

VanAir™ Ventilated Door

Door Series

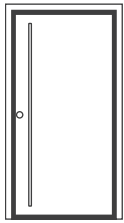
| | |
|----------------------------------|--|
| FACES: | HPVA Architectural "A" grade wood veneer Options: "AA" grade wood veneer, paint grade MDO, Hardboard, HPDL |
| SUBSTRATE: | Engineered wood composites |
| CORE: | Engineered wood composites and acoustic foam |
| VENTILATION SLOT: | Wood and composite material matching with faces |
| STILES: | (CE) Compatible with face veneer, mill option AWS Type A wood or Type B veneered. Options: (ME) Matching with face veneer |
| RAILS: | Mill option wood or composite material |
| ASSEMBLY: | Stiles and rails are securely bonded to ventilated core and the assembled unit is sanded prior to application of faces. |
| ADHESIVES: | Type 1 |
| MAXIMUM SIZE: | 4'0" x 10'0" (1220mm x 3048mm). Contact factory for sizing options. |
| THICKNESS: | 1 ¾" (45 mm) |
| WARRANTY: | 1 Year for interior use only |
| STANDARDS: | WDMA IS-1A and AWS Custom Grade Option: Premium Grade Performance attributes meet or exceed WDMA IS-1A Extra Heavy Duty when specified with blocking for surface applied hardware without through bolts. |
| FIRE RATING: | Not applicable |
| ENVIRONMENTAL ATTRIBUTES: | Recycled content, no added urea-formaldehyde, certified wood, and/or regionally recovered and manufactured, may apply — see GreenDor™ Contribution Sheets. |



Manufacturing Options

| | |
|----------------------------|--|
| BLOCKING: | Lock blocks included. Special blocking options may be specified. (Reference WDMA I.S. 1A blocking options HB-1 through HB-8). Additional blocking may affect STC rating. |
| MACHINING: | Machining for hardware, applied moldings, plant-ons, and decorative routing. Hardware cutouts shall be factory machined from manufacturer's templates and shop drawings. |
| TRANSPARENT FINISH: | WDMA TR8 / AWS System 9 UV cured catalyzed polyurethane finishes in standard and custom stain match. Options: Other finish systems available |
| OPAQUE FINISH: | Factory painting in standard and custom match colors. Options: Standard or color tinted priming available |

Performance: Standard



VANAIR

80 IN² VENTILATION AREA*
25 STC SOUND PRIVACY

Tests conducted independently in accordance with ASTM Standards on 3'0" x 7'0" x 1 3/4" VanAir Door with:

1. Acoustic foam in air channel
2. Full perimeter seal (PEMKO STCSET-1A Seal Set)

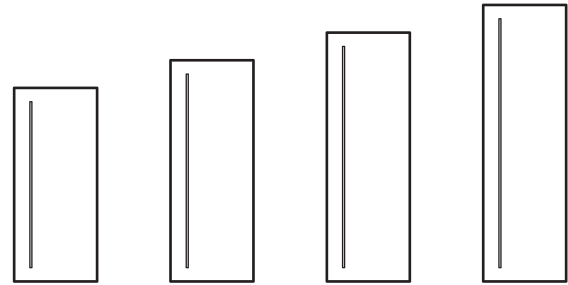
Airflow Performance, Flow Rate vs Pressure
 ASTM E779-10 Determining Air Leakage Rate by Fan Pressurization

* Ventilation area is the equivalent grille/louver area. The unrestricted free/open area for airflow is equal to 50% of the ventilation area.

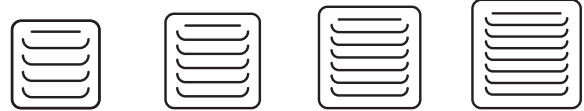
† Compared to grilles/louvers with 50% free/open area.

Airflow Comparison

VanAir Door vs Grille/Louver



| | | | | |
|--------------------------|--------------------|--------------------|---------------------|---------------------|
| VanAir Door Height | 6'8", 7'0" | 8'0" | 9'0" | 10'0" |
| VanAir Ventilation Area* | 80 in ² | 94 in ² | 106 in ² | 120 in ² |

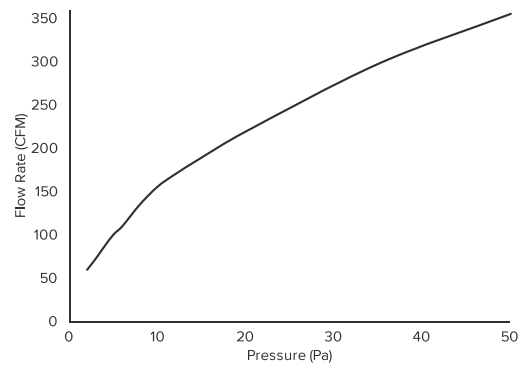


| | | | | |
|--------------------------------|---------|-------------|-----------------|-----------|
| Equivalent Grille/Louver Size† | 9" x 9" | 9.5" x 9.5" | 10.25" x 10.25" | 11" x 11" |
|--------------------------------|---------|-------------|-----------------|-----------|

Airflow Performance

| Pressure (Pa) | Airflow (CFM) |
|---------------|---------------|
| 50 | 355 |
| 35 | 297 |
| 20 | 219 |
| 15 | 189 |
| 12 | 170 |
| 10 | 156 |
| 8 | 136 |
| 6 | 110 |
| 5 | 100 |
| 4 | 87 |
| 3 | 73 |
| 2 | 60 |

