



## **TRAX-1 GRID SYSTEM**



### **INSTALLATION, OPERATION, MAINTENANCE INSTRUCTIONS CLEANROOM CEILING SYSTEM**

#### **SHIPPING, RECEIVING**

When your shipment arrives either on pallets or crates, inspect for any external damage that may have occurred during shipping. Note any damages to the delivering carrier. It is your responsibility to file a freight claim with the carrier at the time of receiving the package. Take pictures to prove that freight damage has occurred.

After receiving, check to make sure that all the packages, boxes, pallets or crates have been delivered. Unpack the packages carefully to avoid any damage to the components or painted members. This is a good time to get familiar with the components.

#### **SUPER-STRUT GRID SUPPORT SYSTEM**

The grid system has been designed to be suspended with 3/8-16 threaded rod, turnbuckles including a RH-LH threaded rod connection to the grid system. The Trax-1 grid system is supplied to the job site from the turnbuckle down. Any additional support including the threaded rod from the turnbuckle and the super-strut intermediate grid supports is by others. The grid has been supplied with enough turnbuckles for a grid support on a nominal 4' x 4' center distance. See drawings for location of turnbuckles. The turnbuckles are generally located at the 4-way intersection of the grid system. The grid system main runners are spaced either 48" or 48.5" from each other. The super-strut is run perpendicular to the main runners on 49" centers. Any additional support with the Trax-1 grid system shall be done anywhere on from the top T-slot profile of the grid system with 1/4-20 threaded rod supplied by others. Use some of the extra 1/4-20 nut assemblies for this connection to the grid system if this situation arises.

## **GRID INSTALLATION**

Refer to the Architectural drawings for the grid system layout along with the Super-strut layout. This will show the hang point locations for the grid system. The grid system should be laid out to the design of the ceiling.

Generally the wall angle is installed first. Always use a laser to install the grid. Continue to use the laser to level all the grid components. The use of adjustable turnbuckles will ease the leveling of the grid system. Once the wall angle has been installed find a datum point for installing the first piece of main runner. Note: it is advisable to pre-install the cross connection clips on the main runners prior to hooking to the suspended rods. At this time figure that the main runner be end loaded with (2) screw/nut assemblies per intersection clip. Generally this is (6) clips per main runner or (12) screw/nut assemblies per main runner. It is advisable to install the appropriate number of screw/nut assemblies in the wall angle as the wall angle is being installed. Although it is not totally necessary, a screw/nut assembly can be installed after the fact from the top of the T-slot of the grid extrusion. To do this, disassemble a screw/nut assembly and drop the nut in from the top of the T-slot with the bezel of the nut pointing up. The nut will still work in either direction. The bezel is designed to fit in-between the opening of the T-slot. Also Note: that when installing the cross connectors on the main runners that it is very important to place them on the appropriate center distance and always measure from the end of the main runner to the first clip and then from the end of the main runner to the next clip until all the clips have been spaced from the end of the main runner. Do not measure from clip, to clip, to clip, to avoid tolerance build up. It is advisable to install clips on the main runner on the ground prior to installing the main runners. Once two opposing main runners have been installed then the cross Tee-Bars can be installed. To install a cross t-section just slide a screw/nut assembly into the end of the cross just prior to connecting the cross to the main runner clips. Always continue to double check your layout to make sure that you are within design plans and that the grid is being installed perpendicular to the walls and that the grid is level. The system installs easily if good planning is followed. If the clips are installed on the correct locations on the main runners the cross t-bars will automatically self align with each other. It is also advisable to install one splice clip to the end of each main runner on the ground which will also identify which end that is specially spaced attaches to the correct end of the opposing main runner. Use this same splice clip as the clip that attaches main runners and cross t-sections to the wall angle. Note: it is a good idea to run your main runners, so that a splice occurs between 4-way intersections. The grid is not designed for splices of the main runners to occur at 4-way intersections.

Use a good 80-100 tooth carbide tip blade with a good miter saw to finish end cuts of the main runners, wall angle and cross t-bar extrusions.

I cannot emphasize enough that the start point is the most important part of a good grid installation.

