

FUSION CEILING TILE

The following information provides some basic handling and installation techniques when using suspended grid systems. Installation steps vary from one manufacturer to the next. For specific component information, technical information, detail drawings, CAD design assistance, detailed installation information or other technical services, contact the manufacturer.

Step 1. Locate room center line: Often the room dimensions are not exactly square in dimensions. Determine the room center line which should be perpendicular to the ceiling joists and draw it on the graph paper. Aligning main tees perpendicular to the ceiling joists will make installation easier.

Step 2. Set Perimeter Trim Lines: Next, determining the maximum height of the new suspended ceiling is the most important stage prior to installation. Where reasonable, measure down about 4 in. down (minimum recommended plenum height from underside of structural ceiling) from existing ceiling joists and mark the wall. If a drop-in light fixture is to be installed, measure down about 6 in. from existing joists. Measure down from the joists at several locations around the room to ensure that you'll have enough space above the panel grid at all points across the existing ceiling. If your ceiling joists don't lie on a level plane, make sure to measure down 4 in. from the lowest point on the lowest joist. When the three perimeter lines are level and at the correct height, connect them with a chalk line on the remaining wall. Note: The reference ceiling level should be established by the ceiling contractor with the help of other building service vendors such as light fixtures, HVAC grilles/diffusers, sprinklers, speakers, etc.

Step 3. Install wall angles/perimeter trims: Align the top edge of the wall angle with the chalk line, or line laser leveler, and nail wall angles around the entire room. The first and last fasteners on wall angle should be installed at 6in. from the wall. Then, nail at each stud location or at a minimum of 1.5 ft. (450 mm) intervals.

Step 4. Inside/outside corners: At inside corners, cut wall angles straight (90°) and butt them together. At outside corners, a mitered joint may be more attractive, so using tin snips, or similar, miter them (45°) and fit snugly together, nails, or use corner caps.

Step 5. Locate main tees. Stretch a string across the room at ceiling height to locate each main tee. To do this, pull the string taut around nails that are inserted between the wall and the wall angle at opposite wall locations.

Step 6. Locate cross tees: Stretch a string perpendicular to the main tee strings where you want to locate the first row of cross tees. You only need to do this once since pre-punched slots in the main tees ensure spacing of subsequent rows of cross tees.

Step 7. Install & bend hanger wires. Use a rotary hammer machine to drill and install the hangers from the concrete ceiling slab. Install screw eyes, with hanger wires attached, every 4 ft. (1220 mm) along main tee string lines. The wires should extend 6 in. (150 mm) below the string line. Note, in the case where installation occurs under ductwork, if HVAC duct is greater than 4ft. (1200mm) in length, ensure you suspend a separate bracket under the duct and from it, a hanger-wire can be suspended for ceiling installation. Use pliers to bend a 90° angle in all hanger wires at a point 3/4 in. (19 mm) above the string. If the nearest hanger hole is not directly below the screw eye, adjust the hanger accordingly.

Step 8. Align & hang main tees: In each row, trim the first main tee at the wall so the slot for the first row of cross tees lines up at the string. Rest the cut end of the main tee on the wall angle. Pull each hanger wire through the hanger hole in the tee. After checking the string line to be sure the tee is level, bend the wire up and around itself several times to ensure a good, tight wrap.

Step 9. Install cross tees: After main tees are suspended, then install the cross tees. Push cross tee end through the main tee slot until you hear a "click." Where two cross tees intersect in the same slot, be sure to insert the second tee to the left of the first.

Step 10. Measuring & cutting ceiling border tiles: Use a straight edge to make perimeter cuts. Cut border tiles by measuring each one individually. If installing tiles in a 9/16" suspension system with modules 4ft. in length, the inclusion of 2ft. stabilizer bars at or adjacent the mid-point of the segment is recommended without inclusion of a tile "backer".

Step 11. Lay in the ceiling tiles: Check the level once more using line laser leveler. Ensure that all the services placed on service tiles are tested and confirmed by the ceiling contractor. Only after that can the laying in of ceiling tiles be commenced. It's easiest to begin in one corner of the room and install panels a single row at a time. Tilt each panel up through the opening and lower it to rest squarely on all four tees. Note, if arrows are printed on the tile backs, install the tiles so that all arrows point in the same direction. Panels without arrows may be installed in any direction.