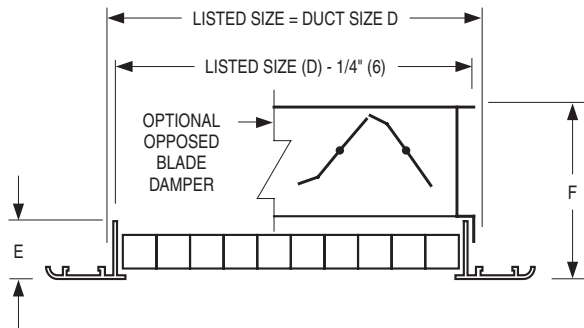
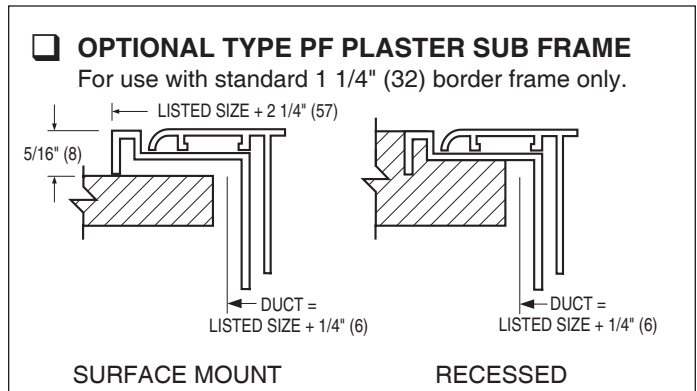
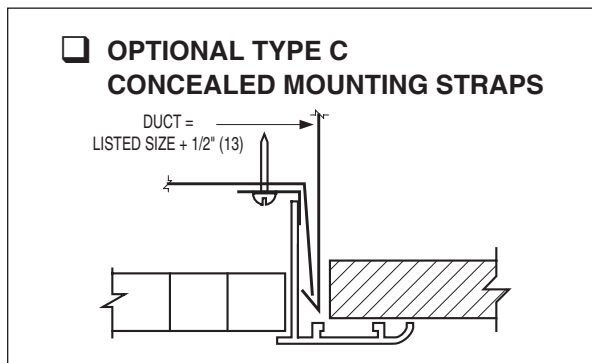
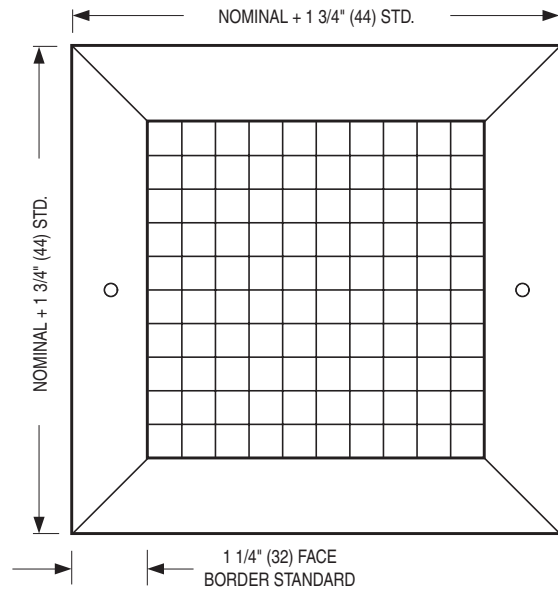




**ALUMINUM EGGCRATE RETURN GRILLES AND  
REGISTERS  
SURFACE MOUNT  
MODELS: 51EC(-O) TYPE S**



DIMENSION	STANDARD FRAME WITH 1/2 x 1/2 x 1/2 STD. CORE	OPTIONAL NF FRAME AND/OR OPTIONAL CORE
E	7/8" (22)	1 1/4" (32)
F	2 5/8" (67)	3" (76)



- Model 51EC Grille Type S.**  
For surface mount applications.
- Model 51EC-O Register Type S.**  
For surface mount applications with opposed blade damper.

**DESCRIPTION:**

1. Construction: Extruded aluminum heavy gauge frame mechanically interlocked with hairline mitered corners for strength. 1/2 x 1/2 x 1/2 (13 x 13 x 13) aluminum grid core (code CA) is standard. A high capacity return or exhaust outlet with maximum free area for minimum pressure drop and sound generation.
2. Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
3. Minimum size is 4" x 4" (102 x 102).  
Maximum size one piece construction is 48" x 48" (1219 x 1219).
4. Type S Surface mount standard frame has a 1 1/4" (32) face border and a 1" (25) overlap margin. Available in multiple sections with mullions - see submittal OG-1-A.
5. Standard fastening is Type A countersunk screw holes.
6. Standard finish is AW Appliance White.

**OPTIONS:**

1. Finish:
  - SA Satin (clear) anodized/mill core.
  - SP Special \_\_\_\_\_.
2. Fastening:
  - Type C Concealed mounting straps
3.  OA Aluminum opposed blade damper (model suffix).
4.  Type NF Narrow frame with 1" (25) face border and a 3/4" (19) overlap margin. O.A. flange to flange dim. = listed size + 1 1/4" (32).
5.  PF Plaster frame
6.  IS Insert screen
7. Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
8.  Other \_\_\_\_\_.

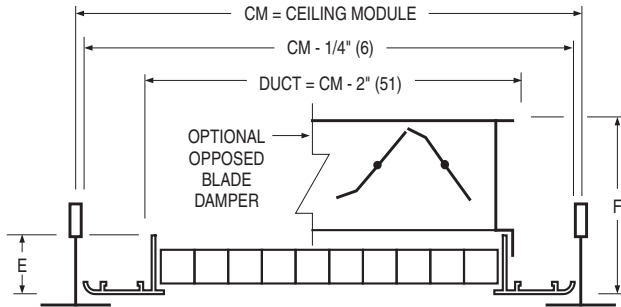
<b>SCHEDULE TYPE:</b>
<b>PROJECT:</b>
<b>ENGINEER:</b>
<b>CONTRACTOR:</b>

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
9 - 1 - 20	5100	2 - 1 - 11	51EC-1

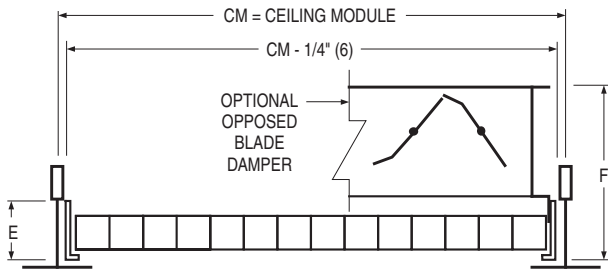


**ALUMINUM EGGCRATE RETURN  
GRILLES AND REGISTERS  
LAY-IN T-BAR  
MODELS: 51EC(-O) TYPES L, A AND C**



**TYPE L ALUMINUM FRAME/BORDER**

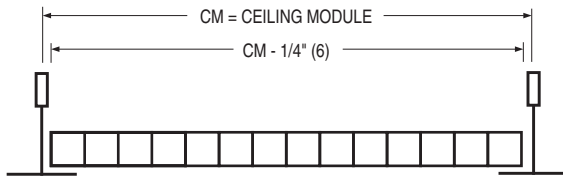
Model 51EC Grille     Model 51EC-O Register



**TYPE A CONCEALED ANGLE FRAME (non-ducted applications)**

Model 51EC Grille     Model 51EC-O Register

DIMENSION	STANDARD FRAME WITH 1/2 x 1/2 x 1/2 STD. CORE	WITH 1/2 x 1/2 x 1 OR 1 x 1 x 1 OPTIONAL CORE
E	7/8" (22)	1 1/4" (32)
F	2 5/8" (67)	3" (76)



**TYPE C CORE ONLY (for non-ducted applications)     Model 51EC**

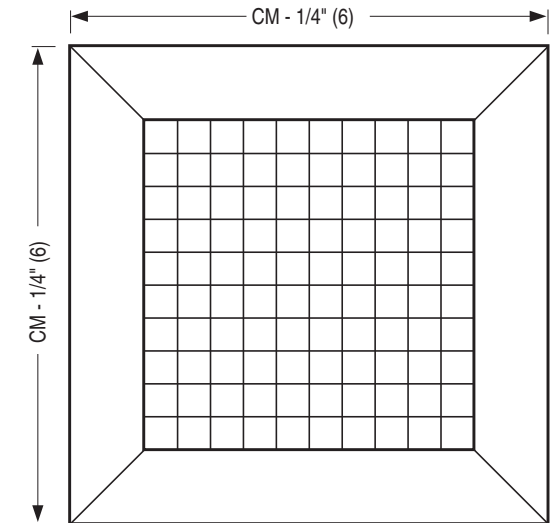
**DESCRIPTION:**

- Construction: Extruded aluminum heavy gauge frame mechanically interlocked with hairline mitered corners for strength on Type L. 1/2 x 1/2 x 1/2 (13 x 13 x 13) aluminum grid core (code CA) is standard on all models. A high capacity return or exhaust outlet with maximum free area for minimum pressure drop and sound generation.
- Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
- Minimum size is 4" x 4" (102 x 102).  
Maximum size is 48" x 48" (1219 x 1219) for Types L and A.  
Maximum size is 48" x 24" (1219 x 610) for Type C.  
Nominal List Size = Ceiling Module Size.
- Standard finish is AW Appliance White.

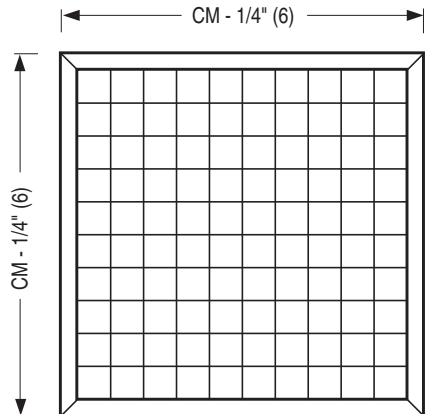
**OPTIONS:**

- Finish:
  - SA Satin (clear) anodized frame/mill core (Type L)
  - SP Special \_\_\_\_\_ .
- OA Aluminum opposed blade damper (model suffix)
- Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
  - Other \_\_\_\_\_ .

Dimensions are in inches (mm).



1 1/4" (32) FACE BORDER



1/4" (6) CONCEALED STEEL ANGLE FRAME

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

2 - 1 - 11

5100

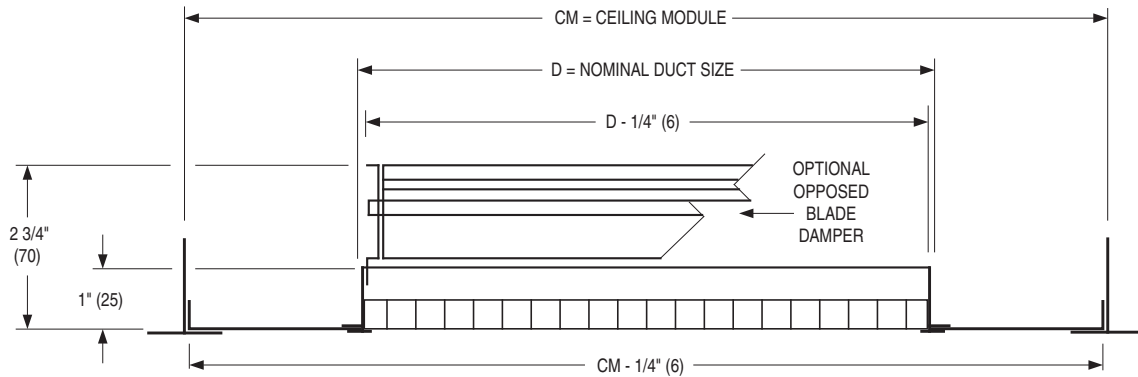
5100-48/6-30-03

51EC-2



**EGGCRATE RETURN GRILLES & REGISTERS**  
 ALUMINUM CORE AND FRAME  
 PANEL MOUNTED • LAY-IN T-BAR  
 MODELS: 51EC(-O) TYPE PLS OR PLA

FOR LAY-IN T-BAR TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

- MODEL 51EC** Eggcrate Return Air Grille
- Type PLS** Steel Panel
- Type PLA** Aluminum Panel

- MODEL 51EC-O** Eggcrate Return Air Register (Includes O. B. Damper)
- Type PLS** Steel Panel
- Type PLA** Aluminum Panel

Maximum Duct/Neck Size D = Ceiling Module - 3" (76)

**DESCRIPTION:**

- Material: Aluminum core and extruded frame mounted in an extended panel.
- Models 51EC and 51EC-O Type PLS or PLA have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment standard exposed grid T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_
- Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)
- OA Aluminum opposed blade damper (model suffix).

