

## **BUILDING VARIETY STATEMENT**

The “B” buildings at Bridge Park are bound by Riverside Drive to the west, Bridge Park Avenue to the north, Mooney Street to the east and Banker Drive to the south. This second phase of a mixed-use development is comprised two blocks, both adjacent to Longshore Street along the north-south axis, and includes three mixed-use buildings (B1, B2 and B3) and a parking garage with residential “liners” on two facades (B4/B5). This development is designed to address the Vision Principles for the development of the Bridge Street Corridor districts, by providing an interesting, walkable setting for urban lifestyles that places value on human scale and a diversity of experiences.

Each building has a unique character which is expressed through a variety of material finishes and details, particularly at the pedestrian street level. Balconies are used extensively throughout, and windows are maximized at select corners to enhance connections to the outside environment. Pedestrian bridges connect the garage to the residential buildings, and are intended for residents’ use only. The bridges are open to the outside, so as to create a feeling of connectivity with the street environment, and detailed mostly in steel. Their design emphasizes lightness and simplicity, and creates another layer of recognition for the community of Bridge Park.

Building B1, a combination of retail and commercial uses at the first and second levels, and residential above. It has a traditional arrangement of base, middle and top, each expressed with stone and storefront glazing, brick, and a combination of composite metal panels and fiber cement. In some cases brick is carried down to street level or metal panels used at the west facade to create distinct moments/accents. This building has a roof terrace at the second story which incorporates green elements and overlooks the park and river along Riverside Drive, and downtown Dublin beyond.

Building B2 is a combination of retail and commercial uses at the first and second levels, and residential above. A tower element at the northwest corner, clad in composite metal panels, has ample corner balconies and provides a recognizable gateway element, further enhancing the sense of arrival and place-making. Stack bond brick and storefront glazing are used mostly along the ground and second stories. The storefront system is recessed deeply to create strong shadow lines and massing articulation. The upper stories are clad in an accent color brick, fiber cement and glazing. A roof terrace along the west façade provides casual meeting space and great views to the west for the residents.

Building B3 is a combination of retail at the ground story and residential above. This building is mostly clad brick and glass, with fiber cement used at the 5<sup>th</sup> story and at balconies. A stack brick bond at the ground story, topped with a metal channel band, adds another level of detail at the pedestrian level. Balconies with metal mesh guardrails punctuate this composition. Generous areas of glazing line all stories. Storefront is used at the ground story, while thin-mullion-profile aluminum framed windows are used at the residential levels. A rooftop amenity deck gives residents additional choices for great views and outdoor social space.

Building B4/B5 has two distinct functions as a garage and a residential building. The two are woven together by the use of two colors of brick and elements such as metal mesh balconies that are used at both the residential and the garage facades. A stainless steel mesh panel system is used at the garage,

to give this structure its unique character. The mesh panel system projects out from the brick cladding to give the garage facades a sculptural character, and the appearance of a “woven fabric”. Extensive glazing and composite metal panels are used at the northwest and southwest corners of the garage; these are the principal entrances for the garage and residential liners. Transparency is maximized at these locations, to create a memorable visual cue for way-finding. Fiber cement is used at select locations along the residential facades, to create visually lighter elements at the top stories. The utility brick base is used along the residential façades, as well as along the garage elevations. The two brick colors are used alternatively as accent band at the base and at the upper levels, to articulate the facades and create visual interest. Planters along the west side of the garage provide elements of green and soften the experience of the building at the pedestrian level.

The two buildings on each block are separated by open spaces meant for a variety of pedestrian uses and experiences. These open spaces incorporate generous green space along with specialty paving, casual seating opportunities, outdoor dining and other flexible event spaces, creating a real sense of place and providing interesting and pleasant connections between streets. Bio-retention areas and impervious paving aid with site stormwater management, and are incorporated seamlessly into the fabric of these spaces.

## **BUILDING B1 (CORRIDOR BUILDING) – WAIVER SUMMARY**

**-Upper Story Street Façade Transparency:** Level 6 at East elevation does not meet requirement. 29% is provided. Window sizes are designed to be consistent with remaining floors; requirement met at all other levels.

**-Blank Wall Limitations:** North elevation does not meet requirement at: ground story between column lines B and E, nor does the 2nd story between column lines B and D and second stories. This is partly due to the service area at this location, and some of the ground story elevation in this area will be screened. The other reason for the limited glazing at this location is the proximity of building B2; building code only allows 25% glazing along this wall. The blank wall areas have been further articulated with panels of brick infill.

**-Parapet Height:** At select locations, parapets are less than 2ft tall to visually break the roof line and work with the vertical increments to create interest in the massing.

**-Principal Entrance Location:** Principal building entrance is located along Longshore Street. Location is determined for ease of access and way-finding from the surrounding street environment and parking garage.

**-Vertical Increments Required:** Requirement exceeded at west elevation above 6th story windows between column lines 8 and 11, at north elevation above the 3rd story between column lines B and E, at east elevation above 6<sup>th</sup> story windows between column lines 9 and 18, and at south elevation above 3<sup>rd</sup> story between column lines A and D. There reason for this departure is aesthetic, as the bays in question work better proportionally with the wider bay spacing, and create a more balanced façade. This also creates a more varied aesthetic when looking at the overall street elevations.

**-Façade Material Transitions:** Vertical material transitions at balconies occur at inside corners, but not overall inside corner of balcony space. This is the design intent, in order to create a visually lighter area at these balconies, as well as highlighting a thickness to the exterior brick wall.

**-Balcony Size:** Corner balconies along west façade are less than 6ft, but more than 5ft deep. This works with the overall massing and proportions of the corners.

**-Permitted Primary Materials:** Secondary materials exceed requirement on all facades. Composite metal panels and fiber cement are used along with brick, stone and glass, to add visual interest and material contrast to the building. They are also used to incorporate a visually lighter 'top' to the building, to create distinct moments along the west façade, to emphasize the visual proportions of base, middle and top, as well as to provide a comfortable street scale.

### **BUILDING B2 (CORRIDOR BUILDING) – WAIVER SUMMARY**

**-Parapet Height:** At select locations, parapets are less than 2ft tall to visually break the roof line and work with the vertical increments to create interest in the massing.

**-Principal Entrance Location:** Principal building entrance is located along Longshore Street. Location is determined for ease of access and way-finding from the surrounding street environment and parking garage.

**-Façade Material Transitions:** Vertical material transitions at balconies occur at inside corners, but not overall inside corner of balcony space. This is the design intent, in order to create a visually lighter area at these balconies, as well as highlighting a thickness to the exterior brick wall.

**-Balcony Size:** Corner balconies at the SW and SE corners are less than 6ft, but more than 5ft deep. This works with the overall massing and proportions of the corners.

**-Permitted Primary Materials:** Secondary materials exceed requirements on east facade. Fiber cement panels and composite metal panels are introduced in this building as a design element, to add visual interest to the façade and provide a material/texture counterpoint to the brick and glass.

### **BUILDING B3 (CORRIDOR BUILDING) – WAIVER SUMMARY**

**-Parapet Height:** At select locations, parapets are less than 2ft tall to visually break the roof line and work with the vertical increments to create interest in the massing.

**-Principal Entrance Location:** Principal building entrance is located along Longshore Street. Location is determined for ease of access and way-finding from the surrounding street environment and parking garage.

**-Vertical Increments Required:** Requirement exceeded at north elevation at both end bays and at ground story between column lines C and G, and at south elevation at both end bays and at ground story between column lines C and G. This is primarily a design decision, in order to maintain end bays that visually anchor the corners on these elevations, as the middle bays are thin and vertical. At the ground story on the north and south facades, the requirement is only exceeded between the top of the storefront openings and the 2<sup>nd</sup> story.

**-Façade Material Transitions:** Vertical material transitions at balconies occur at inside corners, but not overall inside corner of balcony space. This is the design intent, in order to create a visually lighter area at these balconies, as well as highlighting a thickness to the exterior brick wall.

**-Permitted Primary Materials:** Secondary materials exceed requirements on all facades. Fiber cement panels and metal channel accent bands are introduced in this building as a design element, to add visual interest to the façade and provide a material/texture counterpoint to the brick and glass. The fiber cement also adds a visually lighter “top” to the building.

## **BUILDING B4 (CORRIDOR BUILDING/ PARKING STRUCTURE) – WAIVER SUMMARY**

### **CORRIDOR BUILDING**

**-Parapet Height:** At select locations, parapets are less than 2ft tall to visually break the roof line and work with the vertical increments to create interest in the massing.

**-Ground Story Street Façade Transparency:** Does not meet requirement. Maximum transparency (glazing) is provided at lobbies / public entry points. The transparency % at the ground story is low because this building does not have a retail component (instead there are residential units on ground floor of two sides of building), and because of the substantial grade change along the north elevation (east end is almost entirely buried).

**-Blank Wall Limitations:** North elevation does not meet requirement at ground story. Blank wall exceeds 15' of length at first story on north façade between column lines A and D. This is due to the substantial grade change along this elevation, as well as having utility areas along this façade (water room, electrical room, bike storage, etc). The wall at this level is articulated with accents of brick #1 to create a varied pattern.

**-Number of Street Façade Entrances Required:** Requirement not met because there is no retail component in this building (residential units on ground floor of two sides of building). Residential unit privacy is maintained at the street level.

**-Vertical Increments Required:** Requirement exceeded at north elevation, above the 5<sup>th</sup> story windows of the two middle bays; and at west elevation, between column lines 2.6 and 5. The reason for this departure is aesthetic, as the bays in question work better proportionally with the wider bay spacing, and create a more balanced façade. This also creates a more varied aesthetic when looking at the overall street elevations.

**-Permitted Primary Materials:** Secondary materials exceed requirement on east, west and north facades. Fiber cement panels are used along with glass and two brick types/finishes, to add visual interest and material contrast to the building. They are also used to incorporate a “lighter” top to the building in select locations, to emphasize the visual proportions of base, middle and top, as well as to provide a comfortable street scale.

**-Towers:** Towers are located to provide ease of way-finding and access to and from the surrounding neighborhood, by creating taller elements that are easily recognizable and stand out from the ‘typical aesthetic’. The southwest tower is designed to provide access to the residential and parking components, for both this development and the future hotel and conference center south of Banker Drive.

## **PARKING STRUCTURE**

**-Ground Story Street Façade Transparency:** Does not meet requirement. Maximum transparency (glazing) is provided at lobbies and public entry points. The total transparency (storefront) % at the ground story is low because the parking structure is designed to be open to the street, with planters along the street level on the east façade. Also, there is a substantial grade change along the south elevation (ground story is mostly buried at the east end).

**-Blank Wall Limitations:** South elevation does not meet requirement at ground story. Blank wall exceeds 15' of length at first story along the south façades between column lines A and C. This is due to the substantial grade change along this elevation; the ground story is entirely buried at the east end. The area exposed above grade was designed as a continuous "base" to visually balance the open, variegated nature of the garage panel system above.

**-Principal Entrance Location Required:** Does not meet requirement. Principal entrances (pedestrian) are provided at south and west facades, and at the non-street north façade. The entrances along the east façade are vehicular.

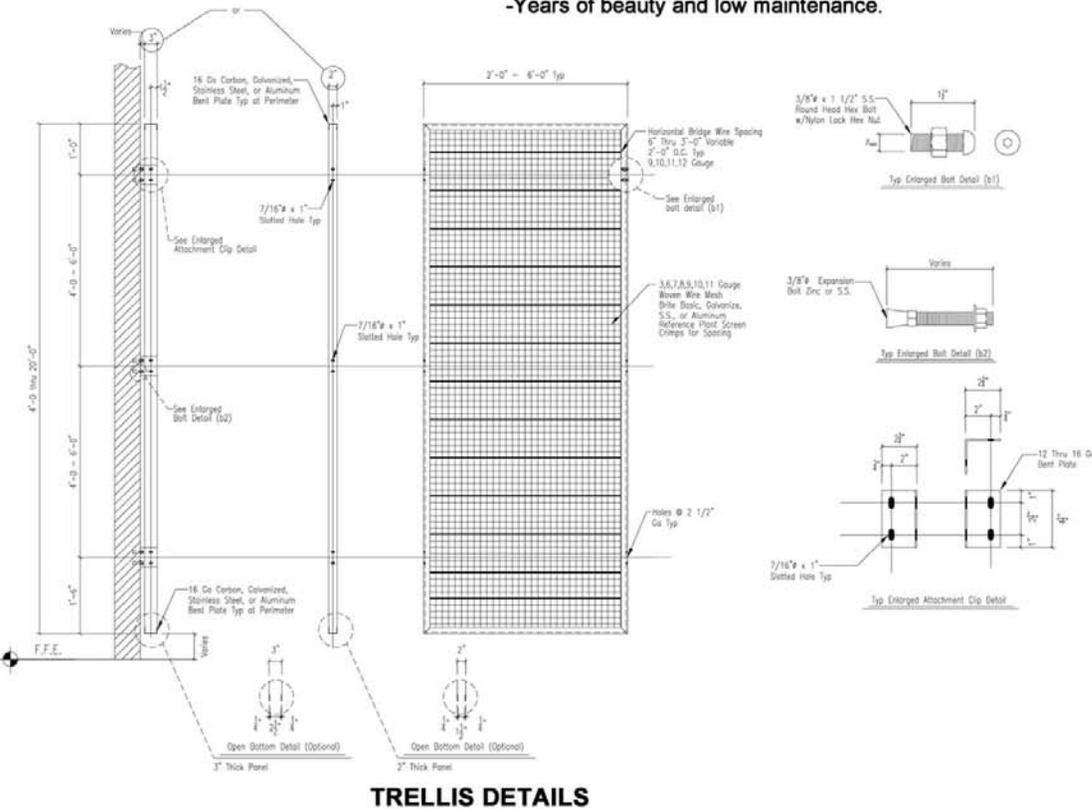
**-Number of Street Façade Entrances Required:** Requirement not met because there is no retail component in this building (residential units on ground floor of two sides of building).

**-Vertical Increments Required:** Requirement is exceeded at east elevation, between column lines 7 and 9, at level 6 parapet only. This is the design intent, to give a visual hierarchy to the garage entry bays.

**-Permitted Primary Materials:** Secondary materials exceed requirement on east and south facades. A stainless steel mesh panel system is used, along with brick, to give this structure its unique character. The mesh panel system projects out from the brick cladding to give the garage facades a sculptural character, and the appearance of a "woven fabric".

**TRELLIS SYSTEM CHARACTERISTICS:**

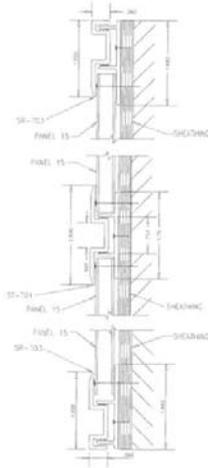
- System is a modular framework grid mounted to the exterior wall of the roof deck elevator lobby creating aesthetic living green facades.
- These high quality attractive eco units are constructed to accommodate a captive grow space for various plants and vines.
- Screens are made with a heavy .120 woven wire mesh screen with a unique bridge wire for stabilization.
- Years of beauty and low maintenance.





