

Installation, Operation and Maintenance Manual

Please read and save these instructions for future reference. Read carefully before attempting to assemble, install, operate or maintain the product described. Protect yourself and others by observing all safety information. Failure to comply with these instructions will result in voiding of the product warranty and may result in personal injury and/or property damage.

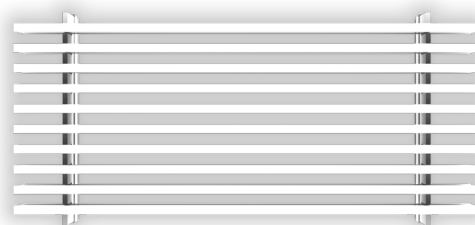
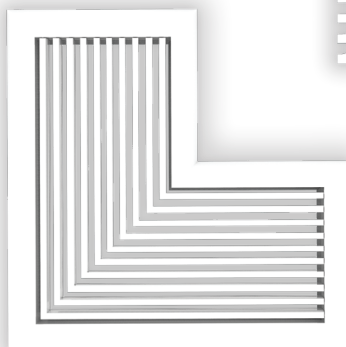
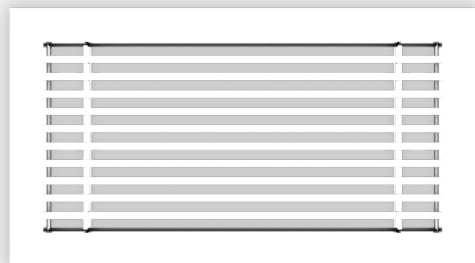


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Getting Started/Model Nomenclature

1. Before starting, inspect all shipping boxes for visible damage. If any visible damage is found, note it on the BOL and contact your local Representative.
2. If you decide to keep the shipment, take all linear diffusers out of the shipping boxes and inspect for any manufacturing flaws or hidden damage. If anything is found, contact your local Representative.
3. Once all product is accounted for in acceptable condition locate any mounting hardware (if included) and be sure to keep this hardware with the applicable diffuser.
4. Referring to the Model Nomenclature breakdown on page 3 and the Table of Contents on this page, proceed to the appropriate page within this IOM to begin installation.

Model LBG Nomenclature

Base Model	Border Width	Blade Deflection	Bar Spacing	Bar Width	Mounting Type	Length in Inches	Width in Inches	End Caps	Finish Color
LBG	- 1	15	12	A	H	10	x 04	MM	24
	1 = 1" Border 2 = 1/2" Border 3 = 3/16" Border	00 = 0 Degree Blade Deflection 15 = 15 Degree Blade Deflection 30 = 30 Degree Blade Deflection	12 = 1/2" Bar Spacing 14 = 1/4" Bar Spacing	A = 7/32" Bar Width B = 1/8" Bar Width	No Optional Mounting (Friction Clip)* H = Concealed Mounting Hanger HP = Spline Subframe - Concealed Mount HC = Combo Subframe - Concealed Mount HW = Narrow Subframe - Concealed Mount F = Floor Mounting FP = Floor Mounting - Pencil Proof TS = Tape & Spackle MC = No Optional Mounting (Friction Clip)* HMC = Concealed Mounting Hanger TSMC = Tape & Spackle FMC = Floor Mounting FPMC = Floor Mounting - Pencil Proof	Length (Parallel to Blades)	2 # Digit Format (1-1/2"-24" in Half Inch Increments)	MM = Mitered/Mitered -1EB = One End Border -2EB = Two End Borders -MO = Mitered/Open -OO = Open/Open	24 = Mill 01 = White 02 = Satin Silver 03 = Black 04 = Clear Anodized 28 = Match Color Chip