<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

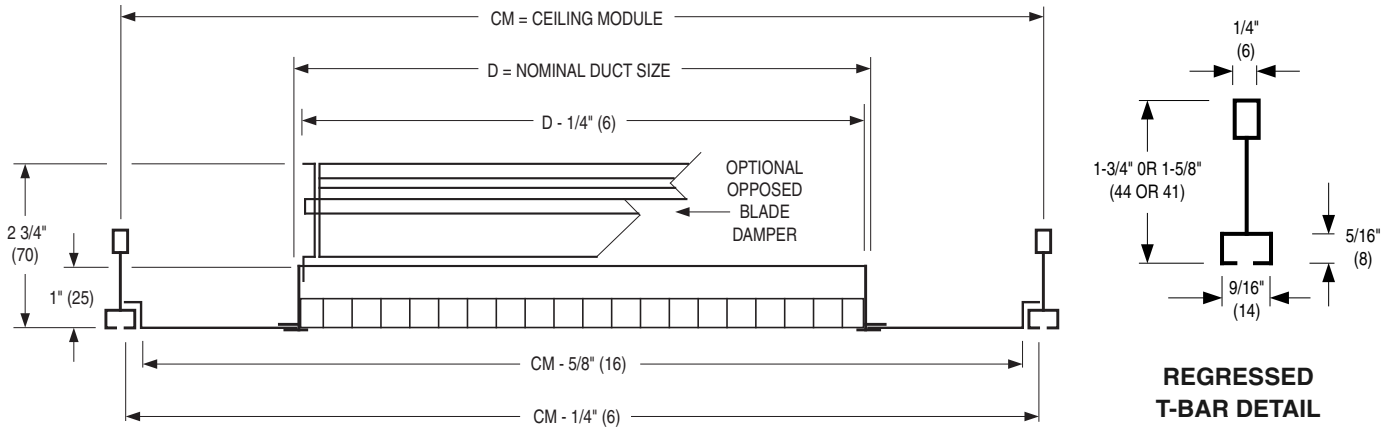
Dimensions are in inches (mm).

<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
2 - 1 - 11	5100	NEW	51EC-3



**EGGCRATE RETURN GRILLES & REGISTERS**  
**ALUMINUM CORE AND FRAME**  
**PANEL MOUNTED • NARROW REGRESSED T-BAR**  
**MODELS: 51EC(-O) TYPE FPS OR FPA**

FOR FINELINE® TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULES (CM)			AVAILABLE DUCT/NECK SIZES
Imperial Modules		Metric Modules	
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)	
20 x 20	508 x 508	500 x 500	6" x 6" (152 x 152) up to 16" x 16" (406 x 406) in 2" (51) increments
24 x 24	610 x 610	600 x 600	6" x 6" (152 x 152) up to 20" x 20" (508 x 508) in 2" (51) increments

- MODEL 51EC** Eggcrate Return Air Grille
  - Type FPS** Steel Panel
  - Type FPA** Aluminum Panel
  
- MODEL 51EC-O** Eggcrate Return Air Register (Includes O. B. Damper)
  - Type FPS** Steel Panel
  - Type FPA** Aluminum Panel

**DESCRIPTION:**

1. Material: Aluminum core and extruded frame mounted in an extended panel.
2. Models 51EC and 51EC-O Type FPS or FPA have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment regressed 'narrow-tee' type T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
3. 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
4. Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
5. Standard finish is AW Appliance White.

**OPTIONS:**

1. Finish:
  - SP Special \_\_\_\_\_ .
2. Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)
3.  OA Aluminum opposed blade damper (model suffix).

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<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	2 - 1 - 11	5100	NEW	51EC-4	



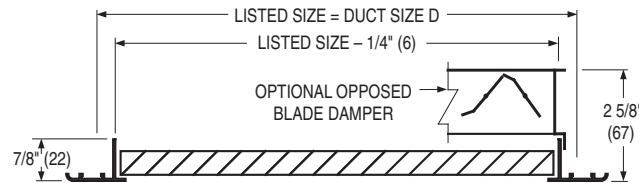
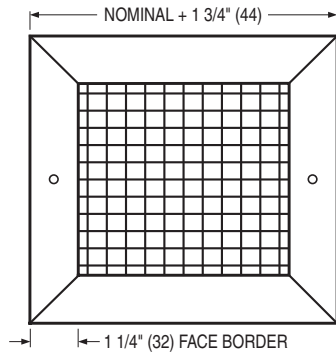
**ALUMINUM EGGCRATE RETURN GRILLES & REGISTERS**  
 45° DEFLECTION • SIGHTPROOF  
**MODELS: 51EC45(-O) TYPE S AND L**

**MODELS**

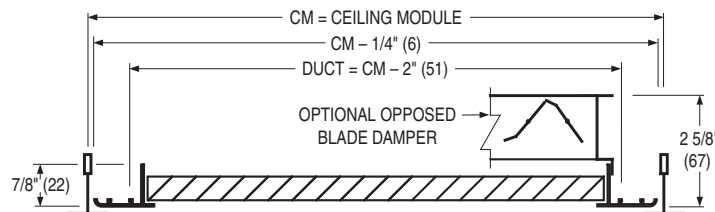
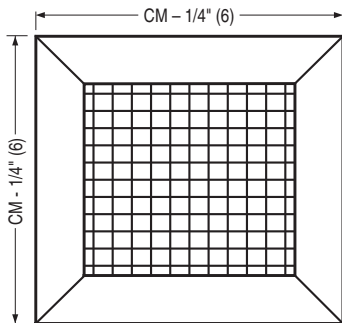
**Model 51EC45**  
 Eggcrate Return Air Grille

**Model 51EC45-O**  
 Eggcrate Return Air Register (Includes Opposed Blade Damper)

**Type S Surface Mount Frame**



**Type L Lay-in T-Bar • Full Face**



**Type L Available Sizes**

CM Ceiling Module Dimension	
inches	S. I. mm
12 x 12	300 x 300
24 x 12	600 x 300
36 x 12	900 x 300
20 x 20	500 x 500
24 x 24	600 x 600
36 x 24	900 x 600
48 x 24	1200 x 600

Duct size = CM - 2" (51)

**DESCRIPTION:**

1. Extruded aluminum heavy gauge frame mechanically interlocked with hairline mitered corners for strength. 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core is angled at 45° to prevent "see through" from three directions.
2. Sight resistant parallel to width/long dimension.
3. Optional roll-formed steel opposed blade damper has a screwdriver slot operator. A portion of the core is removed to allow access.
4. Type S Surface Mount frame has a 1 1/4" (32) face border and a 1" (25) overlap margin. Type L Lay-in T-Bar frame has a 1 1/4" (32) face border.
5. Type S is available in nominal sizes 4" x 4" (102 x 102) through 48" x 24" (1219 x 610) in one piece construction. Fractional and metric sizes are available.
6. Standard fastening for Type S Frame is Type A countersunk screw holes.
7. Standard finish is AW Appliance White.

**OPTIONS:**

- IS Insect Screen (not available with opposed blade damper)
  - PF Plaster Frame (Type S only)
  - EQT Earthquake Tabs
  - OA Aluminum opposed blade damper (model suffix)
  - Other \_\_\_\_\_
  - GK Foam Gasket
- Finish:
- SP Special \_\_\_\_\_

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

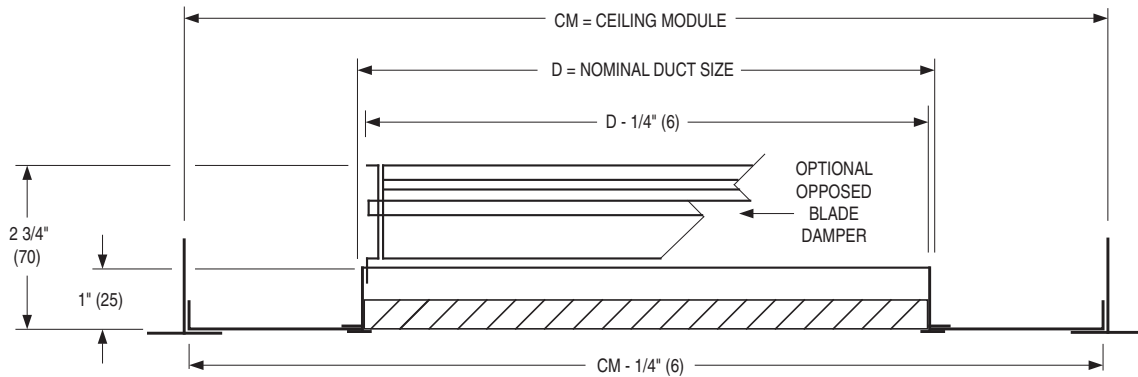
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
12 - 10 - 15	5100	11 - 10 - 15	51EC45-1



**ALUMINUM EGGCRATE RETURN GRILLES & REGISTERS**  
 45° DEFLECTION • SIGHTPROOF  
 PANEL MOUNTED • LAY-IN T-BAR  
 MODELS: 51EC45(-O) TYPE PLS OR PLA

**FOR LAY-IN T-BAR TYPE CEILING SYSTEMS**



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

- MODEL 51EC45** Eggcrate Return Air Grille
  - Type PLS** Steel Panel
  - Type PLA** Aluminum Panel
  
- MODEL 51EC45-O** Eggcrate Return Air Register (Includes O. B. Damper)
  - Type PLS** Steel Panel
  - Type PLA** Aluminum Panel

Maximum Duct/Neck Size D = Ceiling Module - 3" (76)

**DESCRIPTION:**

- Material: Aluminum core and extruded frame mounted in an extended panel.
- Models 51EC45 and 51EC45-O Type PLS or PLA have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment standard exposed grid T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core is angled at 45° to prevent "see through" from three directions.
- Sight resistant parallel to width/long dimension.
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

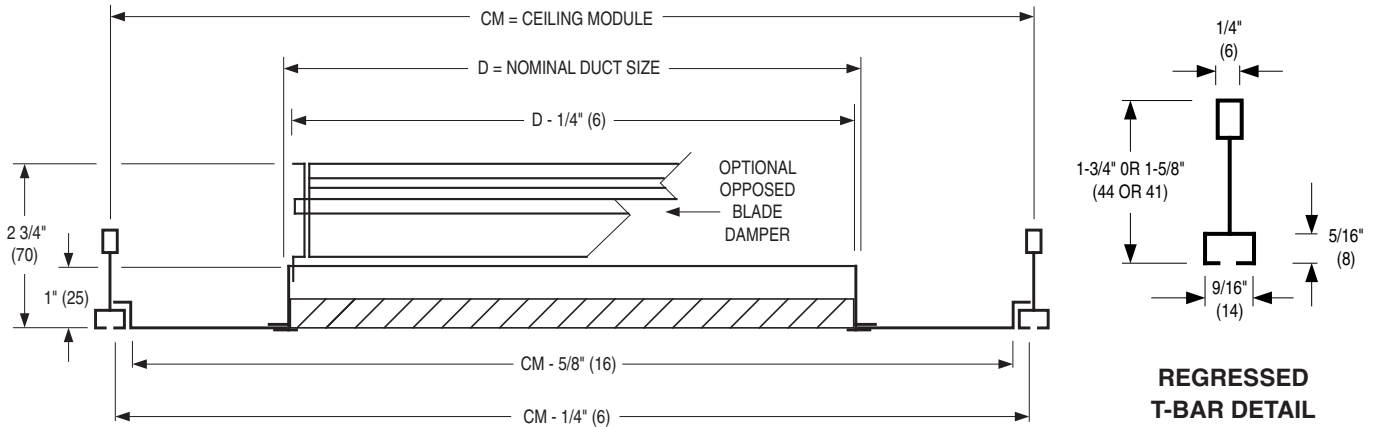
- Finish:
  - SP Special \_\_\_\_\_ .
- OA Aluminum opposed blade damper (model suffix).

