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