Mounting Options and Construction – Quick Reference Guide

Mounting Options

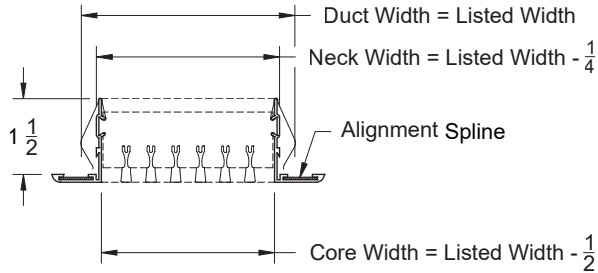
Model	Available Mounting Options										
	None	Floor Mounting (F)	Floor Mounting - Pencil Proof (FP)	Core Only (CO)	Core Only Pencil Proof (PCO)	Concealed Mounting - Hanger Brackets (H)	Spline Subframe (HP)	Combo Subframe (HC)	Narrow / Wall Subframe (HW)	Tape and Spackle (TS)	Available Mitered Corner Sections (MC)
LBG-3-12A		X	X			X					
LBG-3-12B						X					
LBG-3-14B						X					
LBG-2-12A	X					X	X	X	X		
LBG-2-14B	X					X	X	X	X		
LBG-2-12B	X					X	X	X	X		
LBG-1-12A	X	X	X			X	X			X	
LBG-1-14B	X	X				X	X			X	
LBG-1-12B	X					X	X			X	
LBGCO-12A				X	X						
LBGCO-14B				X	X						
LBGCO-12B				X	X						

Construction

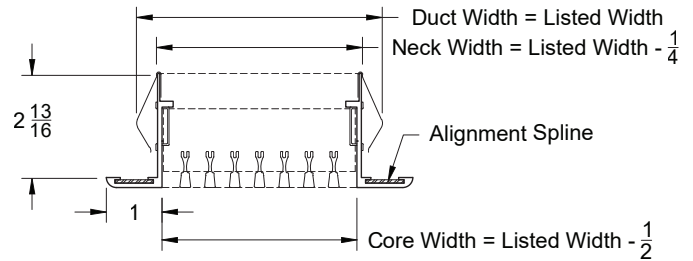
Model	Bar Width		Bar Spacing on Centers		Border Width		
	7/32"	1/8"	1/4"	1/2"	3/16"	1/2"	1"
LBG-3-12A	X			X	X		
LBG-3-12B		X		X	X		
LBG-3-14B		X	X		X		
LBG-2-12A	X			X		X	
LBG-2-14B		X	X			X	
LBG-2-12B		X		X		X	
LBG-1-12A	X			X			X
LBG-1-14B		X	X				X
LBG-1-12B		X		X			X
LBGCO-12A	X			X			
LBGCO-14B		X	X				
LBGCO-12B		X		X			

Mounting Options – Dimensional Drawings

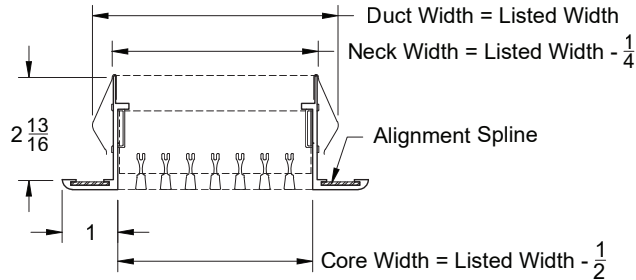
Note: Not all mounting options below are available on every LBG series product. Please see the “Mounting Options” table in the previous section for all available mounting options per product family.



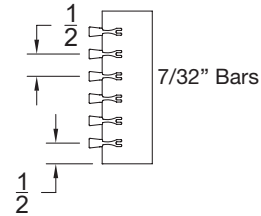
**Flush Surface Mount
Non-Removable Core (LBG-1-12A model shown)**



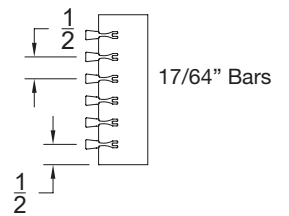
**Floor, Wall or Sill Mounting –
Removable Core (LBG-1-12A-F model shown)**



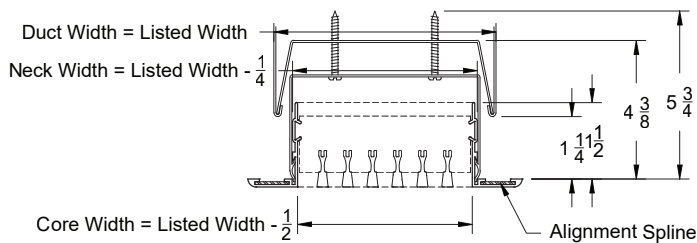
**Pencil Proof Floor, Wall or Sill Mounting
(LBG-1-12A-FP model shown)**