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	11 - 10 - 15	5100	NEW	51EC45-2	



**ALUMINUM EGGCRATE RETURN GRILLES & REGISTERS**  
 45° DEFLECTION • SIGHTPROOF  
 PANEL MOUNTED • NARROW REGRESSED T-BAR  
**MODELS: 51EC45(-O) TYPE FPS OR FPA**

**FOR FINELINE® TYPE CEILING SYSTEMS**



AVAILABLE CEILING MODULES (CM)			AVAILABLE DUCT/NECK SIZES
Imperial Modules		Metric Modules	
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)	
20 x 20	508 x 508	500 x 500	6" x 6" (152 x 152) up to 16" x 16" (406 x 406) in 2" (51) increments
24 x 24	610 x 610	600 x 600	6" x 6" (152 x 152) up to 20" x 20" (508 x 508) in 2" (51) increments

- MODEL 51EC45** Eggcrate Return Air Grille
  - Type FPS** Steel Panel
  - Type FPA** Aluminum Panel
  
- MODEL 51EC45-O** Eggcrate Return Air Register (Includes O. B. Damper)
  - Type FPS** Steel Panel
  - Type FPA** Aluminum Panel

**DESCRIPTION:**

1. Material: Aluminum core and extruded frame mounted in an extended panel.
2. Models 51EC45 and 51EC45-O Type FPS or FPA have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment regressed 'narrow-tee' type T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
3. 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core is angled at 45° to prevent "see through" from three directions.
4. Sight resistant parallel to width/long dimension.
5. Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
6. Standard finish is AW Appliance White.

**OPTIONS:**

1. Finish:
  - SP Special \_\_\_\_\_ .
2.  OA Aluminum opposed blade damper (model suffix).

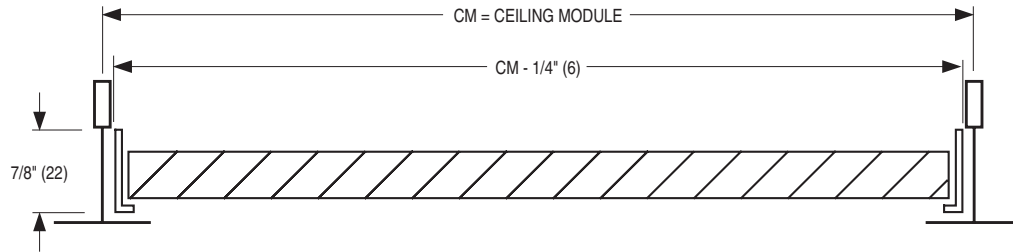
Fineline® is a registered trademark of USG Interiors Inc.

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	11 - 10 - 15	5100	NEW	51EC45-3	

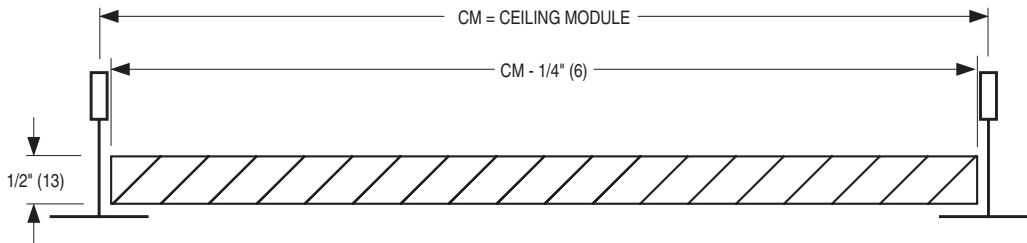


**ALUMINUM EGGCRATE RETURN GRILLES**  
 1/2" x 1/2" x 1/2" (13 x 13 x 13) • LAY-IN T-BAR  
 45° DEFLECTION • SIGHTPROOF  
**MODELS: 51EC45 TYPE A CONCEALED ANGLE FRAME**  
**TYPE C (CORE ONLY)**

**Type A Concealed Angle Frame** (for non-ducted applications)



**Type C (Core Only)** (for non-ducted applications)



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

**DESCRIPTION:**

- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core (Code CA) is angled at 45° to prevent "see through" from three directions.
- Sight resistant parallel to width/long dimension.
- Available in nominal sizes 4" x 4" (102 x 102) through 48" x 24" (1219 x 610) in one piece construction. Fractional and metric sizes are available.  
Nominal List Size = Ceiling Module Size.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - AL Aluminum
  - BK Black
  - BW British White
  - MI Mill Finish
  - PC Prime Coat
  - SP Special \_\_\_\_\_.

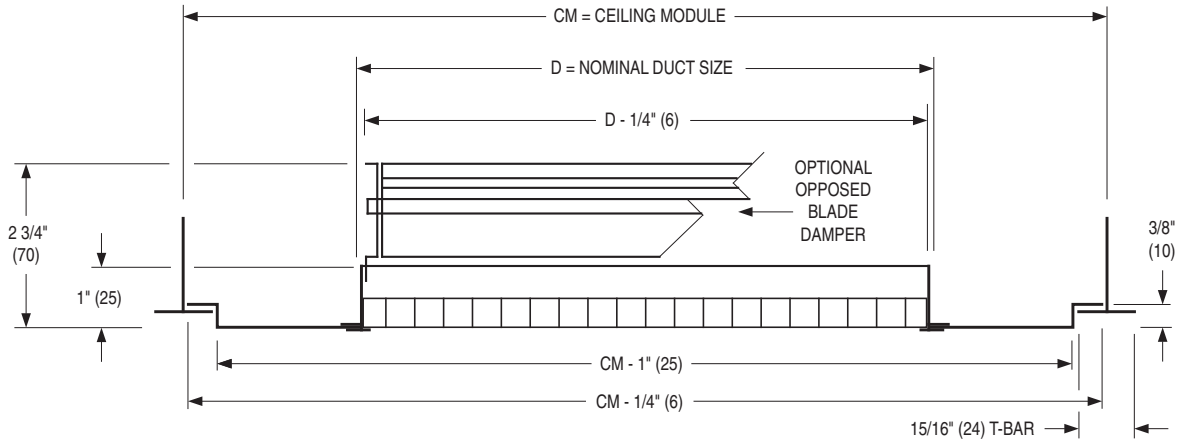
<b>SCHEDULE TYPE:</b>	Dimensions are in inches (mm).			
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	3 - 20 - 20	5100	NEW	51EC45-4





**EGGCRATE RETURN GRILLES & REGISTERS**  
**ALUMINUM CORE AND FRAME**  
**TEGULAR PANEL MOUNTED • LAY-IN T-BAR**  
**MODELS: 51EC(-O) TYPE TPS OR TPA**

TO MATCH TEGULAR TILE LAY-IN 1" (25) T-BAR TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

Maximum Duct/Neck Size D = Ceiling Module - 3" (76)

- MODEL 51EC** Eggcrate Return Air Grille
  - Type TPS** Tegular Steel Panel
  - Type TPA** Tegular Aluminum Panel
  
- MODEL 51EC-O** Eggcrate Return Air Register (Includes O. B. Damper)
  - Type TPS** Tegular Steel Panel
  - Type TPA** Tegular Aluminum Panel

**DESCRIPTION:**

- Material: Aluminum core and extruded frame mounted in an extended panel.
- Models 51EC and 51EC-O Type TPS or TPA have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment standard 1 (25) nominal exposed grid T-Bar suspended ceiling systems utilizing tegular (drop face) ceiling tiles. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

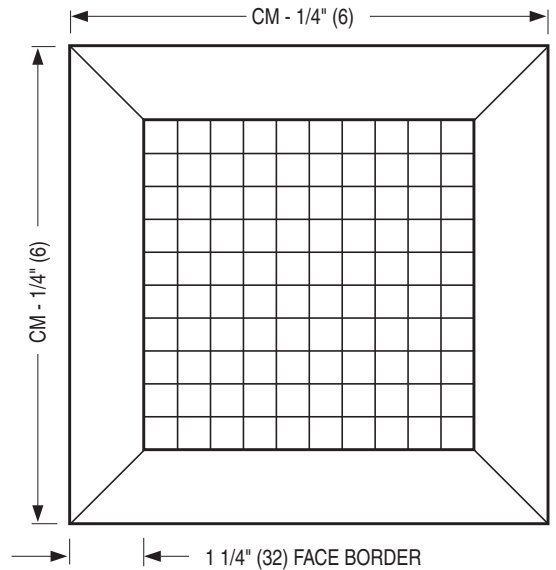
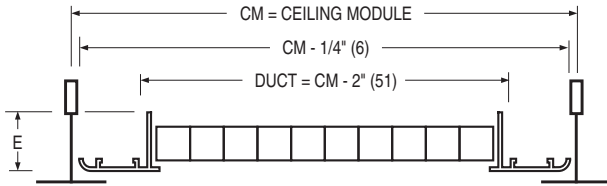
**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_ .
- Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)
- OA Aluminum opposed blade damper (model suffix).

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	11 - 11 - 15	5100	6 - 2 - 14	51EC-4A	



**ALUMINUM EGGCRATE RETURN  
GRILLES • 100% ALUMINUM  
LAY-IN T-BAR • SUITABLE FOR MRI  
MODELS: 51EC-MRI TYPE L**



**TYPE L ALUMINUM FRAME/BORDER**

**Model 51EC-MRI Grille**

DIMENSION	STANDARD FRAME WITH 1/2 x 1/2 x 1/2 STD. CORE	WITH 1/2 x 1/2 x 1 OR 1 x 1 x 1 OPTIONAL CORE
E	7/8" (22)	1 1/4" (32)

**DESCRIPTION:**

1. Construction: Extruded aluminum heavy gauge frame welded with hairline mitered corners for strength on Type L. 1/2 x 1/2 x 1/2 (13 x 13 x 13) aluminum grid core (code CA) is standard on all models. A high capacity return or exhaust outlet with maximum free area for minimum pressure drop and sound generation.
2. Minimum size is 4" x 4" (102 x 102).  
Maximum size is 48" x 48" (1219 x 1219) for Type L.  
Nominal List Size = Ceiling Module Size.
3. Standard finish is AW Appliance White.

**OPTIONS:**

1. Finish:
  - SP Special \_\_\_\_\_ .
2. Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
3.  Other \_\_\_\_\_ .

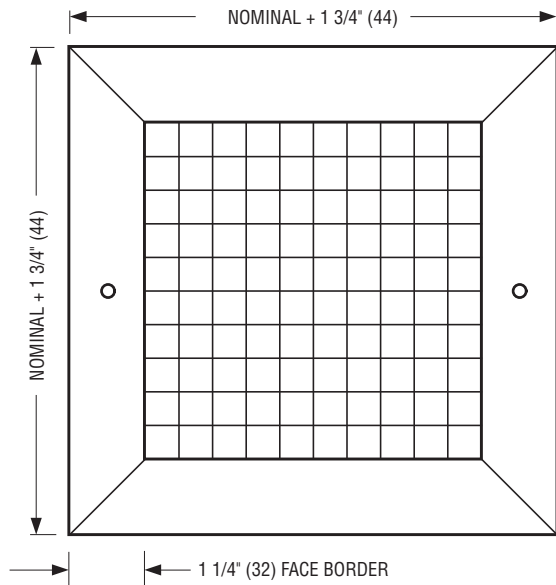
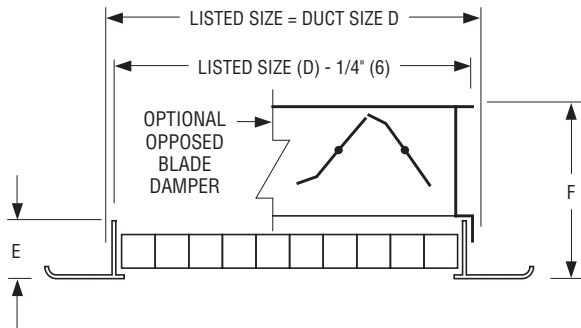
<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
6 - 1 - 11	5100	NEW	51EC-MRI

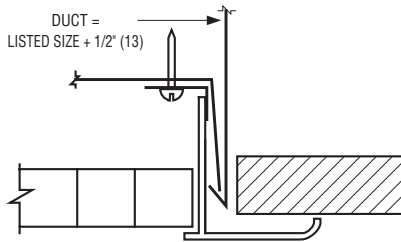


**STEEL EGGCRATE RETURN GRILLES  
AND REGISTERS**  
SURFACE MOUNT • ALUMINUM CORE  
MODELS: 61EC(-O) TYPE S

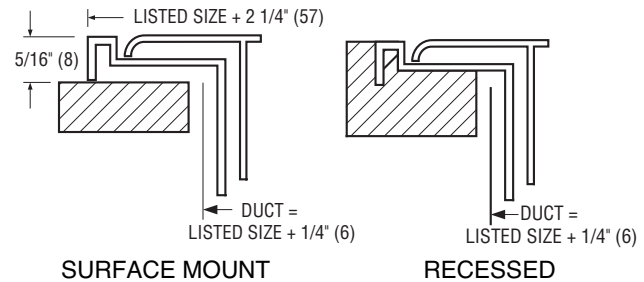


DIMENSION	1/2 x 1/2 x 1/2 STANDARD CORE	OPTIONAL 1/2 x 1/2 x 1 OR 1 x 1 x 1 CORE
E	7/8" (22)	1 1/4" (32)
F	2 5/8" (67)	3" (76)

**OPTIONAL TYPE C  
CONCEALED MOUNTING STRAPS**



**OPTIONAL TYPE PF PLASTER SUB FRAME**  
For use with standard 1 1/4" (32) border frame only.



**MODEL 61EC Grille Type S.**  
For surface mount applications.

**MODEL 61EC-O Register Type S.**  
For surface mount applications with opposed blade damper.

**DESCRIPTION:**

- Construction: Corrosion-resistant steel frame mechanically interlocked with hairline mitered corners for strength. 1/2 x 1/2 x 1/2 (13 x 13 x 13) aluminum grid core (code CA) is standard. A high capacity return or exhaust outlet with maximum free area for minimum pressure drop and sound generation.
- Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
- Minimum size is 4" x 4" (102 x 102).  
Maximum size is 48" x 48" (1219 x 1219).
- Type S Surface mount frame has a 1 1/4" (32) face border and a 1" (25) overlap margin.
- Standard fastening is Type A countersunk screw holes.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SA Satin (clear) anodized frame/mill core.
  - SP Special \_\_\_\_\_.
- Fastening:
  - Type C Concealed mounting straps
- PF Plaster frame
- IS Insert screen
- Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
- Other \_\_\_\_\_.