Flow Rate vs Pressure



STC COMPARISON

SOLID CORE
28 STC SOUND PRIVACY

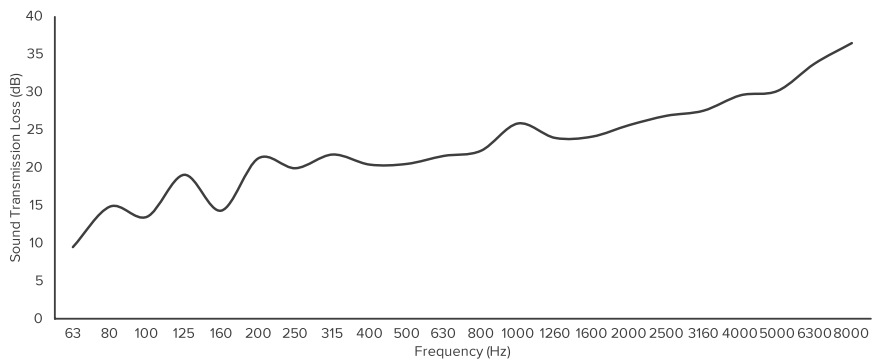
HOLLOW CORE
23 STC SOUND PRIVACY

Sound Transmission Loss Curve

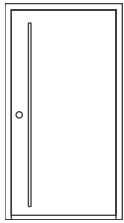
ASTM E90-09 Laboratory Measurements of Airborne Sound Transmission Loss of Building Partition Elements

ASTM E 413-10 Classification for Rating Sound Insulation

Sound Transmission Loss Curve



Performance: Maximum Airflow (Manufacturing Option)



VANAIR

160 IN² VENTILATION AREA*
15 STC SOUND PRIVACY

Tests conducted independently in accordance with ASTM Standards on 3'0" x 7'0" x 1 3/8" VanAir Door with:

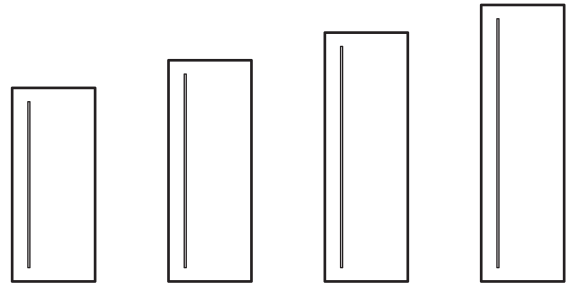
1. No acoustic foam in air channel
2. No perimeter seals
3. Half inch (1/2") undercut

Airflow Performance, Flow Rate vs Pressure
 ASTM E779-10 Determining Air Leakage Rate by Fan Pressurization

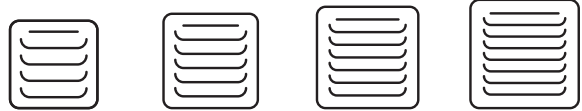
* Ventilation area is the equivalent grille/louver area. The unrestricted free/open area for airflow is equal to 50% of the ventilation area.

* Compared to grilles/louvers with 50% free/open area.

Airflow Comparison VanAir Door vs Grille/Louver



| VanAir Door Height | 6'8", 7'0" | 8'0" | 9'0" | 10'0" |
|--------------------------|---------------------|---------------------|---------------------|---------------------|
| VanAir Ventilation Area* | 160 in ² | 186 in ² | 214 in ² | 240 in ² |

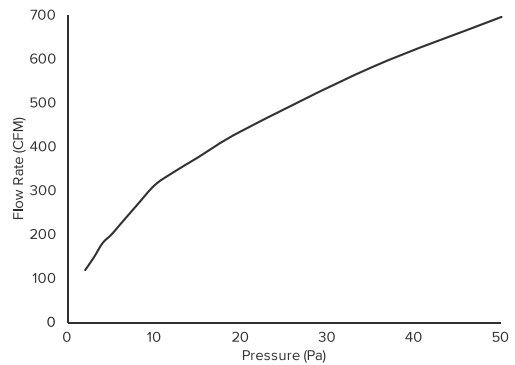


| Equivalent Grille/Louver Size [†] | 12.5" x 12.5" | 13.5" x 13.5" | 14.5" x 14.5" | 15.5" x 15.5" |
|--|---------------|---------------|---------------|---------------|
|--|---------------|---------------|---------------|---------------|

Airflow Performance

| Pressure (Pa) | Airflow (CFM) |
|---------------|---------------|
| 50 | 696 |
| 35 | 581 |
| 20 | 436 |
| 15 | 376 |
| 12 | 340 |
| 10 | 312 |
| 8 | 268 |
| 6 | 222 |
| 5 | 199 |
| 4 | 180 |
| 3 | 148 |
| 2 | 119 |

Flow Rate vs Pressure



STC COMPARISON

SOLID CORE
15 STC SOUND PRIVACY

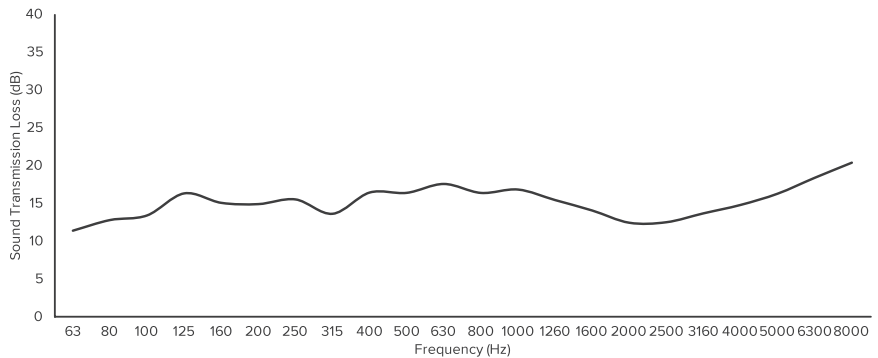
HOLLOW CORE
13 STC SOUND PRIVACY

Sound Transmission Loss Curve

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Sound Transmission Loss Curve



