



"Celebrating 40 years of Integrity, Commitment and Respect

In Ontario's HVAC Community".

Date - 2025-07-30

Project : Lullaboo Interior Alteration

Address : 1425 Harmony Rd N., Oshawa, ON

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OFFICE 289 320 0281

EMAIL kevin.macdonald@airex.ca

Project Lullaboo Oshawa
Architect
Engineer
Contractor
Designation ACD



Date 07-29-2025
Office Airex
Preparer Kevin Macdonald
Version 2014.0.586

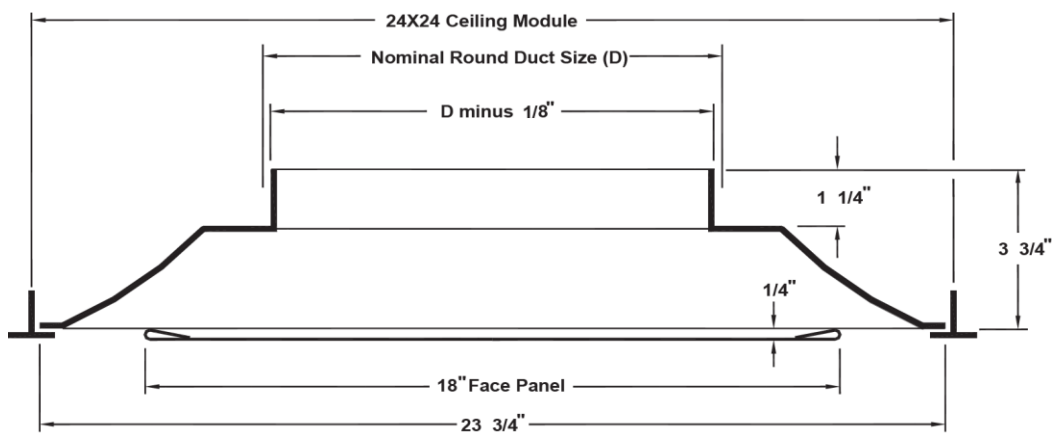
OMNI

Architectural Ceiling Diffusers
Square Cone • Plaque Face
Round Neck • Steel

Main Product

OMNI-1

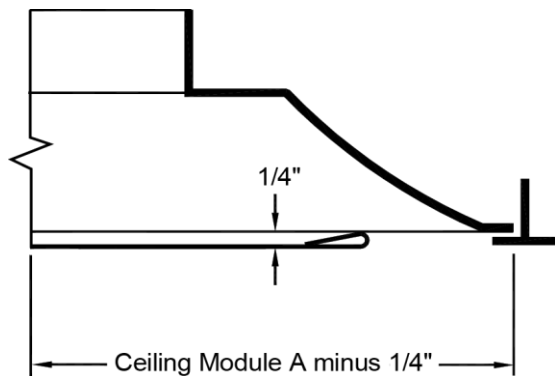
OMNI



Border Type 3 (Lay-In) Full Face

| Nominal Duct Size (D) | Neck Size |
|-----------------------|-------------|
| 8" Dia. | 7 7/8" Dia. |

Lay-in:



General Description

OMNI-1

- The TITUS OMNI diffuser is designed to satisfy architectural as well as engineering criteria. Its strong, clean, unobtrusive lines harmonize with the ceiling system, without sacrificing performance.
- The curvature of the OMNI backpan works with the formed edges of the face panel to deliver a 360 tight horizontal air pattern, without excessive noise or pressure drop.
- The OMNI diffuser is an excellent choice for variable volume systems. The air pattern remains tight and horizontal for effective room air distribution, even when the air volume varies over a wide range.
- The edges of the face panel are formed to a radius for solid, crisp appearance. The formed edges also stiffen the face panel and assure a straight and level surface.
- The panel can be removed from backpan for easy access to an optional damper.

Option Schedule

OMNI-1

| ID | Quantity | Tag | DIM 1 NECK SIZE |
|----|----------|-----|-----------------|
| 1 | | ACD | 8" DIAMETER |

MODULE SIZE 24X24

BORDER 3 - LAY-IN

FINISH 26 - WHITE

DAMPER MODEL AG-75 - DUCT MOUNTED ROUND OBD

ACCESSORY 1 NONE

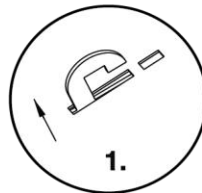
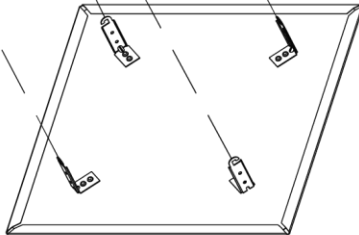
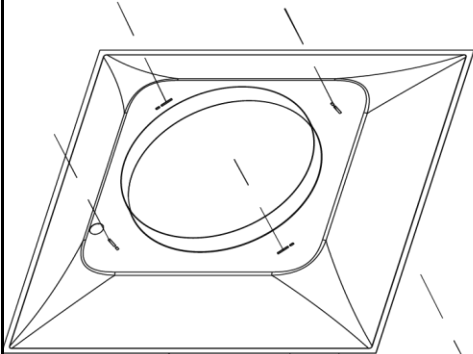
ACCESSORY 2 NONE

ACCESSORY 3 NONE

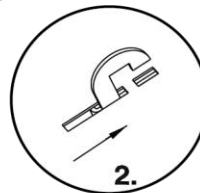
Accessories

OMNI-1

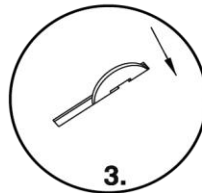
Installing and Removing Face Panel



1.



2.



3.

Installing Face Panel

1. Insert the hook brackets into the slots in the backpan.
2. Rotate the face panel clockwise until...
3. the hooks positively engage in the secondary slots in the backpan.

Removing Face Panel

1. Lift the faceplate towards the backpan to disengage the hook brackets from the backpan slots
2. Rotate the faceplate counter-clockwise
3. Lower the faceplate away from the backpan.

Adjusting Optional Damper

1. Remove face panel as above.
2. Use flat blade screwdriver to turn operator shaft at center of damper.
3. Replace face panel.

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Architect
Engineer
Contractor
Designation ACD

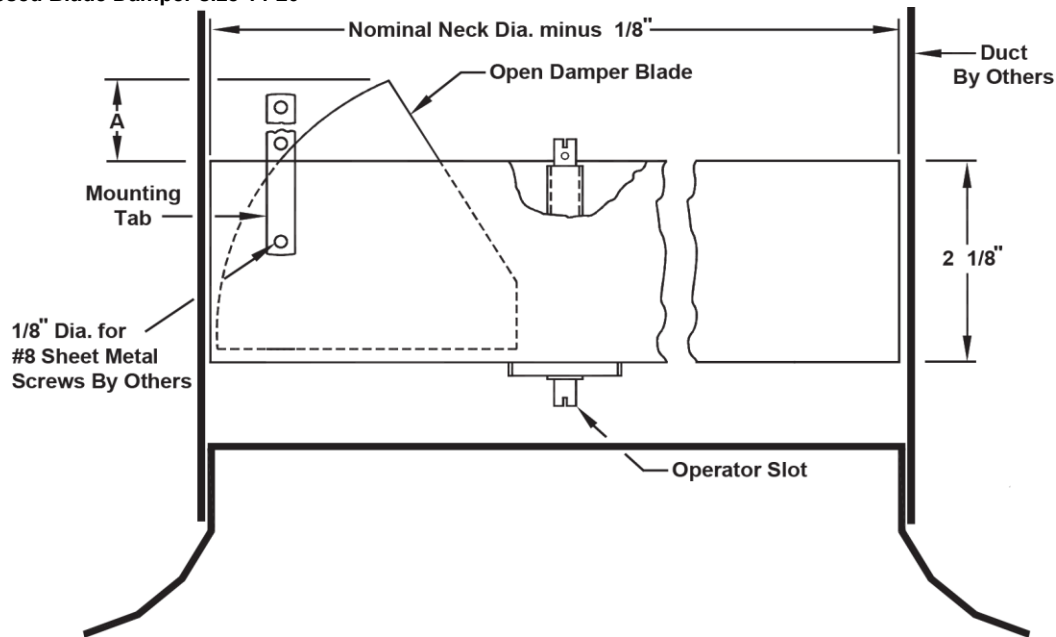


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Accessories (continued)

OMNI-1

AG-75 Opposed Blade Damper size 14-20



Standard Finish: Mill

- The Opposed Blade Damper mounts inside of a round duct neck.
- Gang operated blades(4) distribute air evenly through the diffuser or duct. Not recommended for flexible duct applications
- Adjustable at screwdriver operator slot.
- Shipped loose for field installation.
- Material: Galvanized steel.

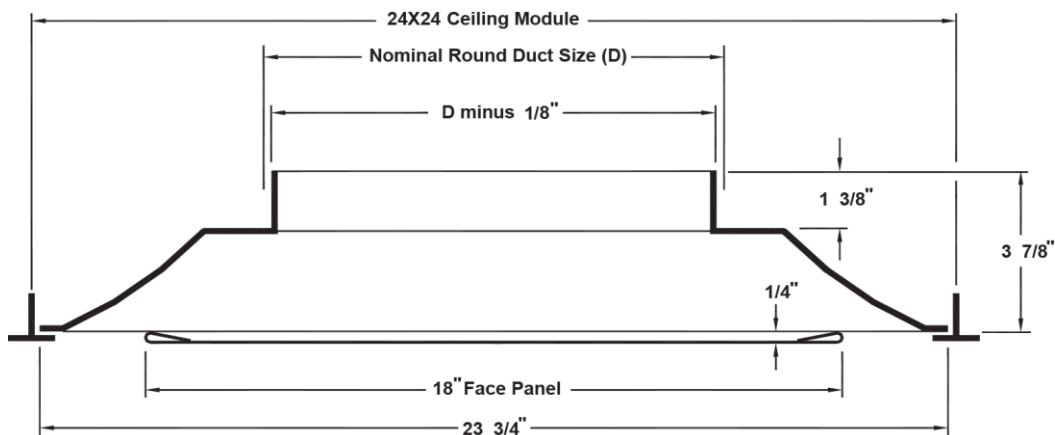
OMNI

Architectural Ceiling Diffusers
 Square Cone • Plaque Face
 Round Neck • Steel

Main Product

OMNI-1 (2)

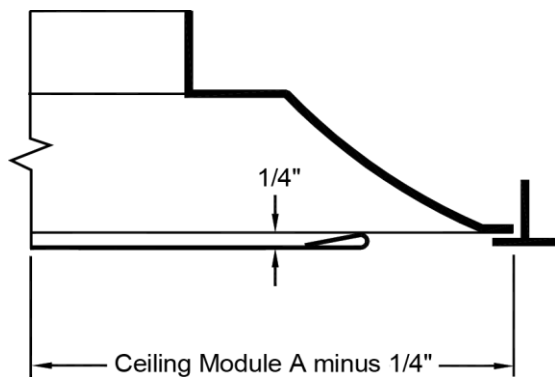
OMNI



Border Type 3 (Lay-In) Full Face

| Nominal Duct Size (D) | Neck Size |
|-----------------------|-------------|
| 10" Dia. | 9 7/8" Dia. |

Lay-in:



General Description

OMNI-1 (2)

- The TITUS OMNI diffuser is designed to satisfy architectural as well as engineering criteria. Its strong, clean, unobtrusive lines harmonize with the ceiling system, without sacrificing performance.
- The curvature of the OMNI backpan works with the formed edges of the face panel to deliver a 360 tight horizontal air pattern, without excessive noise or pressure drop.
- The OMNI diffuser is an excellent choice for variable volume systems. The air pattern remains tight and horizontal for effective room air distribution, even when the air volume varies over a wide range.
- The edges of the face panel are formed to a radius for solid, crisp appearance. The formed edges also stiffen the face panel and assure a straight and level surface.
- The panel can be removed from backpan for easy access to an optional damper.

Option Schedule

OMNI-1 (2)

| ID | Quantity | Tag | DIM 1 NECK SIZE |
|----|----------|-----|-----------------|
| 2 | | ACD | 10" DIAMETER |

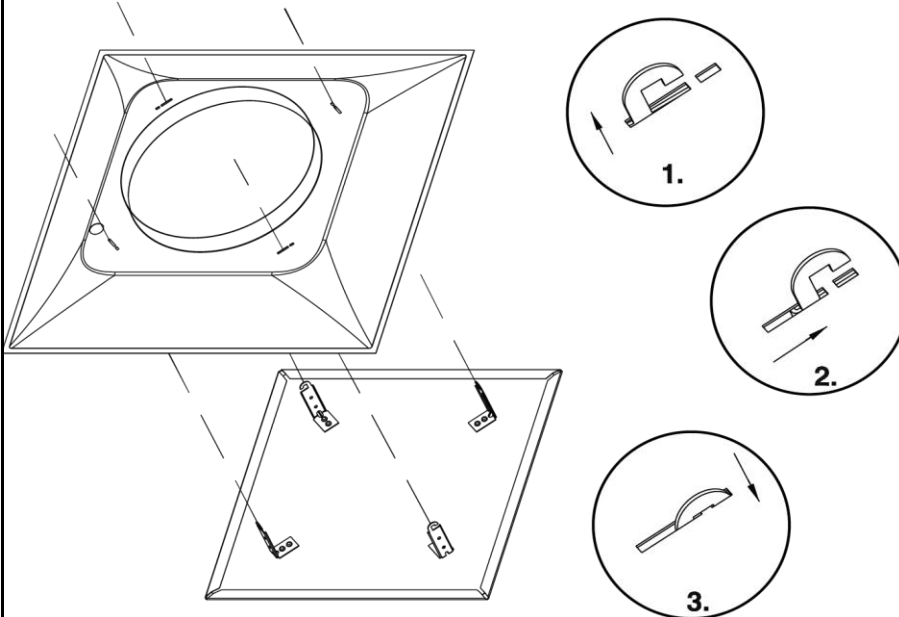
MODULE SIZE 24X24
BORDER 3 - LAY-IN
FINISH 26 - WHITE
DAMPER MODEL AG-75 - DUCT MOUNTED ROUND OBD

ACCESSORY 1 NONE
ACCESSORY 2 NONE
ACCESSORY 3 NONE

Accessories

OMNI-1 (2)

Installing and Removing Face Panel



Installing Face Panel

1. Insert the hook brackets into the slots in the backpan.
2. Rotate the face panel clockwise until...
3. the hooks positively engage in the secondary slots in the backpan.

Removing Face Panel

1. Lift the faceplate towards the backpan to disengage the hook brackets from the backpan slots
2. Rotate the faceplate counter-clockwise
3. Lower the faceplate away from the backpan.

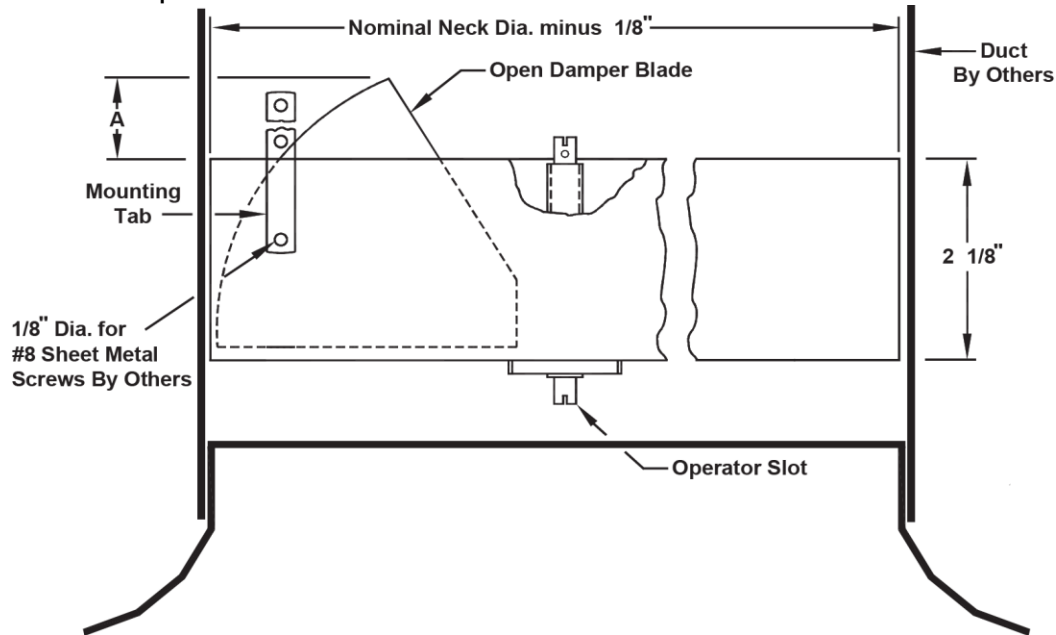
Adjusting Optional Damper

1. Remove face panel as above.
2. Use flat blade screwdriver to turn operator shaft at center of damper.
3. Replace face panel.

Accessories (continued)

OMNI-1 (2)

AG-75 Opposed Blade Damper size 14-20



Standard Finish: Mill

- The Opposed Blade Damper mounts inside of a round duct neck.
- Gang operated blades(4) distribute air evenly through the diffuser or duct. Not recommended for flexible duct applications
- Adjustable at screwdriver operator slot.
- Shipped loose for field installation.
- Material: Galvanized steel.

