

REVIEWED

By Pat Newton at 12:20 pm, Feb 07, 2020

Project: ENTERPRISE
225 HUNTMAR DR.

Client: Corcann Heating & Cooling Inc.

DRAWING FOR APPROVAL

Date: February 5th, 2020

Revision Number: 00

Project Number 4012522 // Q-4101650

Prepared By: Pierre Laframboise

Telephone: (613) 829-2816
Email: plaframboise@master.ca

Reviewed
Reviewed as noted

Revise and resubmit
Not reviewed

Date: 2020 Feb. 07

Reviewed by: MH

This review by J.C.F.A.Inc. is for the sole purpose of ascertaining conformance with the general design concept for architectural features only, and does not in any way constitute review of the design of engineering elements which form part of the contract documents prepared by others. This review shall not mean that J.C.F.A.Inc. approves the detailed design inherent in the shop drawings, responsibility for which shall remain with the Contractor submitting same, and such review shall not relieve the Contractor of the responsibility for errors or omissions in the shop drawings or of the responsibility for meeting all requirements of the contract documents. The Contractor is responsible for dimensions to be confirmed and correlated at the job site, for information that pertains solely to fabrication processes or to techniques of construction and installation, and for coordination of the work of all trades.

Jason C. Flynn Architect Inc. (J.C.F.A.Inc.)

For Approval As-Built Revision



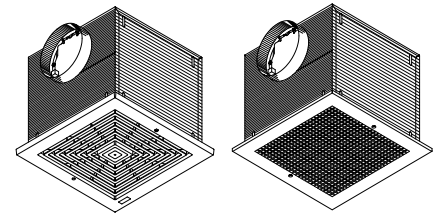
PERFORMANCE & DRAWINGS

Fans



<input checked="" type="checkbox"/> NO COMMENT	<input type="checkbox"/> COMMENT AS NOTED
<input type="checkbox"/> REJECTED	<input type="checkbox"/> REVISE AND RESUBMIT
<input type="checkbox"/> SUBMIT SPECIFIED PRODUCT	
<p>CORRECTIONS OR COMMENTS MADE ON SHOP DRAWINGS DURING THIS REVIEW DO NOT RELIEVE THE CONTRACTOR FROM COMPLIANCE WITH DRAWINGS AND SPECIFICATION REQUIREMENTS. CONTRACTOR IS RESPONSIBLE FOR CONFIRMING AND CORRELATING ALL QUANTITIES, CAPACITIES AND DIMENSIONS, SELECTING FABRICATION, CO-ORDINATING HIS WORK WITH THAT OF ALL OTHER TRADES, AND PERFORMING HIS WORK IN A SAFE AND SATISFACTORY MANNER.</p>	
<p>ANTARES ENGINEERING GROUP INC.</p>	
DATE <u>11-02-2020</u>	PERS <u>S.S.</u>

L100 SERIES & L150 SERIES LOSONE SELECT® CEILING MOUNT VENTILATORS



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- White polymeric ("MG" models - metal, finished with white painted enamel)

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Dynamically-balanced, polymeric, centrifugal blower wheel for quiet, efficient performance
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 6" (152.4 mm) round duct connector
- 1/2" (12.7 mm) acoustic insulation inside
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic back draft damper located within duct connector
- Factory-shipped in horizontal discharge position - easily converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 961L (see "Accessories")

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L100, (L100MG), (L150) or (L150MG).

Ventilator shall have galvanized steel housing insulated with at least 1/2" (12.7 mm) of acoustic insulation. Housing to have adjustable mounting brackets.

Automatic back draft damper to be located within duct connector. Duct connector, blower assembly and wiring plate shall be adjustable for either horizontal or vertical installation.

Blower unit shall be removable from housing and will have a polymeric, dynamically balanced centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model.

Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



"Broan-NuTone LLC certifies that the models 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 AMCA Publication 311 if sound is also certified) and comply with the requirements of the AMCA Certified Ratings Program"



Broan-NuTone LLC, 926 West State Street, Hartford, WI 53027 (1-800-637-1453)
Broan-NuTone Canada Inc., 1140 Tristar Drive, Mississauga, Ontario, Canada L5T 1H9 (1-888-882-7626)

REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

PERFORMANCE RATINGS - L100 SERIES & L150 SERIES LOSONE SELECT® CEILING MOUNT VENTILATORS

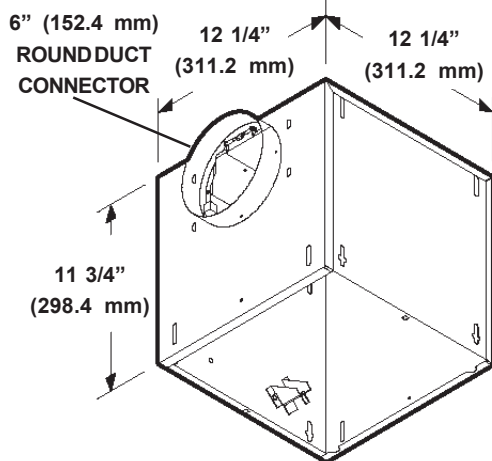
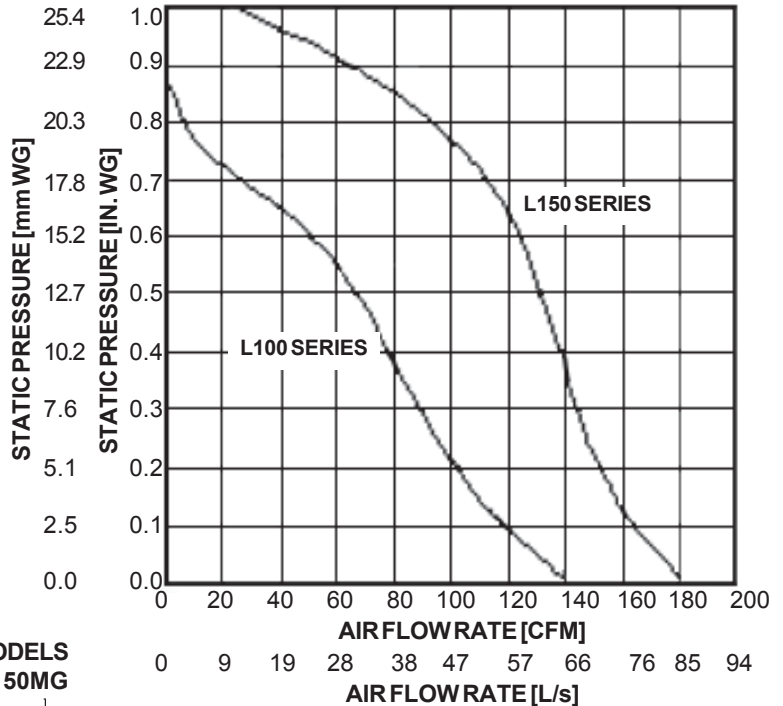
AMCA LICENSED PERFORMANCE