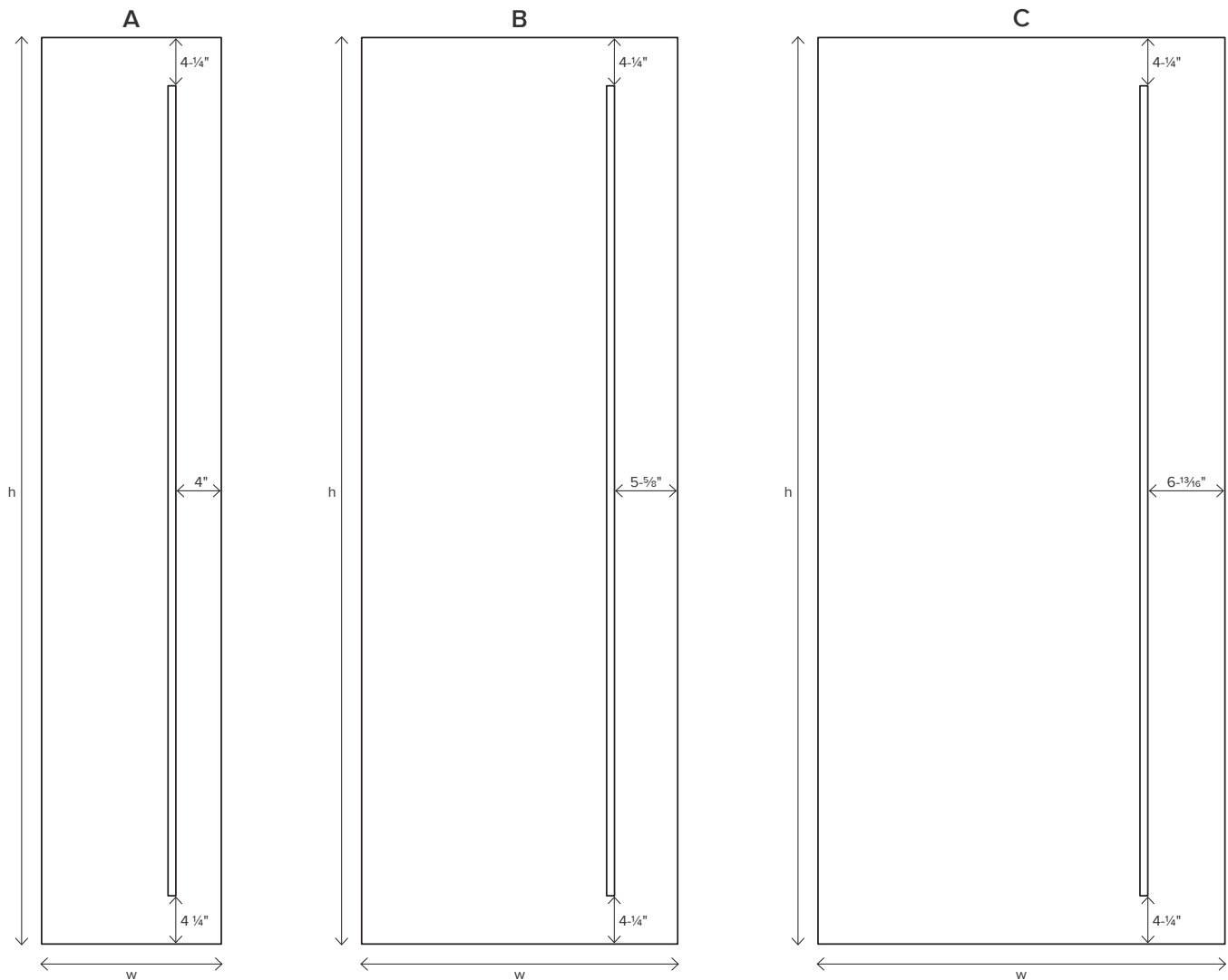
Line Drawings: Door and Ventilation Slot Dimensions

Reference the chart for standard sizes to the drawings below for the placement of the ventilation slot

Standard ventilation slot width is $\frac{7}{8}$ "

Custom sizes available

| Width (w) | Height (h) | | | | | Additional Details |
|-----------|------------|------|------|------|--|--------------------|
| | ≥ 6'8" | 7'0" | 8'0" | 9'0" | 10'0" | |
| 1'0" | A | D | | | Doors narrower than 1'8" in width are limited to pull hardware and unable to accept standard 2- $\frac{3}{8}$ " and 2- $\frac{3}{4}$ " hardware. | |
| 1'2" | | | | | | |
| 1'4" | | | | | | |
| 1'6" | B | E | | | Doors narrower than 2'6" in width have no acoustic foam in air channel. | |
| 1'8" | | | | | | |
| 1'10" | | | | | | |
| 2'0" | | | | | | |
| 2'2" | | | | | | |
| 2'4" | | | | | | |
| 2'6" | C | F | | | Acoustical foam is standard in these widths, but can also be produced without for additional ventilation. | |
| 2'8" | | | | | | |
| 2'10" | | | | | | |
| 3'0" | | | | | | |
| 3'2" | | | | | | |
| 3'4" | | | | | | |
| 3'6" | | | | | | |
| 3'8" | | | | | | |
| 3'10" | | | | | | |
| 4'0" | | | | | | |