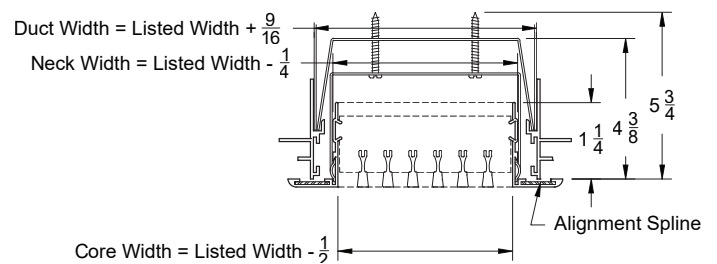
**Core Only
(LBGCO-12A
model shown)**



**Pencil Proof Core Only
(LBGCO model shown)**

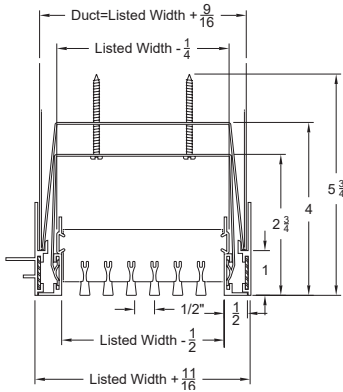


**Concealed Mounting Hanger Brackets
(LBG-1-12A-H model shown)**

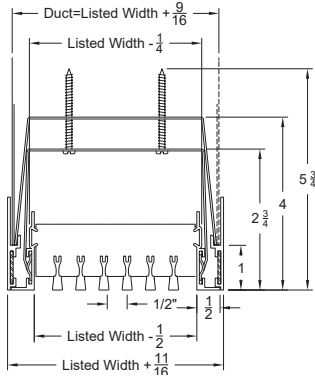


**Spline Subframe for Plaster Wall and Ceiling
(LBG-1-12A-HP model shown)**

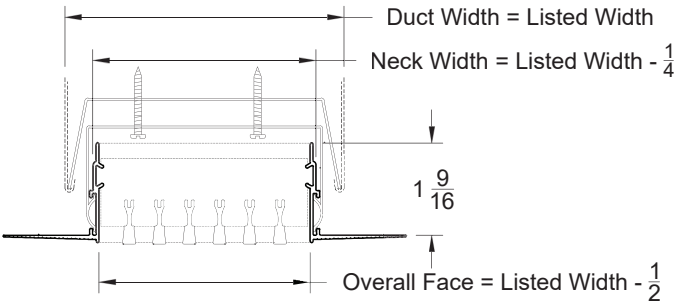
Mounting Options – Dimensional Drawings



Combination Narrow Wall / Spline Mounting
(LBG-2-12A-HC model shown)



Narrow / Wall Subframe Mounting
(LBG-2-12A-HW model shown)



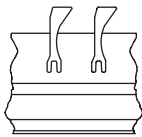
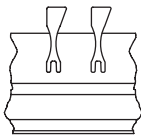
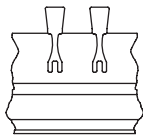
Tape and Spackle Mounting
(LBG-1-14B-TS model shown)

Deflection Options

0° Deflection

15° Deflection

30° Deflection



Installation Instructions for Concealed Surface Mount with Bracket Applications

This section can apply to both models LBG and LBGMC. The below can be used as a guideline to install other LBG frame styles that mount similarly with concealed mounting hardware in a surface mount application such as the Tape and Spackle Frame Style ("TS").

Step 1 – Mounting Hardware

- A. Locate and ensure all proper mounting brackets and screws were supplied with the linear bar grille before starting installation. See Figure 1 for a table showing how many hanger brackets are shipped with the corresponding linear lengths.

