

**PRODUCT: 59NDR**  
**SUBJECT: MOUNTING AND APPLICATION**  
**ISSUED BY: GUS FARIS**

This bulletin covers the proper installation of the 59NDR supply/return horizontal pattern ceiling slot diffuser with vertical down-blast.

Install the units in a flush mount T-bar system. Slight acoustic tile exposure (no more than ¼") below the T-bar is permitted, but for best performance, use flush face system. Make sure the face of the unit is parallel to the floor and has no tilt or lean. Ensure that the T-bar rests flush to the face of the unit and that there is no T-bar exposed to the supply air stream. This can lead to whistling and affect performance. Make sure no obstructions from the wall affect the down-blast air stream. Before running supply air to the unit, make sure down-blast pattern control blades are vertical in the fully open position from the factory. Adjust as needed but make sure the air stream is not directed right at the window to avoid condensate issues.



In a colder outdoor climate, 10-degree Fahrenheit or less, it is recommended that the unit be placed in the ceiling no more than 12 inches from the perimeter wall or window (This also depends upon ceiling height and wall construction characteristics as well: wall R-values, window U-values, glass type, etc.). At this distance, in heat mode, the down blast of air will create a curtain as it travels toward the floor. The curtain will slope toward the cold perimeter window and strike the wall near the floor if sized and adjusted properly. The warm air then entrains the cold air off the window raising the air temperature to near room temperature. This ensures the room environment is nearly unaffected by the outdoor climate due to heat loss through the window. During cooling mode in hotter months, the warm air at the window will exhaust through the return at the ceiling. Additionally, the proximity of the downblast from the wall ensures good performance.

If the diffuser is placed at distances of more than a foot from the wall in the same climate described above, the down-blast may short circuit. Meaning the down-blast will not make it to the floor. This happens because controlling the effects of heat loss through the wall becomes more difficult as the cold air gains more volume in the space between the wall and down-blast air stream. The downblast should be adjusted to move it closer to the perimeter wall.

END OF ARTICLE