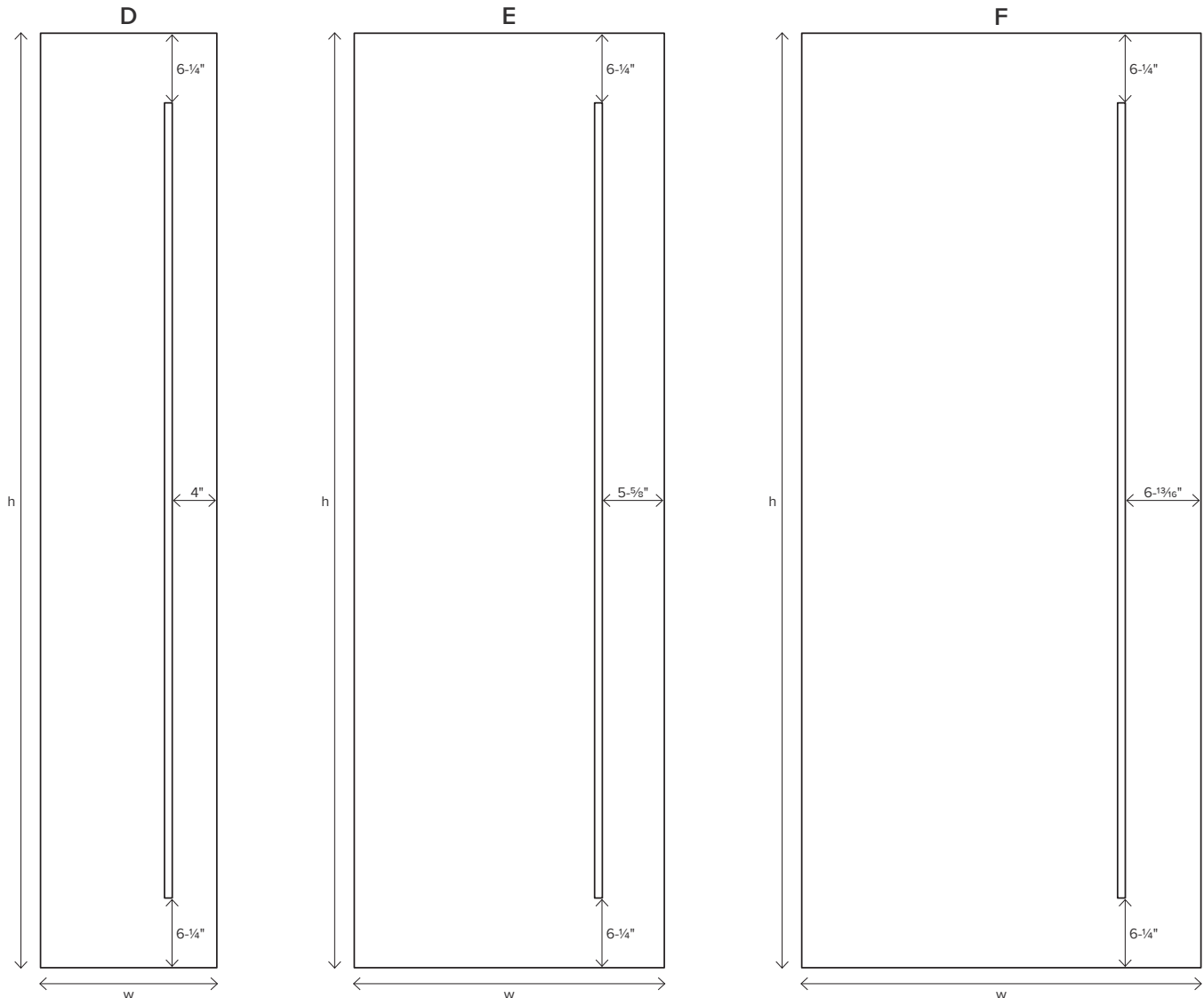
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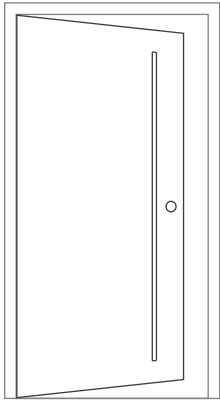
Custom sizes available

| Width (w) | Height (h) | | | | | Additional Details |
|-----------|-------------|------|------|------|-------|--|
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| 2'8" | | | | | | |
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| 3'0" | | | | | | |
| 3'2" | | | | | | |
| 3'4" | | | | | | |
| 3'6" | | | | | | |
| 3'8" | | | | | | |
| 3'10" | | | | | | |
| 4'0" | | | | | | |