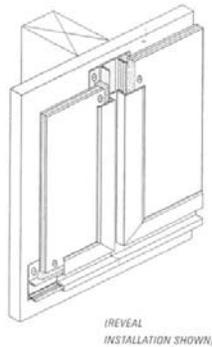
# BRIDGE PARK

DUBLIN, OH



|             |                         |
|-------------|-------------------------|
| P15 PROJECT | FREMONT ROAD SCHOOL     |
| OWNER       | FREMONT SCHOOL DISTRICT |
| LOCATION    | MUNDELEIN, IL           |
| ARCHITECT   | LEGAT ARCHITECTS, IL    |
| INSTALLER   | M & E CONSTRUCTION      |
| SYSTEM      | 2-PART REVEAL MOLDINGS  |
| SOLD BY     | S & S PANEL SALES, IL   |

|  |                            |           |                              |
|--|----------------------------|-----------|------------------------------|
| PANEL FEATURES 15 YEAR WARRANTY, DURABILITY, PROVEN INDUSTRY |                            |           |                              |
| FACE   | .010" TEXT ALUM            | WEIGHT    | 1.10 LBS/SQ FT               |
| CORE   | 5/16" EXT. PLYWOOD         | R-VALUE   | 1.16                         |
| BACK   | .004" FOIL VAPOR BARRIER   | STIFFNESS | 33,000 LB-IN/FT <sup>2</sup> |
| THICKNESS  | 5/16" NOMINAL              | IMPACT    | 300 FT/LB                    |
| SIZES  | 48" X 96" UP TO 60" X 120" | FLAME     | CLASS A                      |
| FINISH   | PPG TRUFORM® COATING       |           |                              |

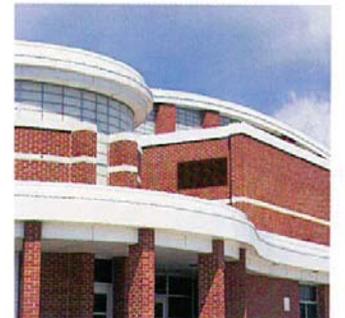


## CITADEL PANEL 15 used at buildings B1, B2, B4

► **DURABLE.** A benchmark of quality for over 30 years, Panel 15® was designed to provide an economical, long-lasting solution in a laminated wood-core panel.

Named for its 15-Year Standard Warranty, these panels are ideal for cladding, fascia, soffits and accent bands.

And with 20 molding profiles available, you can create virtually any look and be confident it will remain for years to come.



08-23-2015

## METAL PANEL DETAILS

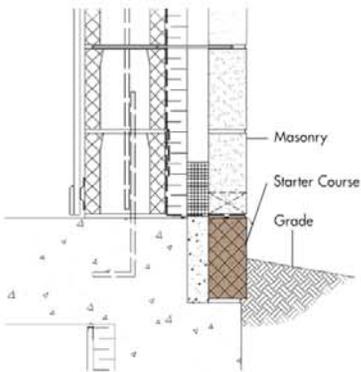


# BRIDGE PARK

DUBLIN, OH

Incorporate an  
**Adair® Limestone Starter Course**  
*Starter Course*

Installing a starter course of Adair® dolomite will maintain the aesthetic integrity of the masonry. Its greater density and lower absorption is ideally suited to resist the conditions at grade.



Adair® limestone starter course



**Top Left:**  
4501 North Fairfax Office Complex  
Fairfax, VA  
WDG Architects  
Renaissance® Wheat Sandblasted

**Top Right:**  
Providence  
Palatine, IL  
Tinaglia Architects  
Renaissance® White Sandblasted

**Left:**  
Saint Nektarios Southeast  
Greek Orthodox Parish, Inc.,  
Charlotte, NC  
One on One Design  
Renaissance® Custom Color Smooth and Rocked



**Below:**  
St. George 5th Court House  
St. George, UT  
VCRB Architecture  
Renaissance® Custom Color Cleft Rocked



**ARRISCRAFT STONE is used at buildings B1**



### THE ARRISCRAFT ADVANTAGE:

- High strength, high density, and natural absorption translate into superior durability;
- Exceptionally tight dimensional tolerances;
- No cement or chemical additives; Renaissance® is not subject to the degree of shrinkage associated with cement-based products;
- Consistent color throughout the entire stone; Renaissance® can be cut, chiseled and dressed in the field while maintaining its color and texture.
- Arriscraft products can contribute to LEED® points and to sustainability in the LEED categories of Energy and Atmosphere, Materials and Resources, and Innovation in Design.
- Arriscraft offers an industry-unique Lifetime Product Warranty.

06-23-2015

## STONE DETAILS

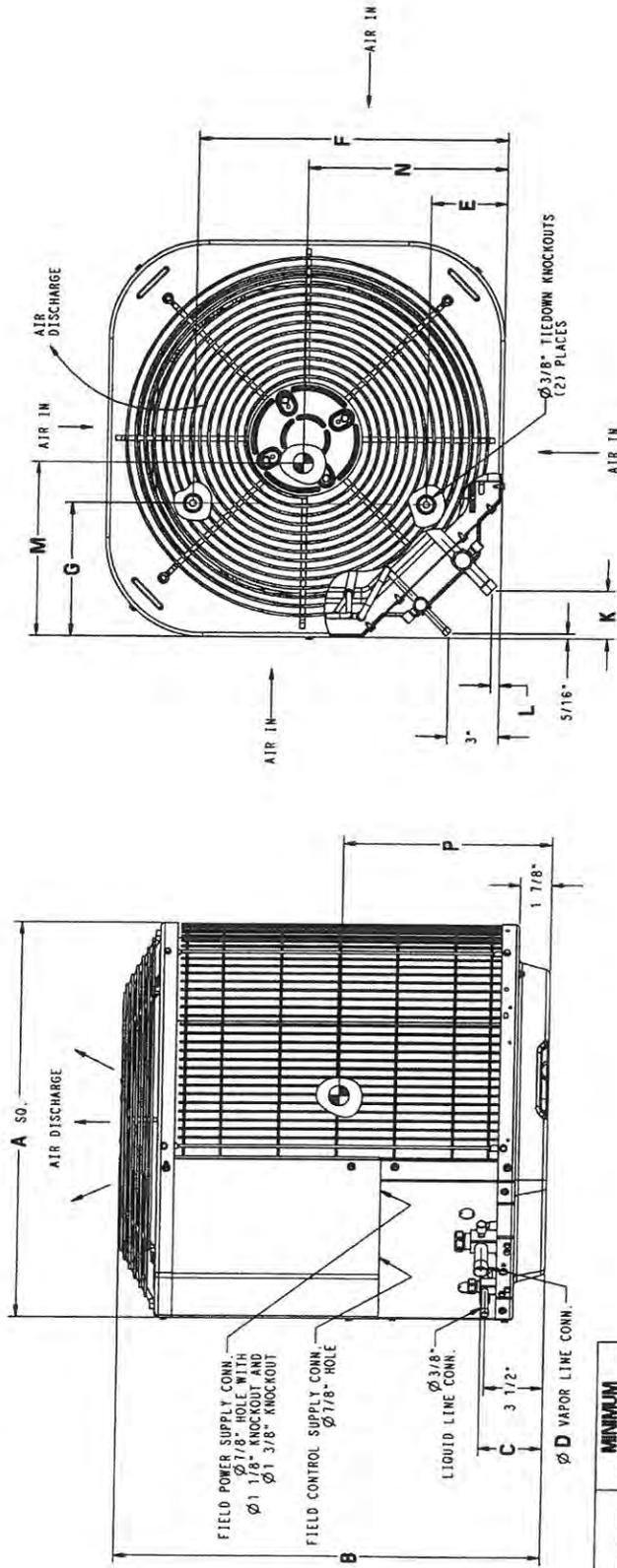
# RESIDENTIAL CONDENSING UNIT

## DIMENSIONS - ENGLISH

| UNIT      | SERIES | ELECTRICAL CHARACTERISTICS |   | A        | B         | C      | D    | E       | F         | G        | K        | L    | M   | N       | P       | OPERATING WEIGHT (LBS) | SHIPPING WEIGHT (LBS) | SHIPPING DIMENSIONS (L x W x H) |
|-----------|--------|----------------------------|---|----------|-----------|--------|------|---------|-----------|----------|----------|------|-----|---------|---------|------------------------|-----------------------|---------------------------------|
|           |        | X                          | 0 |          |           |        |      |         |           |          |          |      |     |         |         |                        |                       |                                 |
| CA13MA018 | A      | X                          | 0 | 23 1/8"  | 24 13/16" | 3 3/4" | 3/4" | 4 7/16" | 18 1/16"  | 7 13/16" | 2 13/16" | 1/2" | 12" | 11 3/4" | 11 7/8" | 108                    | 124                   | 24 1/8" x 24 1/8" x 27 3/16"    |
| CA13MA024 | A      | X                          | 0 | 23 1/8"  | 24 13/16" | 3 3/4" | 3/4" | 4 7/16" | 18 1/16"  | 7 13/16" | 2 13/16" | 1/2" | 12" | 11 3/4" | 11 7/8" | 111                    | 127                   | 24 1/8" x 24 1/8" x 27 3/16"    |
| CA13MA030 | A      | X                          | 0 | 23 1/8"  | 28 1/16"  | 3 3/4" | 3/4" | 4 7/16" | 16 1/16"  | 7 13/16" | 2 13/16" | 1/2" | 12" | 11 3/4" | 12 1/2" | 114                    | 130                   | 24 1/8" x 24 1/8" x 30 5/8"     |
| CA13MA036 | A      | X                          | 0 | 23 1/8"  | 35 3/16"  | 3 7/8" | 7/8" | 4 7/16" | 18 1/16"  | 7 13/16" | 2 13/16" | 1/2" | 12" | 11 3/4" | 13 3/4" | 127                    | 144                   | 24 1/8" x 24 1/8" x 37 7/16"    |
| CA13MA042 | A      | X                          | 0 | 31 3/16" | 31 13/16" | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8"   | 2 15/16" | 5/8" | 16" | 15 1/2" | 13 3/4" | 172                    | 195                   | 32 3/16" x 32 3/16" x 34"       |
| CA13MA048 | A      | X                          | 0 | 31 3/16" | 35 3/16"  | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8"   | 2 15/16" | 5/8" | 16" | 15 1/2" | 14 1/2" | 185                    | 212                   | 32 3/16" x 32 3/16" x 37 7/16"  |
| CA13MA060 | A      | X                          | 0 | 31 3/16" | 28 1/16"  | 3 7/8" | 7/8" | 6 9/16" | 24 11/16" | 9 1/8"   | 2 15/16" | 5/8" | 16" | 15 1/2" | 12 3/4" | 198                    | 224                   | 32 3/16" x 32 3/16" x 30 5/8"   |

X = YES  
0 = NO

|             |         |              |          |
|-------------|---------|--------------|----------|
| 208-2301-60 | 2301-60 | 208/230-3-60 | 460-3-60 |
|-------------|---------|--------------|----------|

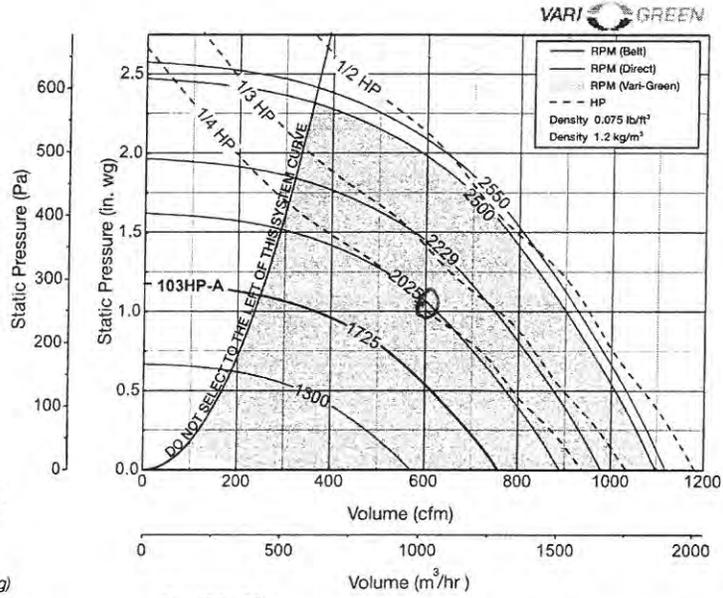
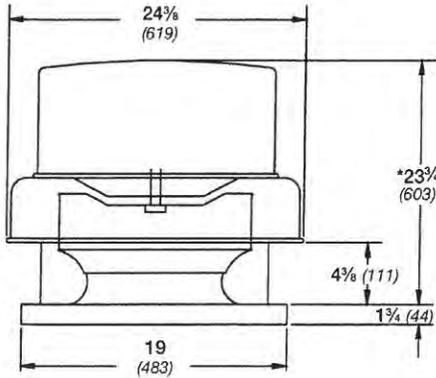


| UNIT SIZE      | MINIMUM MOUNTING PAD DIMENSIONS |
|----------------|---------------------------------|
| 18, 24, 30, 36 | 23 1/2" x 23 1/2"               |
| 42, 48, 60     | 26" x 26"                       |
| ...            | 31 1/2" x 31 1/2"               |
| ...            | 35" x 35"                       |

CA13NA

# TRASH EXHAUST

## Roof Downblast Exhaust Belt & Direct Drive GB-101HP • G-103HP



Damper Size = 12 x 12 (305 x 305)  
 Roof Opening = 14 1/2 x 14 1/2 (368 x 368)  
 Shroud Thickness = 0.051 (1.3)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight G/GB = 58/63 lbs. (26/29 kg)  
 All dimensions in inches (millimeters). \*May be greater depending on motor. ^Weight shown is largest cataloged Open Drip-Proof motor.

Direct Drive RPM  
 A-1725 RPM      VG-2550 RPM

| Motor HP |        | Fan RPM | Static Pressure in Inches wg |        |      |       |       |      |       |       |      |       |      |      |      |      |      |      |      |      |      |      |
|----------|--------|---------|------------------------------|--------|------|-------|-------|------|-------|-------|------|-------|------|------|------|------|------|------|------|------|------|------|
| Belt     | Direct |         | 0                            | 0.25   | 0.5  | 0.75  | 1     | 1.25 | 1.5   | 1.75  | 2    | 2.25  |      |      |      |      |      |      |      |      |      |      |
| 101HP    | 103HP  | 1300    | CFM                          | 571    | 477  | 342   |       |      |       |       |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         | BHP                          | 0.06   | 0.06 | 0.07  |       |      |       |       |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         | Sones                        | 6.6    | 5.7  | 5.3   |       |      |       |       |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         | 1/4                          | VG-1/2 | 1445 | CFM   | 635   | 553  | 449   | 243   |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      | BHP   | 0.08  | 0.09 | 0.09  | 0.08  |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      | Sones | 8.4   | 7.5  | 7     | 6.3   |      |       |      |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      | 1/4   | A-1/4 | 1590 | CFM   | 699   | 626  | 537   | 417  |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      |       |       |      | BHP   | 0.10  | 0.11 | 0.12  | 0.12 |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      |       |       |      | Sones | 10.4  | 9.5  | 9.1   | 8.3  |      |      |      |      |      |      |      |      |      |
|          |        |         |                              |        |      |       |       |      | 1/3   | A-1/4 | 1725 | CFM   | 758  | 692  | 613  | 521  | 364  |      |      |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.13 | 0.14 | 0.15 | 0.16 | 0.15 |      |      |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 11.4 | 10.7 | 10.6 | 10.1 | 10   |      |      |      |      |      |
| 1/2      | A-1/4  | 1880    |                              |        |      |       |       |      |       |       |      | CFM   | 826  | 767  | 697  | 618  | 518  | 337  |      |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.18 |      |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 12.7 | 12.2 | 11.9 | 12   | 11.4 | 11.9 |      |      |      |      |
|          |        |         | 1/2                          | A-1/4  | 2025 |       |       |      |       |       |      | CFM   | 890  | 836  | 772  | 702  | 622  | 515  | 313  |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.21 | 0.23 | 0.24 | 0.24 | 0.26 | 0.25 | 0.22 |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 14.2 | 13.6 | 13.3 | 13.2 | 12.6 | 12   | 11.4 |      |      |      |
|          |        |         |                              |        |      | 1/2   | A-1/4 | 2137 |       |       |      | CFM   | 939  | 889  | 830  | 765  | 693  | 607  | 474  |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.25 | 0.26 | 0.28 | 0.28 | 0.29 | 0.30 | 0.28 |      |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 15.4 | 14.8 | 14.4 | 14.2 | 13.4 | 13.1 | 12.1 |      |      |      |
|          |        |         |                              |        |      |       |       |      | 1/2   | A-1/4 | 2229 | CFM   | 979  | 931  | 875  | 814  | 748  | 674  | 574  | 406  |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.28 | 0.30 | 0.31 | 0.32 | 0.33 | 0.35 | 0.33 | 0.31 |      |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 15.8 | 15.4 | 14.8 | 14.5 | 14.1 | 13.7 | 13.2 | 12.0 |      |      |
| 1/2      | A-1/4  | 2336    |                              |        |      |       |       |      |       |       |      | CFM   | 1026 | 981  | 928  | 871  | 809  | 742  | 661  | 543  | 358  |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.33 | 0.34 | 0.36 | 0.36 | 0.37 | 0.39 | 0.40 | 0.37 | 0.34 |      |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 16.4 | 16   | 15.4 | 14.9 | 14.7 | 14   | 14.1 | 13.5 | 13.6 |      |
|          |        |         | 1/2                          | A-1/4  | 2500 |       |       |      |       |       |      | CFM   | 1098 | 1056 | 1008 | 956  | 901  | 840  | 775  | 695  | 583  | 416  |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.40 | 0.42 | 0.43 | 0.45 | 0.45 | 0.46 | 0.48 | 0.48 | 0.46 | 0.42 |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 17.8 | 17.4 | 16.9 | 16.7 | 15.8 | 15.5 | 14.8 | 15.2 | 15.7 | 16.6 |
|          |        |         |                              |        |      | 1/2   | A-1/4 | 2550 |       |       |      | CFM   | 1120 | 1078 | 1032 | 982  | 928  | 869  | 807  | 735  | 639  | 497  |
|          |        |         |                              |        |      |       |       |      |       |       |      | BHP   | 0.43 | 0.44 | 0.46 | 0.47 | 0.47 | 0.49 | 0.51 | 0.52 | 0.50 | 0.47 |
|          |        |         |                              |        |      |       |       |      |       |       |      | Sones | 18.2 | 17.9 | 17.4 | 17.2 | 16.3 | 16.1 | 15.1 | 15.6 | 16.2 | 17.2 |