		CFM (L/s) SONES AT STATIC PRESSURE [Ps in. (mm) of water]														
MODEL NUMBER	NOMINAL VOLTAGE		0.0 (0.0)	0.1 (2.5)	0.125 (3.2)	0.250 (6.4)	0.375 (9.5)	0.50 (12.7)	0.625 (15.9)	0.750 (19.0)	0.875 (22.2)	1.0 (25.4)	NOMINAL RPM	AMPS @ 60 Hz	WATTS	
L100	120 VAC	CFM (L/s) Hor.	136 (64.2)	115 (54.3)	109 (51.4)	93 (43.9)	80 (37.8)	65 (30.7)	44 (20.8)	12 (5.7)			640	1.1	87	
		SONES Hor.	0.5	0.8	0.9	1.3	1.8	2.3	3.0	3.2						
		CFM (L/s) Ver.	138 (65.1)	117 (55.2)	112 (52.9)	94 (44.4)	80 (37.8)	67 (31.6)	46 (21.7)	13 (6.1)				650	1.1	87
		SONES Ver.	0.7	0.9	1.0	1.3	1.8	2.2	2.8	3.0						
L100MG	120 VAC	CFM (L/s) Hor.	144 (68.0)	121 (57.1)	115 (54.3)	97 (45.8)	83 (39.2)	68 (32.1)	46 (21.7)	12 (5.7)			630	1.1	87	
		SONES Hor.	0.5	0.8	0.9	1.2	1.8	2.4	3.0	3.3						
		CFM (L/s) Ver.	142 (67.0)	119 (56.2)	115 (54.3)	95 (44.8)	80 (37.8)	67 (31.6)	45 (21.2)	13 (6.1)				640	1.1	87
		SONES Ver.	0.5	0.8	0.9	1.4	1.8	2.3	2.9	3.1						
L150	120 VAC	CFM (L/s) Hor.	181 (85.4)	161 (76.0)	157 (74.1)	141 (66.5)	132 (62.3)	124 (58.5)	114 (53.8)	94 (44.4)	62 (29.3)		710	1.3	100	
		SONES Hor.	1.3	1.4	1.5	2.2	2.6	3.1	3.6	4.1	4.6					
		CFM (L/s) Ver.	179 (84.5)	163 (76.9)	160 (75.5)	149 (70.3)	142 (67.0)	133 (62.8)	122 (57.6)	105 (49.6)	73 (34.5)	23 (10.9)		750	1.3	100
		SONES Ver.	1.4	1.6	1.6	2.0	2.5	3.0	3.3	3.6	3.9	4.2				
L150MG	120 VAC	CFM (L/s) Hor.	184 (86.8)	165 (77.9)	161 (76.0)	148 (69.8)	141 (66.5)	135 (63.7)	126 (59.5)	108 (51.0)	74 (34.9)	19 (9.0)	710	1.3	100	
		SONES Hor.	1.1	1.4	1.4	1.9	2.3	2.8	3.2	3.8	4.1	4.5				
		CFM (L/s) Ver.	183 (86.4)	165 (77.9)	162 (76.5)	151 (71.3)	143 (67.5)	135 (63.7)	124 (58.5)	107 (50.5)	76 (35.9)	26 (12.3)		725	1.3	100
		SONES Ver.	1.4	1.6	1.6	2.0	2.5	3.0	3.3	3.6	4.0	4.4				

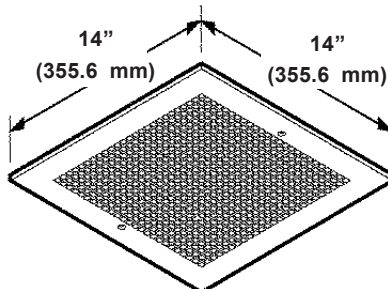
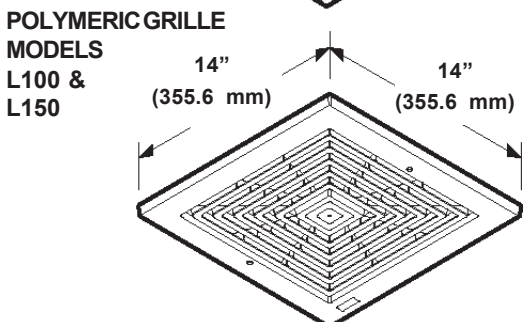
Performance ratings include the effects of inlet grille and back draft damper in the air stream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.



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METAL GRILLE MODELS
L100MG & L150MG



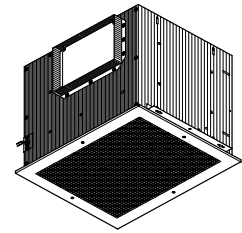
WEIGHT

MODEL	SHIPPING WT.
L100	22.8 lbs. (10.3 kg)
L100MG	23.7 lbs. (10.8 kg)
L150	23.1 lbs. (10.5 kg)
L150MG	23.7 lbs. (10.8 kg)



*PRODUCT SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

MODELS L900 & **L1500** LOSONE SELECT® CEILING MOUNT VENTILATORS



Incredibly reliable. Unbelievably quiet. Offering the CFM choices you need at the lowest sound levels in the industry.