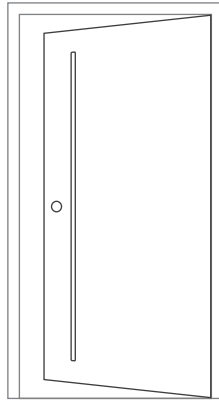


Handing Detail For Ventilation Slot

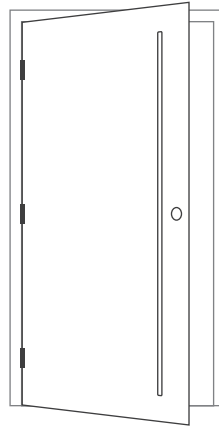
Left Hand
LH



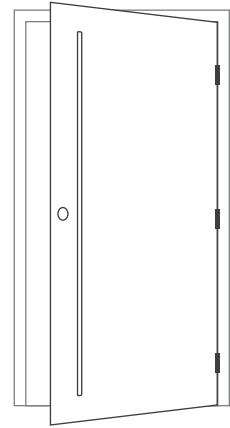
Right Hand
RH



Left Hand Reverse
LHR

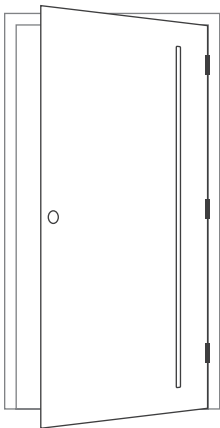


Right Hand Reverse
RHR

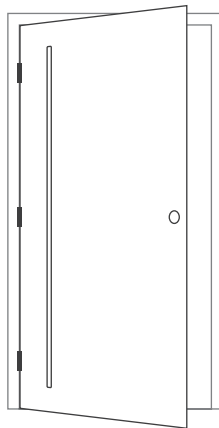


Viewing from outside

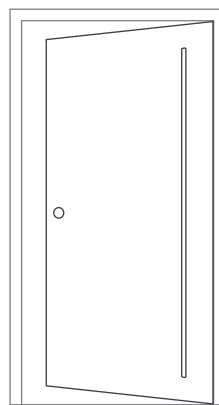
Left Hand
LH



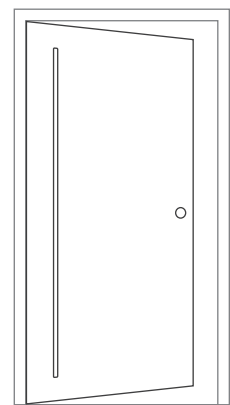
Right Hand
RH



Left Hand Reverse
LHR



Right Hand Reverse
RHR



Viewing from inside

VanAir™ Ventilated Door

Door Series

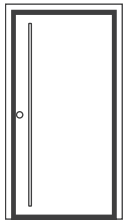
| | |
|----------------------------------|--|
| FACES: | Wood veneer Prefinished smooth or embossed hardboard Paint grade hardboard |
| SUBSTRATE: | Engineered wood composites |
| CORE: | Engineered wood composites and acoustic foam |
| VENTILATION SLOT: | Wood and composite material matching with faces |
| STILES: | Mill option clear or fingerjoing. Softwood — AWS Type A Solid Wood |
| RAILS: | Mill option wood or composite material |
| ASSEMBLY: | Non Bonded (Loose Lay) |
| ADHESIVES: | Type 2 |
| MAXIMUM SIZE: | 4'0" x 10'0" (1220mm x 3048mm). Contact factory for sizing options. |
| THICKNESS: | 1 3/8" (35 mm) |
| WARRANTY: | 1 Year for interior use only |
| STANDARDS: | Performance attributes meet or exceed WDMA IS-1A Extra Heavy Duty standards when specified with blocking for surface applied hardware without through bolts. |
| FIRE RATING: | Not applicable |
| ENVIRONMENTAL ATTRIBUTES: | Recycled content, no added urea-formaldehyde, certified wood, and/or regionally recovered and manufactured, may apply — see GreenDor™ Contribution Sheets. |



Manufacturing Options

| | |
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| BLOCKING: | Lock blocks included. Special blocking options may be specified. (Reference WDMA I.S. 1A blocking options HB-1 through HB-8). Additional blocking may affect STC rating. |
| MACHINING: | Machining for hardware, applied moldings, plant-ons, and decorative routing. Hardware cutouts shall be factory machined from manufacturer's templates and shop drawings. |
| TRANSPARENT FINISH: | WDMA TR8 / AWS System 9 UV cured catalyzed polyurethane finishes in standard and custom stain match. Options: Other finish systems available |
| OPAQUE FINISH: | Factory painting in standard and custom match colors. Options: Standard or color tinted priming available |

Performance: Standard



VANAIR

80 IN² VENTILATION AREA*
25 STC SOUND PRIVACY

Tests conducted independently in accordance with ASTM Standards on 3'0" x 7'0" x 1 3/4" VanAir Door with:

1. Acoustic foam in air channel
2. Full perimeter seal (PEMKO STCSET-1A Seal Set)

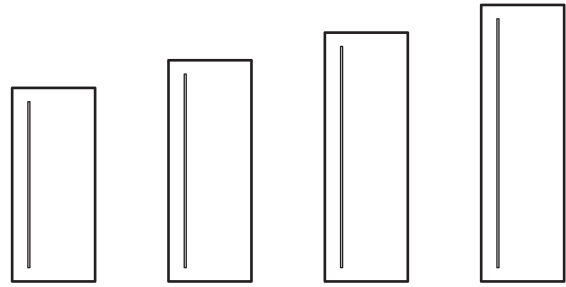
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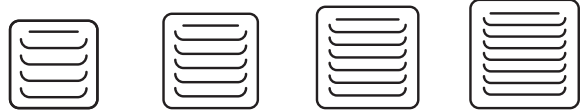
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Airflow Comparison

VanAir Door vs Grille/Louver



| | | | | |
|--------------------------|--------------------|--------------------|---------------------|---------------------|
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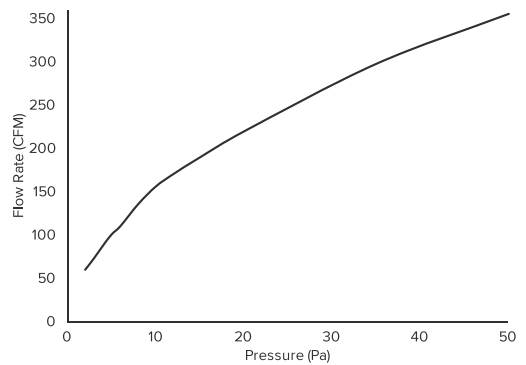


| | | | | |
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| Equivalent Grille/Louver Size† | 9" x 9" | 9.5" x 9.5" | 10.25" x 10.25" | 11" x 11" |
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Flow Rate vs Pressure