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

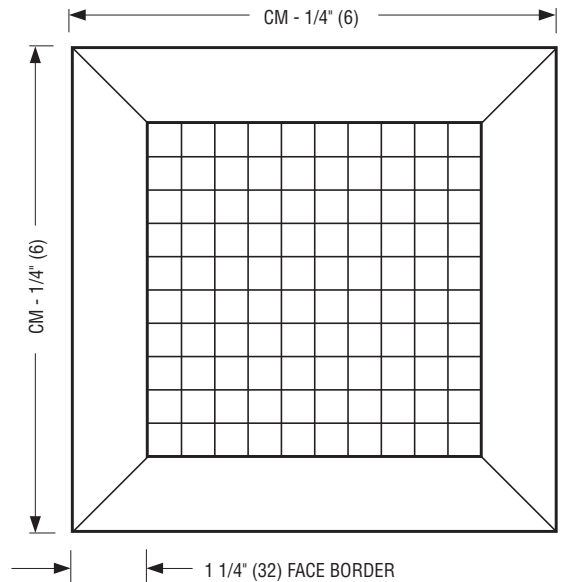
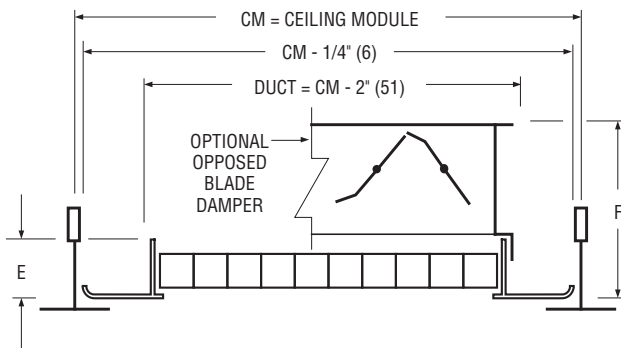
**CONTRACTOR:**

Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
2 - 1 - 11	6100	6100-4A/8-29-05	61EC-1



**STEEL EGGCRATE RETURN GRILLES  
AND REGISTERS**  
LAY-IN T-BAR • ALUMINUM CORE  
MODELS: 61EC(-O) TYPE L



DIMENSION	STANDARD FRAME WITH 1/2 x 1/2 x 1/2 STD. CORE	WITH 1/2 x 1/2 x 1 OR 1 x 1 x 1 OPTIONAL CORE
E	7/8" (22)	1 1/4" (32)
F	2 5/8" (67)	3" (76)

**STEEL FRAME/BORDER**

- MODEL 61EC TYPE L GRILLE     MODEL 61EC-O TYPE L REGISTER

**DESCRIPTION:**

- Construction: Corrosion-resistant steel frame mechanically interlocked with hairline mitered corners for strength on Model 61EC Type L. 1/2 x 1/2 x 1/2 (13 x 13 x 13) aluminum grid core (code CA) is standard on all models. A high capacity return or exhaust outlet with maximum free area for minimum pressure drop and sound generation.
- Optional roll-formed steel opposed blade damper has a screw driver slot operator accessible through face of register.
- Minimum size is 4" x 4" (102 x 102).  
Maximum size is 48" x 48" (1219 x 1219) for Model 61EC Type L.  
Nominal List Size = Ceiling Module Size.
- Standard finish is AW Appliance White.

**OPTIONS:**

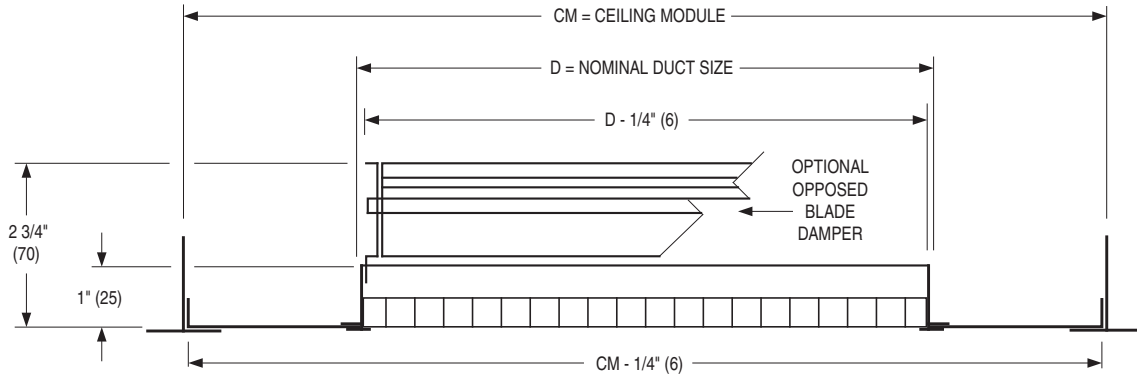
- Finish:
  - SA Satin (clear) anodized frame/mill core.
  - SP Special \_\_\_\_\_.
- IS Insert screen
- Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
- Other \_\_\_\_\_.

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	2 - 1 - 11	6100	6100-48/8-29-05	61EC-2	



**EGGCRATE RETURN GRILLES & REGISTERS**  
 ALUMINUM CORE • STEEL FRAME  
 PANEL MOUNTED • LAY-IN T-BAR  
 MODELS: 61EC(-O) TYPE PLS

FOR LAY-IN T-BAR TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

Maximum Duct/Neck Size D = Ceiling Module - 3" (76)

- MODEL 61EC** Eggcrate Return Air Grille  
Type PLS Steel Panel
- MODEL 61EC-O** Eggcrate Return Air Register  
(Includes O. B. Damper)  
Type PLS Steel Panel

**DESCRIPTION:**

- Material: Aluminum core with corrosion-resistant steel frame mounted in an extended panel.
- Models 61EC and 61EC-O Type PLS have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment standard exposed grid T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_
- Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)

<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

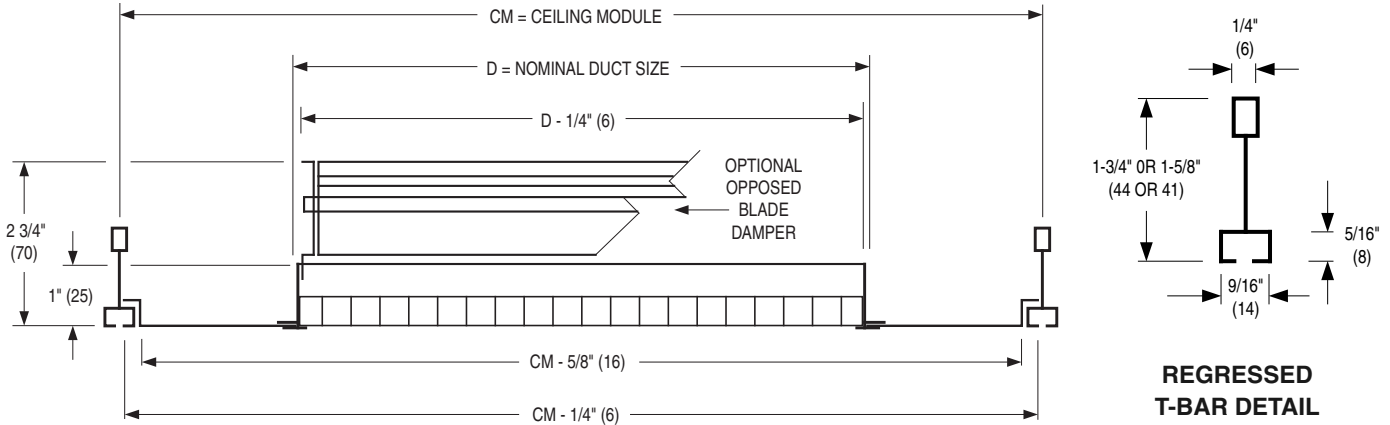
Dimensions are in inches (mm).

<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
2 - 1 - 11	6100	NEW	61EC-3



**EGGCRATE RETURN GRILLES & REGISTERS**  
**ALUMINUM CORE • STEEL FRAME**  
**PANEL MOUNTED • NARROW REGRESSED T-BAR**  
**MODELS: 61EC(-O) TYPE FPS**

FOR FINELINE® TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULES (CM)			AVAILABLE DUCT/NECK SIZES
Imperial Modules		Metric Modules	
Imperial Units (inches)	S.I. Units (mm)	S.I. Units (mm)	
20 x 20	508 x 508	500 x 500	6" x 6" (152 x 152) up to 16" x 16" (406 x 406) in 2" (51) increments
24 x 24	610 x 610	600 x 600	6" x 6" (152 x 152) up to 20" x 20" (508 x 508) in 2" (51) increments

- MODEL 61EC** Eggcrate Return Air Grille  
**Type FPS** Steel Panel
- MODEL 61EC-O** Eggcrate Return Air Register  
**Type FPS** (Includes O. B. Damper) Steel Panel

**DESCRIPTION:**

- Material: Aluminum core with a corrosion-resistant steel frame mounted in an extended panel.
- Models 61EC and 61EC-O Type FPS have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment regressed 'narrow-tee' type T-Bar suspended ceiling systems. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_ .
- Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)

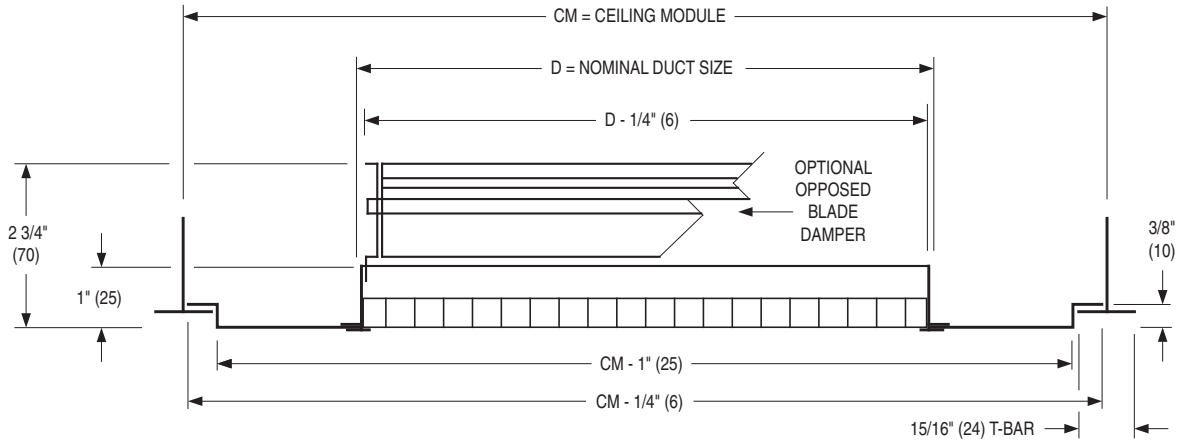
Fineline® is a registered trademark of USG Interiors Inc.