Project Lullaboo Oshawa
 Architect
 Engineer
 Contractor
 Designation B RG



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50F

Eggcrate return, aluminum border and aluminum grid.

Main Product

50F-1

50F

Surface mount with 1/2 x 1/2 x 1/2 Aluminum Grid

| Duct Width | Duct Height | Grille OA Width | Grille OA Height |
|------------|-------------|-----------------|------------------|
| 24 | 6 | 25.75 | 7.75 |

| General Description | 50F-1 |
|---|-------|
| <ul style="list-style-type: none"> • Insect and debris screens are not available when damper are fitted. • #8 x 1 1/4" lg. Phillips flat head sheet metal screws painted white. • All dimensions are ± 1/16" • Material: Aluminum | |

| Option Schedule | | | | | 50F-1 |
|---------------------------|--|----------|--------------------------------------|-----------------|------------------|
| | | | | | |
| ID | | Quantity | Tag | WIDTH IN INCHES | HEIGHT IN INCHES |
| 1 | | | B RG | 24 | 6 |
| | | | | | |
| MODULE SIZE NONE | | | DAMPER MODEL 0 - NONE | | |
| BORDER 1 - SURFACE MOUNT | | | EGGCRATE CORE CORE A (BORDER 1 OR 3) | | |
| FINISH 26 - WHITE | | | ACCESSORY 2 NONE | | |
| FASTENING A - SCREW HOLES | | | ACCESSORY 3 NONE | | |

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 Architect
 Engineer
 Contractor
 Designation E EG



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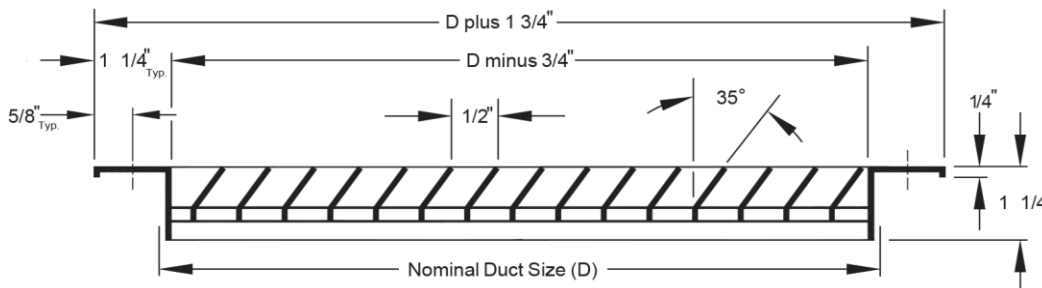
355FL

Louvered Return Grille, 35° Deflection, 1/2" Spacing, blades parallel to long dimension, Aluminum.

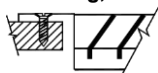
Main Product

355FL-1

355FL



Screw Hole Fastening, Grille Mounting Detail



| Duct Width | Duct Height | Grille OA Width | Grille OA Height |
|------------|-------------|-----------------|------------------|
| 6 | 6 | 7.75 | 7.75 |
| 8 | 6 | 9.75 | 7.75 |
| 8 | 8 | 9.75 | 9.75 |

General Description

355FL-1

- Louvers are horizontal to width with $\frac{1}{2}"$ spacing at 35 degree deflection.
- Optional opposed blade damper has screwdriver adjustment accessible through face of register.
- Odd and fractional sizes are available at additional cost.
- Sizes larger than 48" x 48" are shipped in multiple sections with joining strips for field assembly.
- #8 x $1 \frac{1}{4}"$ lg. Phillips flat head sheet metal screws painted white.
- Wall or duct opening should be duct size $\pm \frac{1}{8}"$.
- All dimensions are $\pm \frac{1}{16}"$
- Material: Aluminum

Option Schedule

355FL-1

| ID | Quantity | Tag | WIDTH IN INCHES | HEIGHT IN INCHES |
|----|----------|------|-----------------|------------------|
| 1 | | E EG | 6 | 6 |
| 2 | | E EG | 8 | 6 |
| 3 | | E EG | 8 | 8 |

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Architect
Engineer
Contractor
Designation E EG



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Option Schedule (continued)

355FL-1

MODULE SIZE NONE

BORDER 1 - SURFACE MOUNT

FINISH 26 - WHITE

FASTENING A - SCREW HOLES

DAMPER MODEL 0 - NONE

ACCESSORY 1 NONE

ACCESSORY 2 NONE

ACCESSORY 3 NONE

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Engineer
Contractor
Designation D DG



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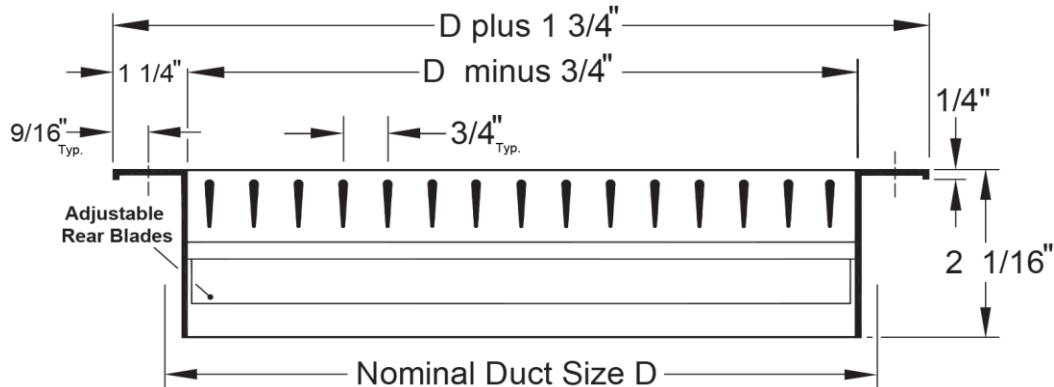
300FL

Double Deflection Supply Grille, $\frac{3}{4}$ " Spacing, front blades parallel to long dimension, Aluminum.

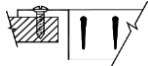
Main Product

300FL-1

300FL



Screw Hole Fastening, Grille Mounting Detail



| Duct Width | Duct Height | Grille OA Width | Grille OA Height |
|------------|-------------|-----------------|------------------|
| 8 | 6 | 9.75 | 7.75 |

General Description

300FL-1

- Front louvers are horizontal to width.
- Front and rear louvers are individually adjustable.
- Screw hole fastening includes #8 x $1 \frac{1}{4}"$ lg. Phillip's flat head sheet metal screws painted color of grille.
- Sizes larger than 48" x 48" are shipped in multiple sections with joining strips for field assembly.
- Odd and fractional sizes are available at additional cost.
- Optional opposed blade damper has screwdriver adjustment accessible through face of register.
- Insect and debris screens are not available when dampers are fitted.
- All dimensions are $\pm \frac{1}{16}"$
- Material: Aluminum

Option Schedule

300FL-1

| ID | Quantity | Tag | WIDTH IN INCHES | HEIGHT IN INCHES |
|----|----------|------|-----------------|------------------|
| 1 | | D DG | 8 | 6 |

MODULE SIZE NONE

BORDER 1 - SURFACE MOUNT

FINISH 26 - WHITE

FASTENING A - SCREW HOLES

DAMPER MODEL 0 - NONE

ACCESSORY 1 NONE

ACCESSORY 2 NONE

ACCESSORY 3 NONE

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Engineer
Contractor
Designation F



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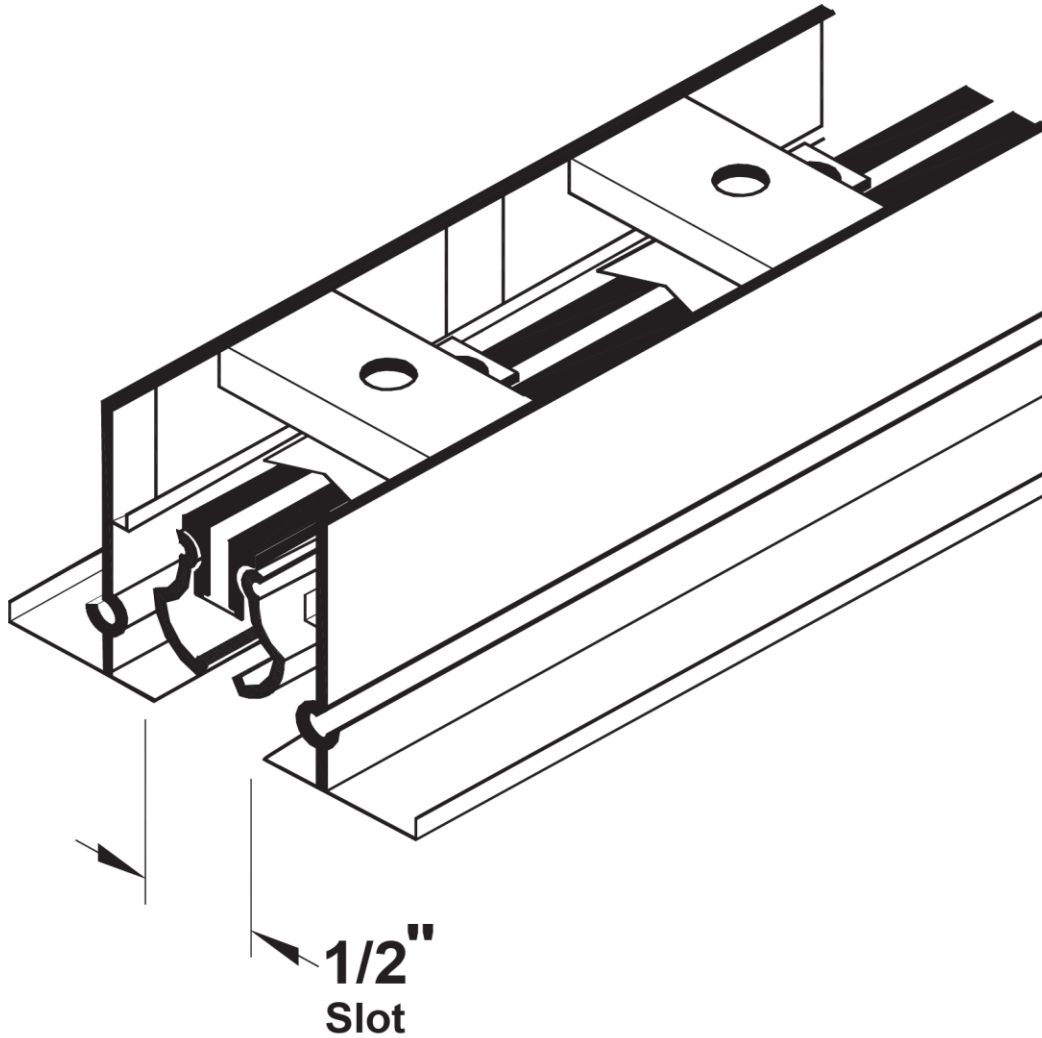
ML-37

ModuLinear supply diffuser with a 1/2" slot, Aluminum.

Main Product

ML37-1

ML-37



| Duct Length (D) | Cutout Width (D') | Neck Length (C) | OA Width (O') | OA Length (OA) |
|-----------------|-------------------|-----------------|---------------|----------------|
| 24 | 1 7/8" | 22.625 | 2 3/4" | 24.75 |

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Engineer
Contractor
Designation F

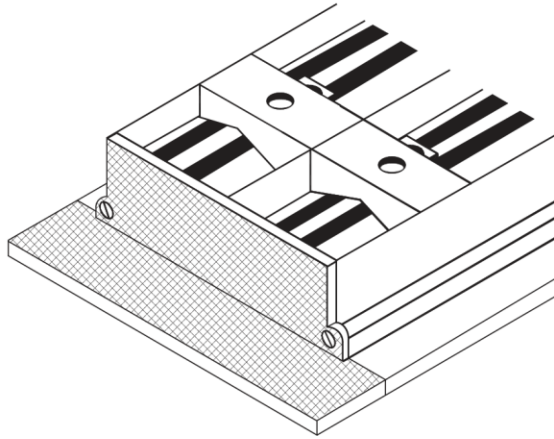
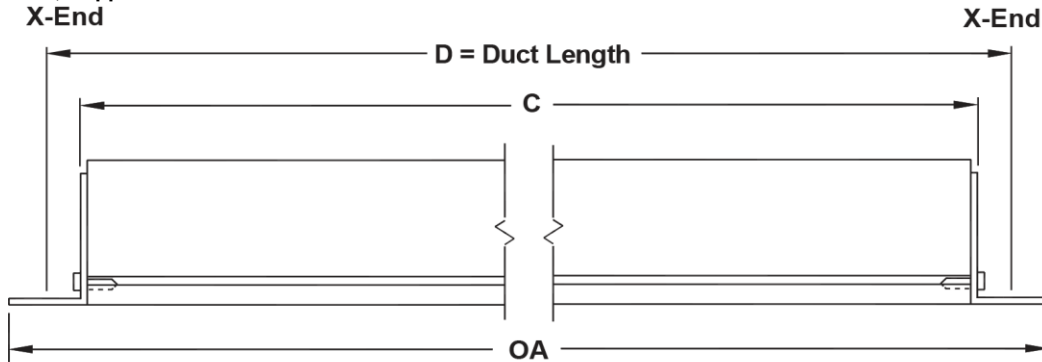


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Main Product (continued)

ML37-1

XX - End Borders, Supplied
X-End

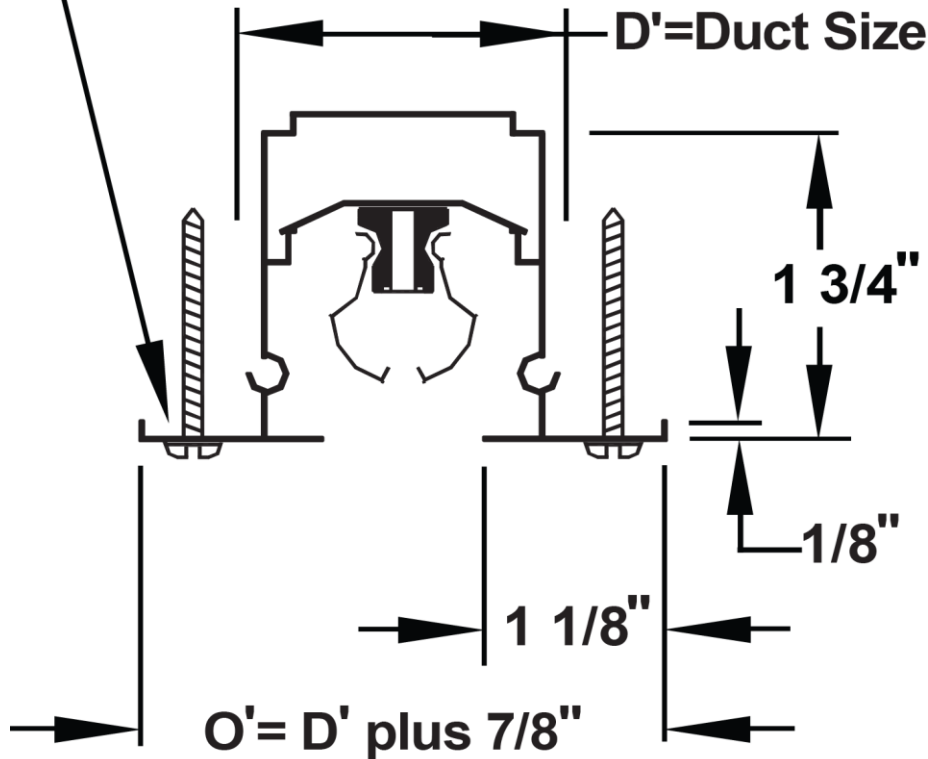


Main Product (continued)

ML37-1

Border Type 1A, 1 slot, ML

Countersunk Screw Holes for #8 SMS (5/16" from Edge)



General Description

ML37-1

- Standard Finish: • #26 White border, Black pattern controllers.
- Standard lengths of diffuser sections are 12", 24", 36", 48", 60" and 72".
- Lengths greater than 72" are furnished in multiple sections, the number and size determined by the factory.
- Pattern controllers change direction and volume of air flow. Maximum length is 36". • • Pattern controllers are furnished in multiple sections for diffuser longer than 36".
- Mounting frames are cut to length and assembled in the field.
- Material: Extruded aluminum with steel pattern controllers.