STC COMPARISON

SOLID CORE
28 STC SOUND PRIVACY

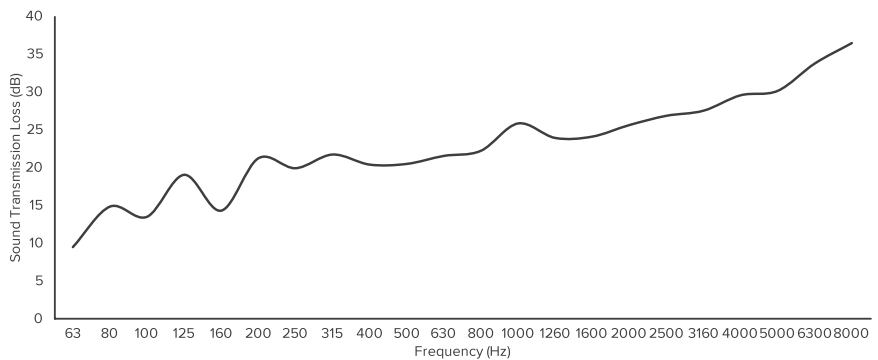
HOLLOW CORE
23 STC SOUND PRIVACY

Sound Transmission Loss Curve

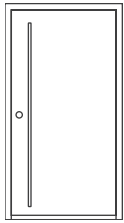
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Performance: Maximum Airflow (Manufacturing Option)



VANAIR

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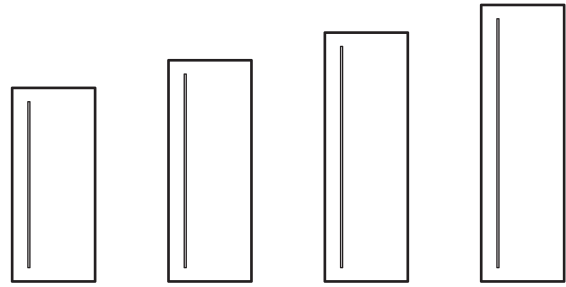
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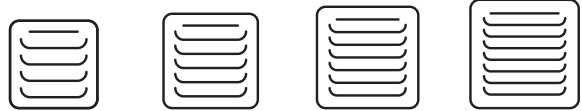
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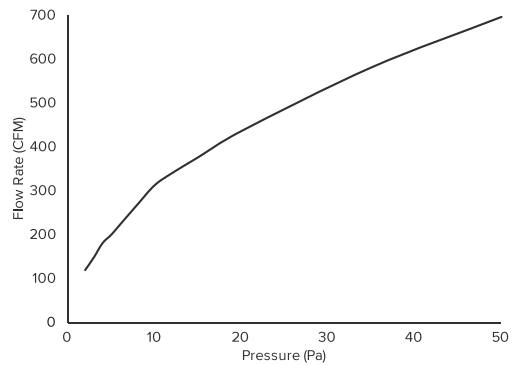


| Equivalent Grille/Louver Size† | 12.5" x 12.5" | 13.5" x 13.5" | 14.5" x 14.5" | 15.5" x 15.5" |
|--------------------------------|---------------|---------------|---------------|---------------|
|--------------------------------|---------------|---------------|---------------|---------------|

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| Pressure (Pa) | Airflow (CFM) |
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Flow Rate vs Pressure



STC COMPARISON

SOLID CORE
15 STC SOUND PRIVACY

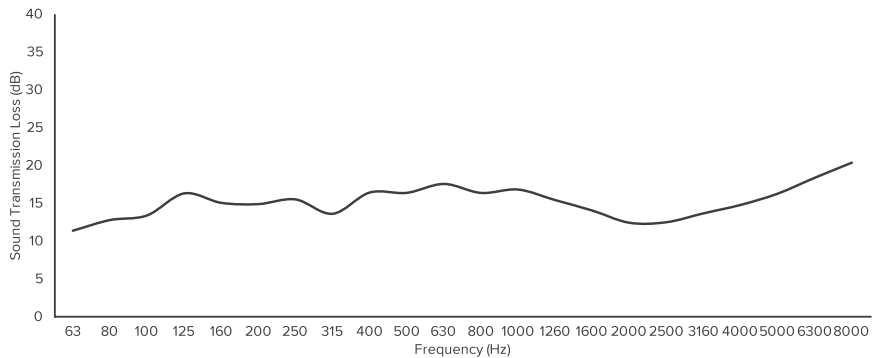
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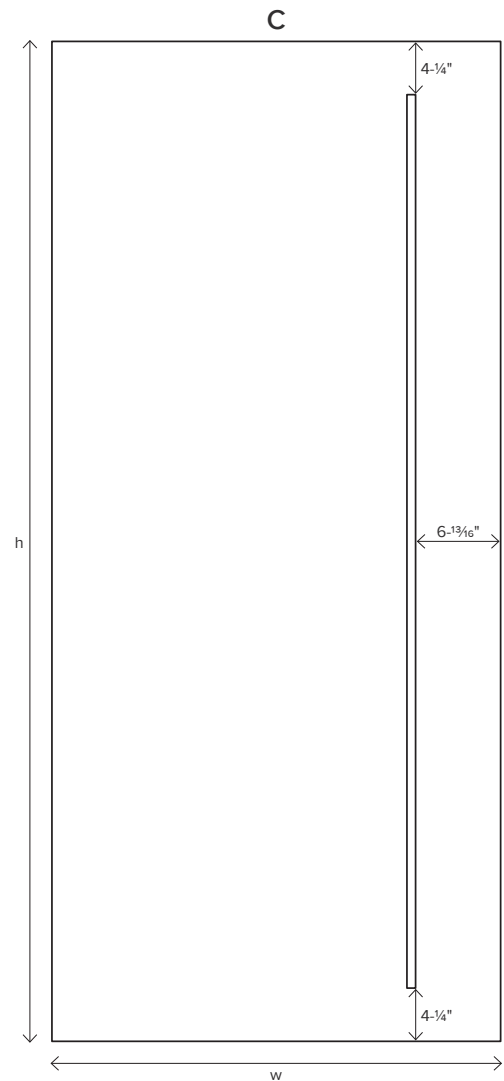
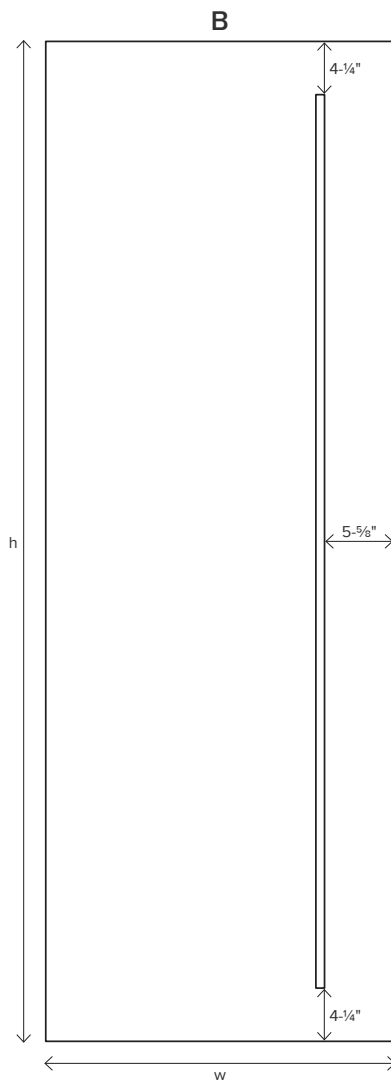
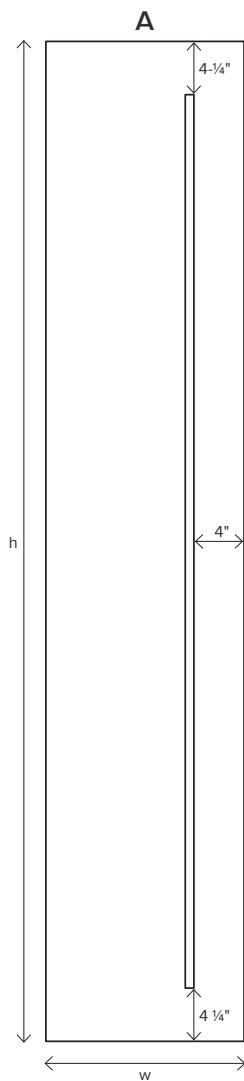
Line Drawings: Door and Ventilation Slot Dimensions