<b>SCHEDULE TYPE:</b>	Dimensions are in inches (mm).			
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	2 - 1 - 11	6100	6100-4D/4-10-00	61EC-4



**EGGCRATE RETURN GRILLES & REGISTERS**  
**ALUMINUM CORE • STEEL FRAME**  
**TEGULAR PANEL MOUNTED • LAY-IN T-BAR**  
**MODELS: 61EC(-O) TYPE TPS**

TO MATCH TEGULAR TILE LAY-IN 1" (25) T-BAR TYPE CEILING SYSTEMS



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

- MODEL 61EC** Eggcrate Return Air Grille
- Type TPS** Tegular Steel Panel
  
- MODEL 61EC-O** Eggcrate Return Air Register (Includes O. B. Damper)
- Type TPS** Tegular Steel Panel

Maximum Duct/Neck Size D = Ceiling Module - 3" (76)

**DESCRIPTION:**

- Material: Aluminum core with corrosion-resistant steel frame mounted in an extended panel.
- Models 61EC and 61EC-O Type TPS have been specially designed for high capacity (90% free area) return air applications and to integrate with and compliment standard 1 (25) nominal exposed grid T-Bar suspended ceiling systems utilizing tegular (drop face) ceiling tiles. The return grille or register is mechanically assembled and using a special frame captures the module sized panel, which eliminates welding and assures a clean smooth blemish free painted finish.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_ .
- Non-standard core:
  - CB 1/2" x 1/2" x 1" (13 x 13 x 25)
  - CC 1" x 1" x 1" (25 x 25 x 25)

<b>SCHEDULE TYPE:</b>	
<b>PROJECT:</b>	
<b>ENGINEER:</b>	
<b>CONTRACTOR:</b>	

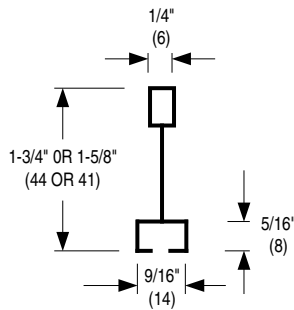
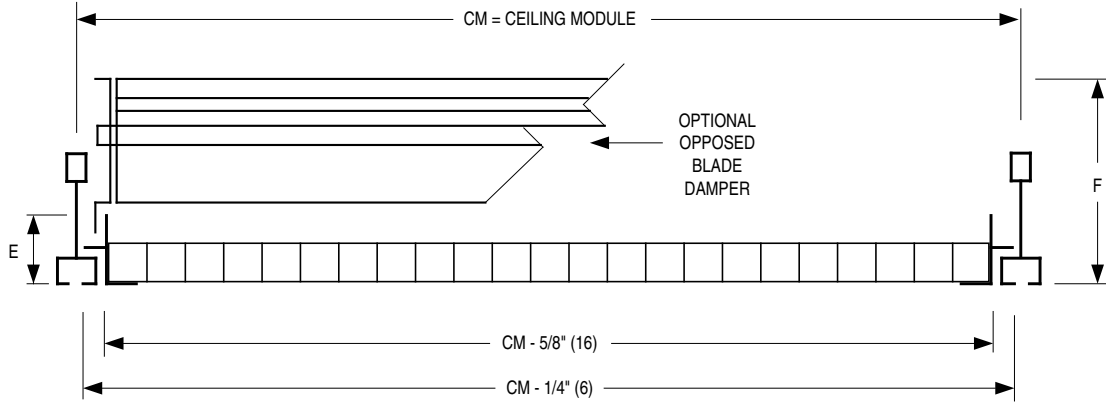
Dimensions are in inches (mm).

DATE	B SERIES	SUPERSEDES	DRAWING NO.
11 - 11 - 15	6100	6 - 2 - 14	61EC-4A



**EGGCRATE RETURN GRILLES & REGISTERS**  
 ALUMINUM CORE • STEEL FRAME  
 NARROW REGRESSED T-BAR • FULL FACE  
**MODELS: 61ECF(-O)**

FOR FINELINE® TYPE CEILING SYSTEMS



**REGRESSED T-BAR DETAIL**

DIMENSION	STANDARD FRAME WITH 1/2 x 1/2 x 1/2 STD. CORE	WITH 1/2 x 1/2 x 1 OR 1 x 1 x 1 OPTIONAL CORE
E	7/8" (22)	1 1/4" (32)
F	2 5/8" (67)	3" (76)

IMPERIAL MODULES		METRIC MODULES
Imperial Units (in.)	S.I. Units (mm)	S.I. Units (mm)
24 x 12	610 x 305	600 x 300
24 x 24	610 x 610	600 x 600

- MODEL 61ECF** Eggcrate Return Air Grille
- MODEL 61ECF-O** Eggcrate Return Air Register (Includes O. B. Damper)

**NOTES:**

- Construction: Aluminum core with corrosion-resistant steel frame.
- Support rail on four sides.
- 1/2" x 1/2" x 1/2" (13 x 13 x 13) aluminum grid core standard (code CA).
- Models 61ECF and 61ECF-O have been specially designed for high capacity (90% free area) return air applications to integrate with and compliment 'Fineline®' type suspended ceiling systems.
- Not recommended for ducted applications. Utilizes full area of ceiling module opening for maximum capacity in ductless return applications.
- Optional roll-formed steel opposed blade damper has a screwdriver slot operator accessible through face of register.
- Standard finish is AW Appliance White.

**OPTIONS:**

- Finish:
  - SP Special \_\_\_\_\_ .
- Non-standard core:
  - CB 1/2 x 1/2 x 1 (13 x 13 x 25)
  - CC 1 x 1 x 1 (25 x 25 x 25)
- Other \_\_\_\_\_ .

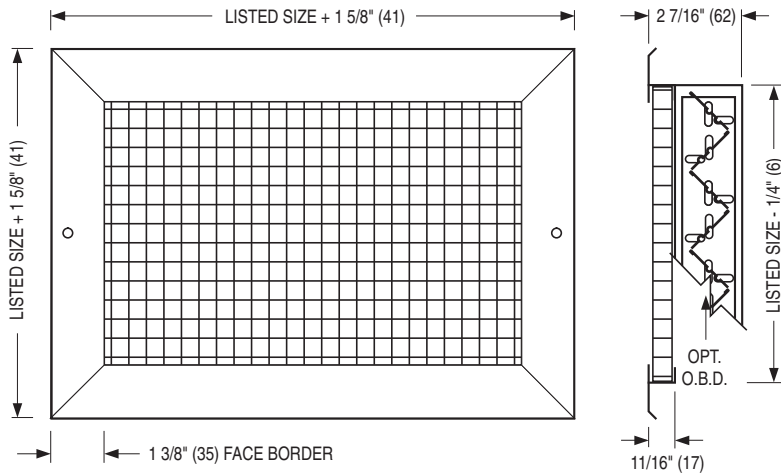
Fineline® is a registered trademark of USG Interiors Inc.

<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	10 - 3 - 13	6100	2 - 1 - 11	61EC-5	





**STAINLESS STEEL EGGCRATE RETURN  
GRILLES & REGISTERS  
SURFACE MOUNT  
MODELS: 67EC(-O) TYPE S**



**MODEL 67EC**  
Eggcrate Face Grille  
Surface Mount

**MODEL 67EC-O**  
Eggcrate Face Register  
Surface Mount  
(Includes O. B. Damper)

**DESCRIPTION:**

1. Construction: Type 304 stainless steel welded and reinforced frame features hairline mitered corners. 1/2" x 1/2" x 1/2" (13 x 13 x 13) stainless steel core.
2. Optional roll-formed Type 304 stainless steel opposed blade damper has a screw driver operator accessible through face of register.
3. Minimum size is 4" x 4" (102 x 102).  
Maximum size is 48" x 36" (1219 x 914).
4. Type S Surface mount standard frame has a 1 3/8" (35) face border.
5. Standard fastening is Type A countersunk screw holes.
6. Standard finish is #4 Brushed Satin Polished.

**OPTIONS:**

1. Construction:
  - 316 Type 316 stainless steel.
2. Finish:
  - AW Appliance White.
  - SP Special \_\_\_\_\_ .
3.  PFS Stainless Steel Plaster frame
4.  Other \_\_\_\_\_ .

**SCHEDULE TYPE:**

**PROJECT:**

**ENGINEER:**

**CONTRACTOR:**

Dimensions are in inches (mm).

**DATE**

**B SERIES**

**SUPERSEDES**

**DRAWING NO.**

5 - 11 - 15

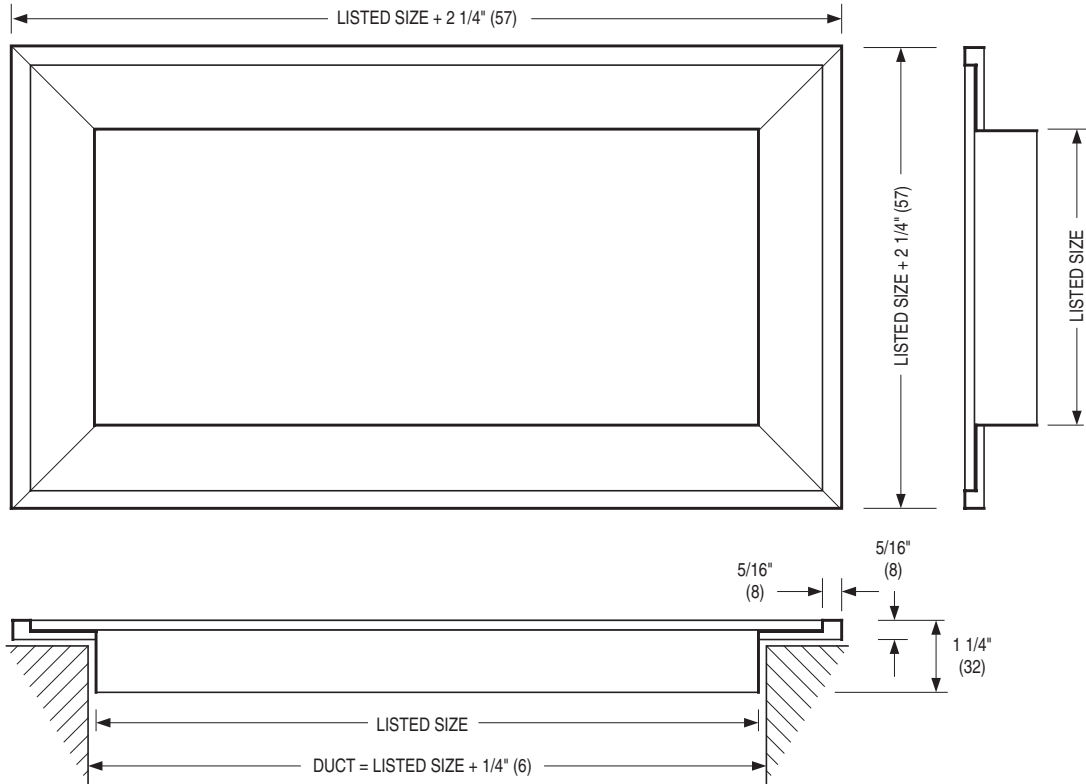
6700

9 - 22 - 11

67EC-1

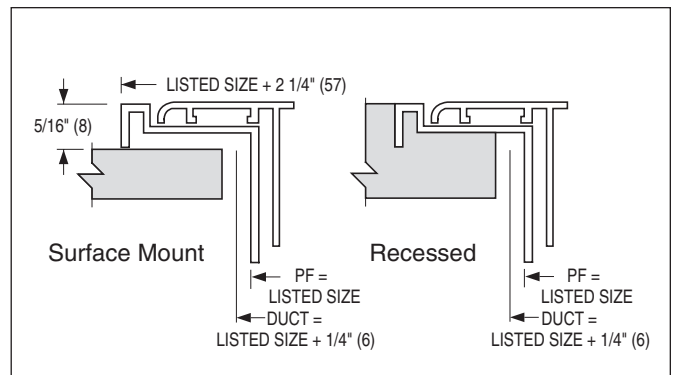


**GRILLES AND REGISTERS ACCESSORY  
PLASTER/MOUNTING FRAME**  
(FOR USE WITH MODEL SERIES 5100, 6100, AND 7100)  
**MODEL: PF**