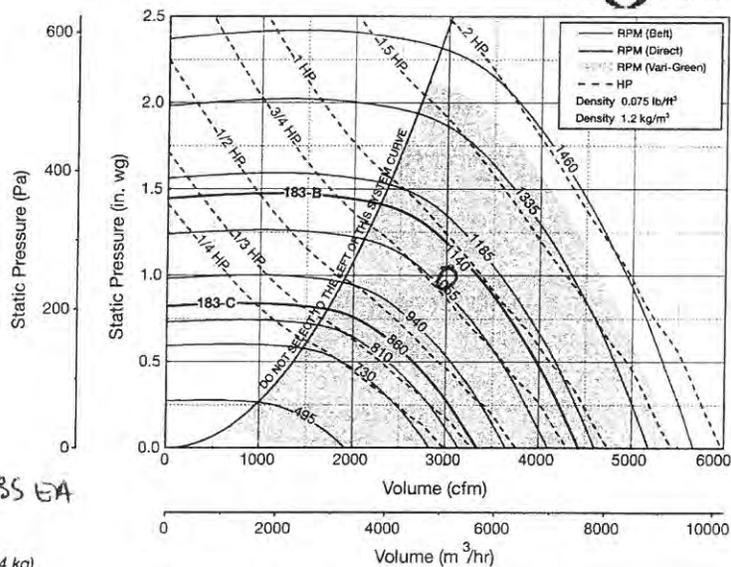
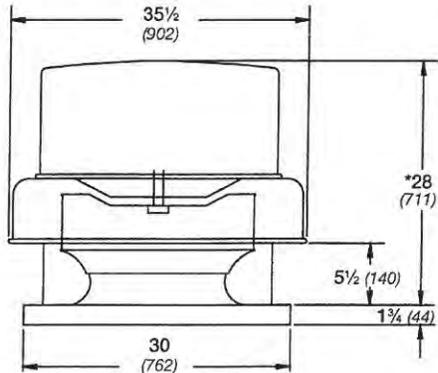
MAXIMUM BHP AT A GIVEN RPM = (RPM/3165)<sup>3</sup>  
 MAXIMUM RPM = 2550  
 TIP SPEED (ft/min) = RPM x 2.978  
 MAXIMUM MOTOR FRAME SIZE = 56

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings include the effects of a birdscreen. The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels.

# Roof Downblast - Exhaust Belt & Direct Drive GB-180 • G-183



## FUTURE TOILET EXHAUST



Damper Size = 18 x 18 (457 x 457)  
 Roof Opening = 20 1/2 x 20 1/2 (521 x 521)  
 Shroud Thickness = 0.064 (1.6)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight G/GB = 108/142 lbs. (49/64 kg)  
 All dimensions in inches (millimeters). \*May be greater depending on motor. ^Weight shown is largest cataloged Open Drip-Proof motor.

-1500 LBS EA

|                  |           |            |
|------------------|-----------|------------|
| Direct Drive RPM | C-860 RPM | B-1140 RPM |
|------------------|-----------|------------|

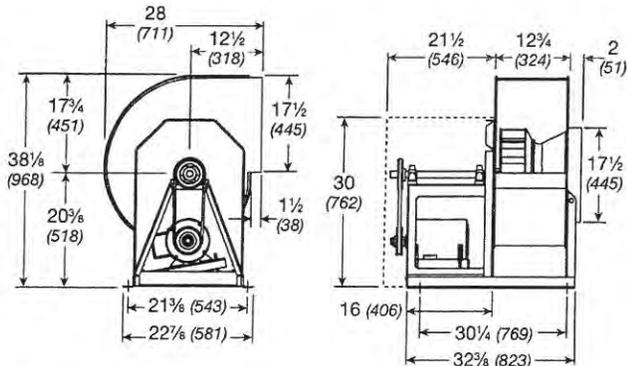
| Motor HP | Belt | Direct | Fan RPM | Static Pressure in Inches wg |       |      |      |      |   |      |      |      |   |  |  |
|----------|------|--------|---------|------------------------------|-------|------|------|------|---|------|------|------|---|--|--|
|          |      |        |         | 0                            | 0.125 | 0.25 | 0.5  | 0.75 | 1   | 1.25 | 1.5  | 1.75 | 2 |  |  |
| 180      | 183  | VG-1   | 730     | CFM                          | 2839  | 2668 | 2469 | 1882 | MAXIMUM BHP AT A GIVEN RPM = (RPM/1149) <sup>3</sup><br>MAXIMUM RPM = 1460<br>TIP SPEED (ft/min) = RPM x 4.843<br>MAXIMUM MOTOR FRAME SIZE = 184T |      |      |      |   |  |  |
|          |      |        |         | BHP                          | 0.21  | 0.23 | 0.25 | 0.25 |   |      |      |      |   |  |  |
|          |      |        |         | Sones                        | 7.4   | 8.7  | 7.2  | 6.7  |   |      |      |      |   |  |  |
|          |      |        |         | CFM                          | 3150  | 2997 | 2832 | 2375 |   |      |      |      |   |  |  |
|          |      |        |         | BHP                          | 0.29  | 0.31 | 0.33 | 0.35 |   |      |      |      |   |  |  |
|          |      |        |         | Sones                        | 8.8   | 9.9  | 8.7  | 8.2  |   |      |      |      |   |  |  |
|          |      |        | 810     | C-1/2                        | CFM   | 3344 | 3202 | 3049 | 2647  | 2015 |      |      |   |  |  |
|          |      |        |         |                              | BHP   | 0.35 | 0.36 | 0.39 | 0.42  | 0.4  |      |      |   |  |  |
|          |      |        |         |                              | Sones | 10.1 | 10.8 | 9.8  | 9.1   | 8.1  |      |      |   |  |  |
|          |      |        |         |                              | CFM   | 3655 | 3527 | 3388 | 3052  | 2601 |      |      |   |  |  |
|          |      |        |         |                              | BHP   | 0.46 | 0.47 | 0.49 | 0.54  | 0.54 |      |      |   |  |  |
|          |      |        |         |                              | Sones | 12.7 | 12.8 | 12.0 | 11.1  | 10.3 |      |      |   |  |  |
| 1000     | B-1  | CFM    | 3888    | 3769                         | 3638  | 3339 | 2953 | 2387 |   |      |      |      |   |  |  |
|          |      | BHP    | 0.55    | 0.57                         | 0.58  | 0.64 | 0.66 | 0.63 |   |      |      |      |   |  |  |
|          |      | Sones  | 15.2    | 14.7                         | 13.7  | 13.0 | 11.9 | 11.1 |   |      |      |      |   |  |  |
|          |      | CFM    | 4102    | 3990                         | 3867  | 3596 | 3252 | 2811 |   |      |      |      |   |  |  |
|          |      | BHP    | 0.65    | 0.67                         | 0.68  | 0.74 | 0.77 | 0.77 |   |      |      |      |   |  |  |
|          |      | Sones  | 16.2    | 15.7                         | 14.9  | 14.0 | 12.9 | 12.4 |   |      |      |      |   |  |  |
| 1140     | VG-2 | CFM    | 4433    | 4329                         | 4216  | 3980 | 3684 | 3328 | 2856  |      |      |      |   |  |  |
|          |      | BHP    | 0.81    | 0.84                         | 0.85  | 0.93 | 0.96 | 0.98 | 0.95  |      |      |      |   |  |  |
|          |      | Sones  | 17.9    | 17.4                         | 16.8  | 16.0 | 15.1 | 14.3 | 13.6  |      |      |      |   |  |  |
|          |      | CFM    | 4608    | 4508                         | 4401  | 4179 | 3900 | 3575 | 3178  | 2499 |      |      |   |  |  |
|          |      | BHP    | 0.91    | 0.94                         | 0.96  | 1.03 | 1.07 | 1.1  | 1.09  | 0.99 |      |      |   |  |  |
|          |      | Sones  | 19.0    | 18.4                         | 17.8  | 17.1 | 16.2 | 15.4 | 14.7  | 13.7 |      |      |   |  |  |
| 1185     | 1335 | CFM    | 5191    | 5102                         | 5010  | 4814 | 4599 | 4344 | 4052  | 3713 | 3262 |      |   |  |  |
|          |      | BHP    | 1.31    | 1.33                         | 1.36  | 1.41 | 1.49 | 1.54 | 1.57  | 1.56 | 1.51 |      |   |  |  |
|          |      | Sones  | 22      | 22                           | 21    | 21   | 19.9 | 19.2 | 18.7  | 18.2 | 17.6 |      |   |  |  |
|          |      | CFM    | 5444    | 5359                         | 5273  | 5086 | 4892 | 4655 | 4401  | 4097 | 3747 | 3253 |   |  |  |
|          |      | BHP    | 1.51    | 1.54                         | 1.56  | 1.61 | 1.71 | 1.75 | 1.81  | 1.81 | 1.79 | 1.71 |   |  |  |
|          |      | Sones  | 24      | 23                           | 23    | 22   | 22   | 21   | 21  | 20   | 19.7 | 19.2 |   |  |  |
| 1400     | 1460 | CFM    | 5677    | 5596                         | 5514  | 5336 | 5155 | 4938 | 4699  | 4426 | 4123 | 3765 |   |  |  |
|          |      | BHP    | 1.71    | 1.74                         | 1.77  | 1.81 | 1.93 | 1.97 | 2.03  | 2.05 | 2.05 | 2.02 |   |  |  |
|          |      | Sones  | 26      | 25                           | 24    | 24   | 23   | 23   | 22  | 22   | 22   | 22   |   |  |  |

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings include the effects of a birdscreen. The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels.

# SWB-116 - Belt Drive Series 100

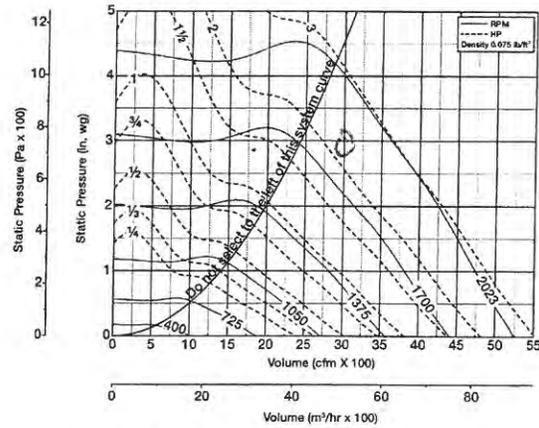


## FUTURE DISHWASHER



Wheel Diameter = 17 (432)  
 Shaft Diameter = 1 (25)  
 Outlet Area = 1.52 ft<sup>2</sup> (0.14 m<sup>2</sup>)  
 ^Approximate Unit Weight = 241 lb. (109 kg) ← 250 LBS EA

All dimensions in inches (millimeters)  
 For additional discharge positions see page 15  
 ^Weight shown is largest cataloged Open Drip Proof motor



Maximum BHP at a given RPM = (RPM/1403)<sup>3</sup>  
 (Maximum KW at a given RPM = (RPM/1547)<sup>3</sup>)  
 Maximum RPM = 2023  
 Tip Speed (ft/min.) = RPM x 4.32  
 (Tip Speed (m/s) = RPM x 0.0219)  
 Maximum Motor Frame Size = 184T

