

INTRODUCTION

Linear bar grilles are a unique grille option that provides architectural appeal with long continuous lengths and a clean appearance while also providing improved air distribution performance in ceiling, sidewall, or even floor applications. With four different models and a variety of configurations, Krueger can provide the specific performance or look that you need for your next building application. Below is a detailed outline and comparison for how to select which model and configuration best fits the architectural and performance requirements for your next design. For questions about linear bar grilles please reach out to our application engineering team (kruegergrd-spl@krueger-hvac.com).

INSTALLATION LOCATION

Linear bar grilles are available for any type of install location, but the correct model must be selected. The 1500/1600 are to be used in wall or ceiling applications while the 1800/1850 are designed and load rated only for floor and sill installation.

CEILING OR SIDEWALL

- 1500
- 1600

FLOOR OR SILL

- 1800
- 1850

FRAMES

Linear bar grilles are available in a multitude of frame styles. Since the various models have different install capabilities, the frame availability is unique. The **1800/1850 utilize floor rated frames**, whereas the **1500/1600 utilize unrated frames**, which are better suited for ceiling and sidewall installations.

Within each model, the variety of frames can be categorized into either single flange, sub frame, or mud-in. The selected frame type will affect the ease of installation and the appearance within the space.

The **single flange frames** have a range of available flange sizes. The larger the flange, the easier it is to cover any rough hole openings in the field. The smallest flange will provide a core only look, but the hole opening must be carefully cut.

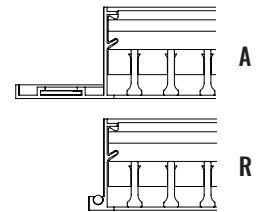
The **sub frame** options come in two sections, where the sub frame can be installed into the ceiling without the grille core to allow for access behind the ceiling. The grille core would then be snapped into the sub frame with provided snap clips once installation is complete. (Note that once the core grille is installed, it is not easily removable).

The **mud-in frame** is only available for 1500/1600 models and is used to create a core only appearance while also having a hidden large flange to cover rough openings.

1500 / 1600 FRAMES

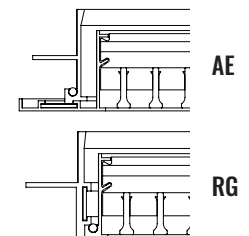
Single Flange Frame

- A (Largest Flange)
- B
- C
- D
- R (Smallest Flange)



Sub Frame

- AE (Largest Flange)
- BEE
- CEE
- DS
- RG (Smallest Flange)



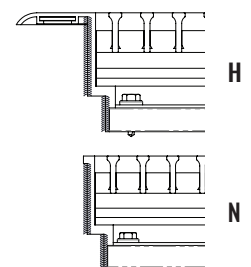
Mud-in Frame

- MF

1800 / 1850 FRAMES

Single Flange Frame

- H (Largest Flange)
- M
- N (Smallest Flange)



MOUNTING

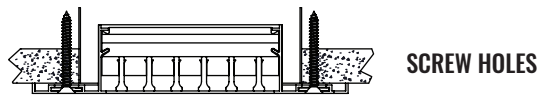
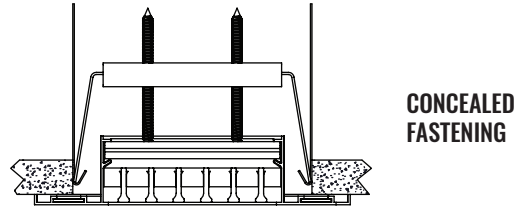
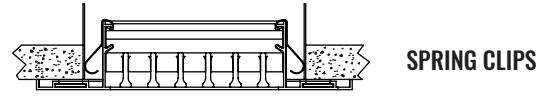
Linear bar grilles have a variety of mounting options.

No mounting is used if the installer has a unique application where they plan to use their own installation.

Spring clips are recommended only for wall or floor applications since the unit is held in place through friction between the spring clip and the surface.

Concealed fastening is used only in ceiling or sidewall applications, as it mechanically secures the grille with a concealed screw and bracket.

Screw holes allow installation through the use of factory provided screws through the face.

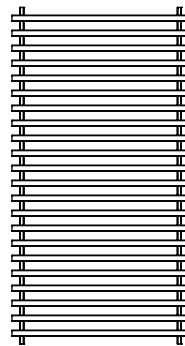


BLADE THICKNESS

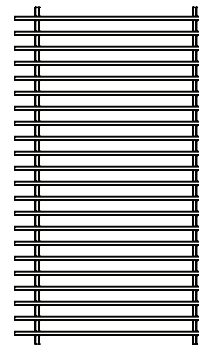
Blade thickness is driven by the model selection. The 1500/1800 use 7/32" blades, while the 1600/1850 use 1/8" blades. This difference will effect both the free area and performance.