LBG Series Linear Bar Length	# of Hanger Brackets
24" or less	2
> 24" to 48"	3
> 48" to 60"	4
> 60" to 96"	6

Figure 1 (Step 1A)

Step 2 – Framing the Opening

- A. Before installing drywall, an adequate frame must be constructed for the LBG Series Linear Bar Grille. This framing must be suitable to hold the weight of the grille (typically wood framing). The length and width of the framing opening depends on the length and width of the linear bar grille.
- B. In general, the length and width of the opening within the framing should be the ordered nominal grille length and width (see Figure 2).

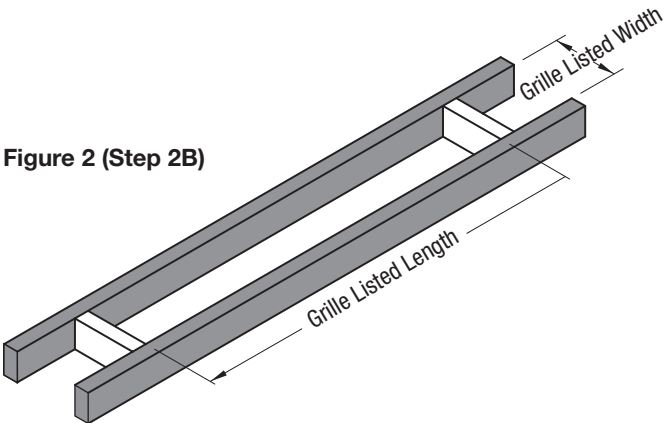


Figure 2 (Step 2B)

Step 3 – Preparation for the Hanger Supports

- A. The hanger bracket hardware is meant to be installed above the plane of the sheet rock in the ceiling. Once installed above that plane, using the screws provided, you will be able to screw from the face of the grille and the linear bar grille will be pulled up into the opening.
- B. There are several ways to support the hanger brackets – see Figure 3.

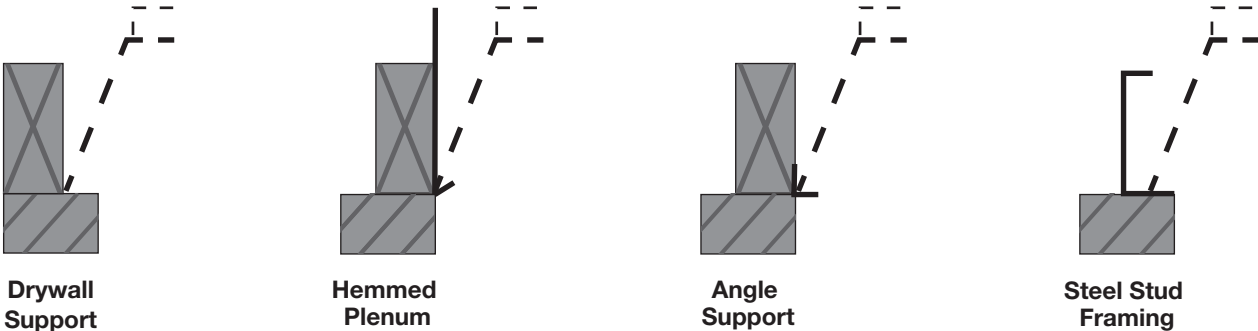


Figure 3 (Step 3B): Hanger Support Options

Step 4 – Installing Hanger Brackets

- A. To start, insert the screw through the face of the grille and start the screw into the hanger bracket – do not tighten all the way, only enough to be attached.
- B. Push all brackets up into the opening until all hanger brackets get caught on the hanger bracket support (drywall, hemmed plenum, angle, steel stud, etc.) – see Figure 4.
- C. Using a screwdriver or drill, tighten the screws to pull the linear bar grille up into the opening.
- D. On long runs with multiple grille sections, the same procedure should be replicated above for all individual grilles with special care to use factory-supplied alignment splines.