### SWB-116

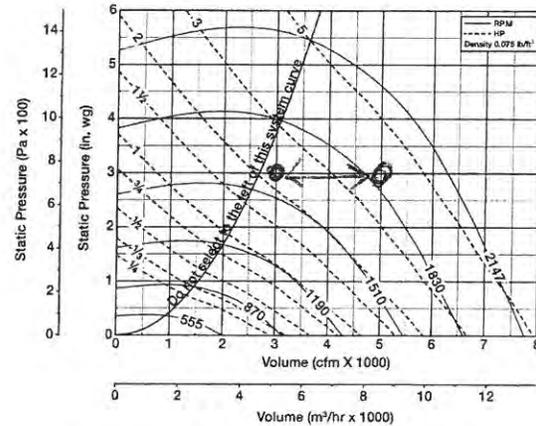
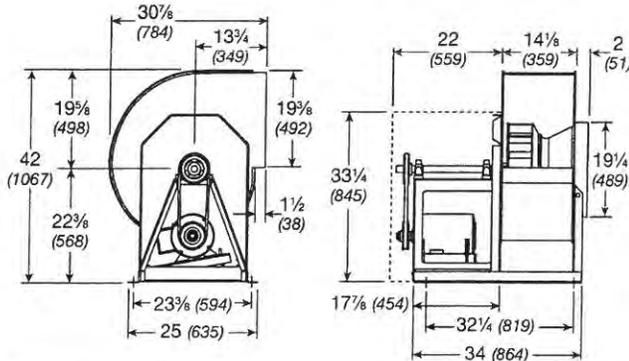
| CFM  | OV   | Static Pressure in Inches wg |      |      |      |      |      |      |      |      |      |  |
|------|------|------------------------------|------|------|------|------|------|------|------|------|------|--|
|      |      | 0.5                          | 0.75 | 1    | 1.25 | 1.5  | 2    | 2.5  | 2.75 | 3    | 3.5  |  |
| 1200 | 789  | RPM                          | 750  |      |      |      |      |      |      |      |      |  |
|      |      | BHP                          | 0.15 |      |      |      |      |      |      |      |      |  |
|      |      | Sones                        | 5.8  |      |      |      |      |      |      |      |      |  |
| 1560 | 1026 | RPM                          | 846  | 943  | 1026 |      |      |      |      |      |      |  |
|      |      | BHP                          | 0.22 | 0.30 | 0.38 |      |      |      |      |      |      |  |
|      |      | Sones                        | 7.1  | 7.8  | 8.7  |      |      |      |      |      |      |  |
| 1920 | 1263 | RPM                          | 949  | 1039 | 1120 | 1192 | 1259 |      |      |      |      |  |
|      |      | BHP                          | 0.31 | 0.40 | 0.50 | 0.60 | 0.71 |      |      |      |      |  |
|      |      | Sones                        | 8.8  | 9.6  | 10.7 | 11.5 | 12.0 |      |      |      |      |  |
| 2280 | 1500 | RPM                          | 1061 | 1141 | 1216 | 1287 | 1352 | 1470 | 1576 |      |      |  |
|      |      | BHP                          | 0.42 | 0.53 | 0.65 | 0.76 | 0.88 | 1.12 | 1.38 |      |      |  |
|      |      | Sones                        | 10.9 | 11.8 | 12.5 | 12.9 | 13.3 | 14.4 | 16.4 |      |      |  |
| 2640 | 1737 | RPM                          | 1182 | 1250 | 1320 | 1385 | 1448 | 1564 | 1666 | 1715 | 1762 |  |
|      |      | BHP                          | 0.57 | 0.69 | 0.82 | 0.96 | 1.09 | 1.36 | 1.64 | 1.79 | 1.93 |  |
|      |      | Sones                        | 13.5 | 13.8 | 14.1 | 14.6 | 15.1 | 15.9 | 17.4 | 18.4 | 19.5 |  |
| 3000 | 1974 | RPM                          | 1306 | 1369 | 1429 | 1490 | 1548 | 1659 | 1761 | 1808 | 1853 |  |
|      |      | BHP                          | 0.76 | 0.89 | 1.03 | 1.18 | 1.34 | 1.64 | 1.95 | 2.11 | 2.26 |  |
|      |      | Sones                        | 15.4 | 15.8 | 16.1 | 16.6 | 17.1 | 18.6 | 19.9 | 21   | 21   |  |
| 3360 | 2211 | RPM                          | 1432 | 1491 | 1545 | 1599 | 1654 | 1758 | 1857 | 1903 | 1948 |  |
|      |      | BHP                          | 0.99 | 1.14 | 1.29 | 1.45 | 1.62 | 1.96 | 2.30 | 2.47 | 2.64 |  |
|      |      | Sones                        | 17.6 | 18.0 | 18.4 | 18.9 | 19.6 | 21   | 23   | 23   | 23   |  |
| 3720 | 2447 | RPM                          | 1560 | 1615 | 1667 | 1716 | 1764 | 1863 | 1955 | 2001 |      |  |
|      |      | BHP                          | 1.27 | 1.43 | 1.60 | 1.76 | 1.94 | 2.32 | 2.70 | 2.89 |      |  |
|      |      | Sones                        | 20   | 21   | 21   | 22   | 23   | 24   | 25   | 26   |      |  |
| 4080 | 2684 | RPM                          | 1690 | 1742 | 1790 | 1837 | 1881 | 1971 |      |      |      |  |
|      |      | BHP                          | 1.60 | 1.78 | 1.96 | 2.14 | 2.32 | 2.72 |      |      |      |  |
|      |      | Sones                        | 23   | 24   | 25   | 25   | 26   | 27   |      |      |      |  |
| 4440 | 2921 | RPM                          | 1821 | 1869 | 1916 | 1960 | 2002 |      |      |      |      |  |
|      |      | BHP                          | 1.99 | 2.18 | 2.38 | 2.58 | 2.77 |      |      |      |      |  |
|      |      | Sones                        | 27   | 28   | 28   | 29   | 30   |      |      |      |      |  |
| 4800 | 3158 | RPM                          | 1953 | 1999 |      |      |      |      |      |      |      |  |
|      |      | BHP                          | 2.44 | 2.65 |      |      |      |      |      |      |      |  |
|      |      | Sones                        | 32   | 32   |      |      |      |      |      |      |      |  |

Performance certified is for installation Type B - Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance only.

# SWB-218 - Belt Drive Series 200



## FUTURE GREASE EXHAUST



Wheel Diameter = 18 5/8 (473)  
 Shaft Diameter = 1 1/4 (32)  
 Outlet Area = 1.87 ft<sup>2</sup> (0.17 m<sup>2</sup>)  
 ^Approximate Unit Weight = 324 lb. (147 kg) ← 350 LBS

All dimensions in inches (millimeters)  
 For additional discharge positions see page 15  
 ^Weight shown is largest cataloged Open Drip Proof motor

Maximum BHP at a given RPM = (RPM/1196)<sup>3</sup>  
 (Maximum KW at a given RPM = (RPM/1319)<sup>3</sup>)  
 Maximum RPM = 2147  
 Tip Speed (ft/min.) = RPM x 4.78  
 (Tip Speed (m/s) = RPM x 0.0243)  
 Maximum Motor Frame Size = 213T

### SWB-218

| CFM  | OV   | Static Pressure in Inches wg |      |      |      |      |      |      |      |      |      |      |
|------|------|------------------------------|------|------|------|------|------|------|------|------|------|------|
|      |      | 0.5                          | 1    | 1.5  | 2    | 2.5  | 3    | 3.5  | 4    | 4.5  | 5    |      |
| 2000 | 1070 | RPM                          | 762  | 963  | 1136 |      |      |      |      |      |      |      |
|      |      | BHP                          | 0.26 | 0.49 | 0.75 |      |      |      |      |      |      |      |
|      |      | Sones                        | 10.1 | 11.3 | 13.4 |      |      |      |      |      |      |      |
| 2500 | 1337 | RPM                          | 862  | 1023 | 1185 | 1330 | 1459 |      |      |      |      |      |
|      |      | BHP                          | 0.37 | 0.62 | 0.92 | 1.24 | 1.58 |      |      |      |      |      |
|      |      | Sones                        | 10.1 | 11.6 | 13.0 | 15.2 | 17.9 |      |      |      |      |      |
| 3000 | 1604 | RPM                          | 974  | 1110 | 1245 | 1380 | 1507 | 1623 | 1730 |      |      |      |
|      |      | BHP                          | 0.52 | 0.80 | 1.12 | 1.47 | 1.85 | 2.24 | 2.65 |      |      |      |
|      |      | Sones                        | 11.5 | 12.6 | 13.9 | 15.5 | 18.3 | 21   | 24   |      |      |      |
| 3500 | 1872 | RPM                          | 1092 | 1211 | 1327 | 1443 | 1557 | 1672 | 1779 | 1878 | 1971 | 2060 |
|      |      | BHP                          | 0.72 | 1.03 | 1.36 | 1.74 | 2.15 | 2.58 | 3.02 | 3.48 | 3.95 | 4.43 |
|      |      | Sones                        | 13.6 | 14.2 | 15.2 | 16.8 | 19.1 | 22   | 25   | 27   | 29   | 31   |
| 4000 | 2139 | RPM                          | 1218 | 1322 | 1423 | 1525 | 1626 | 1727 | 1828 | 1927 | 2020 | 2108 |
|      |      | BHP                          | 0.97 | 1.32 | 1.68 | 2.07 | 2.51 | 2.95 | 3.43 | 3.93 | 4.44 | 4.96 |
|      |      | Sones                        | 15.7 | 16.4 | 17.3 | 18.7 | 21   | 23   | 25   | 27   | 29   | 32   |
| 4500 | 2406 | RPM                          | 1346 | 1438 | 1530 | 1619 | 1709 | 1800 | 1890 | 1979 | 2069 |      |
|      |      | BHP                          | 1.28 | 1.66 | 2.07 | 2.48 | 2.92 | 3.41 | 3.90 | 4.42 | 4.96 |      |
|      |      | Sones                        | 18.2 | 18.8 | 19.6 | 21   | 23   | 24   | 26   | 28   | 30   |      |
| 5000 | 2764 | RPM                          | 1475 | 1557 | 1643 | 1723 | 1804 | 1885 | 1967 | 2048 |      |      |
|      |      | BHP                          | 1.66 | 2.08 | 2.52 | 2.97 | 3.43 | 3.91 | 4.45 | 5.00 |      |      |
|      |      | Sones                        | 21   | 21   | 22   | 24   | 25   | 26   | 28   | 29   |      |      |
| 5500 | 2941 | RPM                          | 1605 | 1683 | 1758 | 1834 | 1907 | 1981 | 2055 |      |      |      |
|      |      | BHP                          | 2.10 | 2.58 | 3.04 | 3.54 | 4.03 | 4.54 | 5.07 |      |      |      |
|      |      | Sones                        | 24   | 24   | 25   | 26   | 27   | 28   | 30   |      |      |      |
| 6000 | 3209 | RPM                          | 1737 | 1810 | 1877 | 1949 | 2017 | 2084 |      |      |      |      |
|      |      | BHP                          | 2.63 | 3.15 | 3.65 | 4.18 | 4.72 | 5.25 |      |      |      |      |
|      |      | Sones                        | 27   | 28   | 28   | 29   | 30   | 31   |      |      |      |      |
| 6500 | 3476 | RPM                          | 1869 | 1938 | 2002 | 2065 | 2131 |      |      |      |      |      |
|      |      | BHP                          | 3.26 | 3.81 | 4.37 | 4.91 | 5.49 |      |      |      |      |      |
|      |      | Sones                        | 31   | 31   | 31   | 32   | 33   |      |      |      |      |      |
| 7000 | 3743 | RPM                          | 2003 | 2067 | 2128 |      |      |      |      |      |      |      |
|      |      | BHP                          | 3.98 | 4.57 | 5.18 |      |      |      |      |      |      |      |
|      |      | Sones                        | 34   | 35   | 35   |      |      |      |      |      |      |      |

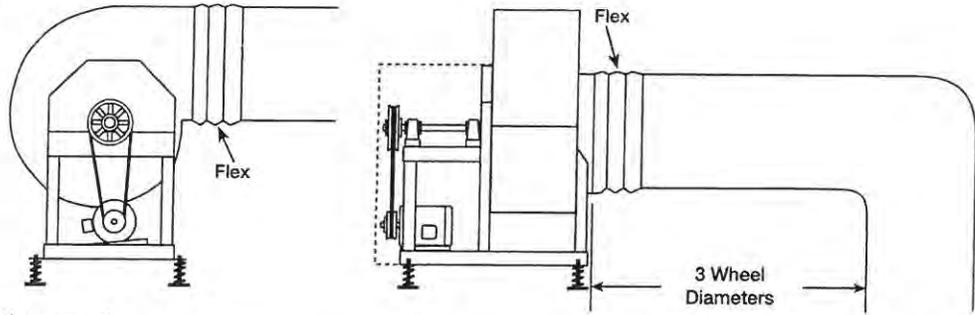
Performance certified is for installation Type B - Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance only.

# Typical Installations



## General Clean Air or Fume Hood (Non-Grease)

The SFD, SFB, SWD and SWB are designed for applications ranging from clean air to contaminated air. Typical installations are shown below. Installations must include a means for inspecting, cleaning and servicing the exhaust fan.



UL 762 KITCHEN EXHAUST

## SWB Commercial Kitchen (Grease)

Greenheck's SWB Series 200 and 300 are designed to meet restaurant and foodservice applications. These fans are UL and cUL Listed for grease removal and have been tested under elevated temperature conditions.

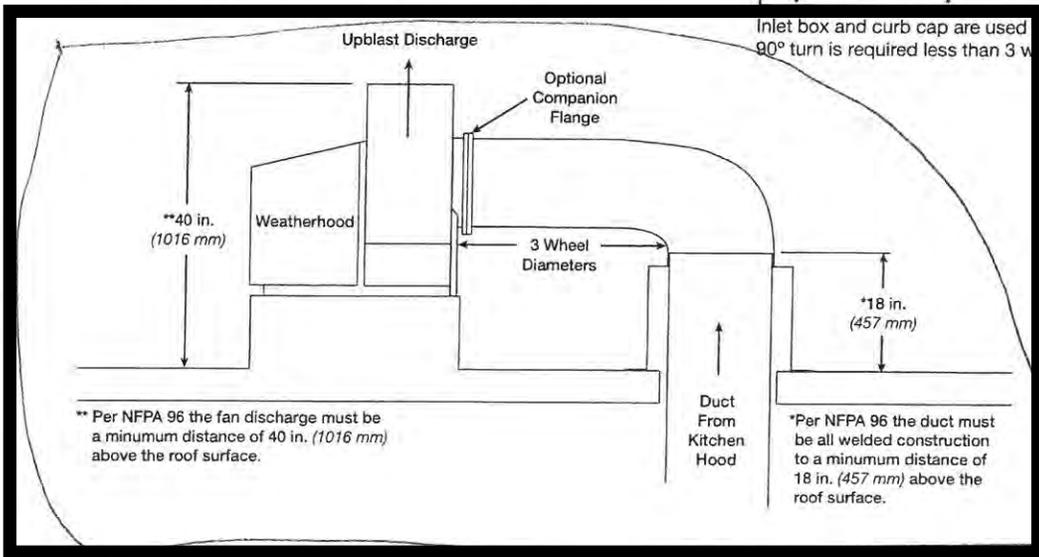
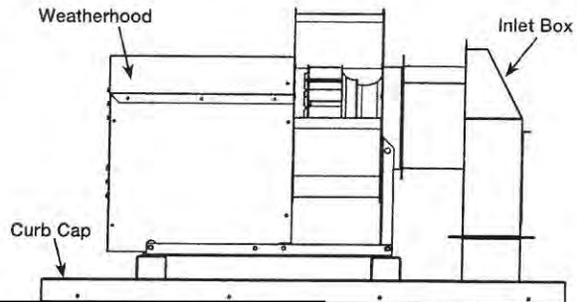
Due to high temperatures and grease-laden airstreams in commercial kitchen ventilation, system designers must be aware of governing codes and guidelines. The National Fire Protection Association (NFPA) is the primary source used by many local codes for commercial kitchen ventilation systems. Local code authorities should be consulted before proceeding with any kitchen ventilation project.

Installation must include a means for inspecting, cleaning and servicing the exhaust fan.

Fans selected for grease removal must include a weatherhood, access door and 1-inch (25 mm) drain connection. For grease applications where the fan is mounted indoors, the welded scroll option must be

selected. An outlet guard is strongly recommended when the fan discharge is accessible. When an outlet guard is not ordered with the fan, it must be provided by the installer. An upblast discharge is recommended. No dampers are to be used in the system.

The fan discharge must be a minimum of 40 inches (1016 mm) above the roof line and the exhaust duct must be fully welded to a minimum distance of 18 inches (457 mm) above the roof surface.



Inlet box and curb cap are used when space is limited and a 90° turn is required less than 3 wheel diameters from the inlet.



SWB Series 200 and 300 models are listed for grease removal (UL/cUL 762). File no. MH11745

\*Per NFPA 96 the duct must be all welded construction to a minimum distance of 18 in. (457 mm) above the roof surface.

# Mounting Options

## Vibration Isolators

Base-mounted neoprene or spring isolators are available to lessen mechanical vibration and assure quiet operation. Free-standing, restrained and housed spring isolators are also available. Isolators are sized to match the weight of each fan.

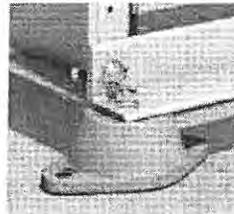


### Free-Standing Open Spring Mounts -

#### Type 3, 1-inch Deflection

Free-standing spring isolators are unhoused laterally stable steel springs. They provide a minimum horizontal stiffness of 0.8 times the rated vertical

stiffness and provide an additional 50% overload capacity. These isolators are equipped with a top-mounted adjusting bolt and an acoustical non-skid base. Springs are color coded to indicate load capacity.

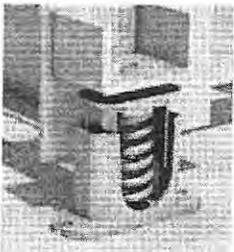


### Rubber Mounts -

#### Type 2, ¼-inch and ½-inch Deflection

Neoprene mountings consist of a steel top plate and base plate completely embedded in colored (oil-resistant) neoprene for easy identification of

capacity. Neoprene mountings are furnished with a tapped hole in the center. This enables the equipment to be bolted securely to the rubber mount.