FEATURES

GRILLE:

- Conceals interior
- Low profile styling blends with any decor
- Metal, finished with white painted enamel

BLOWER:

- Low RPM for quiet operation
- Resilient anti-vibration mounts
- Dynamically-balanced, polymeric, centrifugal blower wheel for quiet, efficient performance
- Permanently lubricated, thermally protected motor
- Plug-in motor rated at 120 VAC
- Designed for continuous operation

HOUSING:

- Rugged, 20 gauge galvanized steel
- 1/2" (12.7 mm) acoustic insulation inside
- May be installed in ceiling or wall (size permitting)
- 8-position mounting brackets for easy installation and greater adaptability to various mounting requirements
- Automatic back draft damper located within duct connector
- Factory-shipped in horizontal discharge position for 8" x 12" (203.2 mm x 304.8 mm) ductwork
- May be converted to vertical discharge
- May be installed as an in-line ventilator with addition of accessory kit Model 983L (purchase separately)

TYPICAL SPECIFICATION

Ventilator shall be Broan Model L900 or (L1500).

Ventilator shall have galvanized steel housing insulated with at least 1/2" (12.7 mm) of acoustic insulation. Housing to have adjustable mounting brackets.

Automatic back draft damper to be located within duct connector. Duct connector, blower assembly and wiring plate shall be adjustable for either horizontal or vertical installation.

Blower unit shall be removable from housing and will have a polymeric, centrifugal-type blower wheel. Motor to be permanently lubricated and mounted with resilient anti-vibration mounts. RPM not to exceed number listed for each model.

Air delivery shall be no less and sound levels no greater than listed for each model. All air and sound ratings shall be certified by AMCA. Units to be UL and cUL listed.



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REFERENCE	QTY.	REMARKS	Project
			Location
			Architect
			Engineer
			Contractor
			Submitted by Date

PERFORMANCE RATINGS - MODELS L900 & L1500 LOSONE SELECT® CEILING MOUNT VENTILATORS

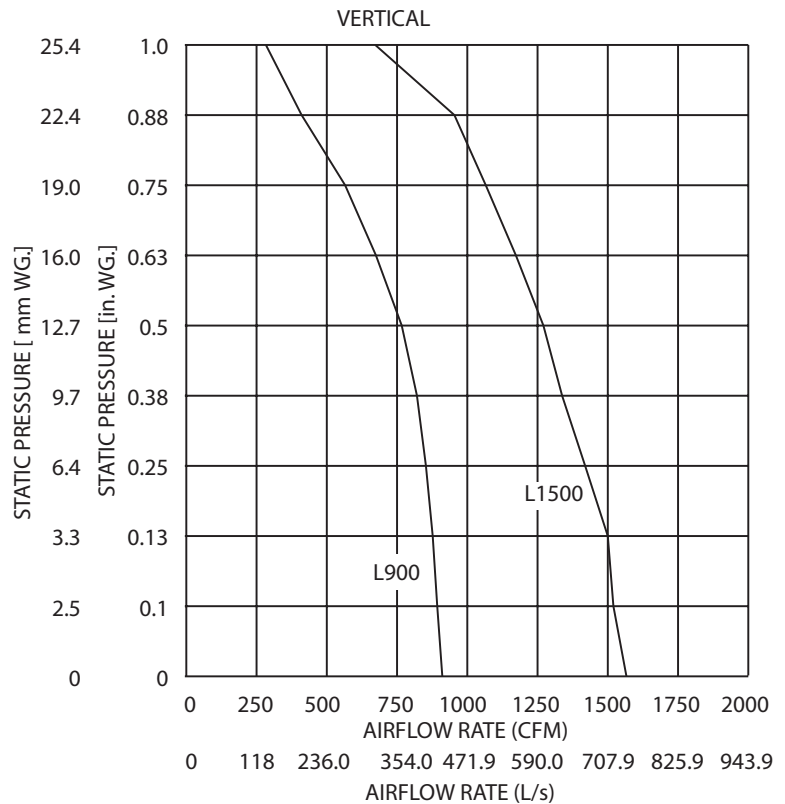
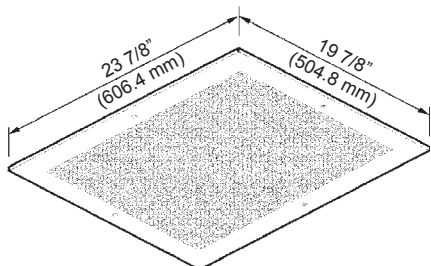
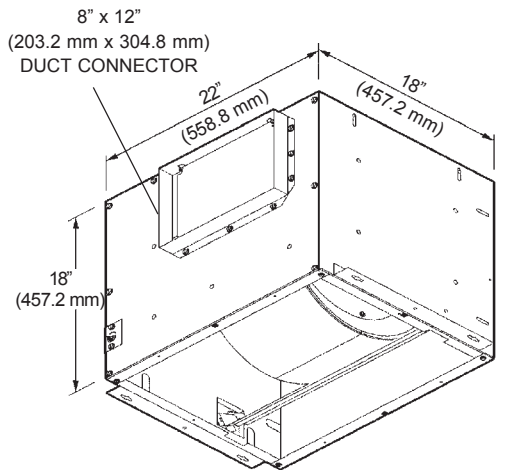
AMCA LICENSED PERFORMANCE

