

# TECH TALK

TT-22

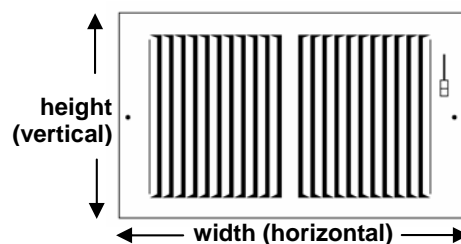
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## Dimensions of a Grille, Register or Diffuser

by Dave Fetters

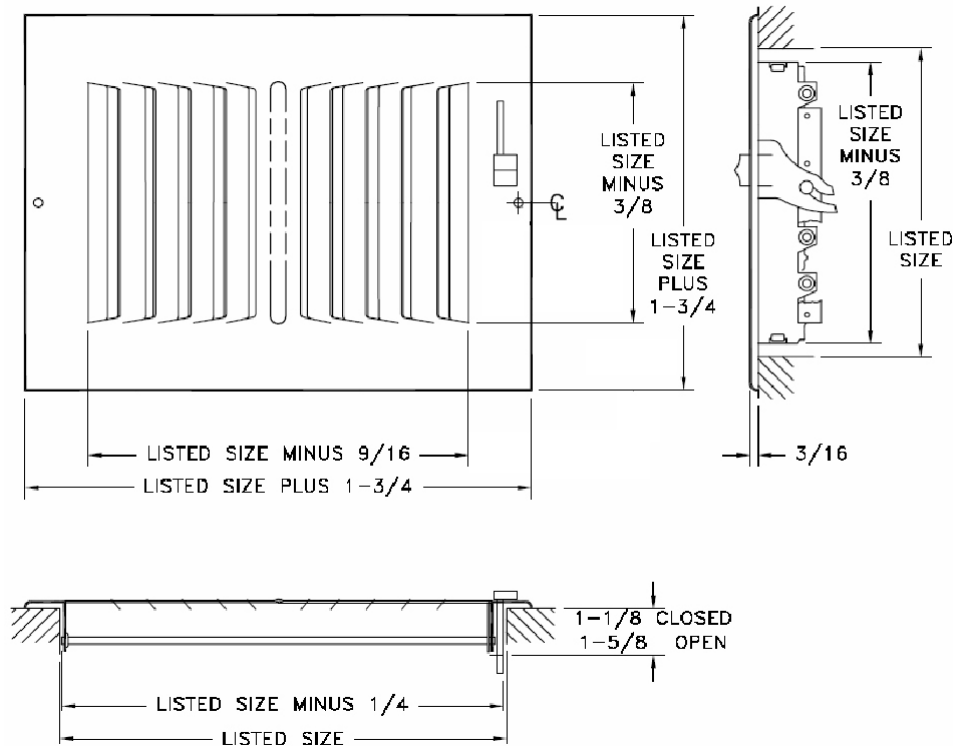
Sometimes, those of us in the HVAC industry assume our customers understand the everyday lingo we use in helping describe our products. Have you ever stopped to realize what the “size” of a register means or where one measures the size? Usually a size is given in inches and it refers to the two dimensions of a square or rectangular register. The size can also be a single dimension that refers to the diameter of a round diffuser or the “square” of diffusers that are only offered in square as opposed to rectangular sizes.



Let’s look at the simple example of a 12 x 6 sidewall supply register. The model doesn’t matter. The dimensions 12 and 6 are inches. By convention in the industry, the first dimension is the width of the register. So looking at the register, the 12-inch dimension is the left-to-right (horizontal) measurement. That leaves the 6-inch dimension as the height or up-and-down (vertical) dimension. To refer to this product as a 6 x 12 would imply that the 6-inch dimension is the width, because it is the first dimension given, and the height 12 inches. This would not look right on a wall nor would the fins be oriented in the proper direction for its intended use.

Big deal, you say? Have you ever tried to find the 12- and 6-inch dimensions on a register? They aren't there! The dimensions are called *nominal*, meaning "in name only." The nominal dimensions or "listed size" of a register refer to the hole, boot, stack head, or duct opening. The industry builds the damper on the back of a register undersized with reference to the nominal dimensions so that the damper will fit into the opening. A submittal drawing of the part may show the damper dimensions as "listed size minus  $\frac{3}{8}$ " which means that for our example, the damper dimension would be  $11\frac{5}{8}$  by  $5\frac{5}{8}$  inches.

The margin or outside face dimensions are oversized compared to nominal. They may be "listed size plus  $1\frac{3}{4}$ " inches so that the face will easily overlap the 12 x 6 mounting hole. Our example register would have face dimensions of  $13\frac{3}{4}$  by  $7\frac{3}{4}$  inches.



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