Option Schedule

ML37-1

| ID | Quantity | Tag | LINEAR LENGTH INCHES |
|----|----------|-----|----------------------|
| 1 | | F | 24 |

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Option Schedule (continued)

ML37-1

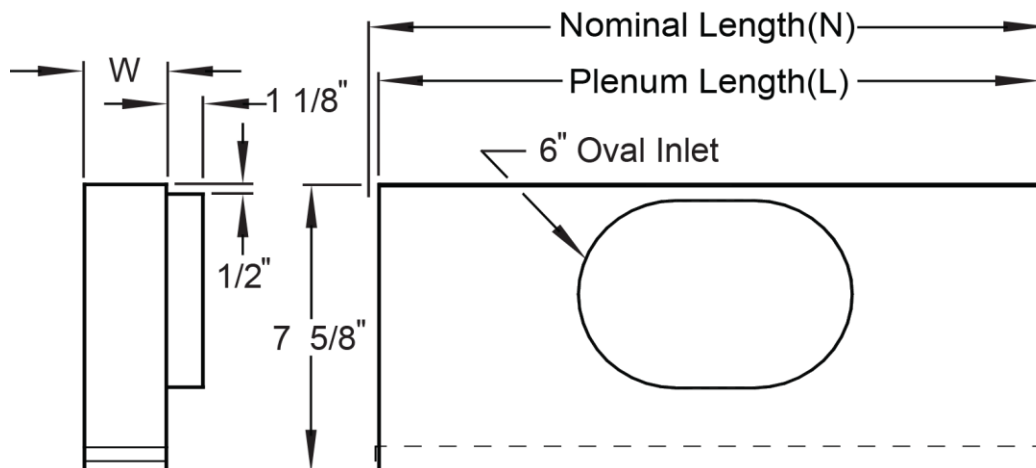
| | |
|---|-------------------------|
| NO OF SLOTS 1 SLOT | ACCESSORY 1 NONE |
| END BORDER XX - TWO END BORDERS | ACCESSORY 2 NONE |
| ML FRAME & BORDER 1A - SCREW MOUNT | ACCESSORY 3 NONE |
| FINISH 26 - WHITE | |

MP-37

Uninsulated plenum for a ModuLinear ML-37.

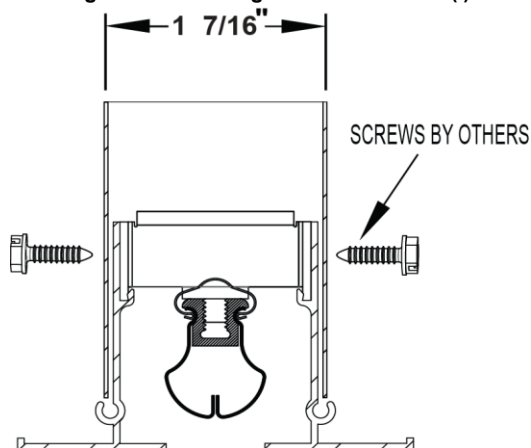
| | |
|--------------|--------|
| Main Product | MP37-1 |
|--------------|--------|

MP-37



| Nominal Plenum Length (N) | Plenum Length (L) | Oval Inlet Width | Oval Inlet Height |
|---------------------------|-------------------|------------------|-------------------|
| 24 " | 23 1/8" | 6 1/4" | 5 1/4" |

Installation Mounting Detail with Single Slot Plenum MP(I)-37



| | |
|---------------------|--------|
| General Description | MP37-1 |
|---------------------|--------|

- Model MP modulinear plenums are tailored for field attachment to ML or MLR modulinear diffusers.
- End caps can be turned up to allow installing the MP on continuous runs of ML diffuser.
- Model MP can be used as supply or return.
- Material: Steel.

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Architect
Engineer
Contractor
Designation F



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Option Schedule

MP37-1

| ID | Quantity | Tag | PLENUM LENGTH | SLOTS/PLENUM HGT |
|----|----------|-----|---------------|--------------------------|
| 1 | | F | 24 INCHES | 1LP - 1 SLOT LOW PROFILE |

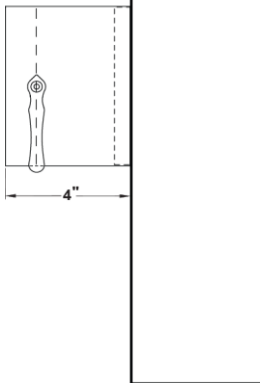
PLENUM INLET 6 INCH
ML FRAME & BORDER 1A - SCREW MOUNT

DAMPER MODEL ID - INLET DAMPER
END BORDER XX - TWO END BORDERS

Accessories

MP37-1

ID Damper (shipped loose)



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Designation G



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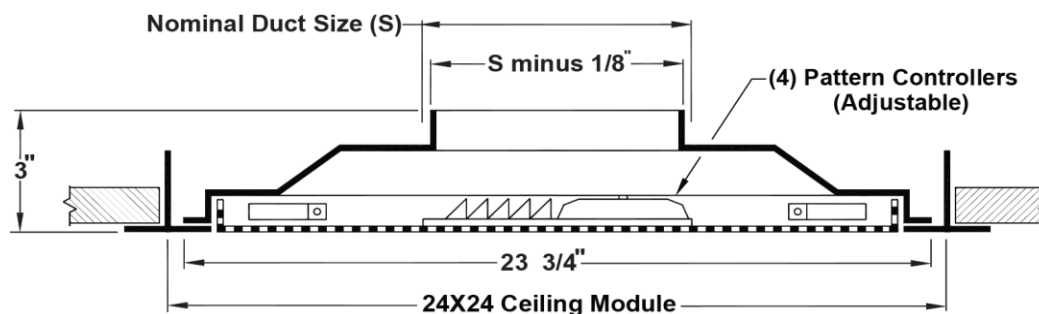
PAS

Perforated Ceiling Supply Diffuser with Face Mounted Adjustable Deflectors, Flush Face, Steel.

Main Product

PAS-1

PAS



| Nominal Duct Size (S) | Diffuser Neck Size |
|-----------------------|--------------------|
| 6" Dia. | 5 7/8" Dia. |

General Description

PAS-1

- Excellent performance in variable air volume systems.
- A tight, uniform horizontal blanket of air protects the ceiling against smudging.
- Discharge pattern can be adjusted to vertical as well as to 1, 2, 3 or 4 way horizontal. Can be adjusted before or after installation.
- Discharge pattern is adjusted by dropping the perforated face and rotating the pattern controllers.
- Dropping the perforated face also gives access for adjusting the optional dampers.
- Perforated face has 3/16" diameter holes on 1/4" staggered centers.
- Inlet collar is approximately 1 1/2" deep to allow easy duct connection.
- Material: Heavy gauge steel.

Option Schedule

PAS-1

| ID | Quantity | Tag | DIM 1 NECK SIZE | DIM 2 NECK SIZE |
|----|----------|-----|-----------------|-----------------|
| 1 | | G | 6" DIAMETER | NONE |

MODULE SIZE 24X24
BORDER 3 - LAY-IN
FINISH 26 - WHITE
DAMPER MODEL 0 - NONE

ACCESSORY 1 NONE
ACCESSORY 2 NONE
ACCESSORY 3 NONE

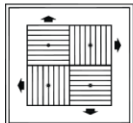
Accessories

PAS-1

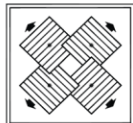
Pattern Selection

Adjusting Pattern Controllers

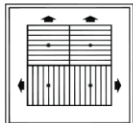
4-Way



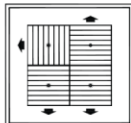
4-Way Corner



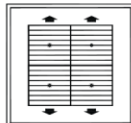
3-Way



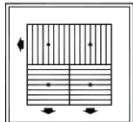
3-Way



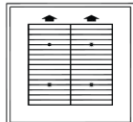
2-Way



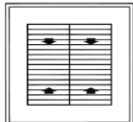
2-Way Corner



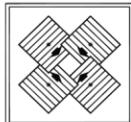
1-Way



Vertical



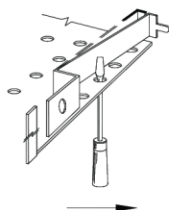
Vertical



Removing Perforated Face

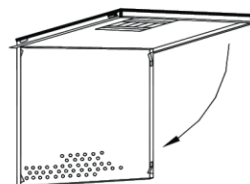
1. Insert small Screwdriver or other slim instrument to push latch inward from border.

2. Repeat on opposite side.



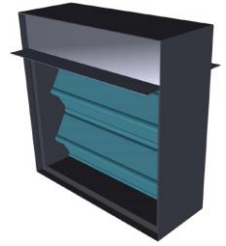
3. Face will now swing down with 2 remaining latches acting as hinges.

For complete removal, release 2 remaining latches at left.



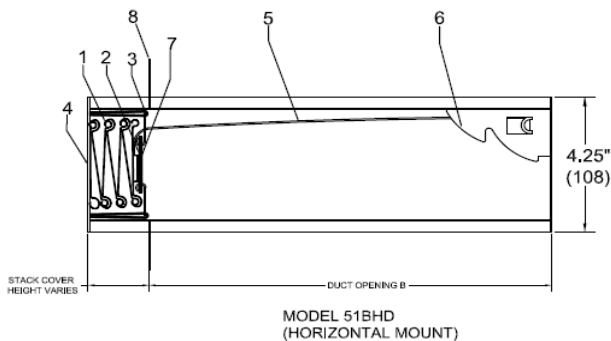
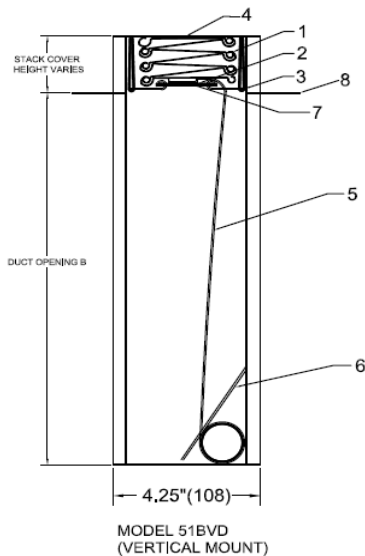
- UL 555 & CAN/ULC-S112 Classified Dynamic Fire Damper, 1 ½ Hr. Label (File # R25565).
- NFPA 80, 90A & 101 compliant.
- NBC and IBC building codes compliant.

Fire Damper



STANDARD CONSTRUCTION

DEPTH: 4 ¼" (108).
FRAME: Roll formed 20 Ga. galvanized steel with hemmed edge.
BLADE: Roll formed 22 Ga. galvanized steel.
 Interlocking curtain type blades.
FUSIBLE LINK: 165°F (74 C).

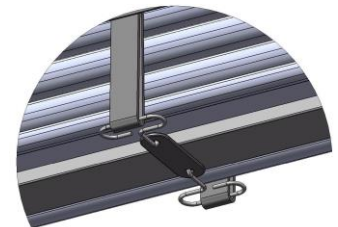
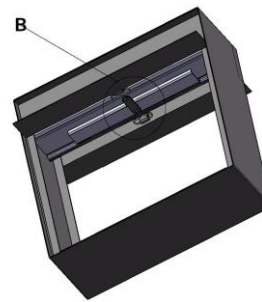


FIRE DAMPER COMPONENTS

- | | |
|--------------------------|--------------------------|
| 1. Blade | 5. Constant Force Spring |
| 2. Fusible Link Assembly | 6. Lock Ramp |
| 3. Link Strap | 7. Blade Stiffener |
| 4. Frame | 8. Blade Stack Cover |

OPTIONAL CONSTRUCTION

- Factory supplied Sleeve – 22, 20, 18 or 16 GA.
*Sleeve length required
- 212°F (100 C) Fusible Link [max. size 48" x 44" (1219 x 1118).
- 1 ½" x 1 ½" mounting angles



DETAIL B

DYNAMIC CLOSURE RATINGS:

- 2000 fpm (10.2 m/s) on all sizes, vertical or horizontal mount.
- 5000 fpm (25.4 m/s) vertical mount only, up to 24" x 20" (610 x 508) duct size.
- 4" w.g. (1kPa) maximum pressure on all sizes.

MAINTENANCE RECOMMENDATIONS:

NFPA 80 advises that fire dampers be inspected and tested 1 year after installation, then every 4 years minimum (6 years for hospitals). More frequent inspections may be required due to system use and air conditions, or applicable local codes.

NOTES:

Dampers are furnished approximately ¼" (6) smaller than the given duct dimensions.

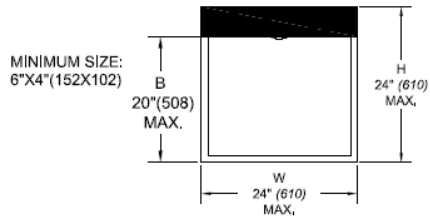
These dynamic dampers are UL/ULC approved for use in HVAC systems where the fans remain on in the event of fire.

1½ hr. labeled fire dampers are suitable for use in fire separations with a fire resistance rating of 2 hours or less.

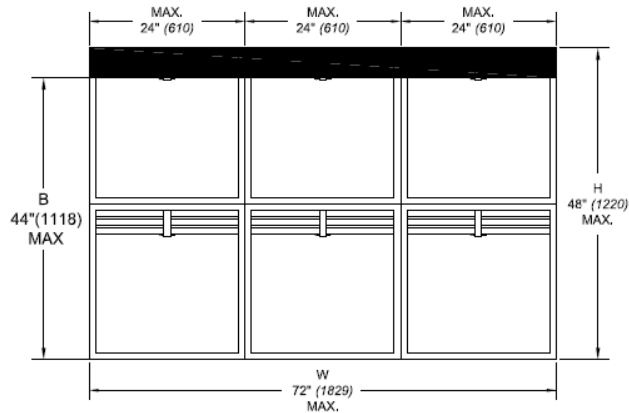
Fire dampers must be installed in accordance with manufacturer's instructions. Refer to Alumavent installation instructions for details.

Dimensions are shown in inches (mm).

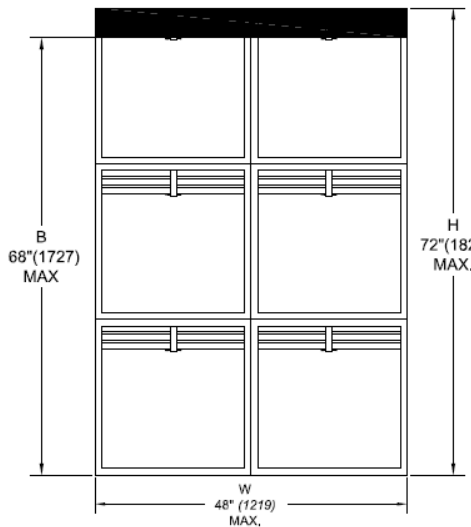
SINGLE SECTION DAMPER
-VERTICAL OR HORIZONTAL MOUNT



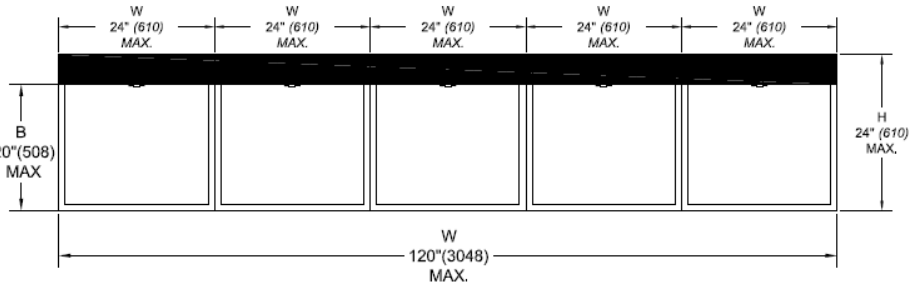
MULTIPLE SECTION DAMPER
-VERTICAL MOUNT ONLY



MULTIPLE SECTION DAMPER
-VERTICAL MOUNT ONLY



MULTIPLE SECTION DAMPER
-VERTICAL MOUNT ONLY



NOTE: SEE TYPE B DYNAMIC SIZING CHART SC51BD FOR OVERALL DAMPER DIMENSIONS.

| REF. # | QTY. | DUCT WIDTH (W) | DUCT HEIGHT (H) | MOUNT (V/H) | ACCESSORIES |
|--------|------|-------------------|--------------------|----------------|-------------|
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |
| | | | | | |

*DAMPER WILL BE MANUFACTURED APPROXIMATELY ¼" (6) SMALLER THAN GIVEN DUCT DIMENSIONS.

| | | | |
|---------------|--|-----------------|--|
| PROJECT NAME: | | ENGINEER: | |
| CONTRACTOR: | | SUBMITTAL DATE: | |

- UL 555 & CAN/ULC-S112 Classified Dynamic Fire Damper, 1 1/2 Hr. Label (File # R25565).
- NFPA 80, 90A & 101 compliant.
- NBC and IBC building codes compliant.

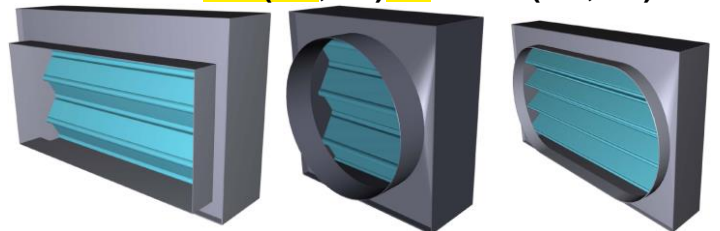


Fire Damper

5100D SERIES

DYNAMIC 1 1/2 HOUR LABEL FIRE DAMPERS
VERTICAL & HORIZONTAL MOUNT

51C(CR,CO)VD & 51C(CR,CO)HD



TYPE C

TYPE CR

TYPE CO

STANDARD CONSTRUCTION

DEPTH: 4 1/4" (108).

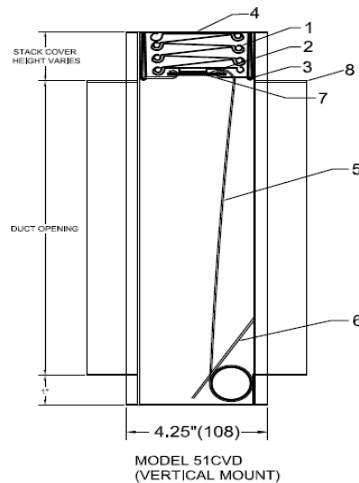
FRAME: Roll formed 20 Ga. galvanized steel with hemmed edge

BLADE: Roll formed 22 Ga. galvanized steel.
Interlocking curtain type blade.

