

FEATURES

Design

Large Selection and Variety of Grilles

- Standard and custom materials complement all yacht interiors.
- Custom sizes available for any application.

Wood Frame Grilles

- Pop out louver panels with Return Air Grilles have easy to clean replaceable filters.
- Supply Air Grilles have double deflection, moveable louvers available in anodized bronze or aluminum finish.

Aluminum Grilles

- Supply air grilles have adjustable louvers to direct air flow.
- Return air grilles feature durable fixed-vane louvers.
- Return air grilles are supplied either with or without filters depending on system requirements.
- Painted grilles are sprayed with an aerospace grade polyurethane.
- Multiple color selection.

Product Characteristics

Wood Frame Grilles

- Cut-out dimensions are 0.063" (0.16cm) larger than the nominal grilled size, i.e., a 10 x 5 VH requires a 10.063" x 5.063" (25.6cm x 12.9cm) cut-out.
- Outside frame dimensions are 1.125" (2.9cm) larger than the nominal grille size, i.e., a 10 x 5 VH has overall dimensions of 11.125" x 6.125" (28.3cm x 15.6cm).
- Depth of grilles: VH is 1.375" (3.5cm), VML is 1.875" (4.8cm), RA is 0.875" (2.2cm), measured from back of frame.
- Frame (flange) dimensions is 0.563" (1.4cm) on all sides.

Aluminum Grilles

- Cut-out dimensions for the TH, TV, and TRA style grilles are .375" smaller than the nominal grille size, i.e., a 10 x 5 TH requires a 9.625" x 4.625" cut-out. The TRAF style grilles are .125" smaller.
- Outside frame dimensions are 0.875" (2.2cm) larger than the nominal grille size, i.e., a 10 x 5 TH has overall dimensions of 10.875" x 5.875" (27.6cm x 14.9cm).
- Depth of grilles: TH and TRA are 0.875" (2.2cm), TRAF is 1" (2.5cm), measured from back of frame.
- Frame (flange) dimension is 0.625" (1.6cm) on all sides.

Plastic Grilles (Circular)

- Depth of 4SA is 2.375" (6.0cm) measured from back of frame.
- Frame (flange) dimension is 5.5" (14.0cm) in diameter.
- Cut-out dimension is 4.0" (10.2cm) in diameter.
- Special adapter available for 3.0" (7.6cm) ducting.



Not all grilles are shown

The following Supply and Return Air minimums are required to achieve rated capacity.

Unit (BTUs)	Return (Sq. In/Sq. cm)		Supply (Sq. In/Sq. cm)	
4,000	49	316.1	24	154.8
5,000	64	412.9	30	193.6
6,000	70	451.6	35	225.8
7,000	88	567.8	40	258.1
9,000	98	632.3	50	322.6
10,000	98	632.3	50	322.6
12,000	140	903.3	70	451.6
16,000	168	1083.9	84	542.0
24,000	280	1806.6	140	903.3
30,000	350	2258.2	175	1129.1
36,000	420	2709.8	210	1354.9
48,000	560	3613.1	280	1806.6

Note: Custom sizes and custom painted grilles are offered. Contact Marine Air Systems, Inc. for pricing and availability.

DIMENSIONS (WIDTH X HEIGHT)⁽¹⁾

Wood Frame Grilles

Supply Air - Primary

Model VH

7x7
10x5
12x5
12x6
14x4
14x5
14x6
16x4

Supply Air Secondary Closeable

Model VML

4x4
6x4
8x4
8x8
10x4
12x4

Supply Air - Secondary

Model VH

4x4
6x4
8x4
10x4
12x4

Return Air with Filter

Model RA

7x7 12x14
8x8 14x7
8x10 14x10

Plastic Grilles

Round and Closeable Supply Air Grilles

Model	2SA	3SA	4SA
Duct Size	2"	3"	4"

Aluminum Grilles

Supply Air

Model TH

4x4 12x4 16x2
4x10 12x5 16x4
7x7 12x6 18x2
8x4 14x4 18x3
10x4 14x5 20x5
10x5 14x6 24x3
12x3 14x7

Return Air With Filter

Model TRAF

Return Air Without Filter

Model TRA

8x11 14x7
10x4 14x10
11x7 14x12
11x8 16x9
11x12 20x5
12x12 22x7
28x6

⁽¹⁾ All sizes are in inches, multiply by 2.54 to calculate dimensions in centimeters.

Installation Guidelines for Supply & Return Air Grilles

When choosing the proper size grilles for any system, primary consideration should be given to the capacity of that system and its necessary air flow (CFM). Reduced or restricted air flow due to undersized grilles or poor installation will result in loss of performance and/or inefficient operation of the system.

Standard air flow for any system is nominally rated at approximately 400 CFM (cubic feet per minute) per ton (12,000 BTU/Hr). In order to maintain this air flow, return air grilles are to be a minimum of 140 square inches of surface area per ton. If the grille is in close proximity to the evaporator coil, it should match the actual dimensions of the coil as closely as possible to prevent obstruction of air flow through part of the coil which would result in loss of performance.