CFM (L/s) SONES AT STATIC PRESSURE [Ps in. (mm) of water]															
MODEL NUMBER	NOMINAL VOLTAGE		0.0 (0.0)	0.1 (2.5)	0.125 (3.2)	0.250 (6.4)	0.375 (9.5)	0.50 (12.7)	0.625 (15.9)	0.750 (19.0)	0.875 (22.2)	1.0 (25.4)	NOMINAL RPM	AMPS @ 60 Hz	WATTS
L900	120 VAC	CFM (L/s) Hor.	918 (433.2)	905 (427.1)	901 (425.2)	877 (413.9)	842 (397.4)	793 (374.3)	725 (342.2)	636 (300.2)	536 (253.0)	390 (184.1)	650	3.0	306
		SONES Hor.	3.8	4.0	4.1	4.0	4.2	4.3	4.4	4.9	4.5	5.3			
		CFM (L/s) Ver.	909 (429.0)	892 (421.0)	885 (417.7)	850 (401.2)	807 (380.9)	756 (356.8)	695 (328.0)	568 (268.1)	440 (207.7)	282 (133.1)	650	3.0	306
		SONES Ver.	3.8	3.4	3.4	3.5	3.6	3.7	3.9	4.2	4.3	4.4			
L1500	120 VAC	CFM (L/s) Hor.	1578 (744.7)	1526 (720.2)	1513 (714.1)	1438 (678.7)	1371 (647.0)	1285 (606.5)	1198 (565.4)	1103 (520.6)	1000 (471.9)	816 (385.1)	955	5.0	468
		SONES Hor.	8.6	8.4	8.4	8.1	7.5	7.0	6.7	6.2	5.8	5.8			
		CFM (L/s) Ver.	1590 (750.4)	1519 (716.9)	1502 (708.9)	1423 (671.6)	1340 (632.4)	1259 (594.2)	1176 (555.0)	1069 (504.5)	954 (450.2)	689 (325.2)	955	5.0	468
		SONES Ver.	8.5	8.4	8.4	8.1	7.9	7.5	7.2	7.1	6.9	6.5			

Performance ratings include the effects of inlet grille and back draft damper in the air stream. Speed (RPM) shown is nominal. Performance is based on actual speed of test. The sound ratings shown are loudness values in fan sones at 5' (1.5m) in a hemispherical free field calculated per AMCA Std. 301. Values shown are for Installation Type B: Free inlet fan sone levels. Performance shown is for Installation Type B: Free inlet, Ducted outlet.



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WEIGHT

MODEL	SHIPPING WT.
L900	64.2 lbs. (29.1 kg)
L1500	64.3 lbs. (29.2 kg)