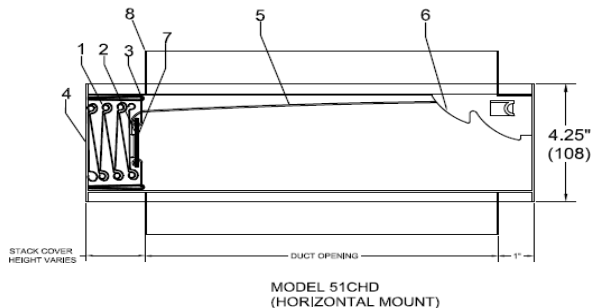
FUSIBLE LINK: 165°F (74 C).

OPTIONAL CONSTRUCTION

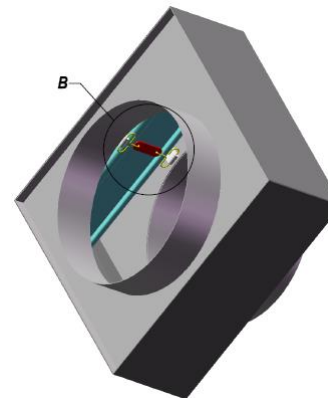
- Factory supplied Sleeve (Required for all multiple section sizes; collars will be fastened to sleeve ends).
- Fusible Link 212°F (100 C)
- 1 1/2" x 1 1/2" mounting angles



MODEL 51CVD
(VERTICAL MOUNT)



MODEL 51CHD
(HORIZONTAL MOUNT)



DETAIL B

DYNAMIC CLOSURE RATINGS:

- 2000 fpm (10.2 m/s) on all sizes, vertical or horizontal mount.
- 5000 fpm (25.4 m/s) vertical mount only, with size limitations (contact factory).
- 4" w.g. (1kPa) maximum pressure on all sizes.

MAINTENANCE RECOMMENDATIONS:

NFPA 80 advises that fire dampers be inspected and tested 1 year after installation, then every 4 years minimum (6 years for hospitals). More frequent inspections may be required due to system use and air conditions, or applicable local codes.

NOTES:

These dynamic dampers are UL/ULC approved for use in HVAC systems where the fans remain on in the event of a fire. 1 1/2 hr. labeled fire dampers are suitable for use in fire separations with a fire resistance rating of 2 hours or less.

Fire dampers must be installed in accordance with manufacturer's instructions. Refer to Alumavent installation instructions for details.

FIRE DAMPER COMPONENTS

- | | |
|--------------------------|---------------------------|
| 1. Blade | 5. Constant Force Spring |
| 2. Fusible Link Assembly | 6. Lock Ramp |
| 3. Link Strap | 7. Blade Stiffener |
| 4. Frame | 8. Duct Connection Collar |

Dimensions are shown in inches (mm).

TYPE C (SQUARE/RECTANGULAR COLLAR)

Min. Size: 4" x 4" (102 x 102).

Max. Size: Single Section

Vertical or Horizontal mount: 22" x 20"
(559 x 508).

Multiple Section (See *NOTE below)

Vertical Mount: 70" x 43" (1778 x 1092),
46" x 68" (1168 x 1727) or 118" x 20"
(2997 x 508).

Horizontal mount: Contact factory.

TYPE CR (ROUND COLLAR)

Min. Size: 4"(102) diameter.

Max. Size: Single Section

Vertical or Horizontal mount: 20"(508) diameter.

Multiple Section (See *NOTE below)

Vertical mount: 43" (1092) diameter.

Horizontal mount: Contact factory.

TYPE CO (OVAL COLLAR)

Min. Size: 5" x 4" (127 x 102) oval.

Max. Size: Single Section

Vertical or Horizontal mount: 22" x 20"
(559 x 508) oval.

Multiple Section (See *NOTE below)

Vertical mount: 46" x 68" (1168 x 1727),
118" x 20" (2997 x 508) or 70" x 43"
(1778 x 1992) oval.

Horizontal mount: Contact factory.

***NOTE: All multiple section sizes require a factory sleeve. Collars will be fastened to sleeve ends.**

SEE TYPE C DYNAMIC SIZING CHART SC51CD FOR OVERALL DAMPER DIMENSIONS.

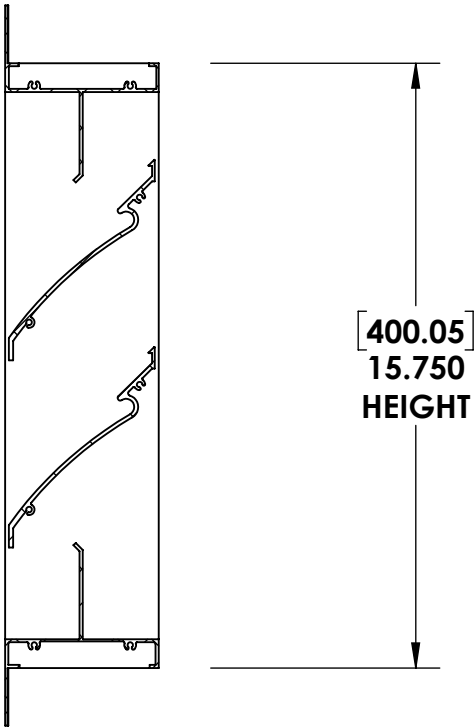
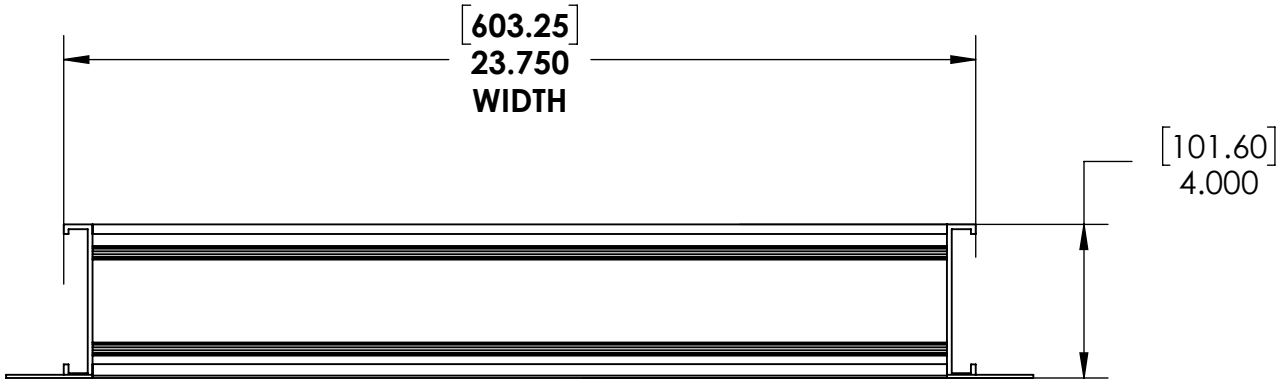
| REF. # | QTY. | DUCT SIZE Ø / WxH | MOUNT (V/H) | ACCESSORIES |
|--------|------|----------------------|----------------|-------------|
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |
| | | | | |

| | | | |
|----------------------|--|------------------------|--|
| PROJECT NAME: | | ENGINEER: | |
| CONTRACTOR: | | SUBMITTAL DATE: | |

TAG-Louver Tag

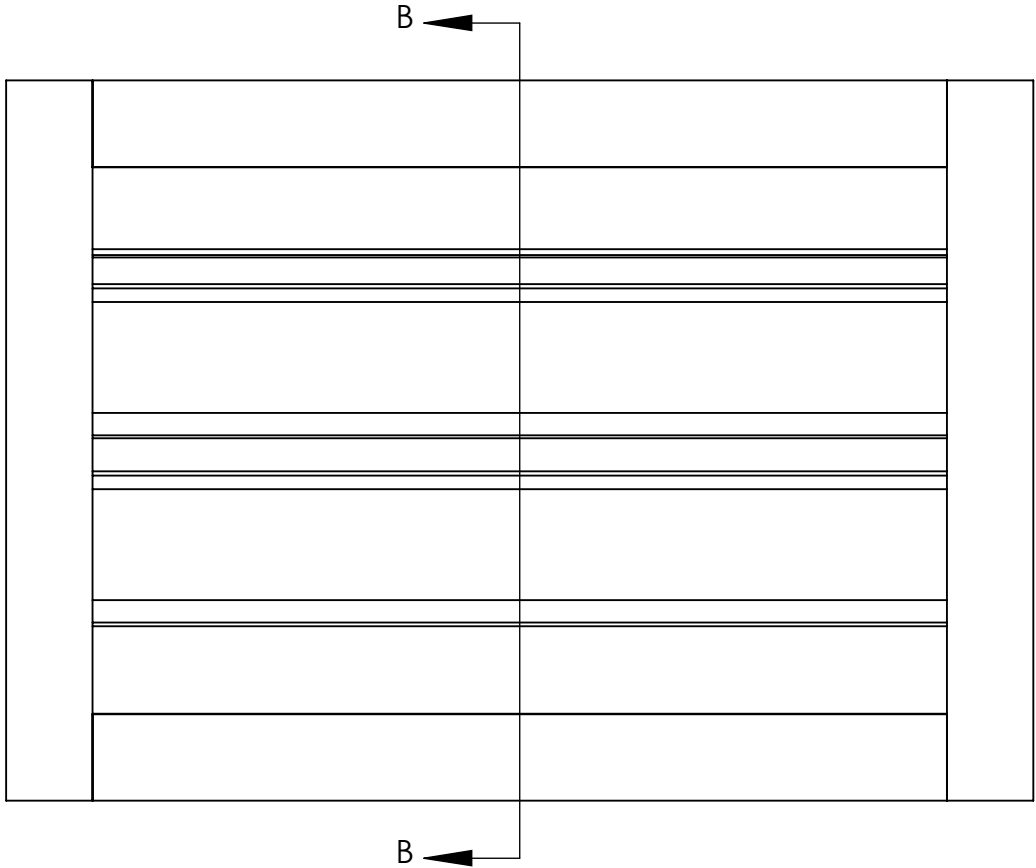
NOTE-

ACCS. :GBS



SECTION B-B

SCALE 1 : 5




AIREX

195150710

Lullaboo

Qty: 1

| | | | | | | | |
|--|--|--------------------------------|----------------------|--|-----------------------------------|--|-----------------------|
|  <div>222 Church St S. Alliston, ON L9R 2B7 TEL: 905-857-4700 FAX: 905-857-4730 TOLL FREE: 1-800-668-7214 www.ventexinc.com</div> | UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN INCHES. | | DO NOT SCALE DRAWING | | REMOVE ALL BURRS & SHARP CORNERS | | UNITS: INCHES (mm) |
| | DESIGNED BY: DW Config | | DATE: 2025-07-29 | | SCALE: 1:5 | | REVISION 0 |
| | DRAWN BY: DW Config | | DATE: 2025-07-29 | | DRAFTER: DW Config | | SIZE B |
| | FINISH: RAL Colour TBA 1 | | Sheet1 of 1 | | SW FILE NUMBER: 1951539-A-1-R0 | | |
| DESCRIPTION: 2425 24 X 16 1-1 VM | | MATERIAL: SEE PART DRAWINGS | | | | | |

DESCRIPTION:

2425 24 X 16 1-1 VM

MATERIAL:

SEE PART DRAWINGS

FINISH:

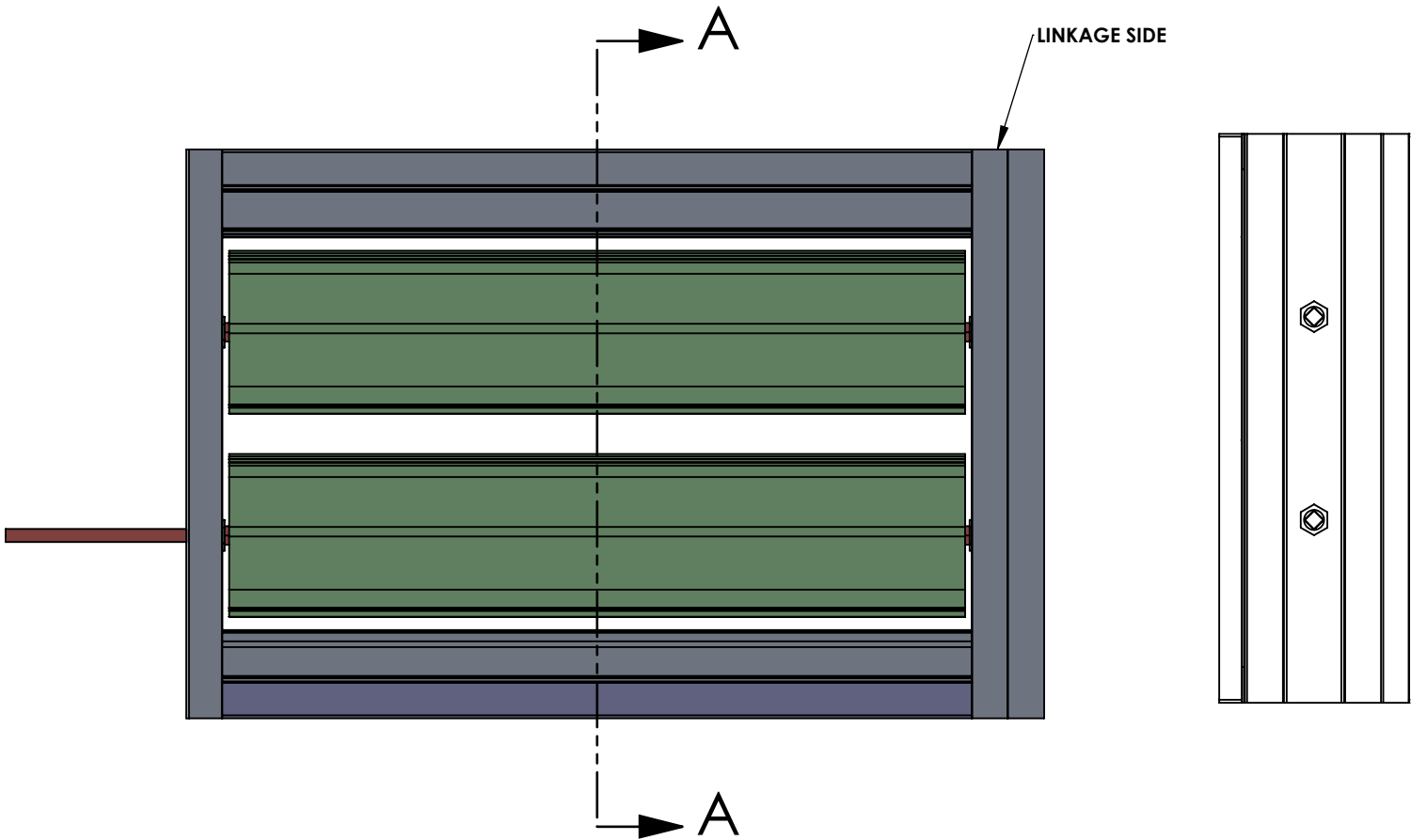
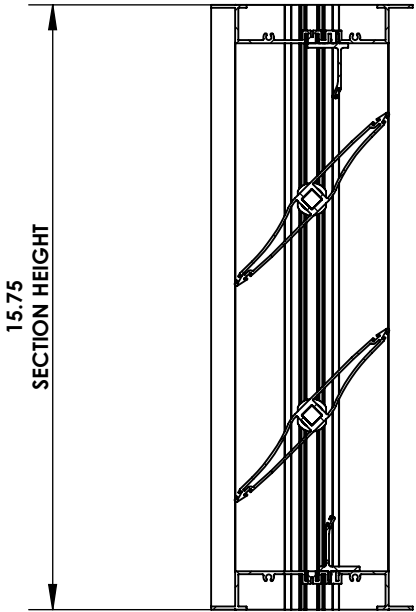
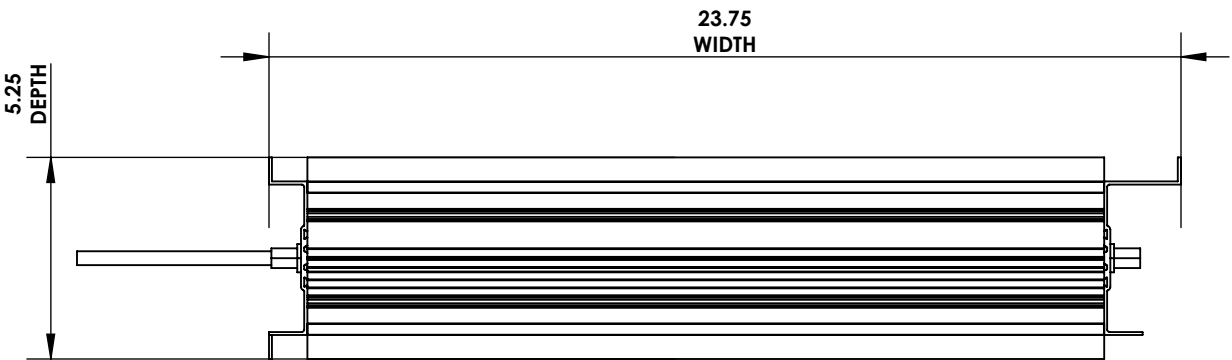
RAL Colour TBA 1

SW FILE NUMBER:

1951539-A-1-R0

TAG: Damper Tag
NOTE: NOTE - Motorized Damper
REQUIRES 22 IN-LB OF TORQUE ON EACH SHAFT

SANTOPRENE SEALS



AIREX
Lullaboo

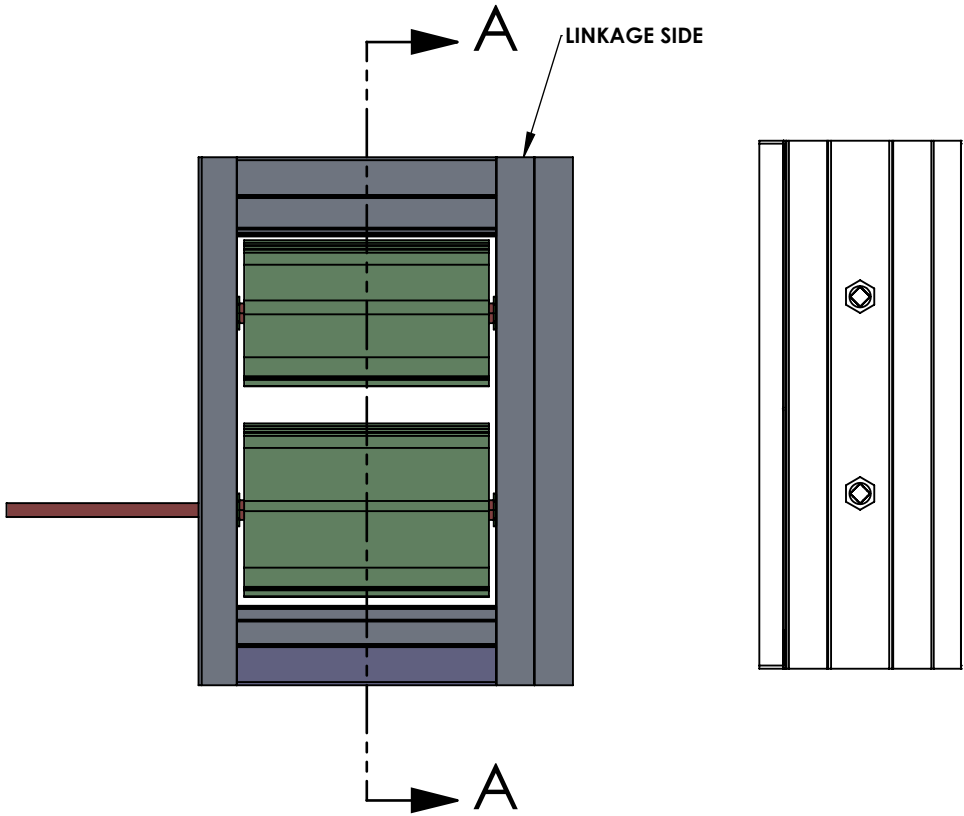
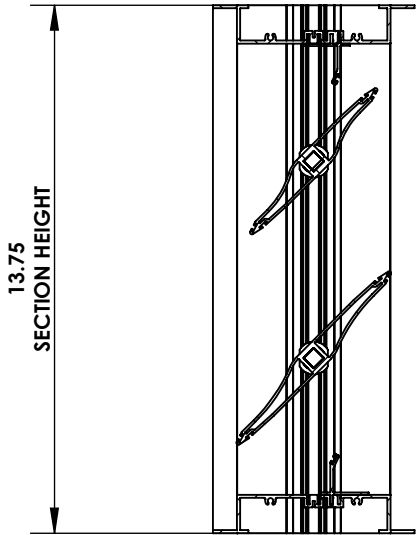
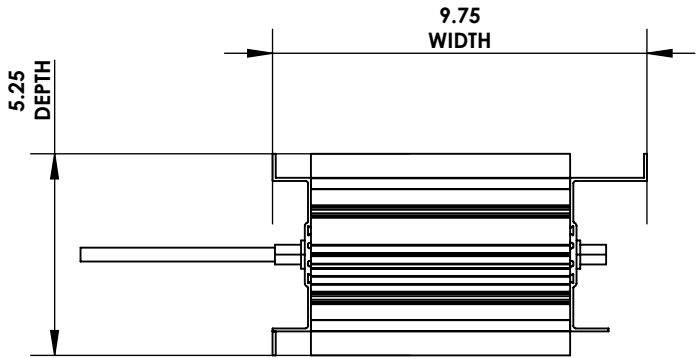
All DIMENSIONS ARE IN INCHES

| | | | | | | | | | | | | | | | | |
|------|--------------------|------------------|----------------|------------------------|-----------|----------------------|---|---|-----------|----------------|------------------------|---------------------|------------|--|---------------|-----------|
| FOR: | SUPPLIER: Works | CONTRACTOR: - | ENGINEER: - | JOB NAME: 195150710 | QTY: 1 | ORDER # 195150710 | DESCRIPTION: 3161 24.000 X 16.000 - P11L | 222 CHURCH ST. S ALLISTON, ON L9R 2B7 TEL: 905-857-4700 FAX: 905-857-4730 TOLL FREE: 1-800-668-7214 www.ventexinc.com | MATERIAL: | FINISH: N/A | DRAWN BY: DW Config | DATE: 2025-07-29 | SHEET 1 | SCALE 1:32 DO NOT SCALE DRAWING | REVISION 0 | SIZE 0 |
|------|--------------------|------------------|----------------|------------------------|-----------|----------------------|---|---|-----------|----------------|------------------------|---------------------|------------|--|---------------|-----------|

SW FILE NUMBER:
1951580

TAG: Damper Tag
NOTE: NOTE - Motorized Damper
REQUIRES 22 IN-LB OF TORQUE ON EACH SHAFT

SANTOPRENE SEALS



AIREX
Lullaboo

All DIMENSIONS ARE IN INCHES

| | | | | | | | | | | | | | | | | |
|------|--------------------|------------------|----------------|------------------------|-----------|----------------------|---|---|-----------|----------------|------------------------|---------------------|------------|--|---------------|-----------|
| FOR: | SUPPLIER: Works | CONTRACTOR: - | ENGINEER: - | JOB NAME: 195150710 | QTY: 1 | ORDER # 195150710 | DESCRIPTION: 3161 10.000 X 14.000 - P11L | 222 CHURCH ST. S ALLISTON, ON L9R 2B7 TEL: 905-857-4700 FAX: 905-857-4730 TOLL FREE: 1-800-668-7214 www.ventexinc.com | MATERIAL: | FINISH: N/A | DRAWN BY: DW Config | DATE: 2025-07-29 | SHEET 1 | SCALE 1:32 DO NOT SCALE DRAWING | REVISION 0 | SIZE 0 |
|------|--------------------|------------------|----------------|------------------------|-----------|----------------------|---|---|-----------|----------------|------------------------|---------------------|------------|--|---------------|-----------|

SW FILE NUMBER:
1951570

Basic Fail-Safe actuator for controlling dampers in typical commercial HVAC applications.

- Torque motor 22 in-lb [2.5 Nm]
- Nominal voltage AC 100...240 V
- Control On/Off
- 1x SPDT



Motorized Damper
Actuator 120V



5-year warranty



Technical data

| | | |
|------------------------|-------------------------------------|---|
| Electrical data | Nominal voltage | AC 100...240 V |
| | Nominal voltage frequency | 50/60 Hz |
| | Nominal voltage range | AC 85...265 V |
| | Power consumption in operation | 2.5 W |
| | Power consumption in rest position | 1.3 W |
| | Transformer sizing | 5 VA |
| | Auxiliary switch | 1x SPDT, 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V, adjustable 0...95° |
| | Switching capacity auxiliary switch | 1 mA...3 A (0.5 A inductive), DC 5 V...AC 250 V |
| | Electrical Connection | (2) 18 GA appliance cables, 1 m, with 1/2" NPT conduit connectors |
| | Overload Protection | electronic throughout 0...95° rotation |
| Functional data | Electrical Protection | actuators are double insulated |
| | Torque motor | 22 in-lb [2.5 Nm] |
| | Direction of motion motor | selectable by ccw/cw mounting |
| | Direction of motion fail-safe | reversible with cw/ccw mounting |
| | Angle of rotation | Max. 95° |
| | Angle of rotation note | adjustable with mechanical stop |
| | Running Time (Motor) | 75 s |
| | Running time fail-safe | <25 s @ -4...122°F [-20...50°C], <60 s @ -22°F [-30°C] |
| | Noise level, motor | 50 dB(A) |
| | Noise level, fail-safe | 62 dB(A) |
| Safety data | Position indication | Mechanical |
| | Degree of protection IEC/EN | IP42 |
| | Degree of protection NEMA/UL | NEMA 2 |
| | Enclosure | UL Enclosure Type 2 |
| | Agency Listing | cULus acc. to UL60730-1A/-2-14, CAN/CSA E60730-1:02 CE acc. to 2014/30/EU and 2014/35/EU |
| | Quality Standard | ISO 9001 |
| | UL 2043 Compliant | Suitable for use in air plenums per Section 300.22(C) of the NEC and Section 602 of the IMC |
| | Ambient humidity | Max. 95% RH, non-condensing |
| | Ambient temperature | -22...122°F [-30...50°C] |
| | Storage temperature | -40...176°F [-40...80°C] |
| Weight | Servicing | maintenance-free |
| | Weight | 1.1 lb [0.50 kg] |

| | | |
|------------------|------------------|----------|
| Materials | Housing material | UL94-5VA |
|------------------|------------------|----------|

Footnotes †Rated Impulse Voltage 4kV, Type of Action 1.AA.B, Control Pollution Degree 3.

Product features

| | |
|------------------------------|---|
| Application | For On/Off, fail-safe control of dampers in HVAC systems. Actuator sizing should be done in accordance with the damper manufacturer's specifications. Control is On/Off from an auxiliary contact, or a manual switch. The actuator is mounted directly to a damper shaft from 1/4" up to 1/2" in diameter by means of its universal clamp, 1/2" shaft centered at delivery. A crank arm and several mounting brackets are available for applications where the actuator cannot be direct coupled to the damper shaft. |
| Operation | <p>The TF series actuators provide true spring return operation for reliable fail-safe application and positive close off on air tight dampers. The spring return system provides consistent torque to the damper with, and without, power applied to the actuator. The TF series provides 95° of rotation and is provided with a graduated position indicator showing 0° to 90°. The actuator may be stalled anywhere in its normal rotation without the need of mechanical end switches. Power consumption is reduced in holding mode. The actuator is double insulated so an electrical ground connection is not necessary. The TF-S versions are provided with one built-in auxiliary switch. This SPDT switch is provided for safety interfacing or signaling, for example, for fan start-up. The switching function is adjustable between 0° and 95°.</p> <p>Safety Note: Screw a conduit fitting into the actuator's bushing. Jacket the actuator's input and output wiring with suitable flexible conduit. Properly terminate the conduit in a suitable junction box.</p> |
| Typical specification | On/Off spring return damper actuators shall be direct coupled type which require no crank arm and linkage and be capable of direct mounting to a shaft up to a 1/2" diameter and center a 1/2" shaft. The actuators must be designed so that they may be used for either clockwise or counter clockwise fail-safe operation. Actuators shall be protected from overload at all angles of rotation. If required, one SPDT auxiliary switch shall be provided having the capability of being adjustable. Actuators with auxiliary switch must be constructed to meet the requirements for Double Insulation so an electrical ground is not required to meet agency listings. Actuators shall be cULus listed, have a 5 year warranty, and be manufactured under ISO 9001 International Quality Control Standards. Actuators shall be as manufactured by Belimo. |

Accessories

| Electrical accessories | Description | Type |
|------------------------|---|----------|
| | Auxiliary switch, mercury-free | P475 |
| | Auxiliary switch, mercury-free | P475-1 |
| | Signal simulator, Power supply AC 120 V | PS-100 |
| | Cable conduit connector 1/2" | TF-CC US |

| Mechanical accessories | Description | Type |
|------------------------|---|---------------|
| | Shaft extension 170 mm \varnothing 10 mm for damper shaft \varnothing 6...16 mm | AV6-20 |
| | Position indicator for TFB(X) | IND-TF |
| | Shaft clamp for TFB(X) | K8 US |
| | Ball joint suitable for damper crank arm KH8 / KH10 | KG10A |
| | Ball joint suitable for damper crank arm KH8 | KG6 |
| | Ball joint suitable for damper crank arm KH8 | KG8 |
| | Damper crank arm Slot width 8.2 mm, for \varnothing 1.05" | KH12 |
| | Damper crank arm Slot width 6.2 mm, clamping range \varnothing 10...18 mm | KH6 |
| | Damper crank arm Slot width 8.2 mm, clamping range \varnothing 10...18 mm | KH8 |
| | TFB(X) crankarm with 5/16" slot. | KH-TF US |
| | TFB(X) crankarm with 1/4" slot. | KH-TF-1 US |
| | Screw fastening kit | SB-TF |
| | Push rod for KG10A ball joint 36" L, 3/8" diameter | SH10 |
| | Push rod for KG6 & KG8 ball joints (36" L, 5/16" diameter). | SH8 |
| | Anti-rotation bracket TF/NKQ/AM/NM/LM. | TF-P |
| | Wrench 0.32 in and 0.39 in [8 mm and 10 mm] | TOOL-06 |
| | Angle of rotation limiter, with end stop | ZDB-TF |
| | Mounting bracket for TFB(X) | ZG-113 |
| | Damper clip for damper blade, 3.5" width. | ZG-DC1 |
| | Damper clip for damper blade, 6" width. | ZG-DC2 |
| | Shaft extension for 3/8" diameter shafts (4" L). | ZG-LMSA-1 |
| | Shaft extension for 1/2" diameter shafts (5" L). | ZG-LMSA-1/2-5 |
| | TFB(X) crankarm adaptor kit (includes ZG-113). | ZG-TF112 |
| | TFB(X) crankarm adaptor kit (T bracket included). | ZG-TF2 |
| | Mounting kit for TFB(X) | ZG-TF3 |
| | Weather shield 13x8x6" [330x203x152 mm] (LxWxH) | ZS-100 |
| | Baseplate, for ZS-100 | ZS-101 |
| | Weather shield 406x213x102 mm [16x8-3/8x4"] (LxWxH) | ZS-150 |

Electrical installation

Warning! Live electrical components!

During installation, testing, servicing and troubleshooting of this product, it may be necessary to work with live electrical components. Have a qualified licensed electrician or other individual who has been properly trained in handling live electrical components perform these tasks. Failure to follow all electrical safety precautions when exposed to live electrical components could result in death or serious injury.

Meets cULus requirements without the need of an electrical ground connection.

Apply only AC line voltage or only UL-Class 2 voltage to the terminals of auxiliary switches. Mixed or combined operation of line voltage/safety extra low voltage is not allowed.

Actuators with appliance cables are numbered.

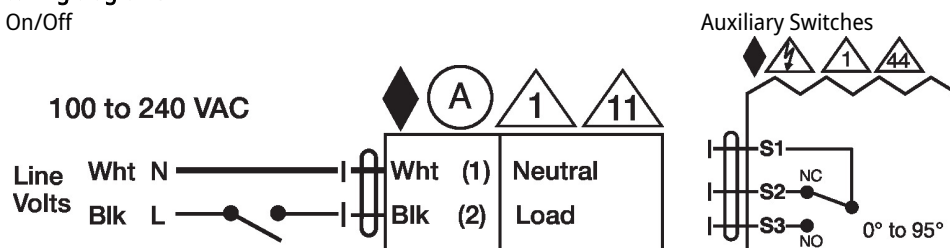
Provide overload protection and disconnect as required.

Actuators may be connected in parallel if not mechanically linked. Power consumption and input impedance must be observed.

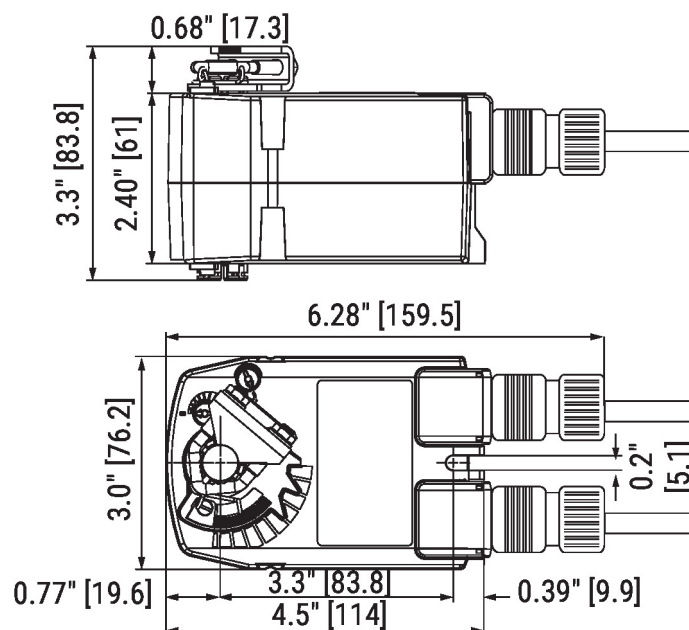
One built-in auxiliary switch (1x SPDT), for end position indication, interlock control, fan startup, etc.