Reference the chart for standard sizes to the drawings below for the placement of the ventilation slot

Standard ventilation slot width is $\frac{7}{8}$ "

Custom sizes available

| Width (w) | Height (h) | | | | | Additional Details |
|-----------|------------|------|------|------|--|--------------------|
| | ≥ 6'8" | 7'0" | 8'0" | 9'0" | 10'0" | |
| 1'0" | A | D | | | Doors narrower than 1'8" in width are limited to pull hardware and unable to accept standard 2- $\frac{3}{8}$ " and 2- $\frac{3}{4}$ " hardware. | |
| 1'2" | | | | | | |
| 1'4" | | | | | | |
| 1'6" | B | E | | | Doors narrower than 2'6" in width have no acoustic foam in air channel. | |
| 1'8" | | | | | | |
| 1'10" | | | | | | |
| 2'0" | | | | | | |
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| 2'8" | | | | | | |
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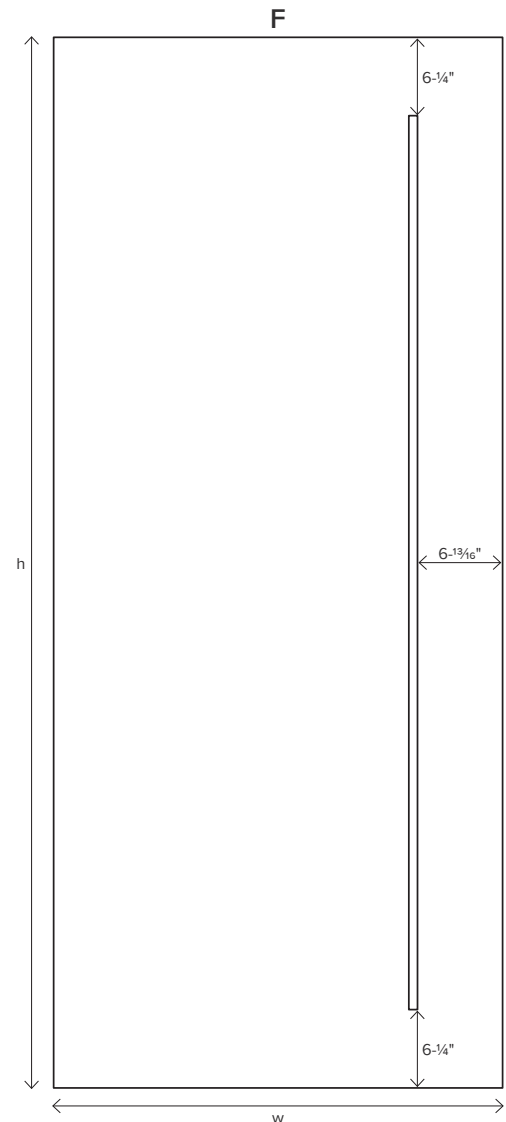
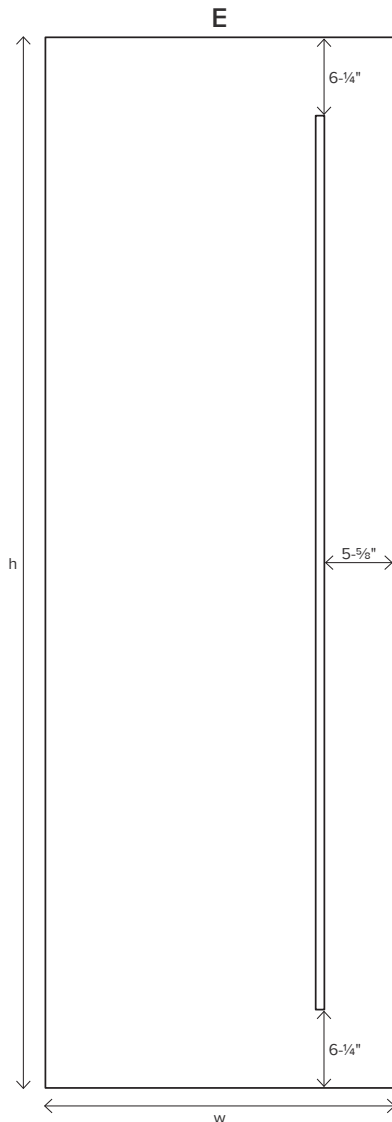
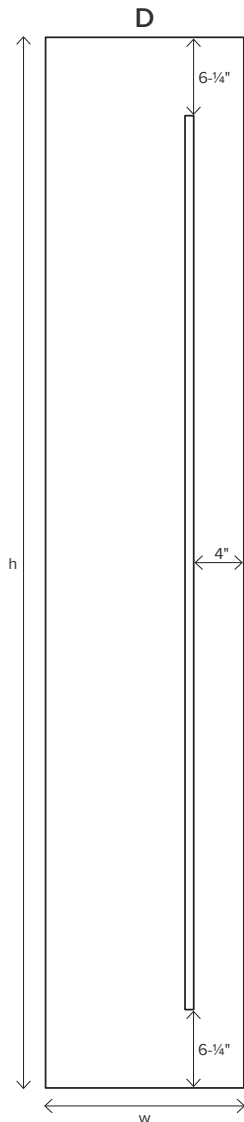
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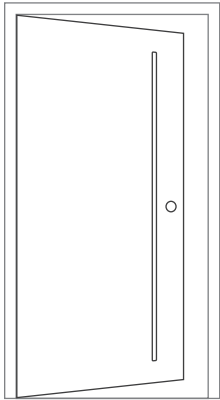
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| | ≥ 6'8" | 7'0" | 8'0" | 9'0" | 10'0" | |
| 1'0" | A | D | | | | Doors narrower than 1'8" in width are limited to pull hardware and unable to accept standard 2- $\frac{3}{8}$ " and 2- $\frac{3}{4}$ " hardware. |
| 1'2" | | | | | | |
| 1'4" | | | | | | |
| 1'6" | B | E | | | | Doors narrower than 2'6" in width have no acoustic foam in air channel. |
| 1'8" | | | | | | |
| 1'10" | | | | | | |
| 2'0" | | | | | | |
| 2'2" | | | | | | |
| 2'4" | | | | | | |
| 2'6" | C | F | | | | Acoustical foam is standard in these widths, but can also be produced without for additional ventilation. |
| 2'8" | | | | | | |
| 2'10" | | | | | | |
| 3'0" | | | | | | |
| 3'2" | | | | | | |
| 3'4" | | | | | | |
| 3'6" | | | | | | |
| 3'8" | | | | | | |
| 3'10" | | | | | | |
| 4'0" | | | | | | |