**DESCRIPTION:**

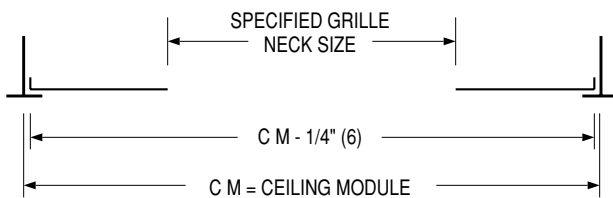
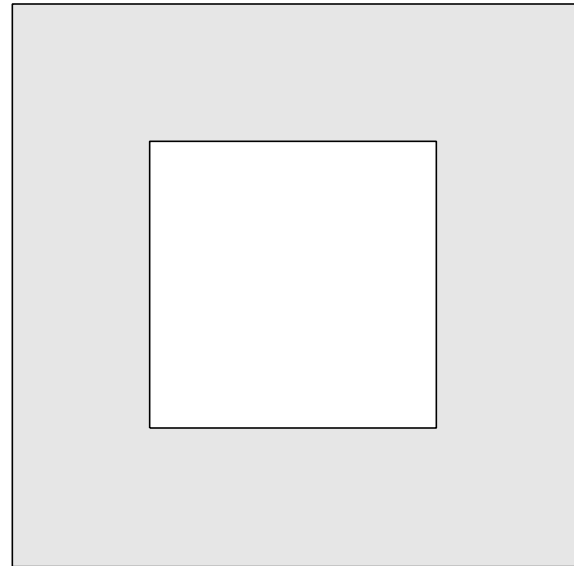
1. Construction: Extruded aluminum frame with staked and mitered mitered corners for strength.
2. Model PF Plaster frame provides a convenient and professional method for finishing off a grille or register opening. It provides a stable anchor for attachment, while enabling the grille or register to be readily removed and replaced without disturbing the finished surface of the wall or ceiling.
3. Frames can be installed before plastering and installed in a recessed fashion or surface mounted afterwards on plaster or other material.
4. Duct openings should be 1/4" (6) larger than nominal listed size to accommodate frame.
5. Finish: Baked enamel finish to match grille or register.



<b>SCHEDULE TYPE:</b>		Dimensions are in inches (mm).			
<b>PROJECT:</b>					
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>	
<b>CONTRACTOR:</b>	10 - 24 - 01	ACC-GR	5100-11	ACC-PF	



**ALUMINUM T-BAR MOUNTING PANEL**  
 (FOR USE WITH ALUMINUM RETURN  
 GRILLES AND REGISTERS)  
**TYPE PLA**



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

**DESCRIPTION:**

1. Material: Aluminum.
2. Type PLA mounting panels are for use with aluminum return grilles and registers, Model Series 51C, 5100, 51EC, 51PR and 7100 to fit standard exposed grid T-bar ceiling systems.
3. Grilles or registers are factory mounted in the auxiliary panel.
4. Maximum grille neck size = Ceiling Module - 3" (76).

5. Standard finish is AW Appliance White to match supply or return grille and register.

**OPTIONS:**

Finish:  
 SP Special \_\_\_\_\_ .

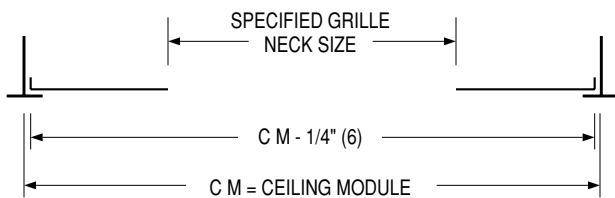
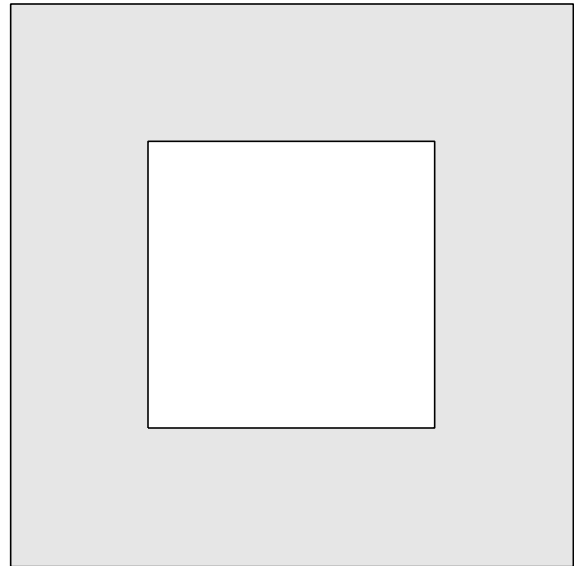
<b>SCHEDULE TYPE:</b>
<b>PROJECT:</b>
<b>ENGINEER:</b>
<b>CONTRACTOR:</b>

Dimensions are in inches (mm).

<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
13 - 10 - 00R	ACC-GR	4-93/5100-PL	ACC-PLA



**STEEL T-BAR MOUNTING PANEL**  
 (FOR USE WITH STEEL OR ALUMINUM  
 RETURN GRILLES AND REGISTERS)  
**TYPE PLS**



AVAILABLE CEILING MODULE SIZES		
Imperial Modules		Metric Modules
Imperial Units (in.)	Metric Units (mm)	S.I. Units (mm)
12 x 12	305 x 305	300 x 300
24 x 12	610 x 305	600 x 300
36 x 12	914 x 305	900 x 300
48 x 12	1219 x 305	1200 x 300
20 x 20	508 x 508	500 x 500
24 x 24	610 x 610	600 x 600
36 x 24	914 x 610	900 x 600
48 x 24	1219 x 610	1200 x 600

**DESCRIPTION:**

1. Material: Heavy gauge corrosion-resistant steel.
2. Type PLS mounting panels are for use with steel or aluminum return grilles and registers, Model Series 51C, 5100, 51EC, 51PR, 61C, 6100, 61EC, 61PR and 7100 to fit standard exposed grid T-bar ceiling systems.
3. Grilles or registers are factory mounted in the auxiliary panel.
4. Maximum grille neck size = Ceiling Module - 3" (76).

5. Standard finish is AW Appliance White to match supply or return grille and register.

**OPTIONS:**

Finish:  
 SP Special \_\_\_\_\_ .

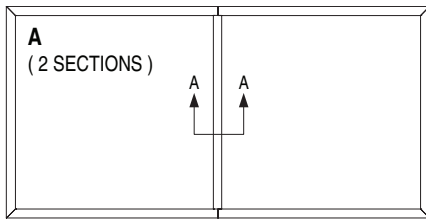
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<b>PROJECT:</b>
<b>ENGINEER:</b>
<b>CONTRACTOR:</b>

Dimensions are in inches (mm).

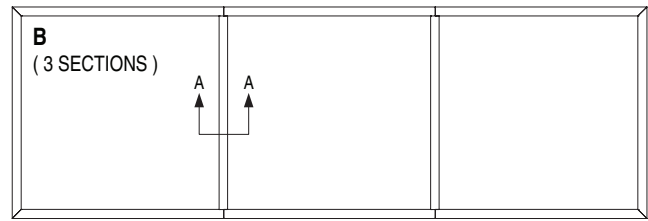
<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
13 - 10 - 00R	ACC-GR	4-93/6100-PL	ACC-PLS



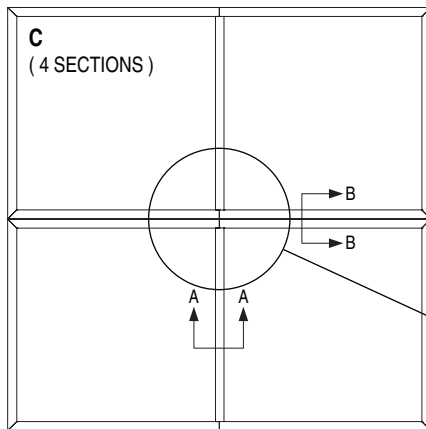
**OVERSIZED GRILLE CONSTRUCTION  
ALUMINUM SUPPLY AND RETURN GRILLES  
FOR DUCTS OR OPENINGS LARGER THAN 48" (1219)  
MODEL SERIES: 5100 AND 7100**



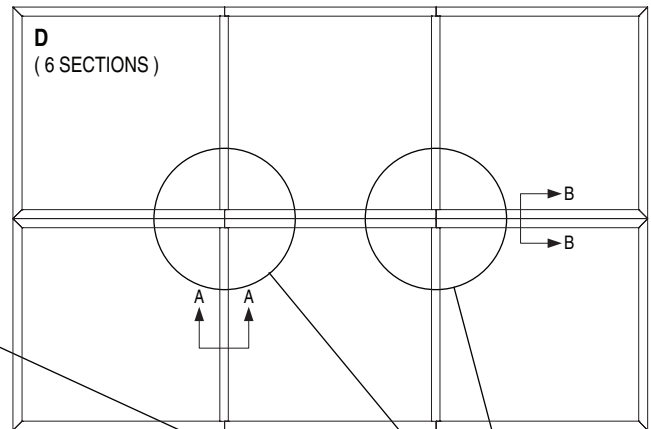
OVER 48" (1219) IN WIDTH UP TO 96" x 48" (2438 x 1219)



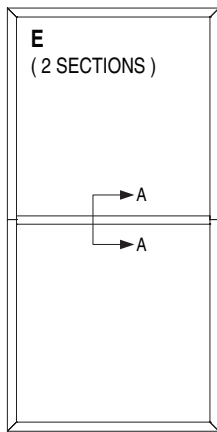
OVER 96" (2438) IN WIDTH UP TO 144" x 48" (3658 x 1219)



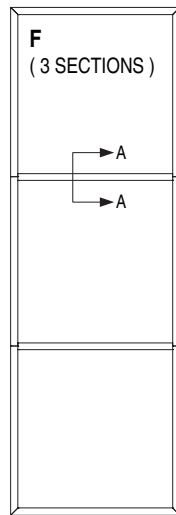
OVER 48" (1219) IN WIDTH AND HEIGHT UP TO 96" x 96" (2438 x 2438)



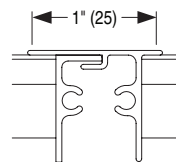
OVER 96" x 48" (2438 x 1219) UP TO 144" x 96" (3658 x 2438)



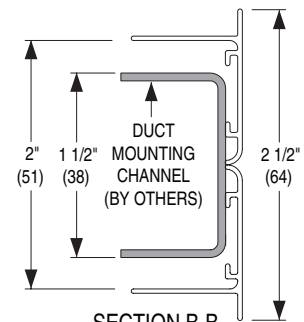
UP TO 48" (1219) IN WIDTH AND  
UP TO 96" (2438) IN HEIGHT



UP TO 48" (1219) IN WIDTH AND  
UP TO 144" (3658) IN HEIGHT



**SECTION A-A**  
FACE MULLION WITH  
ALIGNMENT TAB  
OVERLAP DETAIL



**SECTION B-B**  
DOUBLE FRAME / BORDER DETAIL

**NOTES:**

- Maximum single section size is 48" x 48" (1219 x 1219).
- Detail A-A frame joints are sheared and butted together. Alignment tabs interlock and keep the face surfaces parallel.
- Detail B-B shows two separate grille frames butted together.
- Mounting countersunk screw holes are located per the standard screw hole chart on grille frames, but not on face mullion.
- Sections ship loose for field installation.
- Additional structural support (Duct mounting support channels by others) is required for diagrams C and D.
- This detail applies to Type S Surface Mount Frame/Border only.

<b>SCHEDULE TYPE:</b>	Dimensions are in inches (mm)			
<b>PROJECT:</b>				
<b>ENGINEER:</b>	<b>DATE</b>	<b>B SERIES</b>	<b>SUPERSEDES</b>	<b>DRAWING NO.</b>
<b>CONTRACTOR:</b>	4 - 27 - 20	GR	NEW	OG-1-A

Nailor offers a selection of standard colors and finishes available on our grilles, registers and diffusers. For painted finishes, our state-of-the-art paint systems provide environmentally friendly finishing solutions with uniform coverage and coating thickness. The result is an exceptionally durable finish that resists scratching, corrosion and general wear. Additional facilities for special requirements, as well as a selection of anodized or brushed finishes, complete our ability to provide unmatched beauty and durability for any application.

