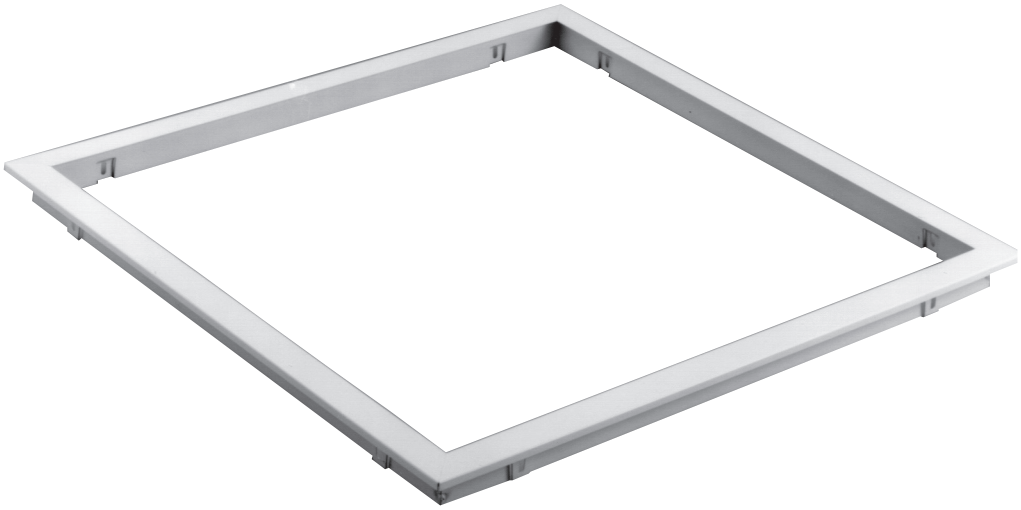
Options for Surface Mounting Ceiling Diffusers

One of the more frequently asked questions we receive in application engineering is in regards to surface mounting Titus diffusers. When a ceiling grid is not present, surface mounting is specified and the installation questions arise. Linear diffusers are available with concealed mounting, square and rectangular diffusers with square or round inlets are not.

The most important thing to know about surface mounting is that it normally requires additional framing to which the units will be secured. We often receive calls for mounting instructions after the sheet rock has been installed which is too late to provide framing without removing the installed surface.

Framing requirements will vary from one job to the next, but there are some general guidelines and terminology we use.

Obviously installing screws in the face of a diffuser will work as it does for grilles but the duct return flanges behind diffuser edges are generally not available to provide a secure mounting base for screws. Also, many surface mount frames do not have a flat surface nor is there a screw hole fastening option available. Furthermore, screw fastening certainly does not enhance the aesthetics of the installed diffuser.



The TRM mounting frame makes installation of grilles, diffusers and other ceiling components in plaster and sheet rock ceilings as simple as inserting them in a standard T-bar type ceiling.

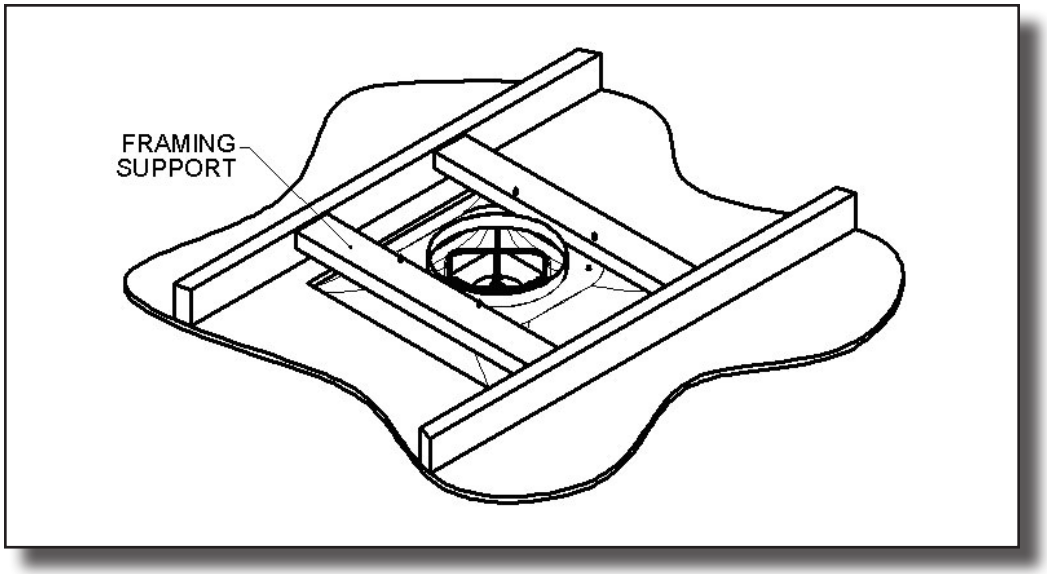
All sheetrock is mounted to ceiling joists. Joists are usually parallel to each other and spaced at two to three feet apart depending on local building codes, and in most cases, the framing for the diffuser can be mounted to the top of, and perpendicular to the joists. Screws are then used to mount the back pan to the framing. Framing members should be centered on the diffuser location to allow sufficient clearance for the diffuser inlet and associated duct. Additional care must be taken so as to avoid any protrusions or features that will occupy the space necessary for the framing on the rear side of the diffuser. Framing should also be at a depth that will allow the diffuser to firmly seat against the sheet rock. Most diffuser back pan heights are less than the depth of the joist. The sheet rock or ceiling surface is installed into an opening provided for the diffuser.

The diffuser core should be removed prior to installation to allow for screws to be installed in the top of the back pan transition; this is the flat portion

on the rear of the back pan. Screws are then used to secure the back pan to the framing. It is helpful to use washers to prevent the screw heads from being driven through the back pan if the framing is not flush to the rear of the pan. In most cases the screws can be placed in a manner to not be visible from the occupied space after the diffuser core or face is re-installed.

As an alternative to the framing process, and one that we suggest if the ceiling surface has been installed without prior framing for the diffuser mounting, is to use our rapid mount frame. The TRM frame can be installed in the space between the joists following the installation of the ceiling.

The TRM replicates a standard ceiling grid module and a lay-in (type 3) frame diffuser. The diffuser can then be laid in the TRM frame. The TRM frame does add a border to the finished appearance of the diffuser, but also can be utilized as an access port to the space above the ceiling by simply pushing the diffuser up and out of the opening.



The illustration above shows how the TMS diffuser would be mounted in sheetrock.

While the TRM does represent additional diffuser cost, the reduced labor requirement and flexibility of the installation sequence offers a distinct advantage.

The TRM is available in steel and aluminum and is ordered as a separate line item. Remember, when using the TRM frame, the (type 3) diffuser frame must be used instead of the (type 1) diffuser frame.

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