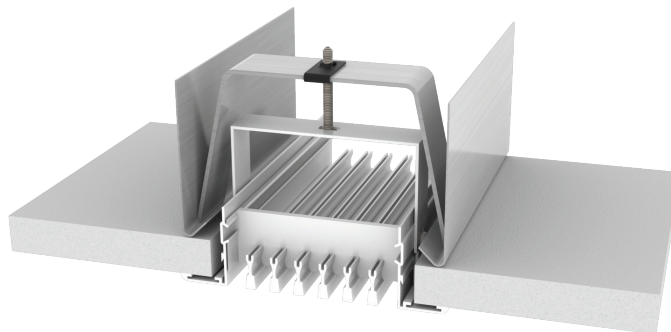


Figure 4 (Step 4B): Hanger Bracket Install – Hemmed Plenum (other methods similar)

Installation Instructions for Concealed Spline Mount (HP, HC and HW Frame Styles)

This section only applies to models in the LBG Series which includes the option for a concealed spline subframe (Frame Styles HP, HC and HW). See the Quick Reference Guide within this IOM for more information.

Step 1 – Mounting Hardware

- A. Locate and ensure all proper mounting brackets and screws were supplied with the linear diffuser before starting installation. See Figure 5 for a table showing how many hanger brackets are shipped with the corresponding linear lengths.

LBG Series Linear Bar Length	# of Hanger Brackets
24" or less	2
> 24" to 48"	3
> 48" to 60"	4
> 60" to 96"	6

Figure 5 (Step 1A)

Step 2 – Framing the Opening

- A. Before installing drywall, an adequate frame must be constructed for the LBG Series Linear Bar Grille. This framing must be suitable to hold the weight of the grille (typically wood framing). The length and width of the framing opening depends on the length and width of the linear bar grille.
- B. In general, the length of the opening within the framing should be the ordered nominal grille length plus 11/16" (see Figure 6) and the opening width should be the ordered nominal grille width.

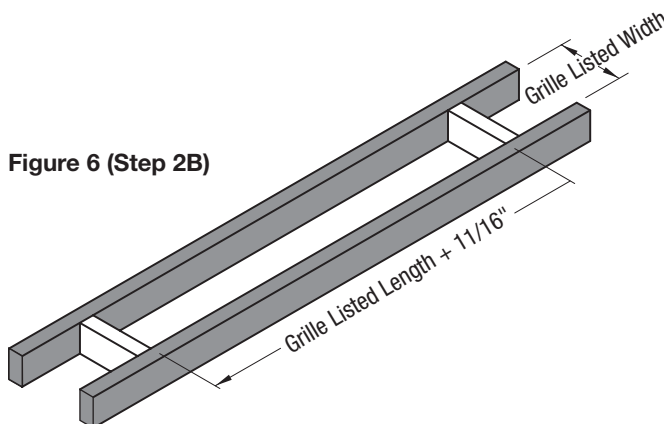


Figure 6 (Step 2B)

Step 3 – Installing Subframe

- A. The hanger bracket hardware is meant to be installed above the plane of the sheet rock in the subframe provided. Once installed above that plane, using the screws provided, you will be able to screw from the face of the diffuser and the linear diffuser will be pulled up into the opening/subframe.
- B. Install and secure subframe provided in framing – see Figure 7. Note: sub end borders need to be cut to size and notched if used; they are not provided by the factory.
- C. Spacers (by others) should be used to brace the opening and only removed when ready to install the grille. In long runs (with multiple grilles), the spacers should only be removed when each individual grille section is ready to be installed.
- D. Spacers will help prevent distortion of the subframe and should be done prior to plastering if applicable.

Step 4 – Installing Sheet Rock / Drywall

- A. Install drywall below framing, butted up against the lower section of the subframe – see Figure 7.