**NAILOR POWDER COAT PROPERTIES**

FILM THICKNESS	2.0 to 3.0 mils
HARDNESS	2 H
IMPACT RESISTANCE	Direct: 160 inch - lbs. Reverse 160 inch - lbs.
SALT SPRAY	1000 hours

**ELECTROCOATING PROPERTIES**

FILM THICKNESS	.8 to 1.2 mils
HARDNESS	HB TO H
IMPACT RESISTANCE	80 inch - lbs
SALT SPRAY	100 hours


**POWDER COAT**

Nailor's powder coat is a high-tech thermosetting polyester powder coating with superior physical properties that provide excellent color and gloss retention. The finish offers extreme durability and hardness that resists scratching, chipping and general wear. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse before a final powder coat finish is applied and baked. The environmentally friendly Nailor powder coat system assures uniform coverage and color consistency resulting in a long lasting superior finish. Colors, including simulated anodizing, which is far more economical than color anodizing, can be selected from Nailor's standard color chart or non-standard colors and can be matched from sample chips provided to Nailor.

**ELECTROCOATING**

E-Coat is an environmentally friendly coating that provides complete coverage and a wide range of performance properties, formulated to meet corrosion, durability and other performance specifications. Electrocoating is a highly automated process in which paint is electrically deposited onto a metal foundation. Film build thickness is uniform and overall application efficiencies are in excess of 90%. Paint is consistent on all part-to-part surfaces, preventing sags, runs or drips. E-Coat offers flexibility, better first yield pass and quicker production times compared to other forms of paint applications. Electrocoating is an excellent solution that offers superior properties and uniform finish.

**CLEAR ANODIZING** (Aluminum products only)

Clear anodizing is a clear oxide coating that exemplifies an aluminum surface's natural oxide coating producing a hard, scratch resistant surface that is resistant to general wear and mild chemicals. The process provides a natural looking, virtually maintenance free finish that will endure for many years.

**COLOR ANODIZING** (Aluminum products only)

Color anodizing is an electrolytic process where, after standard anodizing procedures, colored metallic pigments penetrate the oxide surface pores producing a corrosion resistant, colorfast finish. The process results in a natural metallic appearance that requires little maintenance.

**BRUSHED AND CLEAR COAT**

Available on specific aluminum products (consult applicable product page for availability). Surface is brushed to achieve a scratch finish texture before being degreased and chemically cleaned. A clear lacquer coating is then applied to provide a durable protective finish.

**#4 BRUSHED SATIN POLISHED** (Stainless Steel products only)

Surface is polished to ASTM A480 #4 standard to achieve a bright durable finish that is resistant to mild chemicals and corrosion. A final coating is not required due to the inherent anti-corrosion properties of the stainless steel.

**PRIME COAT**

Prime coat provides a stable base for painting in the field. Surface pretreatment includes degreasing and a chemical cleaning before an alkyd prime coat is applied. After a thorough cleaning for dust, etc. that can contaminate the final finish and cause premature flaking or peeling, finish coat should be field applied as soon as possible.

**PAINT PREPARED ALUMINUM** (Aluminum products only)

Allows for field applied paint. Surface preparation includes degreasing and a chemical cleaning followed by a clean rinse. Finish coat should be field applied as soon as possible.

**MILL FINISH**

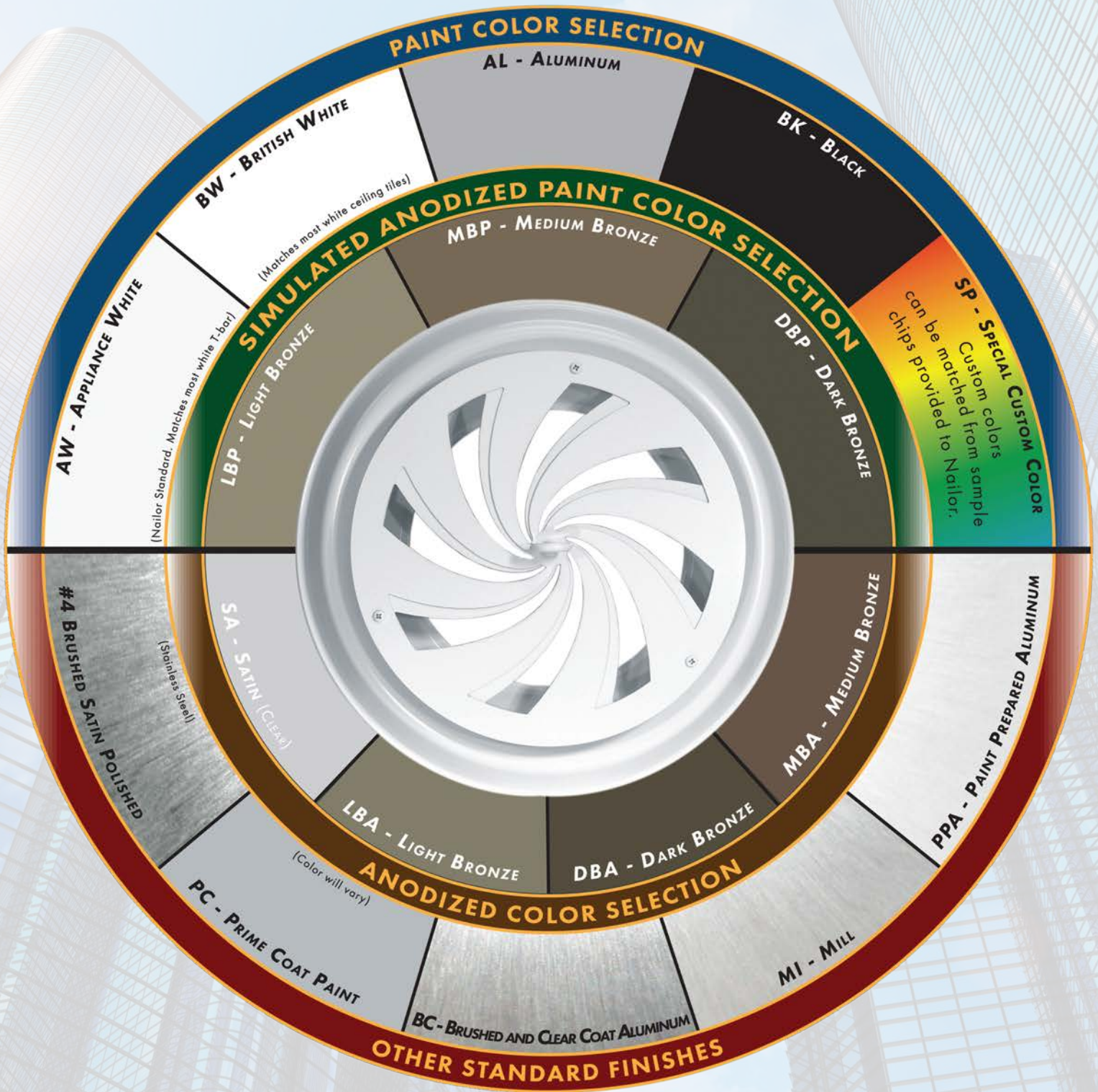
Surface is left untreated and requires cleaning, degreasing, etc. in the field before final finish can be applied if required.



**Nailor**<sup>®</sup>  
Industries Inc.

## STANDARD AND OPTIONAL FINISHES FOR GRILLES AND DIFFUSERS

The following standard colors and finishes are available on applicable Nailor air distribution products. Consult individual product pages for availability



The pictured finishes have been represented as best as possible within printing limitations. However, actual finish may vary. Contact your Nailor representative for a color chip sample on the material specified for a more accurate representation.

**DBK** - Black (for registers ordered with factory mounted dampers) - **BA** - Perforated Diffusers (4300 series only) Appliance White (AW) face with black back pan and pattern controllers.

"Complete Air Control and Distribution Solutions."

WGDSOF2015

[www.nailor.com](http://www.nailor.com)

## PERFORMANCE DATA:

### EGGCRATE RETURN AND EXHAUST GRILLES AND REGISTERS • 5100, 6100 & 6700 SERIES

#### MODELS: 51EC, 61EC, 67EC, 51FE, 61FE

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	300	400	500	600	700	800	900	1000	1200	1400
					.006 .012	.010 .021	.016 .033	.022 .048	.031 .065	.040 .085	.050 .107	.062 .132	.090 .190	.122 .259
6 x 6	8 x 4 10 x 4	0.20	0.25	CFM Noise Criteria	60 -	80 -	100 -	120 -	140 -	160 15	180 20	200 23	240 29	280 34
8 x 6	10 x 5 12 x 4	0.27	0.33	CFM Noise Criteria	81 -	108 -	135 -	162 -	189 -	216 17	243 21	270 24	324 30	378 35
10 x 6	12 x 5 16 x 4	0.35	0.41	CFM Noise Criteria	105 -	140 -	175 -	210 -	245 -	280 18	315 22	350 25	420 31	490 36
8 x 8	14 x 5	0.38	0.44	CFM Noise Criteria	114 -	152 -	190 -	228 -	266 15	304 18	342 23	380 26	456 32	532 37
12 x 6	18 x 4	0.42	0.50	CFM Noise Criteria	126 -	168 -	210 -	252 -	294 15	336 19	378 23	420 26	504 32	588 37
12 x 8	16 x 6 24 x 4	0.58	0.66	CFM Noise Criteria	174 -	232 -	290 -	348 -	406 17	464 20	522 24	580 27	696 33	812 38
10 x 10	14 x 7 26 x 4	0.61	0.69	CFM Noise Criteria	183 -	244 -	305 -	366 -	427 17	488 20	549 25	610 28	732 34	854 39
18 x 6	14 x 8 28 x 4	0.65	0.74	CFM Noise Criteria	195 -	260 -	325 -	390 -	455 17	520 21	585 25	650 28	780 34	910 39
12 x 10	16 x 8 24 x 5	0.74	0.82	CFM Noise Criteria	222 -	296 -	370 -	444 -	518 18	592 21	666 25	740 29	888 35	1036 40
12 x 12	14 x 10 18 x 8	0.90	0.99	CFM Noise Criteria	270 -	360 -	450 -	540 -	630 18	720 22	810 26	900 30	1080 36	1260 41
14 x 14	16 x 12 20 x 10	1.24	1.35	CFM Noise Criteria	372 -	496 -	620 -	744 -	868 19	992 23	1116 27	1240 31	1488 37	1736 42
18 x 12	16 x 14 20 x 10	1.37	1.49	CFM Noise Criteria	411 -	548 -	685 -	822 -	959 20	1096 24	1233 27	1370 31	1644 37	1918 42
24 x 10	20 x 12 30 x 8	1.52	1.65	CFM Noise Criteria	456 -	608 -	760 -	912 15	1064 20	1216 24	1368 28	1520 32	1824 38	420 43
16 x 16	18 x 14 22 x 12	1.64	1.76	CFM Noise Criteria	492 -	656 -	820 -	984 15	1148 20	1312 24	1476 28	1640 32	1968 38	2296 43
24 x 12	18 x 16 20 x 14	1.85	1.98	CFM Noise Criteria	555 -	740 -	925 -	1110 15	1295 20	1480 24	1665 28	1850 32	2220 38	2590 43
18 x 18	20 x 16 24 x 14	2.10	2.23	CFM Noise Criteria	630 -	840 -	1050 -	1260 15	1470 20	1680 25	1890 28	2100 32	2520 38	2940 43
30 x 12	20 x 18 22 x 16	2.32	2.48	CFM Noise Criteria	696 -	928 -	1160 -	1392 16	1624 20	1856 26	2088 29	2320 33	2784 39	3248 44
20 x 20	24 x 18 26 x 16	2.61	2.75	CFM Noise Criteria	783 -	1044 -	1305 -	1566 16	1827 20	2088 26	2349 29	2610 33	3132 39	3654 44
22 x 22	24 x 20 26 x 18	3.17	3.33	CFM Noise Criteria	951 -	1268 -	1585 -	1902 17	2219 21	2536 26	2853 30	3170 34	3804 40	4438 45
30 x 18	24 x 22 34 x 16	3.54	3.71	CFM Noise Criteria	1062 -	1416 -	1770 -	2124 17	2478 22	2832 26	3186 30	3540 34	4248 40	4956 45
24 x 24	26 x 22 28 x 20	3.79	3.96	CFM Noise Criteria	1137 -	1516 -	1895 -	2274 18	2653 23	3032 27	3411 31	3790 35	4548 41	5306 46
36 x 18	32 x 20 40 x 16	4.29	4.46	CFM Noise Criteria	1287 -	1716 -	2145 -	2574 18	3003 23	3432 27	3861 31	4290 35	5148 41	6006 46
26 x 26	28 x 24 48 x 14	4.47	4.65	CFM Noise Criteria	1341 -	1788 -	2235 -	2682 19	3129 24	3576 28	4023 32	4470 36	5364 42	6258 47
30 x 24	28 x 26 32 x 22	4.77	4.95	CFM Noise Criteria	1431 -	1908 -	2385 15	2862 19	3339 24	3816 29	4293 32	4770 36	5724 42	6678 47
28 x 28	30 x 26 36 x 22	5.20	5.39	CFM Noise Criteria	1560 -	2080 -	2600 -	3120 19	3640 24	4160 29	4680 32	5200 36	6240 41	7280 46
36 x 24	30 x 28 40 x 22	5.74	5.94	CFM Noise Criteria	1722 -	2296 -	2870 -	3444 20	4018 25	4592 29	5166 33	5740 37	6888 43	8036 48
30 x 30	34 x 26 38 x 24	5.99	6.19	CFM Noise Criteria	1797 -	2396 -	2995 -	3594 20	4193 25	4792 29	5391 33	5990 37	7188 43	8386 48

For performance data notes, see F107.



