

TECH TALK

TT-20

Grille, Register and Diffuser Substitution



For whatever reason, you may not be able to find the exact model of American Metal Products grille, register, or diffuser product you had hoped to. Given the fact that you may not have the option to change the size of the desired model to get by, what options do you have to substitute another model for the one you wanted? Since American Metal Products has the broadest product offering in the industry, chances are very good that a suitable substitution can be found. Allow me to offer some suggestions for substitutions without concern for the obvious variable of cost.

This discussion should help broaden your product knowledge about the use of alternates. Materials, construction, designs, and features may change, but the end effect of adequate (or enhanced) performance will still be achievable.

Floor: An alternate for our popular 421 steel floor diffuser could be a 411, 531, or a Linear in an ascending order of capability. The steel 411 is more robust than the 421 and could be used in high traffic areas. A 531 is constructed of extruded aluminum for a premium look, has high strength, and offers a unique way to both heat and cool from the same location using dual multi-shutter dampers to change the air pattern as necessary. Linears offer the

greatest available range of lengths (almost unlimited) and widths, are made of extruded aluminum, can be used as a supply or return, and can be used in the floor, on the wall, or in the ceiling. The Linear series has a large matrix of possible sizes, when you consider that widths are available in half-inch increments from 1½ to 12 inches (for floor applications) and up to 24 inches for wall or ceiling use combined with infinite lengths. The 210 supply registers and 265 return supply registers could be used as substitutes for sizes of floor registers that are not available in the 421, 411 or 531 styles.

Baseboard: Baseboard diffusers do not have the luxury of a wide range of common sizes. However, the 654, 655, and 664 are interchangeable, for the most part. We offer 406, 462, and 464 baseboard diffusers, as well, in longer lengths and various materials and finishes.

Sidewall/Ceiling: Alternates for our louvered sidewall/ceiling registers, like the 661 ½-inch and 682 ½-inch fin-spaced designs, would be one for the other if you were not concerned with blade spacing. An option for these steel registers is the plastic RZ680 series that has the advantages of molded-in color and rust resistance, but the size offering is limited. The ultimate in sidewall/ceiling

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products are the 92 series in steel and the HV series in extruded aluminum. These products offer the widest range of sizes and options, including stronger construction, multiple damper choices, single or double deflection, adjustable blades, and matching returns and filter grilles.

Curved-blade registers start with the 300/A300 series, progress to the A611-A614MS/OB adjustable curved-blade registers, and finally extend to the C series extruded aluminum registers. The 300/A300 series of stamped, fixed-blade registers have a multi-shutter damper. The assembled A600 series adjustable blade registers offer a choice of multi-shutter and opposed-blade dampers. Faces and blades are made of aluminum with painted galvanized steel dampers. The C series of adjustable curved-blade registers also have a choice of multi-shutter and opposed-blade dampers, as well as a comprehensive size matrix in 2-inch increments. White and satin anodized aluminum finishes are available. These are assembled using premium aluminum extrusions.

Return Grilles: The 650 and 672 stamped-face, louvered return grilles could be substituted for one another (as before, there is a difference in blade spacing) before moving to the 94, 94A, RCB, RE5, RH90, or RH45 return grilles. The latter group is usually considered "commercial" because these are assembled rather than stamped. They have stronger construction and offer more features, especially size options.

Filter Grilles: We start with the "residential" type 659 and 673 with stamped louvered faces that are interchangeable as far as performance, even with the difference in blade spacing. There is a large number of sizes offered. The commercial filter grilles—96AFB, RHF45, REF5, and RCBF—are more robust, being assembled of steel or extruded

aluminum, and offer many more sizes.

Ceiling Diffusers: Round ceiling diffusers are limited to our 16, RZ16, or 20 diffusers. A square diffuser could be substituted for a round diffuser with little change in performance. The 16 is a non-adjustable, steel, step-down diffuser. The RZ16 is a plastic flush diffuser with a 12-inch face, but it has built-in 6-, 7-, and 8-inch collars. These come with a cam-lock installation method, removable core, and built-in damper. The 20 diffuser is a heavy duty, adjustable core diffuser for commercial and industrial applications.

Square diffusers include the 24, RZ500, SD, the A500 directional series, the MCD modular core diffuser, and the SR/AR series, again in ascending order of features and size offerings. The 24 is a steel, step-down diffuser with butterfly and opposed-blade damper options. The RZ500 is the square equivalent of the RZ16 described above. The SD step-down is an all-aluminum diffuser that can be used in high humidity applications. An MCD modular core diffuser is made from extruded aluminum and allows for 1-, 2-, 3-, 4-, and 2-way corner airflow patterns. It is offered in two margin styles, nine sizes, plus an available T-bar mounting, with or without damper. The SR/AR series has the greatest number of options of sizes and face styles in both steel and aluminum for any ceiling diffuser in our lineup of products. Not all of these are suited for residential applications, however.

A substitution may not always be available or welcome, but if the opportunity occurs, the preceding should be helpful.



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