The **1500/1800 models have thicker blades** that create a larger area of obstruction for the airflow, increasing both the pressure drop and NC performance of the unit. These blades give the appearance of a sturdy, heavy-duty product.

The **1600/1850 models have thinner blades**, which allow an increase in free area. These blades give the grille a finer appearance that blends into architecture more easily.



1500 / 1800
(THICKER BLADES)

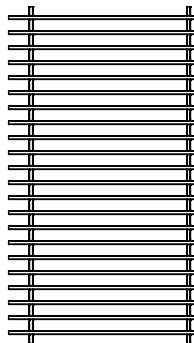


1600 / 1850
(THINNER BLADES)

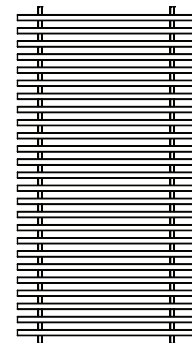
BLADE SPACING

A variety of blade spacings are available that will effect performance and appearance. While all four models are available with 1/2" blade spacing, **the 1600/1850 go down to 1/4" spacing**, while the **1500/1800 only go down to 7/16"**.

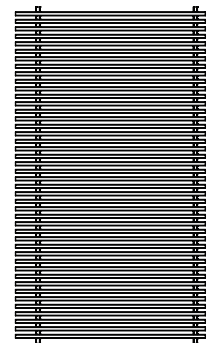
Both of these spacings can be defined as pencil proof, but the smaller, 1/4" spacing further decreases the visibility behind the unit and minimizes the capability of far smaller items to pass through the face. Blade spacing will also affect the NC.



NORMAL 1/2"
(LARGEST)



PENCIL PROOF 7/16"



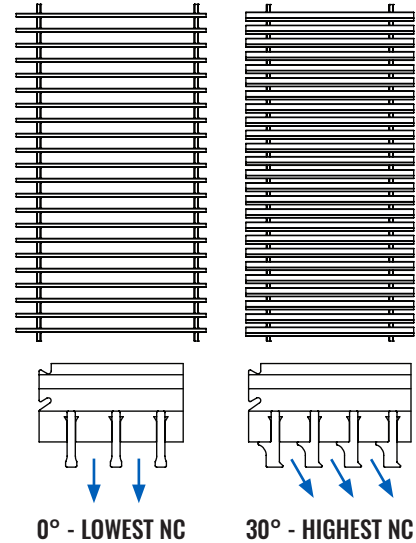
NORMAL 1/4"
(SMALLEST)

DEFLECTION

There are three deflections available between the four models. The **1500/1800** have **0°, 15°, or 30°** deflection available, while the **1600/1850** have only **0° or 15°**.

While deflection is useful for angling air towards a surface to increase throw, it will also effect the performance of the unit.

With different deflections, the pressure drop and throw remains relatively the same, but the NC will increase as the deflection increases.



MODEL PERFORMANCE COMPARISON

MODEL DESCRIPTIONS - 1500 / 1800

- 1500N / 1800N - 1/4" Spacing, 0° Deflection
- 1515N / 1815N - 1/4" Spacing, 15° Deflection
- 1500P / 1800P - 7/16" Spacing, 0° Deflection
- 1530P / 1830P - 7/16" Spacing, 30° Deflection

MODEL DESCRIPTIONS - 1600 / 1850

- 1600E / 1850E - 1/2" Spacing, 0° Deflection
- 1615E / 1855E - 1/2" Spacing, 15° Deflection
- 1600N / 1850N - 1/4" Spacing, 0° Deflection
- 1615N / 1855N - 1/4" Spacing, 15° Deflection

FREE AREA

- 1530P / 1830P (Smallest)
- 1615N / 1855N
- 1600N / 1850N
- 1500P / 1800P
- 1515N / 1815N
- 1500N / 1800N
- 1615E / 1855E
- 1600E / 1850E (Largest)

PRESSURE DROP

- 1600E / 1850E (Lowest)
- 1615E / 1855E
- 1500N / 1800N
- 1600N / 1850N
- 1615N / 1855N
- 1515N / 1815N
- 1500P / 1800P
- 1530P / 1830P (Highest)

SOUND (NC)

- 1600E / 1850E (Lowest)
- 1500P / 1800P
- 1615E / 1855E
- 1600N / 1850N
- 1500N / 1800N
- 1515N / 1815N
- 1530P / 1830P
- 1615N / 1855N (Highest)

THROW

Throw is not effected by model or core configuration. Only size and CFM will change throw characteristics.