## PERFORMANCE DATA:

### EGGCRATE RETURN AND EXHAUST GRILLES AND REGISTERS • 5100, 6100 & 6700 SERIES

#### MODELS: 51EC, 61EC, 67EC, 51FE, 61FE

Listed Duct Size (inches)	Alternate Sizes (inches)	Core Area (sq. ft.)	Ak Factor	Core Velocity Velocity Pressure Neg. Static Pressure	300	400	500	600	700	800	900	1000	1200	1400
					.006 .012	.010 .021	.016 .033	.022 .048	.031 .065	.040 .085	.050 .107	.062 .132	.090 .190	.122 .259
32 x 32	36 x 30 46 x 22 38 x 28	6.84	7.0	CFM	2052	2736	3420	4104	4788	5472	6156	6840	8208	9576
				Noise Criteria	—	—	15	20	26	30	34	37	44	49
48 x 24	34 x 34 38 x 30 36 x 32 48 x 28	7.69	7.92	CFM	2307	3076	3845	4614	5383	6152	6921	7690	9228	10776
				Noise Criteria	—	—	16	21	26	30	35	38	44	49
36 x 36	38 x 34 46 x 28 42 x 30 48 x 26	8.69	8.91	CFM	2607	3476	4345	5214	6083	6952	7821	8690	10428	12166
				Noise Criteria	—	—	16	22	27	31	35	38	44	49
38 x 38	42 x 34 48 x 30 44 x 34	9.70	9.93	CFM	2910	3880	4850	5820	6790	7760	8730	9700	11640	13580
				Noise Criteria	—	—	16	22	27	31	36	39	45	50
40 x 40	42 x 36 48 x 32 46 x 34	10.77	11.00	CFM	3231	4308	5385	6462	7539	8616	9693	10770	12924	15078
				Noise Criteria	—	—	16	22	28	32	37	40	46	51
42 x 42	44 x 40 48 x 36 46 x 38	11.89	12.13	CFM	3567	4756	5945	7134	8323	9512	10701	11890	14260	16646
				Noise Criteria	—	—	17	23	28	32	37	40	46	51
44 x 44	46 x 42	13.07	13.31	CFM	3921	5228	6535	7842	9149	10456	11763	13070	15684	18298
				Noise Criteria	—	—	17	23	28	33	37	40	46	51
46 x 46		14.30	14.55	CFM	4290	5720	7150	8580	10010	11440	12870	14300	17160	20020
				Noise Criteria	—	—	18	24	29	33	37	40	46	52
48 x 48		15.59	15.84	CFM	4677	6236	7795	9354	10913	12472	14031	15590	18708	21826
				Noise Criteria	—	—	18	24	29	33	37	40	46	52

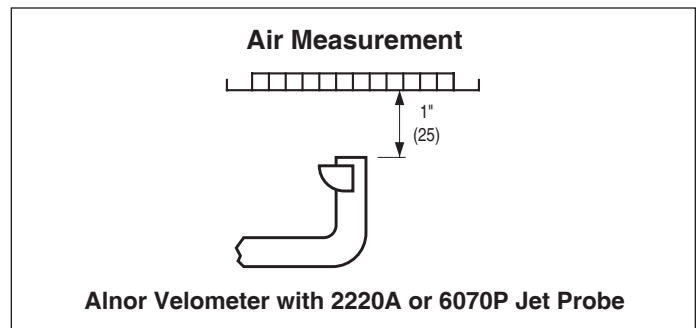
#### Performance Notes:

1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Performance data is for grille tested without damper. Apply the following correction factors for addition of opposed blade damper to grille.

**Neg. Static Pressure** Listed Value x 1.25.

**Noise Criteria** Add + 6 to listed value.

4. Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10<sup>-12</sup> watts. Dash (—) in space denotes a Noise Criteria level of less than 15.
5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.



#### Airflow Measurements

1. Balancing factors are applicable with or without dampers, providing uniform airflow exists into grille or register.
2. Take velocity readings at a number of locations on the inlet face (a minimum of 4), while positioning probe as shown above, one inch out from the face.
3. Total the various velocity readings and divide by the number of readings taken to arrive at an average inlet velocity (Vk in FPM).
4. Calculate the airflow (CFM) by multiplying the average velocity by the appropriate Ak factor.

$$\text{Airflow (CFM)} = \text{Average velocity (Vk)} \times \text{Ak}$$

## PERFORMANCE DATA:

### SIGHT-PROOF EGGCRATE RETURN AND EXHAUST GRILLES AND REGISTERS • 5100

#### MODEL: 51EC45

Listed Duct Size (inches)	Nominal Duct Area (sq. ft.)	Duct Velocity, FPM Velocity Pressure Neg. Static Pressure	200	250	300	350	400	450	500	550	600	650
			.002 .016	.004 .025	.006 .037	.008 .050	.010 .065	.013 .082	.016 .101	.019 .123	.022 .146	.026 .171
10 x 10	0.69	Airflow, CFM	139	174	208	243	278	313	347	382	417	451
		Noise Criteria	–	–	16	20	24	27	30	33	35	37
22 x 10	1.53	Airflow, CFM	306	382	458	535	611	688	764	840	917	993
		Noise Criteria	–	–	18	22	26	30	33	36	38	41
22 x 22	3.36	Airflow, CFM	672	840	1008	1176	1344	1513	1681	1849	2017	2185
		Noise Criteria	–	16	22	27	31	34	38	41	43	46
46 x 22	7.03	Airflow, CFM	1406	1757	2108	2460	2811	3163	3514	3865	4217	4568
		Noise Criteria	21	26	30	34	37	40	42	45	47	49

#### Performance Notes:

1. All pressures are in inches w.g..
2. Core Velocity is in feet per minute.
3. Performance data is for grille tested without damper. Apply the following correction factors for addition of opposed blade damper to grille.

**Neg. Static Pressure** Listed Value x 1.10.

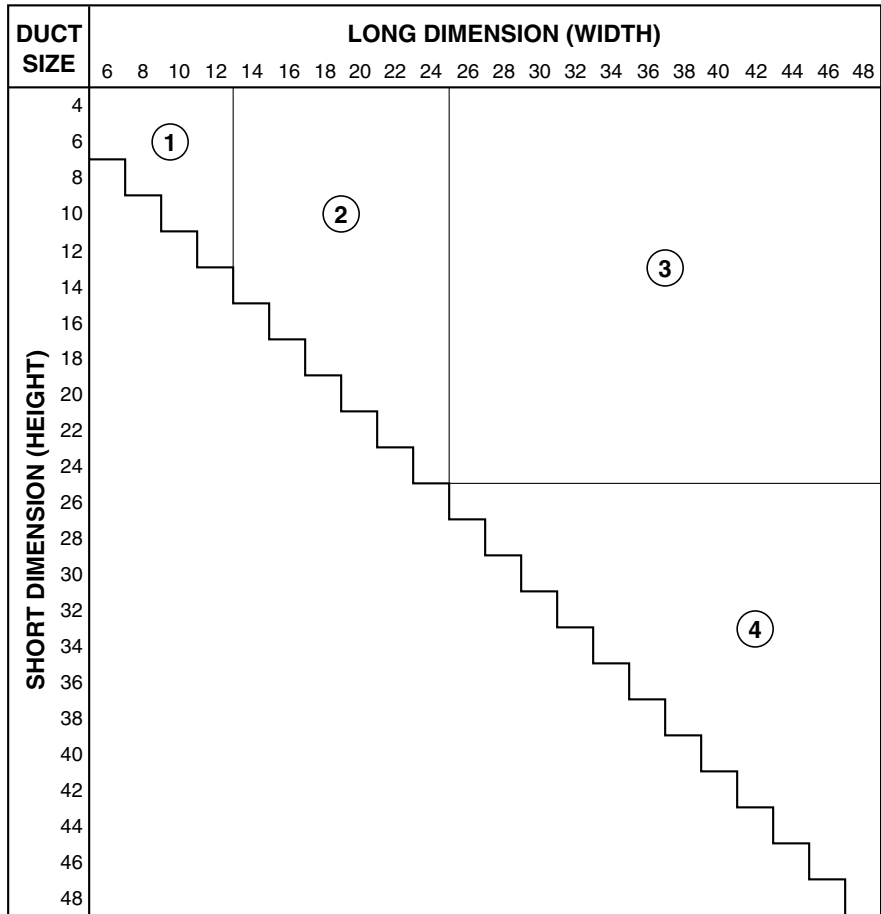
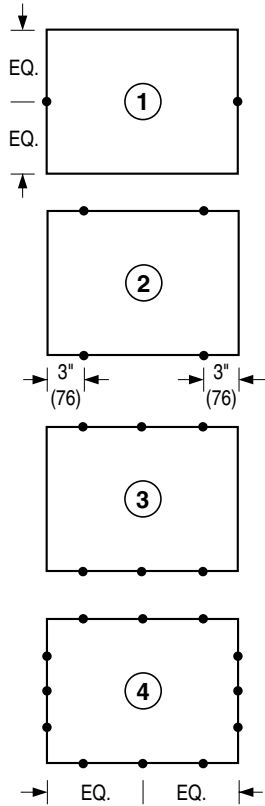
**Noise Criteria** Add 5 dB to listed value.

4. Noise Criteria (NC) values are based on a room absorption of 10 dB, re 10<sup>-12</sup> watts. Dash (–) in space denotes a Noise Criteria level of less than 15.

5. Data derived from tests conducted in accordance with ANSI/ASHRAE Standard 70 – 2006.

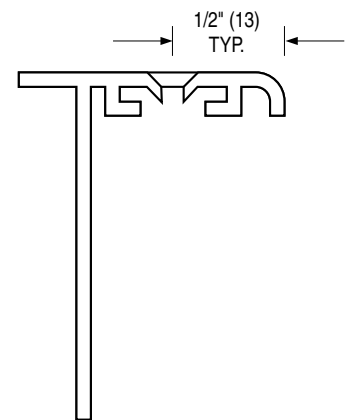
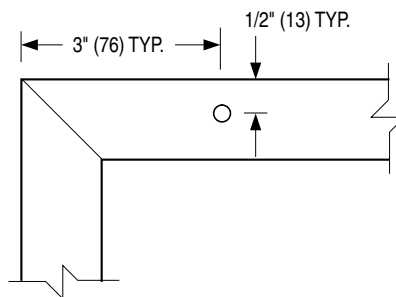
## SCREW HOLE LOCATION CHART

FOR MODELS: 51C, 61C, 5100, 6100, 7100, 51EC  
 TYPE S, 61EC TYPE S, 51PR, 61PR AND 51RC



### DESCRIPTION:

1. All screw holes are located 1/2" (13) in from the outside edge of the frame.
2. Use the chart above to determine which screw hole location diagram applies based on the duct size of the grille or register.
3. This information is provided for general information only. Pre-drilling of mounting holes is not recommended. The actual grille or register, as supplied, should be used as a template to enhance the installation quality.



SCHEDULE TYPE:

PROJECT:

ENGINEER:

CONTRACTOR:

Dimensions are in inches (mm).

DATE

B SERIES

SUPERSEDES

DRAWING NO.

30 - 4 - 01

SUPP./G&R

NEW

SHLC-1