*PRODUCT SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE



PERFORMANCE & DRAWINGS

Grilles & Diffusers



- NO COMMENT
- COMMENT AS NOTED
- REJECTED
- REVISE AND RESUBMIT
- SUBMIT SPECIFIED PRODUCT

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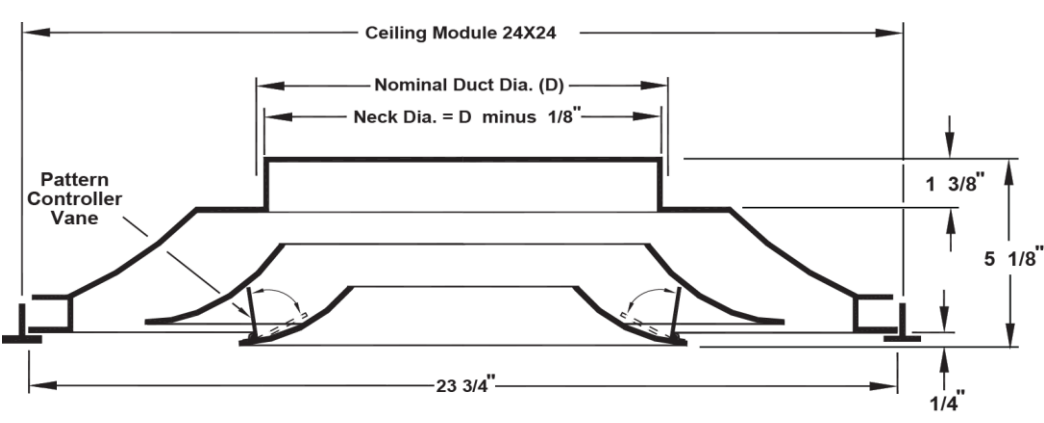
**ANTARES ENGINEERING
GROUP INC.**

DATE 11-02-2020 PERS S.S.

TMSA

Adjustable High performance three cone diffuser, Steel.

Size: 10"
 Quantity: x10

Main Product	TMSA-1				
<p>TMSA</p> 					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Nominal Duct Size (D)</th> <th style="width: 50%;">Neck Size</th> </tr> <tr> <td style="text-align: center;">10" Dia.</td> <td style="text-align: center;">9 7/8" Dia.</td> </tr> </table>		Nominal Duct Size (D)	Neck Size	10" Dia.	9 7/8" Dia.
Nominal Duct Size (D)	Neck Size				
10" Dia.	9 7/8" Dia.				

Qty. 11 indicated on M2.

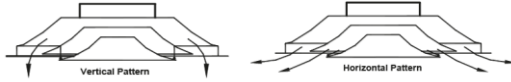
General Description	TMSA-1
<ul style="list-style-type: none"> Model TMSA includes adjustable vanes which vary the discharge pattern between horizontal and vertical. Delivers supply air in a true 360° pattern. Designed to protect ceiling from streaking and smudging. Excellent for variable volume systems. The uniform jet maintains effective room air distribution even when air volume varies over a considerable range. The TMSA consists of 3 concentric cones in all sizes. This uniformity of design enhances appearance in installations where more than one size is involved. Screwdriver adjustment of the optional damper is achieved without removing the inner cone. (See bottom). Quick removal of inner cone with a hex key speeds installation. (See bottom). All cones are die-stamped one piece construction with smooth, clean surfaces and no corner joints. Material is heavy gauge steel. 	

Option Schedule	TMSA-1								
<table border="1" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;">ID</th> <th style="width: 15%;">Quantity</th> <th style="width: 15%;">Tag</th> <th style="width: 60%;">DIM 1 NECK SIZE</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: center;">10</td> <td></td> <td style="text-align: center;">10" DIAMETER</td> </tr> </tbody> </table>		ID	Quantity	Tag	DIM 1 NECK SIZE	1	10		10" DIAMETER
ID	Quantity	Tag	DIM 1 NECK SIZE						
1	10		10" DIAMETER						
<p>DIM 2 NECK SIZE NONE MODULE SIZE 24X24 BORDER 3 - LAY-IN FINISH 26 - WHITE</p> <p style="text-align: right;">DAMPER MODEL 0 - NONE ACCESSORY 1 NONE ACCESSORY 2 NONE ACCESSORY 3 NONE</p>									

Accessories

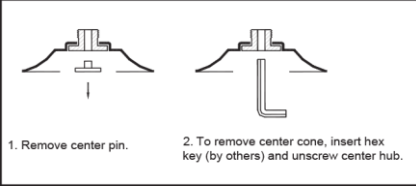
TMSA-1

Adjusting the Air Discharge Pattern



Note: Pattern controller vanes are adjustable to any position from vertical to horizontal.