### Housed Spring Mounts

#### Type 4B, 1-inch Deflection

Housed spring isolators consist of steel springs assembled into a telescoping housing with a top-mounted adjusting bolt and an acoustical non-skid base. Housed spring isolators include resilient inserts to prevent metal-

to-metal contact and provide snubbing for side loads. Springs provide an additional 50% overload capacity and are color coded to indicate load capacity.



### Restrained Spring Mounts -

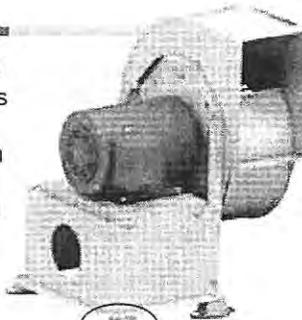
#### Type 4A, 1-inch Deflection

Restrained spring isolators consist of laterally stable, free-standing springs assembled into a steel housing. These assemblies are designed for

vertical and horizontal motion restraint. Restrained spring isolators can be used for blocking during equipment installation and are provided with leveling bolts. Springs provide 50% overload capacity and are color coded or identified to indicate load capacity. Restrained spring mounts are recommended for equipment subject to wind loading or large torquing forces.

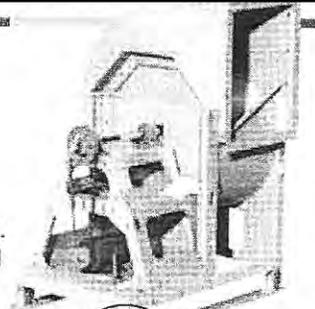
### Direct Mount - Type A

No base required. Isolators are attached directly to equipment. Direct isolation can be used if equipment is unitary and rigid without the use of additional support. If there is any doubt whether or not equipment can be supported directly on isolators, use rails, bases or consult the factory.



### Mounting Rails with Isolators

Isolation mounting rails are available with either rubber mount, free-standing open or restrained spring isolators. The isolators are mounted between aluminum rails that run the length of the fan base. Isolation rails provide easy installation on isolated systems, and are ideal for applications where there is a large overhung load. Mounting rails are available for fans up to size 36.



### Equipment Supports

Models GESS and GESR equipment supports are available for roof mounting of utility fans up to size 36. Equipment supports are available in a number of lengths, widths, heights, and can also be built for a pitched roof.



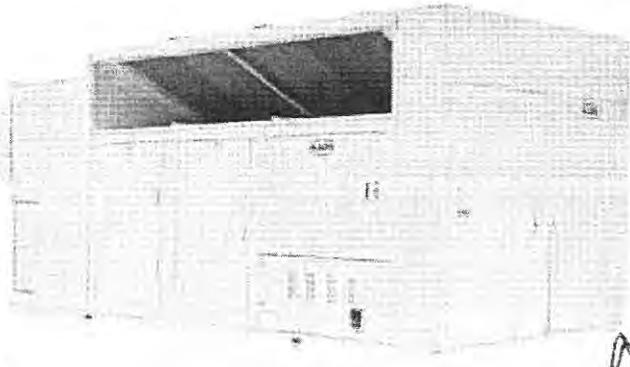
# FUTURE RESTROOM MUA UNIT



AAON **RN SERIES ROOFTOP UNITS** CONTINUE TO LEAD THE PACKAGED ROOFTOP EQUIPMENT INDUSTRY IN PERFORMANCE AND SERVICEABILITY. DOUBLE WALL RIGID POLYURETHANE FOAM INSULATED CABINET CONSTRUCTION AND DIRECT DRIVE BACKWARD CURVED PLENUM FANS ALLOW RN SERIES UNITS TO HAVE QUIET, ENERGY EFFICIENT AIR FLOW WITH HIGH STATIC PRESSURE CAPABILITIES. RN SERIES UNITS ALSO FEATURE LOCKABLE HINGED DOORS WHICH PROVIDE SERVICE ACCESS TO ALL SECTIONS OF THE UNIT.

### Applications

- Air-cooled condenser or air-source heat pump packaged DX rooftop units, 6-140 tons.
- Water-cooled condenser, water-source heat pump, or geothermal heat pump configurations.
- Chilled water or non-compressorized DX air handling units, 1,100-55,500 cfm.
- Makeup air capability, up to 100% outside air, to meet ventilation requirements.
- High performance hot water, steam, electric, and gas heating.
- Variable capacity and variable speed R-410A scroll compressors for load matching cooling and improved part load efficiency.



▲ 26 & 31 - 70 ton RN Series Air-Cooled Condenser Packaged Rooftop Unit.

APPROX. 9,000 LBS

### Construction

• Two-inch double wall rigid polyurethane foam panel cabinet construction has a thermal resistance of R-13 or greater, which exceeds the R-value of a cabinet with four-inch thick fiberglass construction. Panels include a thermal break, with no metal contact from inside to outside, to prevent heat transfer through the panel and prevent condensation on the outside of the cabinet. The inner wall protects the insulation from moisture damage, prevents microbial growth, and is easy to clean. This type of construction also makes the cabinet more rigid and resistant to damage, provides increased sound dampening, and reduces air leakage and infiltration.



▲ Cutaway of panel showing thermal break and foam core.

|  |   |
|--|---|
|  | <p>Don't see the specific product you need? AAON can meet your requirements with Custom Equipment designed specifically for your exact application and job specifications. Visit <a href="http://www.aaon.com">www.aaon.com</a> or call 918.583.2266 to locate a representative near you.</p> |
|--|---|

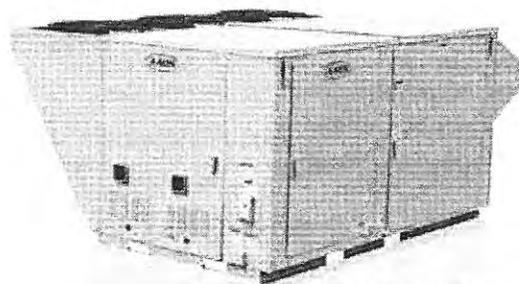
- Access doors with full length stainless steel piano hinges and quarter turn lockable handles provide improved reliability over single point hinges and make the unit easily serviceable.
- Corrosion resistant exterior polyurethane paint exceeds a 2,500 hour salt spray test.
- Double sloped stainless steel drain pans eliminate standing water which can support microbial growth and stainless steel construction prevents corrosion that could lead to water leaks and contaminants in the air stream.

### Fans and Blowers

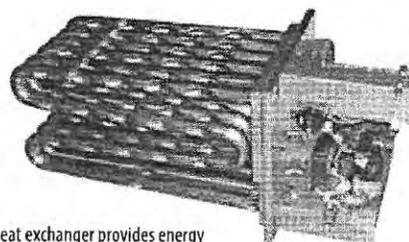
- Direct drive backward curved plenum supply fans with rubber isolation mounts are more energy efficient, quieter, and require less maintenance than belt driven fans.
- VFD controlled supply, exhaust, and return fans for precise air flow control, building pressure control, and reduced power consumption.

### Controls

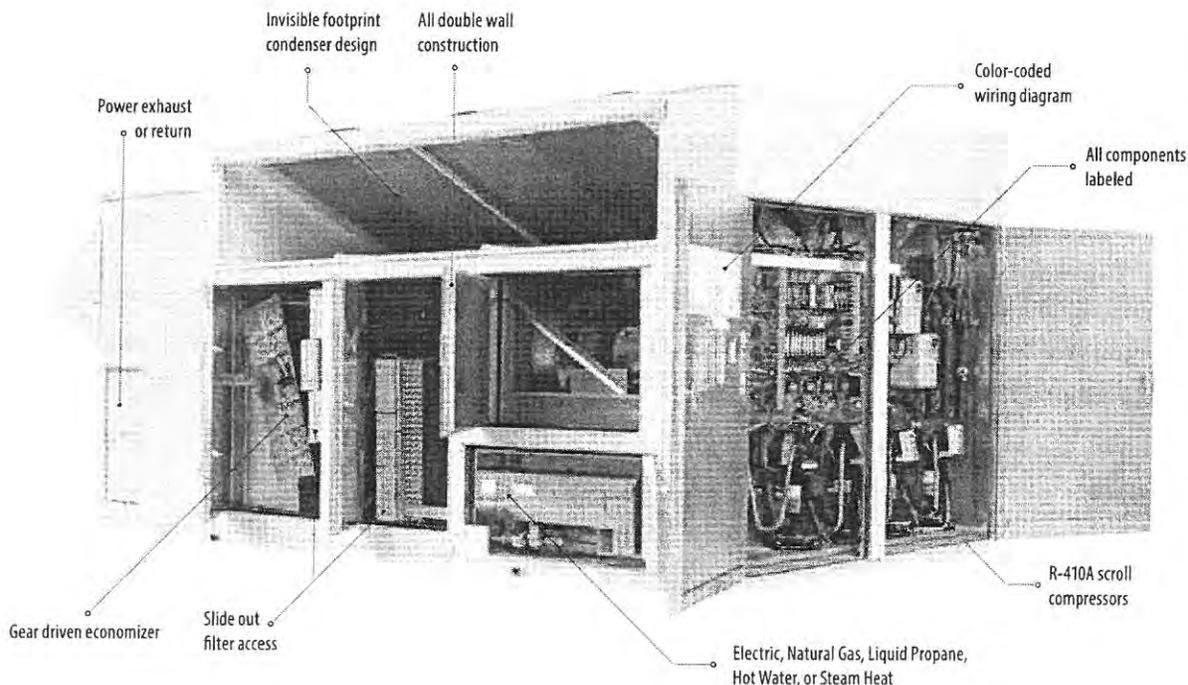
- Labeled electrical components and color-coded wiring match the unit specific color-coded wiring diagram which is laminated and permanently affixed inside the control compartment.
- Factory provided or customer provided controller can be selected to meet existing or new building control architecture.
- Unit controls and compressors are contained within compartment isolated from the air stream for ease of service and quiet operation.
- Run test report, color-coded wiring diagram, and Installation, Operation and Maintenance manual with startup form is included in control access compartment of every unit.



▲ 6 - 25 & 30 ton RN Series Air-Cooled Condenser Packaged Rooftop Unit.



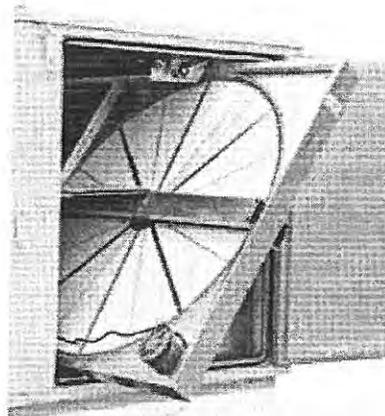
▶ Dimpled heat exchanger provides energy efficient heat transfer and has no internal turbulator, which can corrode over time.



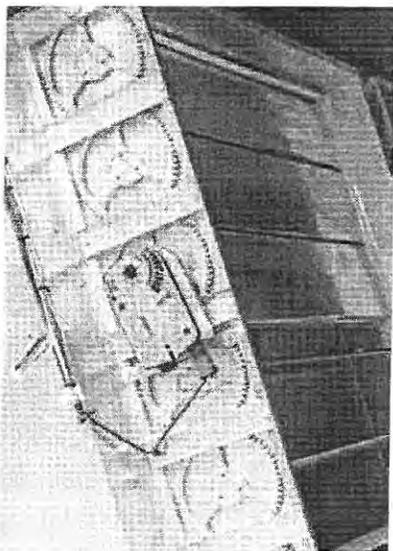


### Features and Options

- Variable capacity and variable speed R-410A scroll compressors for load matching cooling and improved part load efficiency.
- Multiple methods of humidity control including: High Capacity Cooling Coils, Return Air Bypass, Mixed Air Bypass, and Modulating Humidity Control which provides energy efficient dehumidification, even with low sensible heat loads, without the temperature swings common with on/off reheat systems.
- Modulating gas heat and SCR electric heat provide energy efficient, consistent supply air temperature heating and improved occupancy comfort.
- Factory installed, sensible or enthalpy, gear driven economizer allows for free cooling.
- Multiple high efficiency filtration options, with up to a MERV 14 efficiency rating.
- Factory installed total and sensible AAONAIRE® energy recovery wheels save cooling and heating dollars.
- Polymer e-coated coils are available to extend the life of the coils and protect them in corrosive environments.
- Interior corrosion protection option protects interior components of the unit in corrosive environments.
- VFD controlled or ECM driven condenser fans for head pressure control, reduced power consumption and lower sound levels at off design ambient conditions.



▲ Factory installed AAONAIRE® energy recovery wheel saves heating and cooling energy.

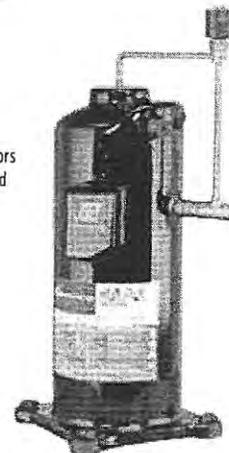


▲ Gear driven economizer eliminates the excess play and binding that occurs with linkage type economizers.



◀ VFD Controlled Variable Speed Scroll Compressor

▶ Variable capacity scroll compressors provide load matching cooling and improve part load efficiency.



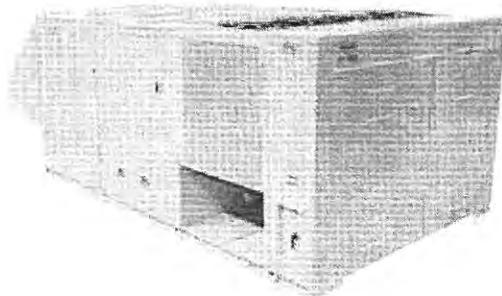
| RN Model | Cabinet | Nominal cfm | Width | Height* | Length* |
|----------|---------|-------------|-------|---------|---------|
| RN-006   | A       | 2,200       | 79    | 44      | 82      |
| RN-007   |         | 2,500       |       |         |         |
| RN-008   |         | 2,800       |       |         |         |
| RN-010   |         | 3,400       |       |         |         |
| RN-009   | B       | 4,000       | 96    | 50      | 88      |
| RN-011   |         | 4,600       |       |         |         |
| RN-013   |         | 5,200       |       |         |         |
| RN-015   |         | 5,800       |       |         |         |
| RN-016   | C       | 4,800       | 101   | 59      | 110     |
| RN-018   |         | 5,400       |       |         |         |
| RN-020   |         | 6,000       |       |         |         |
| RN-025   |         | 7,500       |       |         |         |
| RN-030   | D       | 9,000       | 100   | 97      | 155     |
| RN-026   |         | 8,600       |       |         |         |
| RN-031   |         | 10,100      |       |         |         |
| RN-040   |         | 12,800      |       |         |         |
| RN-050   |         | 15,000      |       |         |         |
| RN-060   |         | 18,000      |       |         |         |
| RN-070   | 21,000  | 8'4"        | 8'-1" | 12'-11" |         |
| RN-055   | E       | 21,000      | 142   | 102     | 241     |
| RN-065   |         | 24,000      |       |         |         |
| RN-075   |         | 27,000      |       |         |         |
| RN-090   |         | 22,000      |       |         |         |
| RN-105   |         | 26,500      |       |         |         |
| RN-120   |         | 31,000      |       |         |         |
| RN-130   | 34,000  | 303         |       |         |         |
| RN-140   | 37,000  |             |       |         |         |

\*Dimensions may vary depending on options selected.

All dimensions are in inches.

Design cfm may be 30-50% greater or less than nominal cfm.