## **GASKET INSTALLATION**

After the grid has been installed, it is advisable to wait until all other trades are finished in the space if this is possible. At this time clean the grid with a water and alcohol wipe down. Install the gasket after the grid has been wiped clean. Install the gasket tape with the adhesive side to the grid. Note: leave the paper on while applying the gasket. Apply the gasket all around the inside edge of the t-bar leaving at least a 1/8" space from the inside edge of the open space on the t-bar ledge. When coming to a corner pinch the gasket and turn the corner. When coming to the end of a complete 2x4 opening overlap the gasket at this point. It is important not to stretch the gasket but to apply the gasket to the top grid surface. After the gasket is applied rub the top of the paper on the gasket to seat the gasket, then remove the paper and proceed to the next grid opening. Prior to gasket installation check to make sure that your particular order is or is not using light fixtures, filters or blank panels with pre-installed gasket on the downstream side. If this is the case do not put gasket on the grid in their respective locations.

## **FILTER, LIGHTS AND BLANK INSTALLATION**

After the grid and gasket have been installed it is now time to install the ceiling grid components. Always take care when installing HEPA or ULPA filters. Generally the light fixtures are the first components to be installed followed by the filters and then the blank panels. At this time the fire protection system has already been installed either through the grid or in 6" wide x 24" blank panels. Make sure that when installing the ceiling components that you do not damage the gasket. Be sure to place the components on the t-bar; do not slide the components over the gasket to avoid tearing the gasket.

## **TOOLS REQUIRED FOR INSTALLATION**

An industrial miter is recommended for all cuts. Use a high quality triple chip carbide tip saw blade with 80-100 teeth. After cutting de-bur the end of the cuts as necessary.

Use a #2 or #3 Philips bit for the fastening of the screws to the connection clips. The #3 is the correct size for the screw but, a #2 bit will work just fine. The 4-way connector clips each require 4 1/4-20 screw assemblies. The 3-way connectors each require 3 1/4-20 screw assemblies. Use a 9/16" open end wrench to secure the RH-LH threaded rod to the connection clip. This will tighten the 3/8" hex head nut to the connection clip, rod and square nut. Secure this prior to doing final leveling of the grid. Note: also use this wrench to secure a 3/8" nut to the threaded rod that attaches to the turnbuckle. This will secure the rod from rotation after the grid has been leveled.

Use a laser level to level all grid components or to transfer the grid layout from the floor up. Note: a laser can also be used to locate all hang points on the super-strut intermediate grid support.

## **GRID COMPONENTS**

Main Runner 144"

Wall Angle 144"

Cross T-Bar 46.5", 22.5" or optional 46" and 22"

4-Way Cross Connector, zinc plated

3-Way, Splice or Perimeter Connector

1/4-20 Screw/Nut Assembly

RH-LH, 3/8" x 8" Rod with 3/8" hex and square nut

3/8" Turnbuckle 6" Body, Zinc plated

Gasket 3/16" x 3/8" PVC with adhesive one side

## **MOD-TEC, LLC LIMITED WARRANTY**

Mod-Tec will repair or replace any parts or products which fail because of workmanship or materials at no charge for the cost of parts, materials or transportation to the original purchaser for a period of one year from the date of purchased delivery. At Mod-Tec's option, such repairs or replacement will be undertaken at the purchaser's site or Mod-Tec's facility. The purchaser shall be responsible for all labor or installation charges concerning the product. The products which have been repaired or replaced by Mod-Tec will be warranted for the remainder of said one year original warranty.

1. Goods returned to Mod-Tec without its prior consent and approval will not be accepted.

2. The purchaser must notify Mod-Tec under the limited warranty within a reasonable time after discovery, but notice shall not be received after 30 days the date of the defect to which the claim related is discovered or should have been discovered.
3. Mod-Tec must be given opportunity to inspect the product and be satisfied that it has been subject to use and service in accordance with its designed use, and that there exists a defect in workmanship or materials not caused by the misuse, accident or improper installation, maintenance or application of the product.
4. Under no circumstances will Mod-Tec, LLC be responsible for any freight (in or out), installation, or removal or reinstall cost.

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