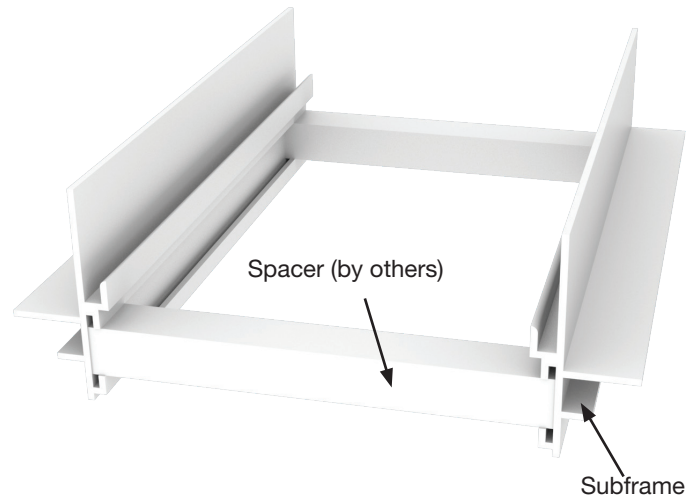


Figure 7 (Step 3B and 4A): Subframe Installed in Framing – Shown with Plenum/Duct (not required)

Note: HP frame version shown, HW (Narrow/Wall) and HC (Combination) are similar.

Step 5 – Installing Hanger Brackets

- A. To start, insert the screw through the face of the grille, through the pre-installed screw mounts and start the screw into the supplied hanger bracket – do not tighten all the way, only enough to be attached. Repeat as needed.
- B. Push all brackets up into the opening until all hanger brackets get caught on the subframe supports – see Figure 8.
- C. Using a screwdriver or drill, tighten the screws to pull the linear bar grille up into the opening.
- D. On long runs with multiple grille sections, the same procedure should be replicated above for all individual grilles with special care to use factory-supplied alignment splines – see Figure 8.

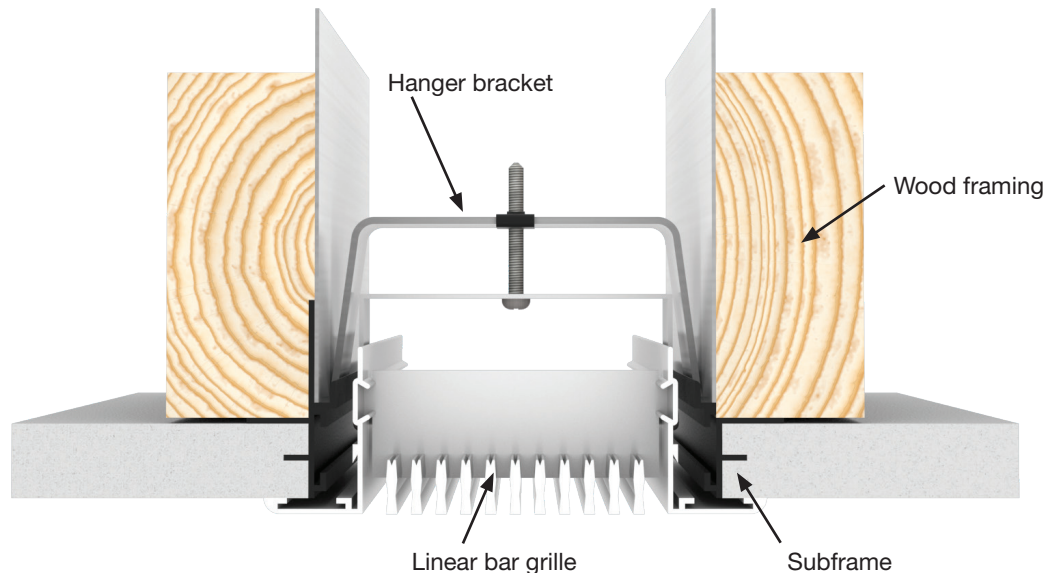


Figure 8 (Step 5B): Hanger Bracket Install into Subframe – Shown with Duct/Plenum (not required)

Note: HP frame version shown, HW (Narrow/Wall) and HC (Combination) are similar.

General Maintenance

Linear Bar Grilles are basically maintenance free. Most Linear Bar Grille models have removable faces to allow for cleaning of dust buildup within the duct or on the internal damper when included. The face of most grilles can be cleaned with water and mild detergent if dirt and dust begin to build up.

Our Commitment

As a result of our commitment to continuous improvement, Greenheck reserves the right to change specifications without notice.

Product warranties can be found online at Greenheck.com, either on the specific product page or in the literature section of the website at Greenheck.com/Resources/Library/Literature.