- 55, 65 and 75-140 ton RN Series Air-Cooled Condenser Packaged Rooftop Unit with Microchannel Condenser Coils.



Microchannel condenser coils are more efficient, lighter, and use less refrigerant than traditional fin and tube condenser coils.

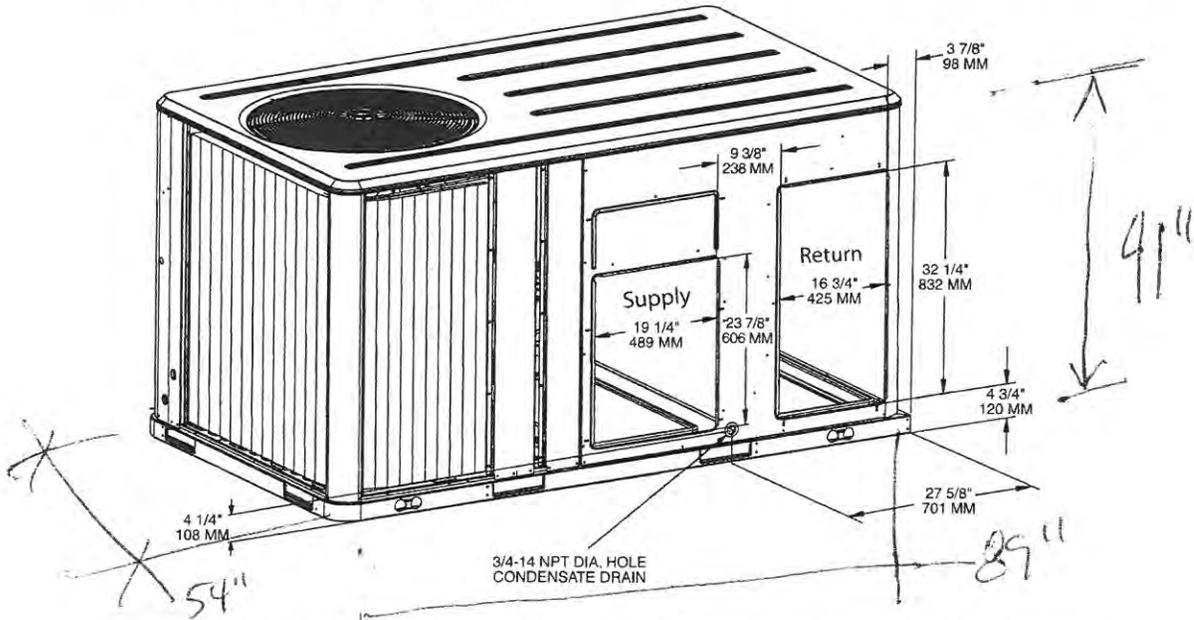
# TYPICAL CORRIDOR UNIT UP TO 5 TON (900 LBS.)



## Dimensional Data

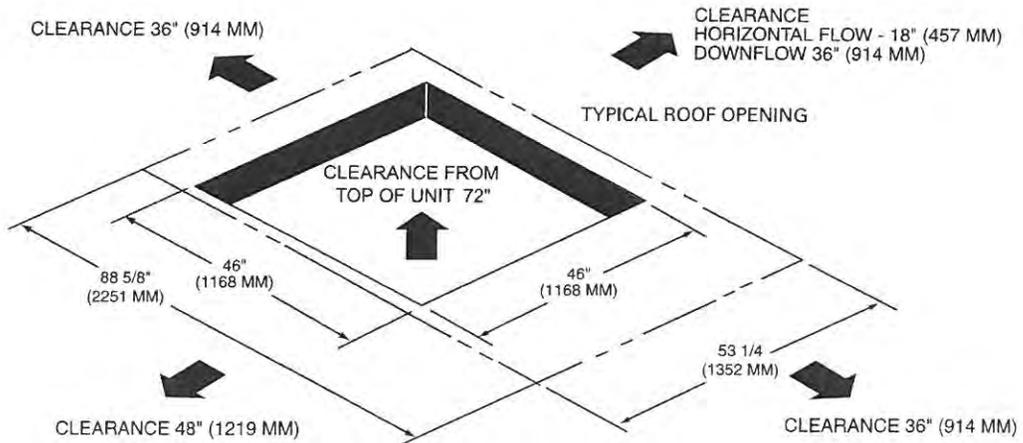
**Figure 13. Cooling and gas/electric - 4-5 tons high efficiency - horizontal airflow supply and return**

Note: All dimensions are in inches/millimeters.



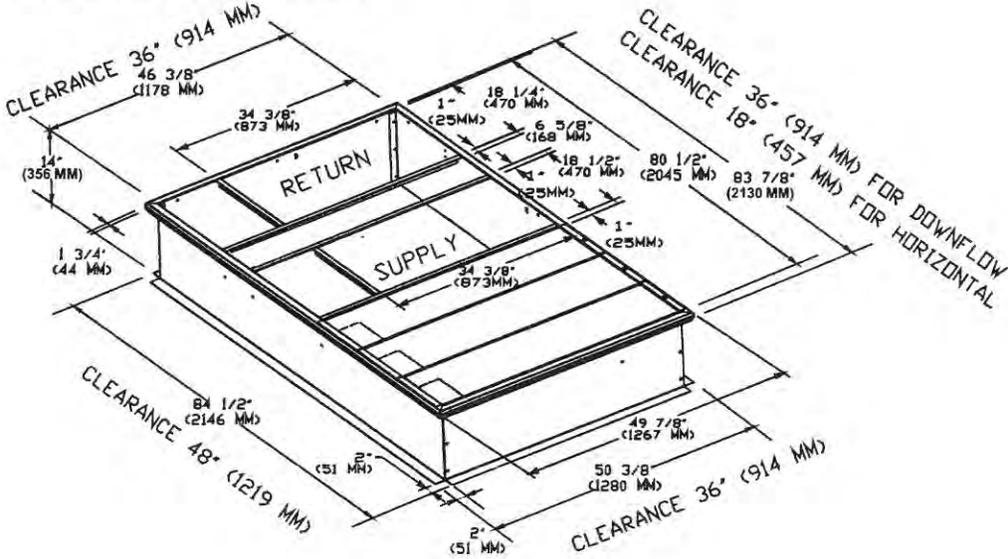
**Figure 14. Cooling and gas/electric - 4-5 tons high efficiency - unit clearance and roof opening**

Note: All dimensions are in inches/millimeters.



**Figure 15. Cooling and gas/electric - 4-5 tons high efficiency - roof curb**

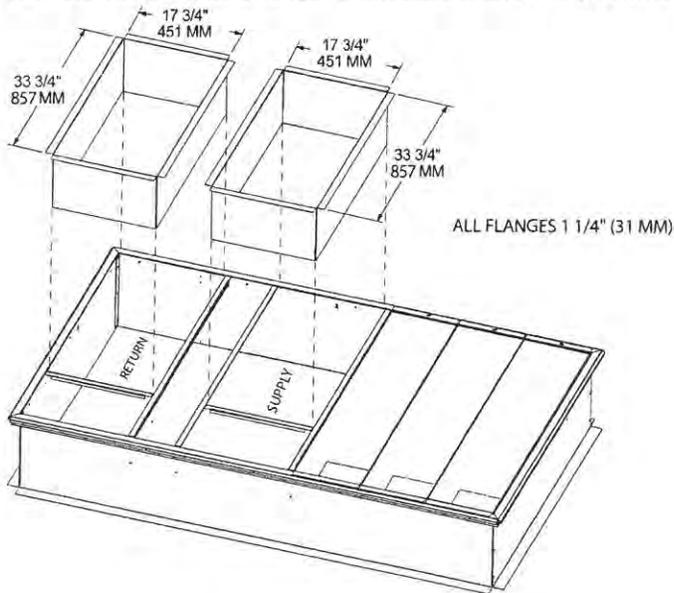
Note: All dimensions are in inches/millimeters.



**Figure 16. Cooling and gas/electric - 4-5 tons high efficiency - downflow duct connections field fabricated**

Note: All dimensions are in inches/millimeters.

Note: See "Clearance required from duct to combustible surfaces (inches)," p. 18 for duct clearance to combustible materials.





## Dimensional Data

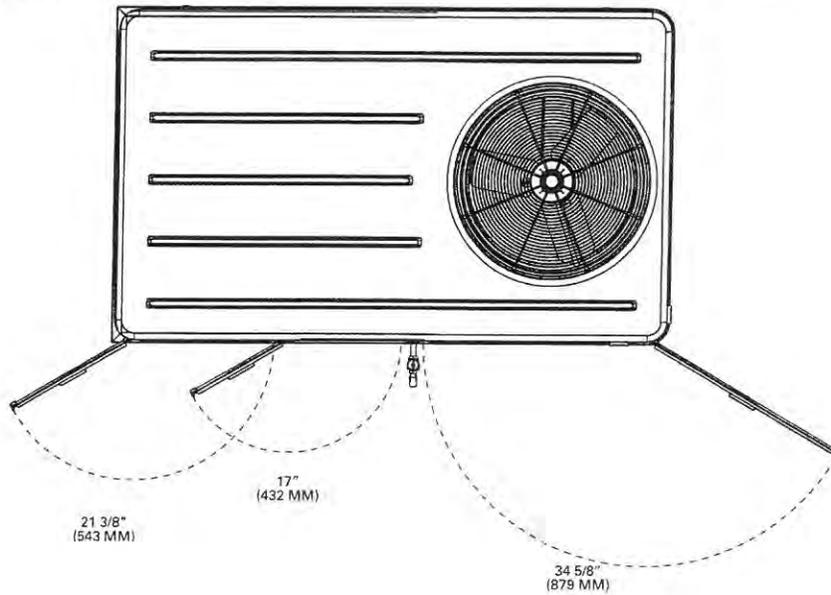
**Figure 17. Cooling and gas/electric - 4-5 tons high efficiency - economizer, manual or motorized fresh air damper**

Note: All dimensions are in inches/millimeters.



**Figure 18. Cooling and gas/electric - 4-5 tons high efficiency - swing diameter for hinged door(s) option**

Note: All dimensions are in inches/millimeters.



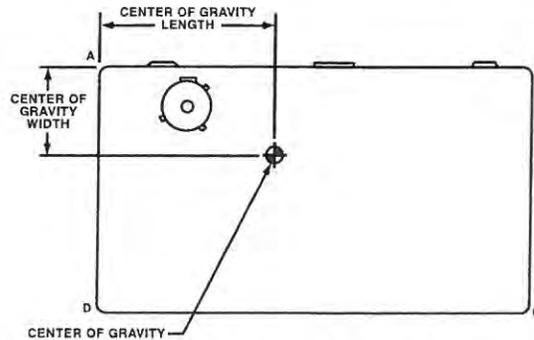
# Weights

**Table 30. Maximum unit & corner weights (lbs) and center of gravity dimensions (in.) - cooling models**

| Tons | Unit<br>Model No. | Maximum Model Weights <sup>(a)</sup> |     | Corner Weights <sup>(b)</sup> |     |     |     | Center of Gravity (in.) |       |
|------|-------------------|--------------------------------------|-----|-------------------------------|-----|-----|-----|-------------------------|-------|
|      |                   | Shipping                             | Net | A                             | B   | C   | D   | Length                  | Width |
| 3    | THC037E           | 614                                  | 544 | 163                           | 144 | 111 | 125 | 33                      | 19    |
| 4    | THC047E           | 787                                  | 692 | 220                           | 178 | 132 | 163 | 40                      | 23    |
| 5    | THC067E           | 841                                  | 746 | 241                           | 193 | 139 | 173 | 39                      | 22    |

(a) Weights are approximate.

(b) Corner weights are given for information only.



**Table 31. Maximum unit & corner weights (lbs) and center of gravity dimensions (in.) - gas/electric models**

| Tons | Unit<br>Model No. | Maximum Model Weights <sup>(a)</sup> |     | Corner Weights <sup>(b)</sup> |     |     |     | Center of Gravity (in.) |       |
|------|-------------------|--------------------------------------|-----|-------------------------------|-----|-----|-----|-------------------------|-------|
|      |                   | Shipping                             | Net | A                             | B   | C   | D   | Length                  | Width |
| 3    | YHC037E           | 676                                  | 606 | 178                           | 162 | 126 | 139 | 33                      | 19    |
| 4    | YHC047E           | 858                                  | 763 | 238                           | 200 | 148 | 176 | 40                      | 23    |
| 5    | YHC067E           | 917                                  | 822 | 261                           | 218 | 156 | 187 | 40                      | 22    |

(a) Weights are approximate.

(b) Corner weights are given for information only.

**Table 32. Factory installed options (fiops)/accessory net weights (lbs)<sup>(a),(b)</sup>**

| Accessory                                | T/YHC037E  | T/YHC047E-067E |
|--|------------|----------------|
|  | Net Weight |                |
|  | 3 Tons     | 4-5 Tons       |
| 460V/575V IDM Transformer <sup>(c)</sup> | 29         | 29             |
| Barometric Relief                        | 7          | 10             |
| Belt Drive Option (3 phase only)         | 31         | 31             |
| Coil Guards                              | 12         | 20             |
| Economizer                               | 26         | 36             |
| Electric Heaters <sup>(d)</sup>          | 15         | 30             |
| Hinged Doors                             | 10         | 12             |
| Low Leak Economizer                      | 68         | 93             |
| Manual Outside Air Damper                | 16         | 26             |
| Motorized Outside Air Damper             | 20         | 30             |

continued on next page



## Weights

**Table 32. Factory installed options (fiops)/accessory net weights (lbs)<sup>(a),(b)</sup> (continued)**

| Accessory                                     | T/YHC037E  | T/YHC047E-067E |
|---|------------|----------------|
|   | Net Weight | Net Weight     |
|   | 3 Tons     | 4-5 Tons       |
| Novar Control                                 | 8          | 8              |
| Oversized Motor                               | 5          | 8              |
| Powered Convenience Outlet                    | 38         | 38             |
| Powered Exhaust                               | 40         | 40             |
| Reheat Coil                                   | 12         | 14             |
| Roof Curb                                     | 61         | 78             |
| Smoke Detector, Supply                        | 5          | 5              |
| Smoke Detector, Return                        | 7          | 7              |
| Stainless Steel Heat Exchanger <sup>(e)</sup> | 4          | 6              |
| Through the Base Electrical                   | 8          | 13             |
| Through the Base Gas                          | 5          | 5              |
| Unit Mounted Circuit Breaker                  | 5          | 5              |
| Unit Mounted Disconnect                       | 5          | 5              |

(a) Weights for options not listed are <5 lbs.

(b) Net weight should be added to unit weight when ordering factory-installed accessories.

(c) Apply weight with all 460V/575V units.

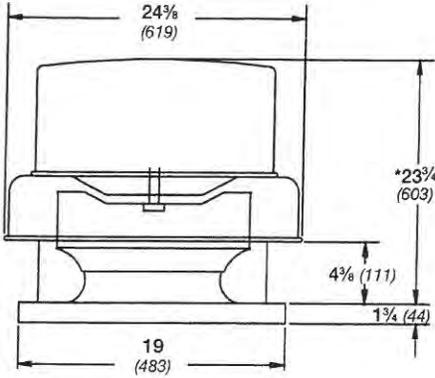
(d) Applicable to Cooling units only.

(e) Applicable to Gas/Electric units only.