Wiring diagrams

On/Off



Dimensions





S&P Canada

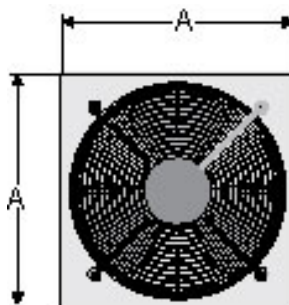
Qty: 1
Tag: EF-2
Project: Barrie OCR
Optimizer Version 2.0
Printed: 2024-11-07

eGED20-3/4

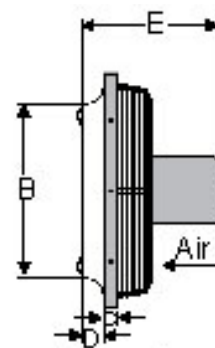
Sidewall Propeller Exhaust Fans with EC Motors (Ecowatt®)

STANDARD FEATURES:

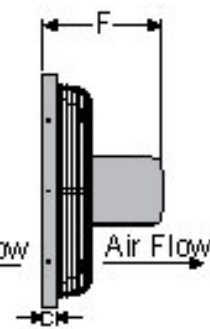
OSHA Motor Side Guard Standard • Electronically Commutated Motor (ECM) Standard • Disconnect is standard, mounted • Statically and Dynamically Balanced Propeller • Motor comes standard with mounted potentiometer for easy speed adjustment • 5 Year Fan and 1 Year Motor Warranty • Heavy Gauge Welded Galvanized Construction • Integral Deep Spun Inlet



Rear View



Exhaust



Supply

Performance

| Fan RPM | Flow (CFM) | SP (in W.G.) | Power (HP) | FEP Actual (kW) | FEI | SE | TE | FPM (TS) | FPM (OV) |
|---------|------------|--------------|------------|-----------------|------|-----|-----|----------|----------|
| 1639 | 2000 | .5 | .463 | 0.45 | 1.13 | 34% | 37% | 8582 | 873 |

Altitude (Feet): n/a Temperature (Centigrade): n/a Density (Lb/Ft3): .075

Motor Information: (Wired for 115V)

| HP | RPM | Volts/PH/Hz | Enclosure | Efficiency | Mounted |
|-----|------|---------------|---------------------------|------------|---------|
| .75 | 1750 | 115V/1PH/60HZ | TOTALLY ENCLOSED AIR OVER | STANDARD | YES |

Sound Power Levels - Octave Bands

| LwA | dBA | Sones | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|-----|-----|-------|----|----|----|----|----|----|----|----|
| 88 | 76 | 26.7 | 90 | 90 | 90 | 84 | 82 | 79 | 74 | 67 |

Dimensions (Inches)

| | | | | | | | | | |
|---|-------|---|-------|---|------|---|------|---|-------|
| A | 24.00 | B | 20.50 | C | 1.00 | D | 2.00 | E | 15.00 |
| F | 13.00 | G | | H | | I | | J | |
| K | | L | | M | | N | | O | |
| P | | Q | | R | | S | | T | |
| U | | V | | W | | X | | Y | |

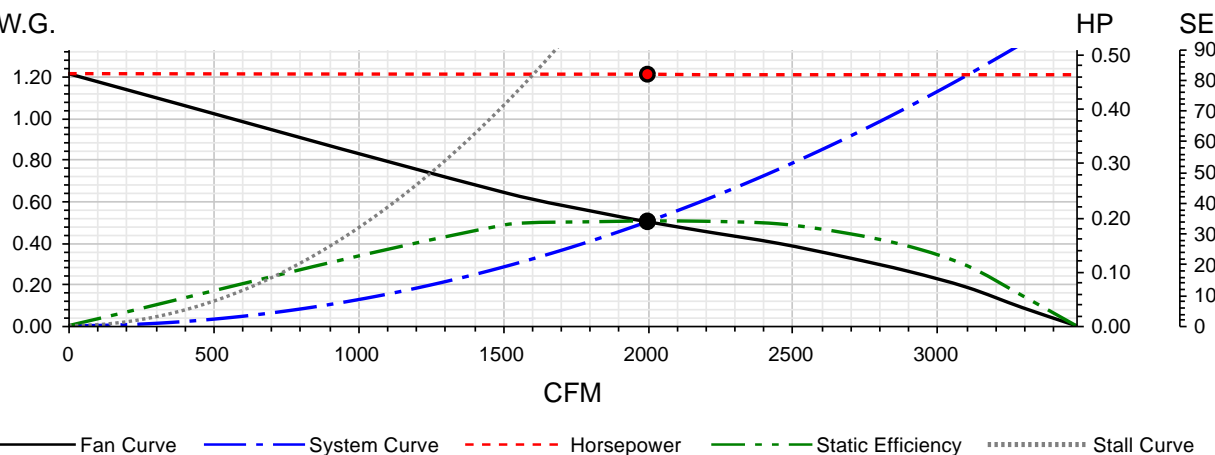
Note: Accessories may effect dimensions shown.

Avg. Shipping Weight (Lbs)*: 80

*Includes fan, motor, and packaging.



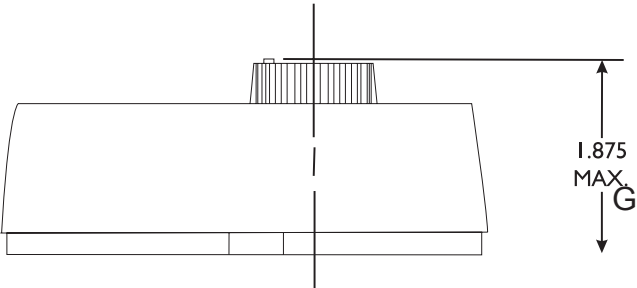
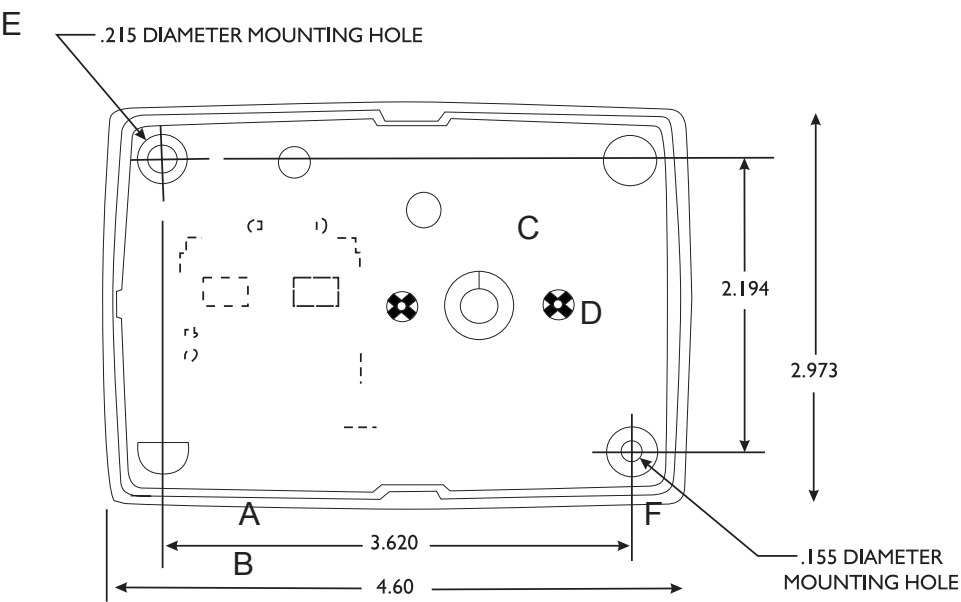
in W.G.



Accessories:

GED20 3/4HP 1700RPM GED BLADE 3WG CW • 1/2" HUB ADAPTER • ECM SPEED CONTROL & DISC SWITCH MOUNTED & WIRED eGED/eGSD • MODEL EAS1232MTR DAMPER MOTOR KIT 120/240 VOLT • ASSY WALL HOUSING PCK-DPR-GRD EXH G/DF1820 • LABEL UL/CUL 705 LISTED POWER VENT (709J) • RAINHOOD EXHAUST 18-20" GALVANIZED KNOCK-DOWN • BIRDSCREEN FOR EXHAUST RAINHOOD 18-20" GALVANIZED • LINE VOLTAGE THERMOSTAT LVT-110 • ACSHW-20 WALL MOTD DE-HUMIDSTAT 120V

SHW-20 - Wall Mounted Humidstat



| ACCESSORY MODEL | 1 | 2 | 3 | 4 | 5 | REMARKS |
|-----------------|---|---|---|---|---|---------|
| | | | | | | |
| | | | | | | |
| | | | | | | |
| | | | | | | |

| | |
|-----------------|------------------|
| Project: _____ | Submitted: _____ |
| Customer: _____ | Approved: _____ |
| Location: _____ | |

Soler & Palau will not be responsible for fabrication changes or errors resulting from customer use of a non-current submittal drawing.

Project No:
Project Name:
Location:
Engineer:
Architect:
Reference: Jul 02, 2025 3:08:12 PM

Submitted by:

Equipment Tag

Contractor:

EF-1

Model Information

ALX120-UD

Model: ALX120-UD

Part Number: ALX120-UD033

CFM: 750

Unit Weight: 37

SP: 0.5

Ship Weight: 37

RPM: 1650

Elevation: 0

BHP: 0.333

Temperature: 70

FEI: unknown

Sound Data

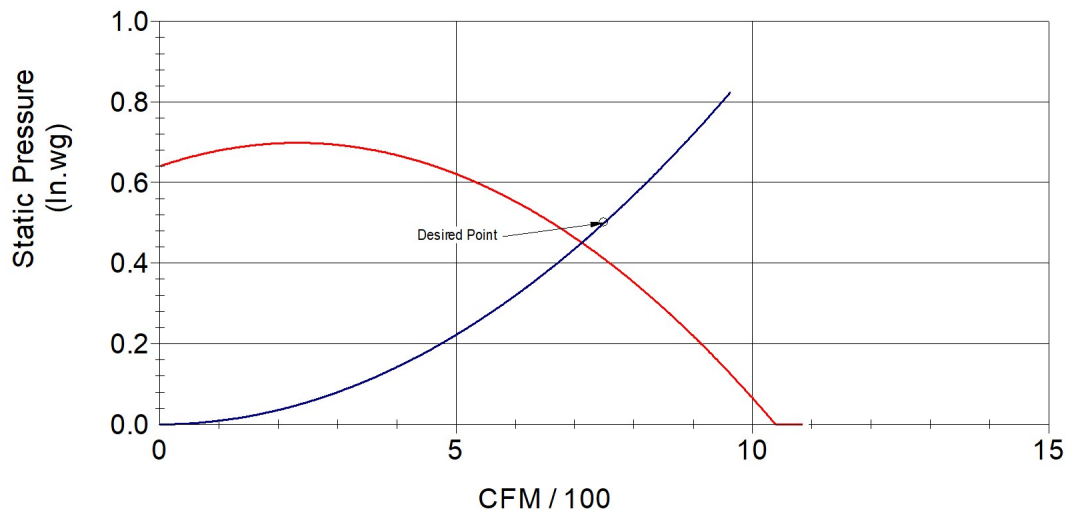
| | | | | | | | | | | |
|----|-----|-----|-----|------|------|------|------|------|--------|------|
| 63 | 125 | 250 | 500 | 1000 | 2000 | 4000 | 8000 | (Hz) | LwA: | 79 |
| 77 | 75 | 78 | 77 | 74 | 71 | 65 | 59 | (dB) | SONES: | 14.9 |

Ducted inlet or ducted outlet dBA @5 ft. 68

Ducted inlet and ducted outlet dBA @5 ft. 48

Performance Curve

DELHI Model ALX120-UD CFM=750 SP=0.5



Canarm Ltd. certifies that the ALX Series Spun Aluminum Exhauster Units shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 211 and Publication 311, and comply with the requirements of the AMCA Ratings Programme.

Performance certified is for installation type A: Free inlet, Free outlet. Power rating bhp does not include transmission losses. Performance ratings do not include the effects of appurtenances (accessories).

The sound power level ratings shown are in decibels, referred to 10⁻¹² watts, calculated per AMCA 301. The A-weighted sound power ratings shown have been calculated per AMCA 301. Values shown are for outlet LwA sound power levels for Installation Type A: free inlet, free outlet.

The sound rating in Sones shown are loudness values in hemispherical sones at a distance of 5 ft. in a hemispherical free field calculated per AMCA 301. Values shown are for Installation Type A: free outlet hemispherical sone levels.

dBa levels are not licensed by AMCA International.

Motor Data

Motor HP
0.33 HP ODP

Single Phase

Motor
RPM
1650

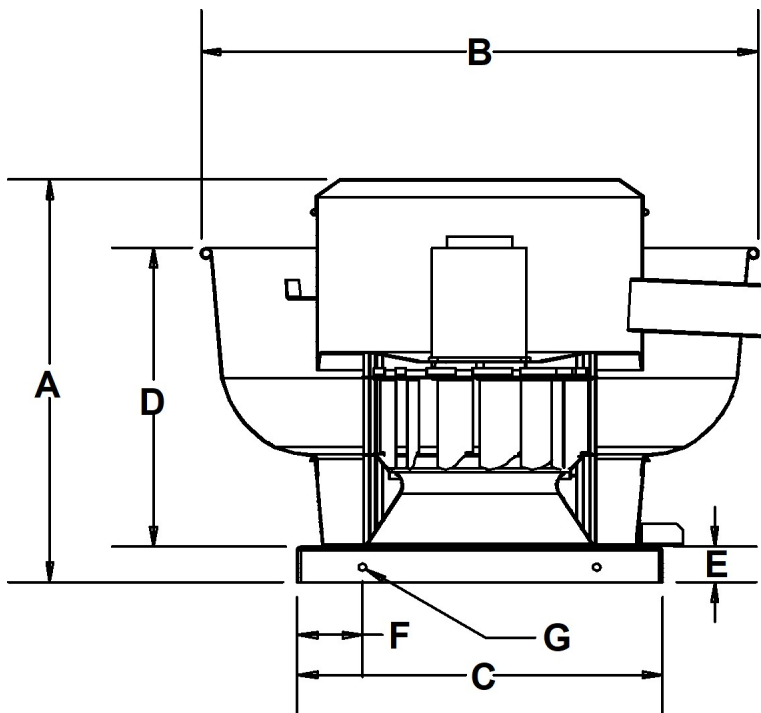
Options

9301002-M Motorized 115/230V Backdraft Damper (UL705 Only)
RCG17.5 Roof Curb-Non Insulated 18 Inch High Galv
DS1/3-30A [DS1/3-30A] Disconnect Switch - 1 or 3 Phase 30 AMP NEMA 3R

Dimensions

Model: ALX120-UD

(Inches)



| <u>A</u> | <u>B</u> | <u>C</u> | <u>D</u> | <u>E</u> | <u>F</u> | <u>G</u> | <u>Roof Opening</u> | <u>Optional C2 Base</u> |
|----------|----------|----------|----------|----------|----------|----------|---------------------|-------------------------|
| 21.0 | 25.0 | 19.0 | 13.0 | 1.5 | 3.5 | .38 | 15.0 | 21.0 |

Standard Features

ALX-UD Spun Aluminum Upblast Direct Drive Rooftop Exhauster

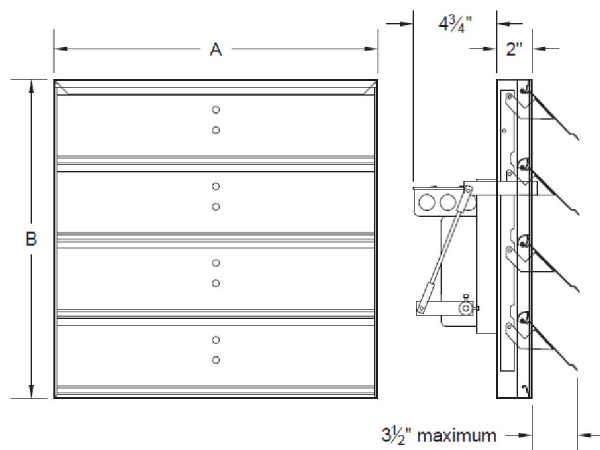
- Durable weather resistant spun aluminum exhauster
- Upblast design sends the exhaust away from the roof and into the atmosphere.
- Curb Mounted for direct intake from below
- Suitable for wall mount, 24" and down
- Quick release latches for easy motor and drive access
- ETL Listed for compliance with UL705 and UL762 standards



Dimensions

(Inches)

MODEL: 9301002-M



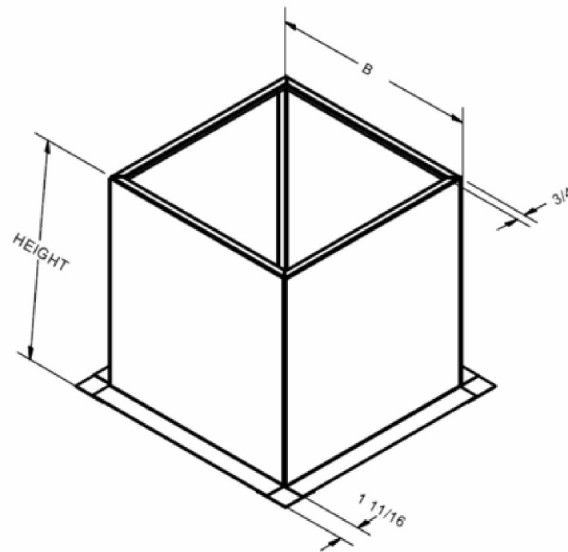
| MODEL | WIDTH | HEIGHT |
|-----------|-------|--------|
| 9301002-M | 12" | 12" |