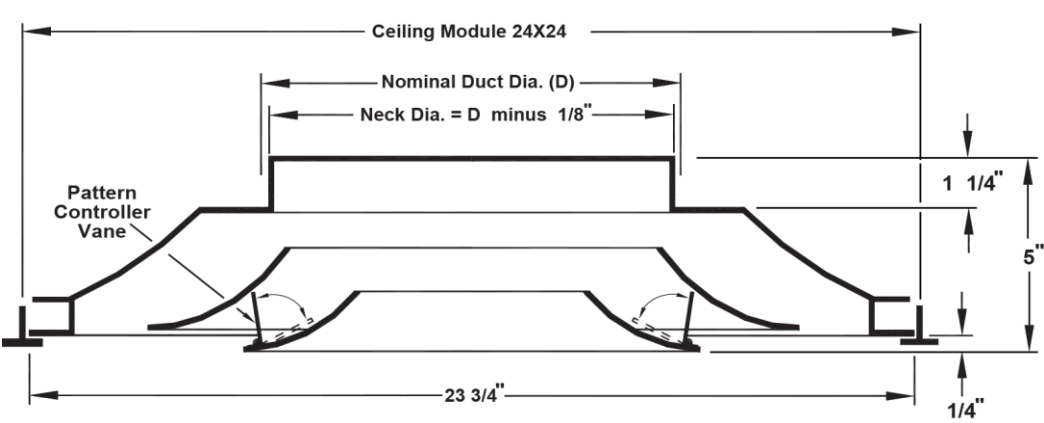
Removing Center Cone



TMSA

Size: 8"
 Quantity: x1

Adjustable High performance three cone diffuser, Steel.

Main Product	TMSA-1 (2)				
<p>TMSA</p> 					
<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <th style="width: 50%;">Nominal Duct Size (D)</th> <th style="width: 50%;">Neck Size</th> </tr> <tr> <td style="text-align: center;">8" Dia.</td> <td style="text-align: center;">7 7/8" Dia.</td> </tr> </table>	Nominal Duct Size (D)	Neck Size	8" Dia.	7 7/8" Dia.	
Nominal Duct Size (D)	Neck Size				
8" Dia.	7 7/8" Dia.				

General Description	TMSA-1 (2)
<ul style="list-style-type: none"> Model TMSA includes adjustable vanes which vary the discharge pattern between horizontal and vertical. Delivers supply air in a true 360° pattern. Designed to protect ceiling from streaking and smudging. Excellent for variable volume systems. The uniform jet maintains effective room air distribution even when air volume varies over a considerable range. The TMSA consists of 3 concentric cones in all sizes. This uniformity of design enhances appearance in installations where more than one size is involved. Screwdriver adjustment of the optional damper is achieved without removing the inner cone. (See bottom). Quick removal of inner cone with a hex key speeds installation. (See bottom). All cones are die-stamped one piece construction with smooth, clean surfaces and no corner joints. Material is heavy gauge steel. 	

Option Schedule	TMSA-1 (2)								
<table border="1" style="width: 100%; border-collapse: collapse; margin-bottom: 10px;"> <tr> <th style="width: 10%;">ID</th> <th style="width: 15%;">Quantity</th> <th style="width: 15%;">Tag</th> <th style="width: 60%;">DIM 1 NECK SIZE</th> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: center;">1</td> <td></td> <td style="text-align: center;">8" DIAMETER</td> </tr> </table> <div style="display: flex; justify-content: space-between;"> <div style="width: 45%;"> <p>DIM 2 NECK SIZE NONE</p> <p>MODULE SIZE 24X24</p> <p>BORDER 3 - LAY-IN</p> <p>FINISH 26 - WHITE</p> </div> <div style="width: 45%;"> <p>DAMPER MODEL 0 - NONE</p> <p>ACCESSORY 1 NONE</p> <p>ACCESSORY 2 NONE</p> <p>ACCESSORY 3 NONE</p> </div> </div>		ID	Quantity	Tag	DIM 1 NECK SIZE	2	1		8" DIAMETER
ID	Quantity	Tag	DIM 1 NECK SIZE						
2	1		8" DIAMETER						

Accessories

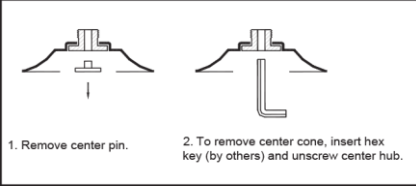
TMSA-1 (2)

Adjusting the Air Discharge Pattern



Note: Pattern controller vanes are adjustable to any position from vertical to horizontal.