Supply air grilles are to maintain a minimum of 70 square inches of surface area per ton. This can be maintained using a single grille or a combination of smaller grilles, provided proper installation methods are followed. In either case, an even and unrestricted air flow across the entire surface of the grille(s) is the ultimate goal in any installation.

Placement of grilles is important to ensure proper system performance. Supply air grilles are to be located as high as possible in any cabin area. They should also be located to distribute air across the cabin as evenly as possible. Air flow across the ceiling of any area provides for even temperatures (no hot spots) and complete circulation of the air.

When supply air grilles cannot be located high and must be installed lower (i.e., countertop, etc.), they are to be installed in such a way as to channel air flow up and across the conditioned area. Properly directed louvers and built-

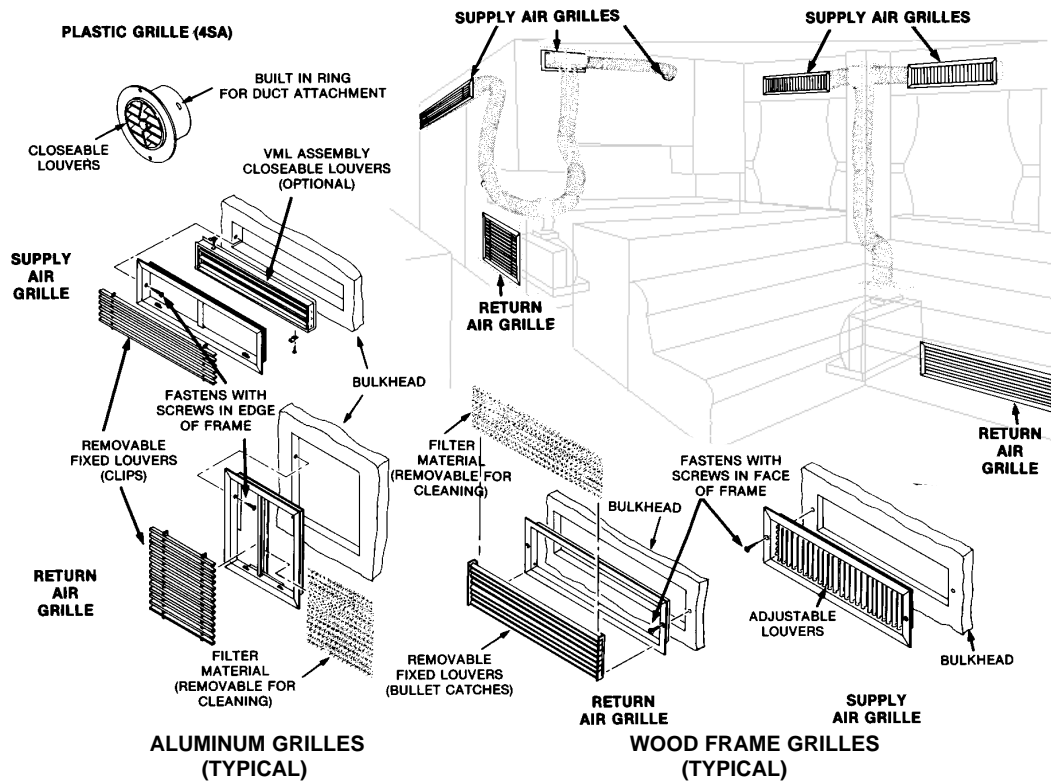
up wedges both help to achieve proper air circulation in this application.

In no instance should a supply air discharge be directed towards a return air grille. This will cause the system to prematurely cycle off (short cycle) and prevent the cabin area from achieving the desired temperature.

Return air grilles are to be installed low in a cabin area and in close proximity to the evaporator coil of the system. If any plenum, chase or duct work is constructed between the return air grille and the face of the evaporator coil, all cross-sectional areas must maintain a minimum surface area equivalent to that of the return air grille. If any open area exists between the grille and the coil, care must be used to prevent this area from being obstructed (stowage, parts, etc.). Return air should only be available to the system from the cabin area(s). Units should not be exposed to engine rooms, bilges or other areas where fumes or odors could be drawn into the system. Compartments housing equipment should be completely sealed from these areas.

Some return air grilles are manufactured with a removable filter attached. This filter must be used to catch and trap particles in the air (dust, lint, etc.) that otherwise would be deposited on and in the evaporator coil, restricting the air flow through it. The louvre section of each grille is designed to be easily removed (clips or bullet catches) to access the filter material for cleaning on a regular basis. If no filter is attached to the grille, then a filter must be installed on the a/c unit.

Clip-on filters are available for applications where standard return air grilles are not used. These filters attach directly to the front of the evaporator coil, and must be checked on a regular basis.



In the interest of product improvement, Taylor Made Environmental's specifications and design as outlined herein are subject to change without prior notice.



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