Standard Features ALX Series Motorized Shutter

- .051" Extruded Aluminum Frame
- .051" Extruded Aluminum Blade
- Galvanized Linkage
- Blade Edge Seals
- Standard Backdraft damper motor mounted in Air Stream
- Actuator Voltage 115/230 Single Phase
- No Flange

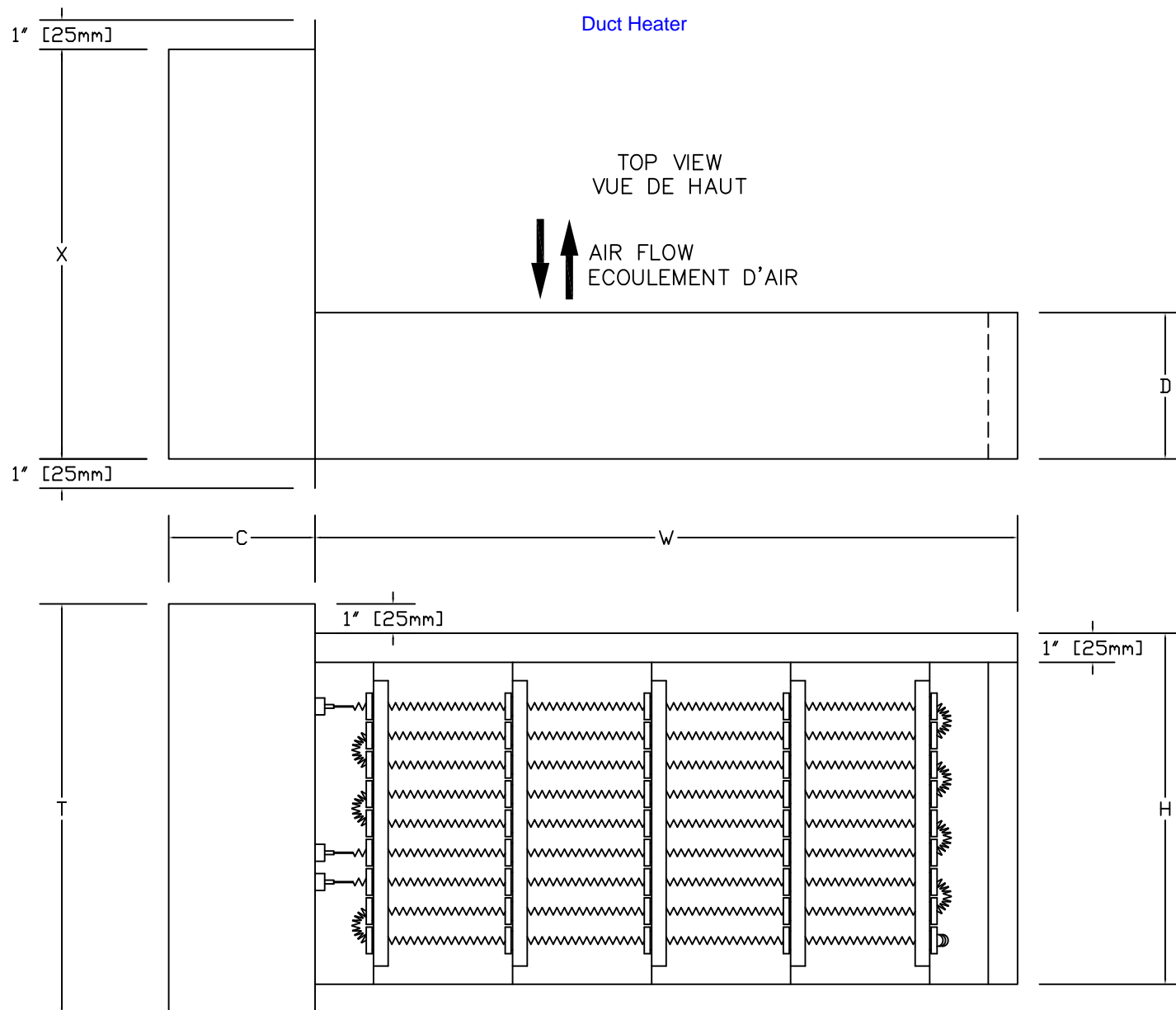
| Dimensions | MODEL: RCG17.5 |
|-------------------|----------------|
| (Inches) | |

| MODEL | "B" | HEIGHT |
|---------|-------|--------|
| RCG17.5 | 17.5" | 18" |



Standard Features Roof Curbs

- RCG are 18" high
- 18 gauge galvanized steel construction
- 1 11/16" flanges
- NON-Insulated
- Shipped fully assembled



TITLE/TITRE
TYPICAL SLIP-IN TYPE HEATER
SERPENTIN A INSERTION TYPIQUE



THERMOLEC
MONTREAL - CANADA

LTEE
LTD

DRAWING NO. MSC0-10LS-0002-0000

DATE

PER

TAG: ERV-1

MINIVENT VENTILATOR UNIT

MODEL: MV750XE

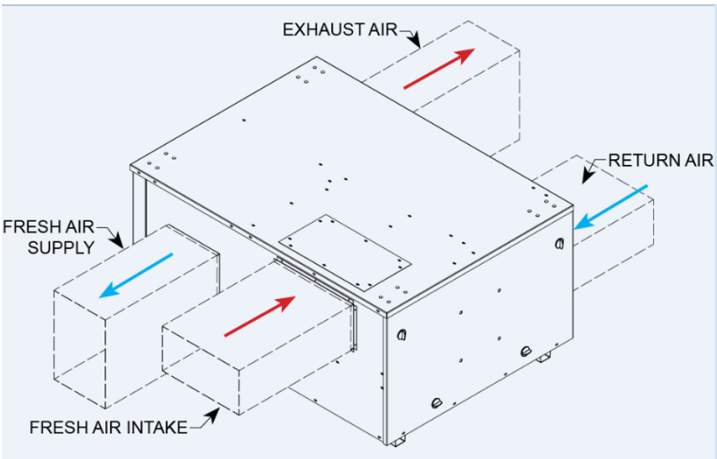
ARRANGEMENT: STANDALONE MINIVENT

Location : Toronto, Ontario

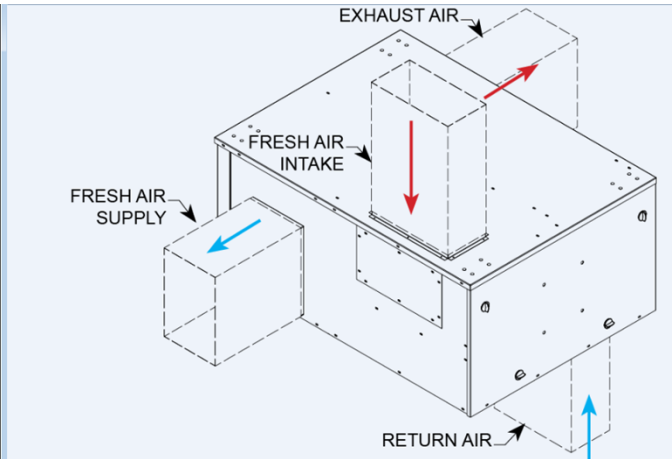
| | | | |
|----------------------|-----------------------|-------------------------|----------------|
| CFM RANGE: | 720 - 1160 CFM | MCA: | 18.93 |
| UNIT VOLTAGE: | 110V / 1 Ph | MOCp: | 25 |
| UNIT WEIGHT: | 225 LBS | SHIPPING WEIGHT: | 261 LBS |

DUCT CONFIGURATIONS

Duct Option 1



Duct Option 2



FILTERS

| | QUANTITY | TYPE | SIZE (EACH) | Filter |
|----------|----------|------------|-------------|--------|
| INTAKE: | 1 | 2" PLEATED | 12x24x2 | MERV8 |
| EXHAUST: | 1 | 2" PLEATED | 12x24x2 | MERV8 |

PERFORMANCE

| QTY | UNIT # | AIRSTREAM | FLOW (CFM) | SP (INWC) |
|-----|---------|-----------|------------|-----------|
| 1 | MV750XE | SUPPLY | 750 | 0.5 |
| | | EXHAUST | 750 | 1.1 |

MOTOR

| AIRSTREAM | HP | VOLTS/PHASE | TYPE | DRIVE | FLA |
|-----------|-----|-------------|------|--------|-----|
| Supply | 0.5 | 110V / 1 Ph | ECM | DIRECT | 8.1 |
| Exhaust | 0.5 | 110V / 1 Ph | ECM | DIRECT | 8.1 |

Location : Toronto, Ontario

Wheel Performance Results

| | SUMMER | | WINTER | |
|--------------------------|---------------------|--------------------|---------------------|--------------------|
| | Outdoor (EA) | Return (RA) | Outdoor (EA) | Return (RA) |
| Airflow [CFM] | 813 | 823 | 813 | 823 |
| Dry bulb temperature [F] | 87 | 75 | -4 | 72 |
| Wet bulb temperature [F] | 71 | 63 | -5 | 54 |
| Enthalpy (H) [BTU/lb] | 30.35 | 28.72 | 16.61 | 22.69 |
| | Exhaust (EA) | Supply (SA) | Exhaust (SA) | Supply (SA) |
| Airflow [CFM] | 813 | 823 | 813 | 823 |
| Dry bulb temperature [F] | 83.95 | 77.76 | 14.99 | 52.96 |
| Wet bulb temperature [F] | 69.02 | 65.15 | 14.97 | 42.69 |
| Enthalpy (H) [BTU/lb] | 33.32 | 30.35 | 5.44 | 16.61 |
| Relative humidity [%] | 47.22 | 51.48 | 100.71 | 41.6 |

| | SUMMER | WINTER |
|----------------------------------|---------------|---------------|
| Net Outdoor Flow, scfm | 750 | 750 |
| Net Exhaust Flow, scfm | 750 | 750 |
| Supply pressure drop [in w.c.] | 0.56 | 0.56 |
| Exhaust pressure drop [in w.c.] | 0.56 | 0.56 |
| Outdoor Air Correction Factor | 0.99 | 0.99 |
| Exhaust Air Transfer Ratio, % | 8.8 | 8.8 |
| Latent Effectiveness, % | 70.0 | 70.5 |
| Sensible Effectiveness, % | 75.0 | 75.5 |
| Total Effectiveness, % | 72.1 | 73.8 |
| Design Loads, Btu/h | | |
| Outdoor Air. Sensible | 9304 | 62302 |
| Outdoor Air. Latent | 11358 | 17048 |
| Outdoor Air. Total | 20662 | 79350 |
| Total Recovered | 14940 | 56129 |
| Net OA Load | 5722 | 22555 |
| Installed HVAC Reduction | | |
| Cooling (Tons) /Heating (Btu/hr) | 1.24 | 56795 |
| Purge Angle, ° | 0 | 0 |

Application Rating for Winter is outside the scope of the AHRI ERV Certification Program. Rating for Summer Certified in accordance with the AHRI ERV Certification Program, which is based on AHRI Standard 1060. Certified units may be found in the AHRI Directory at www.ahridirectory.org.

MINIVENT SERIES ENERGY RECOVERY VENTILATORS

STANDARD CONSTRUCTION

CABINET: **20 gauge galvanized steel single wall.**

PANELS: **20 gauge galvanized steel.**

MOTORS: **110V / 1 Ph**

FINISH: **Polyester Resin based powder coat.**
Gray color

WHEEL: **AHRI rated Internal Polymer Wheel**

NON-FUSED DISCONNECT SWITCH (Standard): **Ampere Rating: 30A**
Enclosure Rating: NEMA 1

| Optional Accessories | Included in your order | Field Install | Factory Install |
|--|------------------------|---------------|-----------------|
| Low Ambient, Rotation Sensor, and Start Stop Jog Package | Yes | No | Yes |
| ECM Motors | Yes | No | Yes |
| BAS Ready Kit | Yes | Yes | No |
| 7 Day Programmable Timer | No | Yes | No |
| Wall Display Panel | Yes | Yes | No |
| CO2 Duct Mounted Sensor | No | Yes | No |
| Motorized Outside Air Damper | No | Yes | No |
| Motorized Exhaust Air Damper | No | Yes | No |
| Occupancy Switch | No | Yes | No |
| Filters | Merv 8 (Standard) | No | Yes |
| Dirty Filter Switch/Sensor | None | Yes | No |
| Speed Controller Package | No | Yes | No |
| Floor Vibration Isolators | No | Yes | No |
| Ceiling Vibration Isolators | Yes | Yes | No |

MV-750XE

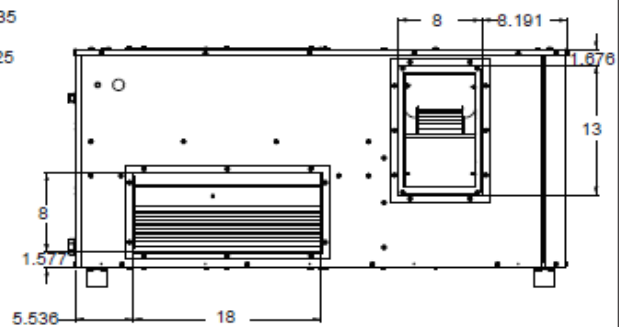
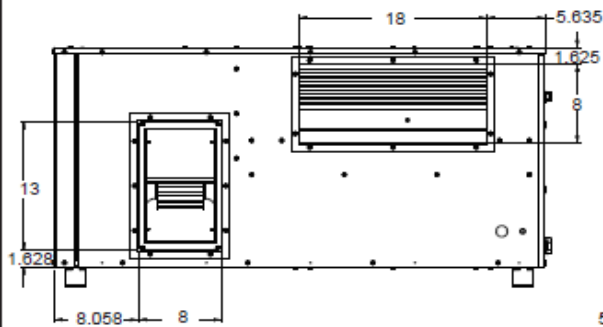
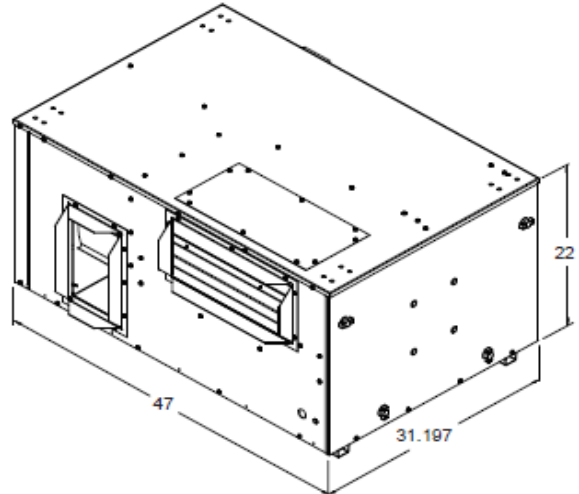


SPECIFICATION DATA FOR STAND ALONE MV 750XE MINI VENTILATOR W/ EC MOTOR

RRS ERV MODEL# 01-C75-02xE01 / 21 STAND ALONE INDOOR CONVERTIBLE W/ LOW AMBIENT / ROTATION SENSOR / CLIMATE SMART

| Unit Data | | |
|------------------------|----------------|----------------|
| Model# | 01-C75-02xE01 | 01-C75-02xE21 |
| Voltage | 115v - 1 Phase | 240v - 1 Phase |
| CFM | 700-1073 | |
| MCA - Stationary | 18.93 | 11.10 |
| OCPD - Stationary | 25 | 15 |
| Filter Size | 12 x 24 x 2 | |
| Net Weight - lbs. | 225 | |
| Shipping Weight - lbs. | 261 | |

| Wheel Data | | |
|----------------------|-----------------------|---------------|
| Model# | 01-C75-02xE01 | 01-C75-02xE21 |
| Potential Volts | 115v | 230v |
| Motor Speed -rpm | 1050 | |
| Full Load Amps | 0.7 | 0.3 |
| Wheel Depth - in | 3 | |
| Wheel Diameter - in | 25.3 | |
| Construction / Media | One Piece / Polymeric | |



| Fresh / Exhaust Air Blower Data (115v) | | |
|--|-------------|---------|
| Motor - hp | ½ | |
| Wheel Size (dia x width) -in | DD 10 x 4AT | |
| Motor Speed -rpm (0-10vdc) | 300-1800 | |
| Motor Torque (oz-ft) | HI (32) | LO (23) |
| Bearing Type | Sleeve | |
| Full Load Amps | 8.1 | |
| Service Factor | 1 | |

| Fresh / Exhaust Air Blower Data (230v) | | |
|--|-------------|---------|
| Motor - hp Stationary | ½ | |
| Wheel Size (dia x width) -in | DD 10 x 4AT | |
| Motor Speed -rpm (0-10vdc) | 300-1800 | |
| Motor Torque (oz-ft) | HI (32) | LO (23) |
| Bearing Type | Sleeve | |
| Full Load Amps - Stationary | 4.8 | |
| Service Factor | 1 | |

FOR LIST PRICES: FORM#

MAY 17, 2019 FORM# RSIMV750E-2

SUPERSEDES 09-13-17



1625 Diplomat Drive, Carrollton, Texas 75006-6848 Phone (972) 247-7447 (800) 552-4822 Fax (972) 243-0940

Warranty: <http://www.ruskin.com/doc/Id/6710>

Certificate of Product Ratings

AHRI Certified Reference Number : 518127

Date : 04-05-2019

Model Status : Active

Old AHRI Reference Number :