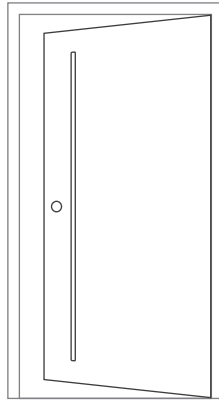


Handing Detail For Ventilation Slot

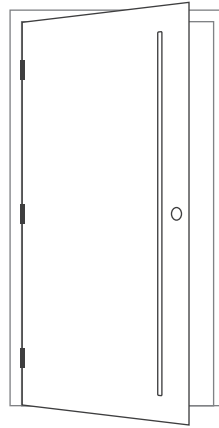
Left Hand
LH



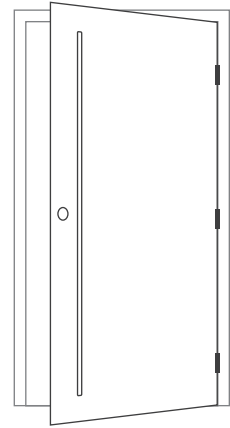
Right Hand
RH



Left Hand Reverse
LHR

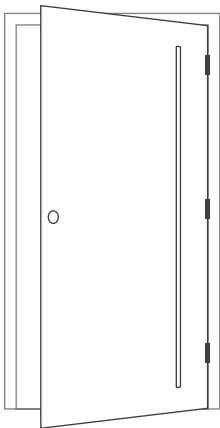


Right Hand Reverse
RHR

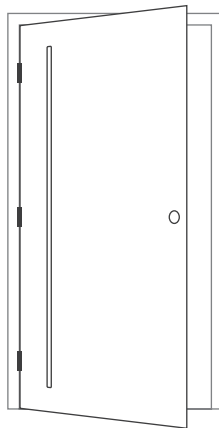


Viewing from outside

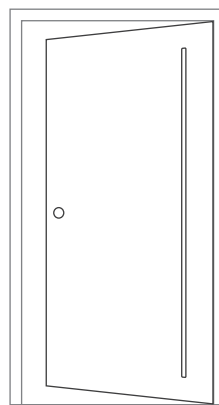
Left Hand
LH



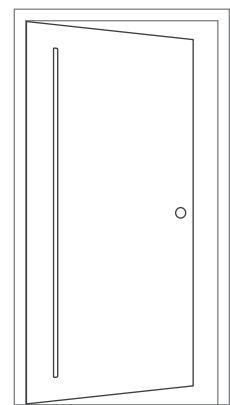
Right Hand
RH



Left Hand Reverse
LHR



Right Hand Reverse
RHR



Viewing from inside