# Roof Downblast Exhaust Belt & Direct Drive GB-101HP • G-103HP



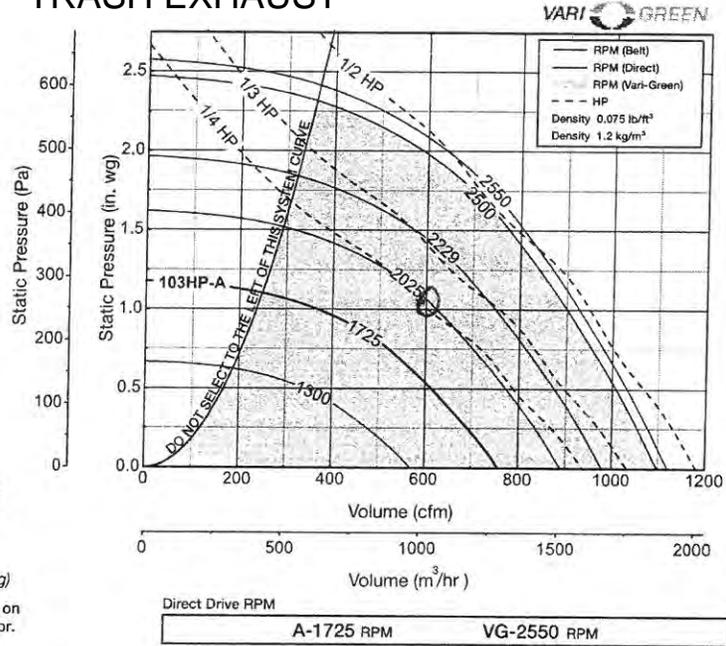
## TRASH EXHAUST



Damper Size = 12 x 12 (305 x 305)  
 Roof Opening = 14 1/2 x 14 1/2 (368 x 368)  
 Shroud Thickness = 0.051 (1.3)  
 Motor Cover Thickness = 0.040 (1.0)  
 Curb Cap Thickness = 0.064 (1.6)  
 ^Approximate Unit Weight G/GB = 58/63 lbs. (26/29 kg)

All dimensions in inches (millimeters). \*May be greater depending on motor. ^Weight shown is largest cataloged Open Drip-Proof motor.

100 LBS EA



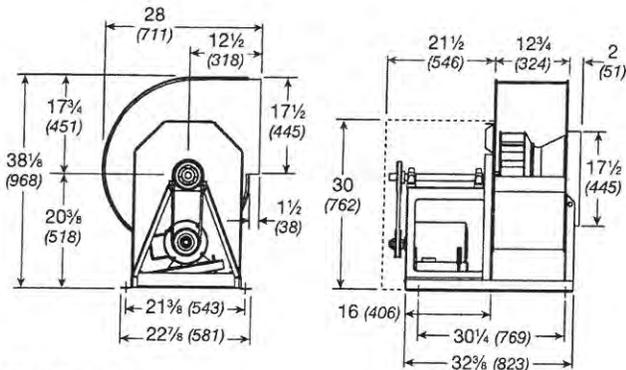
| Motor HP | Fan RPM | Static Pressure in Inches wg |      |      |      |      |      |      |      |      |      |      |  |  |  |
|----------|---------|------------------------------|------|------|------|------|------|------|------|------|------|------|--|--|--|
|          |         | 0                            | 0.25 | 0.5  | 0.75 | 1    | 1.25 | 1.5  | 1.75 | 2    | 2.25 |      |  |  |  |
| 101HP    | 103HP   | CFM                          | 571  | 477  | 342  |      |      |      |      |      |      |      |  |  |  |
|          |         | BHP                          | 0.06 | 0.06 | 0.07 |      |      |      |      |      |      |      |  |  |  |
| 1/4      | VG-1/2  | Sones                        | 6.6  | 5.7  | 5.3  |      |      |      |      |      |      |      |  |  |  |
|          |         | CFM                          | 635  | 553  | 449  | 243  |      |      |      |      |      |      |  |  |  |
|          |         | BHP                          | 0.08 | 0.09 | 0.09 | 0.08 |      |      |      |      |      |      |  |  |  |
|          |         | Sones                        | 8.4  | 7.5  | 7    | 6.3  |      |      |      |      |      |      |  |  |  |
|          |         | CFM                          | 699  | 626  | 537  | 417  |      |      |      |      |      |      |  |  |  |
|          |         | BHP                          | 0.10 | 0.11 | 0.12 | 0.12 |      |      |      |      |      |      |  |  |  |
|          | A-1/4   | Sones                        | 10.4 | 9.5  | 9.1  | 8.3  |      |      |      |      |      |      |  |  |  |
|          |         | CFM                          | 758  | 692  | 613  | 521  | 364  |      |      |      |      |      |  |  |  |
|          |         | BHP                          | 0.13 | 0.14 | 0.15 | 0.16 | 0.15 |      |      |      |      |      |  |  |  |
|          |         | Sones                        | 11.4 | 10.7 | 10.6 | 10.1 | 10   |      |      |      |      |      |  |  |  |
|          |         | CFM                          | 826  | 767  | 697  | 618  | 518  | 337  |      |      |      |      |  |  |  |
|          |         | BHP                          | 0.17 | 0.18 | 0.19 | 0.20 | 0.20 | 0.18 |      |      |      |      |  |  |  |
| 1/3      | VG-1/2  | Sones                        | 12.7 | 12.2 | 11.9 | 12   | 11.4 | 11.9 |      |      |      |      |  |  |  |
|          |         | CFM                          | 890  | 836  | 772  | 702  | 622  | 515  | 313  |      |      |      |  |  |  |
|          |         | BHP                          | 0.21 | 0.23 | 0.24 | 0.24 | 0.26 | 0.25 | 0.22 |      |      |      |  |  |  |
|          |         | Sones                        | 14.2 | 13.6 | 13.3 | 13.2 | 12.6 | 12   | 11.4 |      |      |      |  |  |  |
|          |         | CFM                          | 939  | 889  | 830  | 765  | 693  | 607  | 474  |      |      |      |  |  |  |
|          |         | BHP                          | 0.25 | 0.26 | 0.28 | 0.28 | 0.29 | 0.30 | 0.28 |      |      |      |  |  |  |
|          | A-1/4   | Sones                        | 15.4 | 14.8 | 14.4 | 14.2 | 13.4 | 13.1 | 12.1 |      |      |      |  |  |  |
|          |         | CFM                          | 979  | 931  | 875  | 814  | 748  | 674  | 574  | 406  |      |      |  |  |  |
|          |         | BHP                          | 0.28 | 0.30 | 0.31 | 0.32 | 0.33 | 0.35 | 0.33 | 0.31 |      |      |  |  |  |
|          |         | Sones                        | 15.8 | 15.4 | 14.8 | 14.5 | 14.1 | 13.7 | 13.2 | 12.0 |      |      |  |  |  |
|          |         | CFM                          | 1026 | 981  | 928  | 871  | 809  | 742  | 661  | 543  | 358  |      |  |  |  |
|          |         | BHP                          | 0.33 | 0.34 | 0.36 | 0.36 | 0.37 | 0.39 | 0.40 | 0.37 | 0.34 |      |  |  |  |
| 1/2      | VG-1/2  | Sones                        | 16.4 | 16   | 15.4 | 14.9 | 14.7 | 14   | 14.1 | 13.5 | 13.6 |      |  |  |  |
|          |         | CFM                          | 1098 | 1056 | 1008 | 956  | 901  | 840  | 775  | 695  | 583  | 416  |  |  |  |
|          |         | BHP                          | 0.40 | 0.42 | 0.43 | 0.45 | 0.45 | 0.46 | 0.48 | 0.48 | 0.46 | 0.42 |  |  |  |
|          |         | Sones                        | 17.8 | 17.4 | 16.9 | 16.7 | 15.8 | 15.5 | 14.8 | 15.2 | 15.7 | 16.6 |  |  |  |
|          |         | CFM                          | 1120 | 1078 | 1032 | 982  | 928  | 869  | 807  | 735  | 639  | 497  |  |  |  |
|          |         | BHP                          | 0.43 | 0.44 | 0.46 | 0.47 | 0.47 | 0.49 | 0.51 | 0.52 | 0.50 | 0.47 |  |  |  |
|          | A-1/4   | Sones                        | 18.2 | 17.9 | 17.4 | 17.2 | 16.3 | 16.1 | 15.1 | 15.6 | 16.2 | 17.2 |  |  |  |

Performance certified is for installation type A: Free inlet, Free outlet. Power rating (BHP) does not include transmission losses. Performance ratings include the effects of a birdscreen. The sound ratings shown are loudness values in hemispherical sones at 5 ft. (1.5 m) in a hemispherical free field calculated per AMCA Standard 301. Values shown are for installation type A: free inlet hemispherical sone levels.

# SWB-116 - Belt Drive Series 100

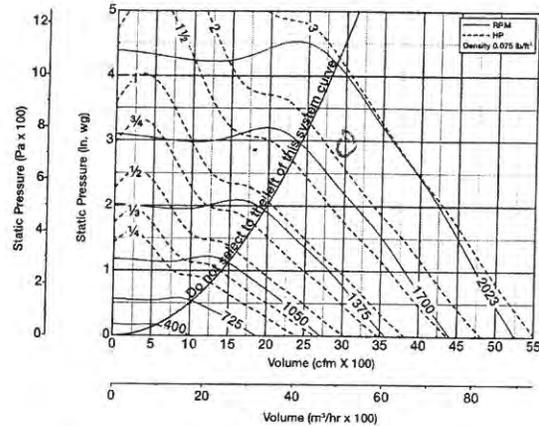


## FUTURE DISHWASHER



Wheel Diameter = 17 (432)  
 Shaft Diameter = 1 (25)  
 Outlet Area = 1.52 ft<sup>2</sup> (0.14 m<sup>2</sup>)  
 ^Approximate Unit Weight = 241 lb. (109 kg) ← 250 LBS EA

All dimensions in inches (millimeters)  
 For additional discharge positions see page 15  
 ^Weight shown is largest cataloged Open Drip Proof motor



Maximum BHP at a given RPM =  $(RPM/1403)^3$   
 (Maximum KW at a given RPM =  $(RPM/1547)^3$ )  
 Maximum RPM = 2023  
 Tip Speed (ft/min.) = RPM x 4.32  
 (Tip Speed (m/s) = RPM x 0.0219)  
 Maximum Motor Frame Size = 184T

### SWB-116

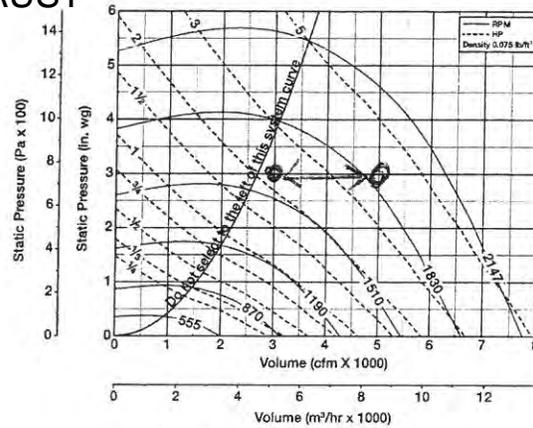
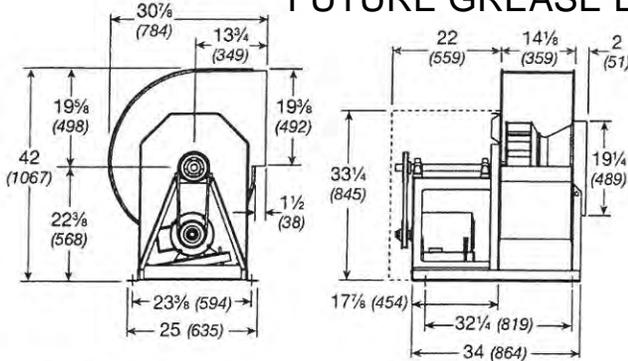
| CFM  | OV   | Static Pressure in Inches wg |      |      |      |      |      |      |      |      |      |      |  |  |  |
|------|------|------------------------------|------|------|------|------|------|------|------|------|------|------|--|--|--|
|      |      | 0.5                          | 0.75 | 1    | 1.25 | 1.5  | 2    | 2.5  | 2.75 | 3    | 3.5  |      |  |  |  |
| 1200 | 789  | RPM                          | 750  |      |      |      |      |      |      |      |      |      |  |  |  |
|      |      | BHP                          | 0.15 |      |      |      |      |      |      |      |      |      |  |  |  |
|      |      | Sones                        | 5.8  |      |      |      |      |      |      |      |      |      |  |  |  |
| 1560 | 1026 | RPM                          | 846  | 943  | 1026 |      |      |      |      |      |      |      |  |  |  |
|      |      | BHP                          | 0.22 | 0.30 | 0.38 |      |      |      |      |      |      |      |  |  |  |
|      |      | Sones                        | 7.1  | 7.8  | 8.7  |      |      |      |      |      |      |      |  |  |  |
| 1920 | 1263 | RPM                          | 949  | 1039 | 1120 | 1192 | 1259 |      |      |      |      |      |  |  |  |
|      |      | BHP                          | 0.31 | 0.40 | 0.50 | 0.60 | 0.71 |      |      |      |      |      |  |  |  |
|      |      | Sones                        | 8.8  | 9.6  | 10.7 | 11.5 | 12.0 |      |      |      |      |      |  |  |  |
| 2280 | 1500 | RPM                          | 1061 | 1141 | 1216 | 1287 | 1352 | 1470 | 1576 |      |      |      |  |  |  |
|      |      | BHP                          | 0.42 | 0.53 | 0.65 | 0.76 | 0.88 | 1.12 | 1.38 |      |      |      |  |  |  |
|      |      | Sones                        | 10.9 | 11.8 | 12.5 | 12.9 | 13.3 | 14.4 | 16.4 |      |      |      |  |  |  |
| 2640 | 1737 | RPM                          | 1182 | 1250 | 1320 | 1385 | 1448 | 1564 | 1666 | 1715 | 1762 | 1851 |  |  |  |
|      |      | BHP                          | 0.57 | 0.69 | 0.82 | 0.96 | 1.09 | 1.36 | 1.64 | 1.79 | 1.93 | 2.23 |  |  |  |
|      |      | Sones                        | 13.5 | 13.8 | 14.1 | 14.6 | 15.1 | 15.9 | 17.4 | 18.4 | 19.5 | 22   |  |  |  |
| 3000 | 1974 | RPM                          | 1306 | 1369 | 1429 | 1490 | 1548 | 1659 | 1761 | 1808 | 1853 | 1940 |  |  |  |
|      |      | BHP                          | 0.76 | 0.89 | 1.03 | 1.18 | 1.34 | 1.64 | 1.95 | 2.11 | 2.26 | 2.59 |  |  |  |
|      |      | Sones                        | 15.4 | 15.8 | 16.1 | 16.6 | 17.1 | 18.6 | 19.9 | 21   | 21   | 22   |  |  |  |
| 3360 | 2211 | RPM                          | 1432 | 1491 | 1545 | 1599 | 1654 | 1758 | 1857 | 1903 | 1948 |      |  |  |  |
|      |      | BHP                          | 0.99 | 1.14 | 1.29 | 1.45 | 1.62 | 1.96 | 2.30 | 2.47 | 2.64 |      |  |  |  |
|      |      | Sones                        | 17.6 | 18.0 | 18.4 | 18.9 | 19.6 | 21   | 23   | 23   | 23   |      |  |  |  |
| 3720 | 2447 | RPM                          | 1560 | 1615 | 1667 | 1716 | 1764 | 1863 | 1955 | 2001 |      |      |  |  |  |
|      |      | BHP                          | 1.27 | 1.43 | 1.60 | 1.76 | 1.94 | 2.32 | 2.70 | 2.89 |      |      |  |  |  |
|      |      | Sones                        | 20   | 21   | 21   | 22   | 23   | 24   | 25   | 26   |      |      |  |  |  |
| 4080 | 2684 | RPM                          | 1690 | 1742 | 1790 | 1837 | 1881 | 1971 |      |      |      |      |  |  |  |
|      |      | BHP                          | 1.60 | 1.78 | 1.96 | 2.14 | 2.32 | 2.72 |      |      |      |      |  |  |  |
|      |      | Sones                        | 23   | 24   | 25   | 25   | 26   | 27   |      |      |      |      |  |  |  |
| 4440 | 2921 | RPM                          | 1821 | 1869 | 1916 | 1960 | 2002 |      |      |      |      |      |  |  |  |
|      |      | BHP                          | 1.99 | 2.18 | 2.38 | 2.58 | 2.77 |      |      |      |      |      |  |  |  |
|      |      | Sones                        | 27   | 28   | 28   | 29   | 30   |      |      |      |      |      |  |  |  |
| 4800 | 3158 | RPM                          | 1953 | 1999 |      |      |      |      |      |      |      |      |  |  |  |
|      |      | BHP                          | 2.44 | 2.65 |      |      |      |      |      |      |      |      |  |  |  |
|      |      | Sones                        | 32   | 32   |      |      |      |      |      |      |      |      |  |  |  |

Performance certified is for installation Type B - Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance only.