Removing Center Cone



50F

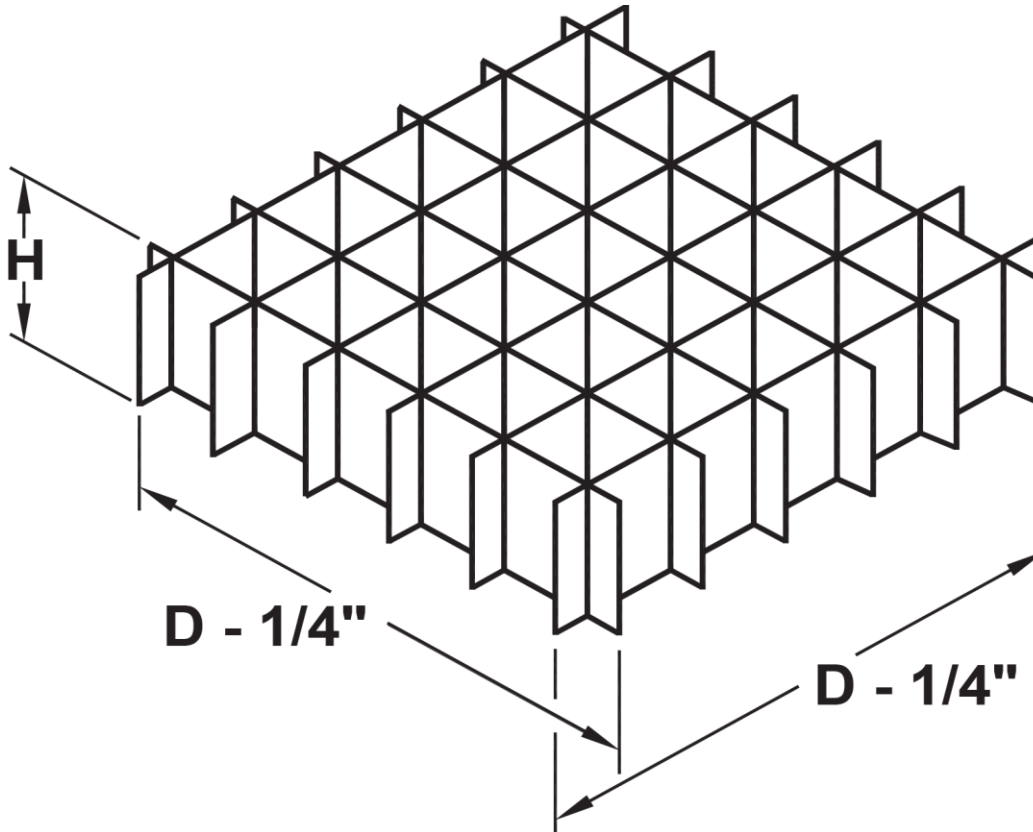
Size: 24x24 Quantity: x4
 Size: 24x12 Quantity: x6

Eggcrate return, aluminum border and aluminum grid.

Main Product

50F-1

50F



A Core border with 1/2 x 1/2 x 1 Aluminum Grid

Duct Width	Duct Height	Core OA Width	Core OA Height
24	24	23.75	23.75
24	12	23.75	11.75

General Description

50F-1

- 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

Project 4012522 - 225 Huntmar - G
Architect
Engineer
Contractor
Designation



Date 02/05/2020
Office Master Group
Preparer jongyun@master.ca
Version 2014.0.467

Option Schedule 50F-1

ID	Quantity	Tag	WIDTH IN INCHES	HEIGHT IN INCHES
1	4		24	24
2	6		24	12

MODULE SIZE NONE

BORDER 8 - CORE ONLY

FINISH 26 - WHITE

FASTENING N - NO SCREW HOLES

DAMPER MODEL 0 - NONE

EGGCRATE CORE CORE B (BORDER 8)

ACCESSORY 2 NONE

ACCESSORY 3 NONE