Brand Name : Airxchange

Product Type : Wheel

Model Number : ERC-2513C

Selection Software Name :

Selection Software Version :

Rated as follows in accordance with the latest edition of ANSI/AHRI 1060 (I-P) Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Nominal Air Flow (scfm) : 1200

Pressure Drop (at nominal airflow, in. H₂O) : 1.00

| Leakage Ratings | PressureDiff | EATR(%) | OACF | PurgeAngle |
|-------------------------|--------------|---------------|--------------|------------|
| Test 1 : | 0 | 2.3 | 1.04 | N/A |
| Test 2 : | 0.5 | 0.7 | 1.08 | 2 |
| Test 3 : | 1 | 0.9 | 1.10 | 1 |
| Sensible(%) | | Latent(%) | Total(%) | |
| 100% Air Flow Heating : | 66 | 61 | 64 | |
| 75 % Air Flow Heating : | 72 | 67 | 70 | |
| 100% Air Flow Cooling : | 66 | 61 | 63 | |
| 75% Air Flow Cooling : | 72 | 67 | 69 | |
| Net Sensible(%) | | Net Latent(%) | Net Total(%) | |
| 100% Air Flow Heating : | 66 | 61 | 64 | |
| 75 % Air Flow Heating : | 72 | 67 | 70 | |
| 100% Air Flow Cooling : | 66 | 61 | 63 | |
| 75% Air Flow Cooling : | 72 | 67 | 69 | |

†“Active” Model Status are those that an AHRI Certification Program Participant is currently producing AND selling or offering for sale; OR new models that are being marketed but are not yet being produced. “Production Stopped” Model Status are those that an AHRI Certification Program Participant is no longer producing BUT is still selling or offering for sale.
Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

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CERTIFICATE VERIFICATION

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we make life better™

CERTIFICATE NO.:

131989431528227503

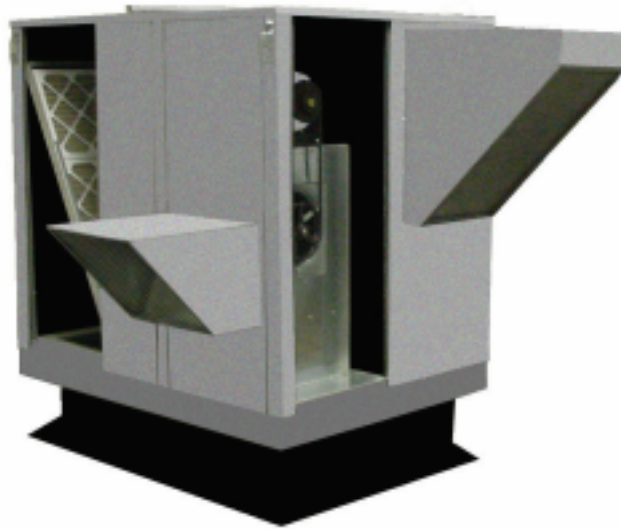
Suggested Specification

Furnish and install, at locations shown on plans or in accordance with schedules, the mechanical cooling system complete with an Energy Recovery Ventilator (ERV). The Energy Recovery Ventilator will contain an energy recovery component rated in accordance with AHRI Standard 1060-2000 with ratings certified by AHRI. Energy Recovery Ventilator shall have movable duct flanges for OA and RA intake. All other airstreams shall be horizontal + vertical as standard. Cabinet shall be galvanized steel construction with a power coat paint finish electrostatically bonded to the metal. Where conditioned air is handled, cabinet panels shall be fully insulated to prevent sweating and minimize sound. Knockouts shall be provided for power connections. Hanging or pad mount installation capability shall be standard. Ports shall be provided so airflow can be measured across the energy recovery wheel. Intake and exhaust air blowers of the ERV shall contain a centrifugal forward curved blower and shall have ball bearings with direct drive motors.

The energy recovery device will be a wheel with a lightweight polymer substrate manufactured by a patented process to attach desiccant without the use of binders or adhesives. Desiccant shall not dissolve or deliquesce in the presence of water or high humidity. The wheel shall be easily cleanable with standard cleaning solution or mild soap and water solution. The wheel shall have a crossover exhaust air transfer ratio of < 5% and should accommodate a low pressure drop of 1 in w.g @ 100% rated CFM. The wheel itself will be built rigid using an aluminum frame and also shall be mold and bacteria resistant due to only handling moisture in vapor state.

Notes

GEN 2 SERIES ENERGY RECOVERY VENTILATORS



Location : Toronto, Ontario

PN: ERV64M2002XM43LXXXXXDAXAEXX

| General Information | | | | | |
|---------------------|-----------------|------|-----|------------------------|-----|
| Duct Type | Stand Alone | MCA | 5.7 | Unit Weights(lbs) | 570 |
| CFM Range | 1200 - 2000 CFM | MOCP | 8 | Shipping Weights (lbs) | 650 |

| Airflow Performance | | |
|---------------------|-----------|-----------|
| Airstream | Flow(CFM) | SP (INWC) |
| Supply | 975 | 0.5 |
| Exhaust | 975 | 1.2 |

| Filter Data | | | | |
|-------------|---------|-----|-----------------|-------------|
| | Style | QTY | Size | Filter Type |
| Supply | Pleated | 2 | 16.000 x 16.000 | Merv 8 |
| Exhaust | Pleated | 2 | 16.000 x 16.000 | Merv 8 |

| Blowers, Heat Wheel, & Motors (Belt Driven) | | | | |
|---|-------------|---------------|------|-----|
| | Horse Power | Voltage/Phase | Type | FLA |
| Supply | 2.0 HP | 575V / 3 Ph | ODP | 2.4 |
| Exhaust | 2.0 HP | 575V / 3 Ph | ODP | 2.4 |
| Heat Wheel | 0.33 HP | 575V / 3 Ph | ODP | 0.3 |

GEN 2 SERIES ENERGY RECOVERY VENTILATORS

ERV64M2002XM43LXXXXXDAXAEXX

Gen 2 Unit: **ERV20- (1200 - 2000 CFM)**

Series: **Stand Alone**

Voltage: **575V / 3 Ph**

Control Package: **Standard Controls - Medium Speed**

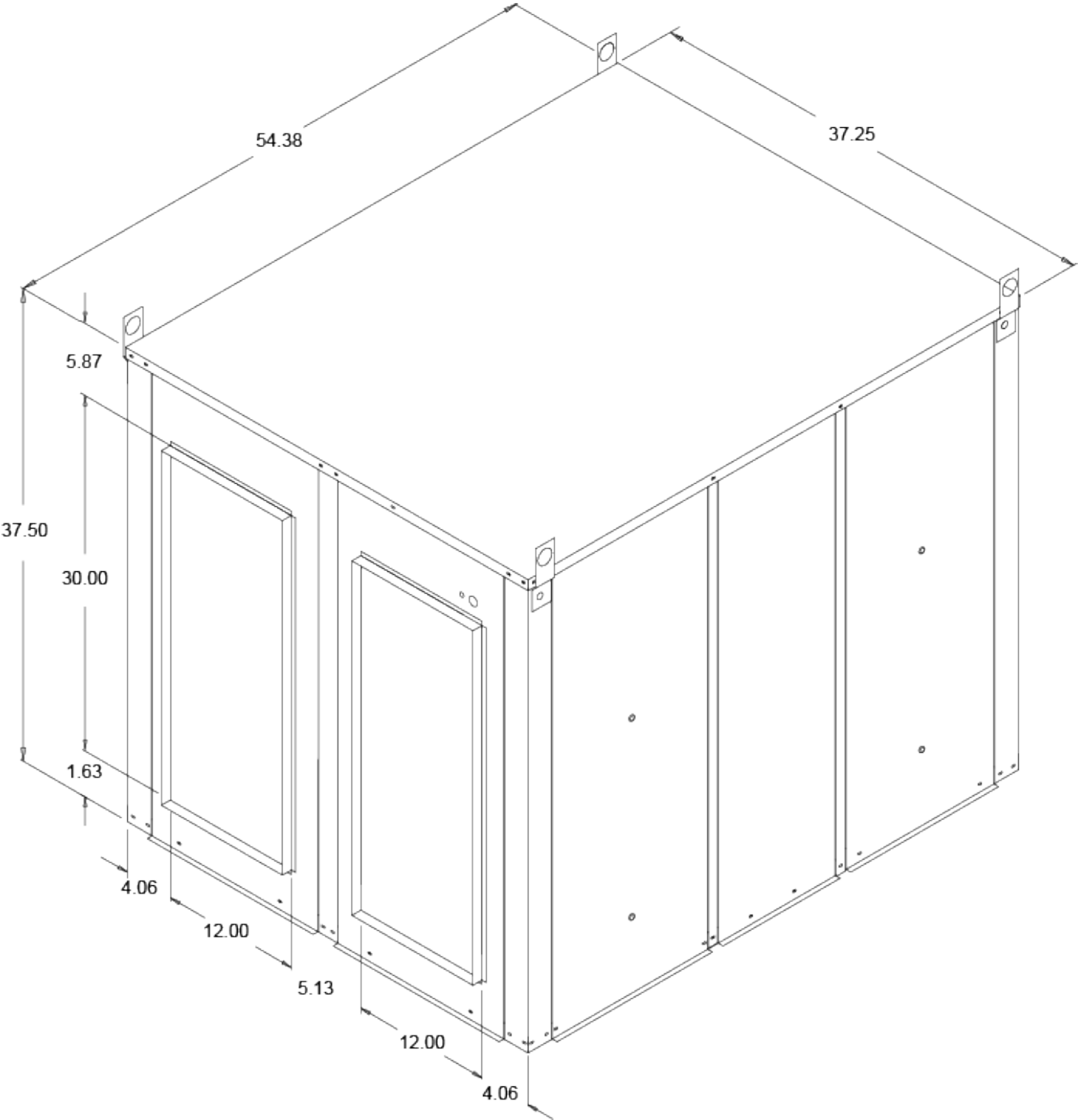
Wheel Type: **M- Indoor Side-By-Side**

| Optional Accessories | Included in your order |
|------------------------------|------------------------|
| Smoke Detector | X- None |
| Filter(s) | Merv 8 |
| Dirty Filter Sensor | X- None |
| Filter Rack | Fresh & Exhaust Air |
| Motorized Outside Air Damper | X- None |
| Motorized Exhaust Air Damper | X- None |
| CO2 Sensor | X- None |
| Rotation Sensor | X- None |
| Pressure Gauge | X- None |
| Low Ambient Kit | Yes |
| Start-Stop-Jog | X- None |
| Non-Fused Disconnect Switch | Yes |

GEN 2 SERIES ENERGY RECOVERY VENTILATORS

Gen 2 M Series ERVs

M20



GEN 2 SERIES ENERGY RECOVERY VENTILATORS

Controls

BASIC UNIT CONTROLS: All internal electrical components shall be factory wired for single point power connection including Electric Pre Heat. All electrical components shall be UL Listed, Approved, or Classified where applicable and wired in compliance with the National Electrical Code. Unit will be provided from the factory with a control panel that includes a 24 VAC transformer, terminal strip, and blower / energy wheel contactors.

STARTUP (Digital Contact Closes)

- Outside air damper actuator is energized and powers open
- Supply blower starts
- Exhaust air damper actuator is energized and powers open
- Exhaust blower starts
- Energy wheel is energized

SHUTDOWN (Digital Contact Opens)

- Exhaust blower is de-energized
- Exhaust air damper actuator is de-energized and powers closed
- Supply blower is de-energized
- Outside air damper actuator is de-energized and powers closed
- Energy wheel is de-energized

ACCESSORIES

- **Low Ambient Kit:** When the exhaust temperature in the exhaust air blower compartment is below the low ambient switch set point, the switch will open, deactivating the fresh air blower and closes the optional motorized intake damper. The system will continue to operate in this mode, drawing warm air out of the building to heat up the wheel surface, until the temperature at the exhaust air blower is 16 degrees above the set point. At that time the switch will close activating the fresh air blower and opens the optional motorized intake damper. The switch is preset at 20°F from the factory, but can be easily reset in the field.
- **Filter Rack Intake and Exhaust:** Support structure that houses filters.
- **MERV 8 Filters** - MERV 8 performance ratings, not reliant on electrostatic charge for efficiency, Low resistance to airflow, High Dust Holding Capacity, Sturdy double-wall frame design, and Moisture resistant beverage board frame.
- **DISCONNECT:** This disconnect provides a single throw action to break up to 600V with lug type terminals for connection of #14 to #2 copper wire. It is a surface mounted device having 3 poles with a NEMA 3R enclosure rating (Rainproof and Sleet/Ice proof) and is non-fused. It is UL listed component and has rating of 30A, 60A or 100A Ampere. The cover panel has a dual cover interlock that keeps the cover shut when the switch is ON. When the cover is open, it locks the switch OFF, unless a qualified person bypasses the interlock.

GEN 2 SERIES ENERGY RECOVERY VENTILATORS

Ontario

Location : Toronto,

Wheel Performance Results

| | SUMMER | | WINTER | |
|--------------------------|--------------|-------------|--------------|-------------|
| | Outdoor (EA) | Return (RA) | Outdoor (EA) | Return (RA) |
| Airflow [CFM] | 1023 | 1091 | 1023 | 1091 |
| Dry bulb temperature [F] | 87 | 75 | -4 | 72 |
| Wet bulb temperature [F] | 71 | 63 | -5 | 54 |
| Enthalpy (H) [BTU/lb] | 30.24 | 28.72 | 17.03 | 22.69 |
| | Exhaust (EA) | Supply (SA) | Exhaust (EA) | Supply (SA) |
| Airflow [CFM] | 1023 | 1091 | 1023 | 1091 |
| Dry bulb temperature [F] | 84.12 | 77.56 | 13.93 | 54.33 |
| Wet bulb temperature [F] | 69.13 | 65.01 | 13.98 | 43.56 |
| Enthalpy (H) [BTU/lb] | 33.41 | 30.24 | 5.12 | 17.03 |
| Relative humidity [%] | 47.13 | 51.56 | 102.18 | 40.51 |

| | SUMMER | WINTER |
|--------------------------------------|--------|--------|
| Net Outdoor Flow, scfm | 975 | 975 |
| Net Exhaust Flow, scfm | 975 | 975 |
| Supply pressure drop [in w.c.] | 0.50 | 0.50 |
| Exhaust pressure drop [in w.c.] | 0.50 | 0.50 |
| Outdoor Air Correction Factor (OACF) | 0.94 | 0.94 |
| Exhaust Air Transfer Ratio (EATR), % | 10.6 | 10.6 |
| Latent Effectiveness, % | 71.4 | 71.9 |
| Sensible Effectiveness, % | 76.5 | 77.0 |
| Total Effectiveness, % | 73.5 | 75.1 |
| Design Loads, Btu/h | | |
| Outdoor Air. Sensible | 12099 | 80802 |
| Outdoor Air. Latent | 14770 | 22110 |
| Outdoor Air. Total | 26870 | 102912 |
| Total Recovered | 19816 | 74389 |
| Net OA Load | 7054 | 27690 |
| Installed HVAC Reduction | | |
| Cooling (Tons) /Heating (Btu/hr) | 1.65 | 74389 |
| Purge Angle, ° | 0 | 0 |

Application Rating for Winter is outside the scope of the AHRI ERV Certification Program. Rating for Summer Certified in accordance with the AHRI ERV Certification Program, which is based on AHRI Standard 1060. Certified units may be found in the AHRI Directory at www.ahridirectory.org.



Certificate of Product Ratings

AHRI Certified Reference Number : 518129

Date : 10-03-2019

Model Status : Active

Old AHRI Reference Number :

Brand Name : Airxchange

Product Type : Wheel

Model Number : ERC-3019C

Selection Software Name :

Selection Software Version :

Rated as follows in accordance with the latest edition of ANSI/AHRI 1060 (I-P) Performance Rating of Air-to-Air Exchangers for Energy Recovery Ventilation Equipment and subject to rating accuracy by AHRI-sponsored, independent, third party testing:

Nominal Air Flow (scfm) : 1700

Pressure Drop (at nominal airflow, in. H₂O) : 1.00

| Leakage Ratings | PressureDiff | EATR(%) | OACF | PurgeAngle |
|-------------------------|-----------------|---------------|--------------|------------|
| Test 1 : | 0 | 2.0 | 1.03 | N/A |
| Test 2 : | 0.5 | 1.0 | 1.06 | 1 |
| Test 3 : | 1 | 0.6 | 1.08 | 1 |
| | | | | |
| | Sensible(%) | Latent(%) | Total(%) | |
| 100% Air Flow Heating : | 67 | 62 | 65 | |
| 75 % Air Flow Heating : | 72 | 67 | 70 | |
| 100% Air Flow Cooling : | 67 | 62 | 64 | |
| 75% Air Flow Cooling : | 72 | 67 | 69 | |
| | | | | |
| | Net Sensible(%) | Net Latent(%) | Net Total(%) | |
| 100% Air Flow Heating : | 67 | 62 | 65 | |
| 75 % Air Flow Heating : | 72 | 67 | 70 | |
| 100% Air Flow Cooling : | 64 | 61 | 64 | |
| 75% Air Flow Cooling : | 69 | 66 | 69 | |

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Ratings that are accompanied by WAS indicate an involuntary re-rate. The new published rating is shown along with the previous (i.e. WAS) rating.

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