# SWB-218 - Belt Drive Series 200



## FUTURE GREASE EXHAUST



Wheel Diameter = 18 3/8 (473)  
 Shaft Diameter = 1 1/4 (32)  
 Outlet Area = 1.87 ft<sup>2</sup> (0.17 m<sup>2</sup>)  
 ^Approximate Unit Weight = 324 lb. (147 kg) ← 350 LBS

All dimensions in inches (millimeters)  
 For additional discharge positions see page 15  
 ^Weight shown is largest cataloged Open Drip Proof motor

Maximum BHP at a given RPM = (RPM/1196)<sup>3</sup>  
 (Maximum KW at a given RPM = (RPM/1319)<sup>3</sup>)  
 Maximum RPM = 2147  
 Tip Speed (ft/min.) = RPM x 4.78  
 (Tip Speed (m/s) = RPM x 0.0243)  
 Maximum Motor Frame Size = 213T

### SWB-218

| CFM  | OV   |       | Static Pressure in Inches wg |      |      |      |      |      |      |      |      |      |
|------|------|-------|------------------------------|------|------|------|------|------|------|------|------|------|
|      |      |       | 0.5                          | 1    | 1.5  | 2    | 2.5  | 3    | 3.5  | 4    | 4.5  | 5    |
| 2000 | 1070 | RPM   | 762                          | 963  | 1136 |      |      |      |      |      |      |      |
|      |      | BHP   | 0.26                         | 0.49 | 0.75 |      |      |      |      |      |      |      |
|      |      | Sones | 10.1                         | 11.3 | 13.4 |      |      |      |      |      |      |      |
| 2500 | 1337 | RPM   | 862                          | 1023 | 1185 | 1330 | 1459 |      |      |      |      |      |
|      |      | BHP   | 0.37                         | 0.62 | 0.92 | 1.24 | 1.58 |      |      |      |      |      |
|      |      | Sones | 10.1                         | 11.6 | 13.0 | 15.2 | 17.9 |      |      |      |      |      |
| 3000 | 1604 | RPM   | 974                          | 1110 | 1245 | 1380 | 1507 | 1623 | 1730 |      |      |      |
|      |      | BHP   | 0.52                         | 0.80 | 1.12 | 1.47 | 1.85 | 2.24 | 2.65 |      |      |      |
|      |      | Sones | 11.5                         | 12.6 | 13.9 | 15.5 | 18.3 | 21   | 24   |      |      |      |
| 3500 | 1872 | RPM   | 1092                         | 1211 | 1327 | 1443 | 1557 | 1672 | 1779 | 1878 | 1971 | 2060 |
|      |      | BHP   | 0.72                         | 1.03 | 1.36 | 1.74 | 2.15 | 2.58 | 3.02 | 3.48 | 3.95 | 4.43 |
|      |      | Sones | 13.6                         | 14.2 | 15.2 | 16.8 | 19.1 | 22   | 25   | 27   | 29   | 31   |
| 4000 | 2139 | RPM   | 1218                         | 1322 | 1423 | 1525 | 1626 | 1727 | 1828 | 1927 | 2020 | 2108 |
|      |      | BHP   | 0.97                         | 1.32 | 1.68 | 2.07 | 2.51 | 2.95 | 3.43 | 3.93 | 4.44 | 4.96 |
|      |      | Sones | 15.7                         | 16.4 | 17.3 | 18.7 | 21   | 23   | 25   | 27   | 29   | 32   |
| 4500 | 2406 | RPM   | 1346                         | 1438 | 1530 | 1619 | 1709 | 1800 | 1890 | 1979 | 2069 |      |
|      |      | BHP   | 1.28                         | 1.66 | 2.07 | 2.48 | 2.92 | 3.41 | 3.90 | 4.42 | 4.96 |      |
|      |      | Sones | 18.2                         | 18.8 | 19.6 | 21   | 23   | 24   | 26   | 28   | 30   |      |
| 5000 | 2764 | RPM   | 1475                         | 1557 | 1643 | 1723 | 1804 | 1885 | 1967 | 2048 |      |      |
|      |      | BHP   | 1.66                         | 2.08 | 2.52 | 2.97 | 3.43 | 3.91 | 4.45 | 5.00 |      |      |
|      |      | Sones | 21                           | 21   | 22   | 24   | 25   | 26   | 28   | 29   |      |      |
| 5500 | 2941 | RPM   | 1605                         | 1683 | 1758 | 1834 | 1907 | 1981 | 2055 |      |      |      |
|      |      | BHP   | 2.10                         | 2.58 | 3.04 | 3.54 | 4.03 | 4.54 | 5.07 |      |      |      |
|      |      | Sones | 24                           | 24   | 25   | 26   | 27   | 28   | 30   |      |      |      |
| 6000 | 3209 | RPM   | 1737                         | 1810 | 1877 | 1949 | 2017 | 2084 |      |      |      |      |
|      |      | BHP   | 2.63                         | 3.15 | 3.65 | 4.18 | 4.72 | 5.25 |      |      |      |      |
|      |      | Sones | 27                           | 28   | 28   | 29   | 30   | 31   |      |      |      |      |
| 6500 | 3476 | RPM   | 1869                         | 1938 | 2002 | 2065 | 2131 |      |      |      |      |      |
|      |      | BHP   | 3.26                         | 3.81 | 4.37 | 4.91 | 5.49 |      |      |      |      |      |
|      |      | Sones | 31                           | 31   | 31   | 32   | 33   |      |      |      |      |      |
| 7000 | 3743 | RPM   | 2003                         | 2067 | 2128 |      |      |      |      |      |      |      |
|      |      | BHP   | 3.98                         | 4.57 | 5.18 |      |      |      |      |      |      |      |
|      |      | Sones | 34                           | 35   | 35   |      |      |      |      |      |      |      |

Performance certified is for installation Type B - Free inlet, Ducted outlet. Power rating (Bhp) does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories). The AMCA Certified Ratings Seal applies to air performance only.

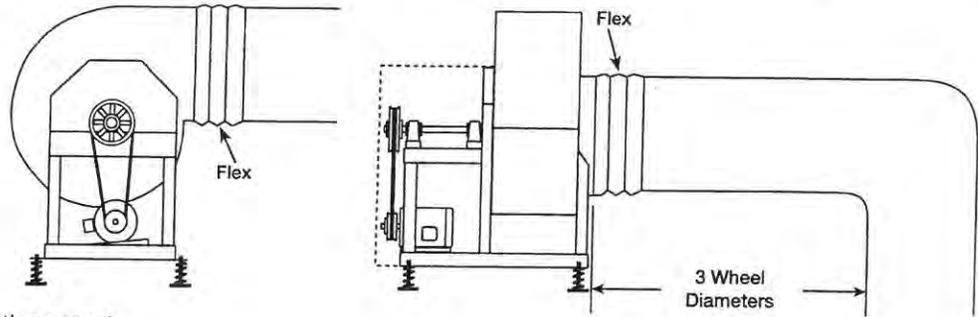
# Typical Installations



## FUTURE KITCHEN EXHAUST

### General Clean Air or Fume Hood (Non-Grease)

The SFD, SFB, SWD and SWB are designed for applications ranging from clean air to contaminated air. Typical installations are shown below. Installations must include a means for inspecting, cleaning and servicing the exhaust fan.



UL 762 KITCHEN EXHAUST

### SWB Commercial Kitchen (Grease)

Greenheck's SWB Series 200 and 300 are designed to meet restaurant and foodservice applications. These fans are UL and cUL Listed for grease removal and have been tested under elevated temperature conditions.

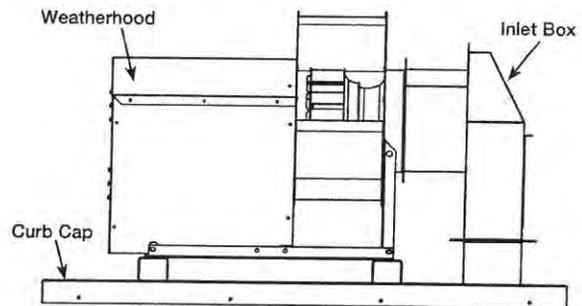
Due to high temperatures and grease-laden airstreams in commercial kitchen ventilation, system designers must be aware of governing codes and guidelines. The National Fire Protection Association (NFPA) is the primary source used by many local codes for commercial kitchen ventilation systems. Local code authorities should be consulted before proceeding with any kitchen ventilation project.

Installation must include a means for inspecting, cleaning and servicing the exhaust fan.

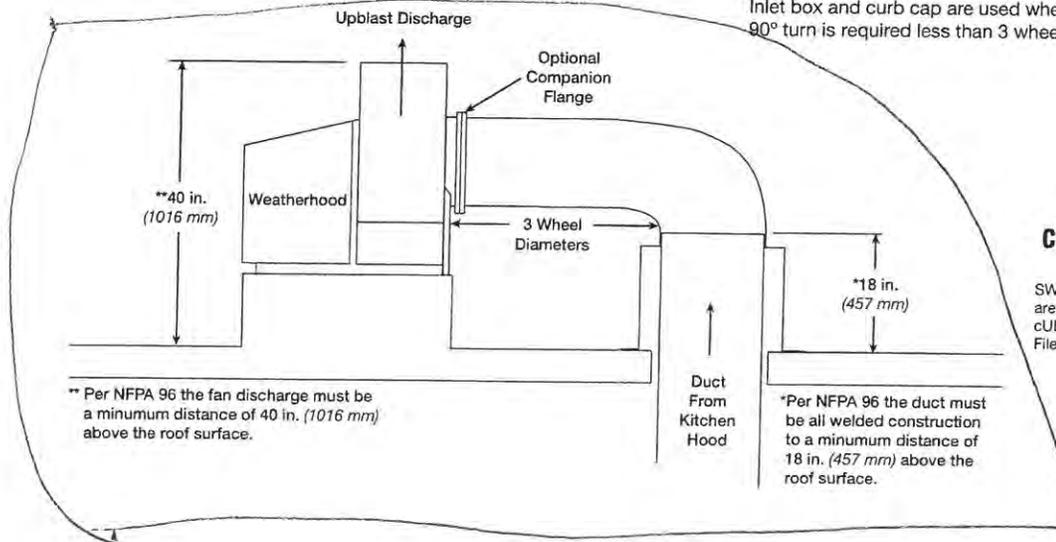
Fans selected for grease removal must include a weatherhood, access door and 1-inch (25 mm) drain connection. For grease applications where the fan is mounted indoors, the welded scroll option must be

selected. An outlet guard is strongly recommended when the fan discharge is accessible. When an outlet guard is not ordered with the fan, it must be provided by the installer. An upblast discharge is recommended. No dampers are to be used in the system.

The fan discharge must be a minimum of 40 inches (1016 mm) above the roof line and the exhaust duct must be fully welded to a minimum distance of 18 inches (457 mm) above the roof surface.



Inlet box and curb cap are used when space is limited and a 90° turn is required less than 3 wheel diameters from the inlet.



\*\* Per NFPA 96 the fan discharge must be a minimum distance of 40 in. (1016 mm) above the roof surface.

\*Per NFPA 96 the duct must be all welded construction to a minimum distance of 18 in. (457 mm) above the roof surface.



SWB Series 200 and 300 models are listed for grease removal (UL/cUL 762).  
File no. MH11745

# Mounting Options

## Vibration Isolators

Base-mounted neoprene or spring isolators are available to lessen mechanical vibration and assure quiet operation. Free-standing, restrained and housed spring isolators are also available. Isolators are sized to match the weight of each fan.



### Free-Standing Open Spring Mounts -

#### Type 3, 1-inch Deflection

Free-standing spring isolators are unboxed laterally stable steel springs. They provide a minimum horizontal stiffness of 0.8 times the rated vertical

stiffness and provide an additional 50% overload capacity. These isolators are equipped with a top-mounted adjusting bolt and an acoustical non-skid base. Springs are color coded to indicate load capacity.

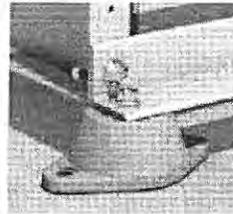


### Housed Spring Mounts

#### Type 4B, 1-inch Deflection

Housed spring isolators consist of steel springs assembled into a telescoping housing with a top-mounted adjusting bolt and an acoustical non-skid base. Housed spring isolators include resilient inserts to prevent metal-

to-metal contact and provide snubbing for side loads. Springs provide an additional 50% overload capacity and are color coded to indicate load capacity.

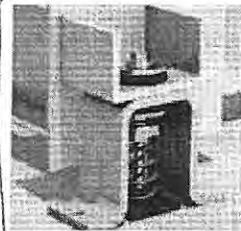


### Rubber Mounts -

#### Type 2, ¼-inch and ½-inch Deflection

Neoprene mountings consist of a steel top plate and base plate completely embedded in colored (oil-resistant) neoprene for easy identification of

capacity. Neoprene mountings are furnished with a tapped hole in the center. This enables the equipment to be bolted securely to the rubber mount.



### Restrained Spring Mounts -

#### Type 4A, 1-inch Deflection

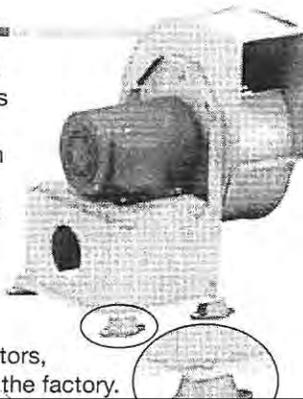
Restrained spring isolators consist of laterally stable, free-standing springs assembled into a steel housing. These assemblies are designed for

vertical and horizontal motion restraint. Restrained spring isolators can be used for blocking during equipment installation and are provided with leveling bolts. Springs provide 50% overload capacity and are color coded or identified to indicate load capacity. Restrained spring mounts are recommended for equipment subject to wind loading or large torquing forces.



### Direct Mount - Type A

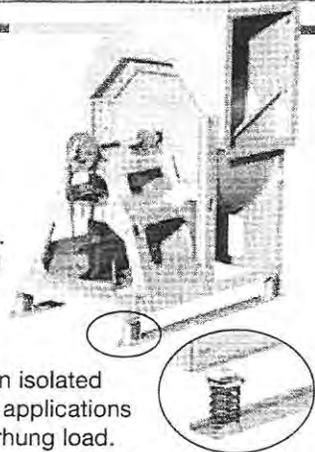
No base required. Isolators are attached directly to equipment. Direct isolation can be used if equipment is unitary and rigid without the use of additional support. If there is any doubt whether or not equipment can be supported directly on isolators, use rails, bases or consult the factory.



### Mounting Rails with Isolators

Isolation mounting rails are available with either rubber mount, free-standing open or restrained spring isolators. The isolators are mounted between aluminum rails that run the length of the fan base. Isolation rails provide easy installation on isolated systems, and are ideal for applications where there is a large overhung load.

Mounting rails are available for fans up to size 36.



### Equipment Supports

Models GESS and GESR equipment supports are available for roof mounting of utility fans up to size 36. Equipment supports are available in a number of lengths, widths, heights, and can also be built for a pitched roof.

