

# KINETICS™

## Sound Control Baffles

### Model KB-803

### Estimating Baffles

Use the following example to estimate the number of baffles for your application.

**Example:**

Consider an 80' L x 40' W x 20' H walls industrial plant.

**Step 1** Determine surface area:

80 x 20 x 2 (walls)	= 3200
40 x 20 x 2 (walls)	= 1600
80 x 40 x 1 (ceiling)	= 3200
80 x 40 x 1 (floor)	= 3200
<b>Total Surface</b>	<b>= 11200 sq. ft</b>

**Step 2** Determine the overall acoustical character of the building. Assume this building is medium hard since the floors and walls are hard, and the ceiling is medium.

**Step 3** Connect 11,200 ft.<sup>2</sup> and medium hard on the nomogram. Extend the line to its intersection with the vertical reference line.

**Step 4** If an 8 dB noise reduction is desired, connect a line between 8 on the "Reduction" scale, and the intersection point on the "Reference Line".

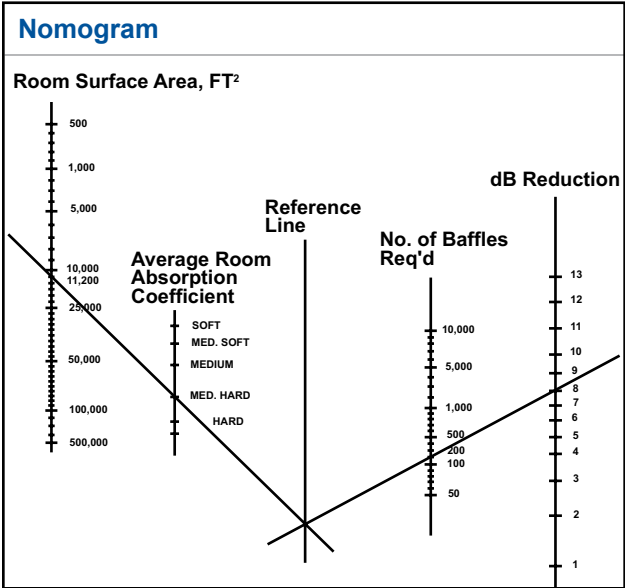
**Step 5** Read 200 as the number of baffles required on the "Required" line.



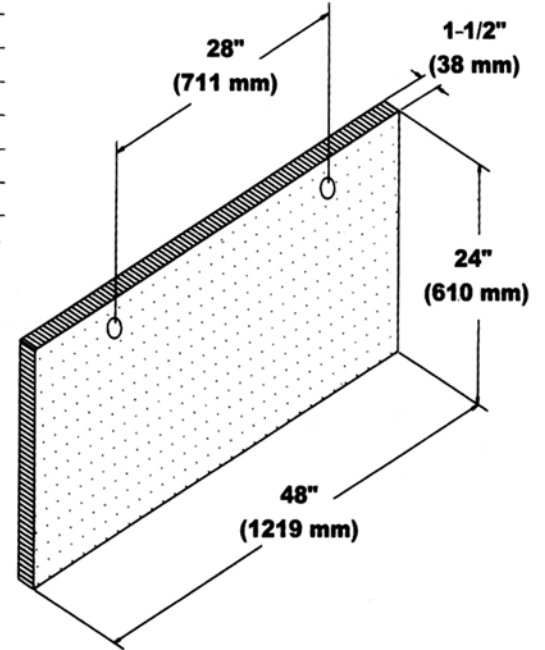
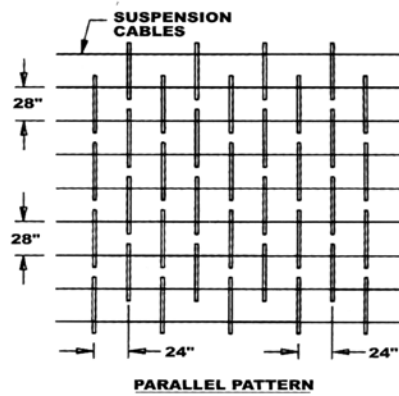
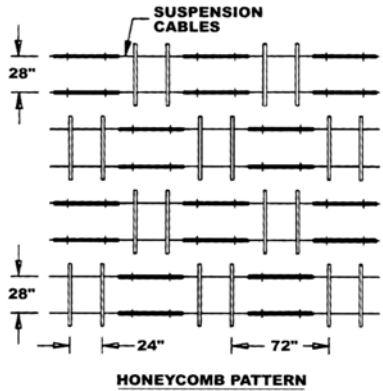
### Description

Kinetics Noise Control Baffles are used to reduce overall noise levels in industrial, recreational, and other high noise areas, and are suspended from above or from the structure near the noise source. Kinetics Noise Control Baffles are 2.7 pcf (43 kg/m<sup>3</sup>) fiberglass, 24" x 48" (610 mm x 1219 mm), and 1-1/2" (38 mm) thick, and are sealed in a black or white fire-retardant vinyl film cover. When tested in accordance to UL-723, the cover material exhibits a flame spread of 15, and smoke development of 105; the fuel contribution is not determinable. The average absorption ratings for Kinetics Baffles are shown in the table. Actual room noise reduction can be up to 10 dBA depending on the configuration of the space and the absorption present before installing baffles. Baffles are packaged ten (10) per carton.

Baffles are available to meet USDA and FDA approved requirements using various available coverings.



Room/Building Acoustical Characteristics	
Terminology	Description
Hard	All (6) Surfaces Brick, Concrete, Marble, Tile, Steel
Medium Hard	(5) Surfaces Hard, (1) Surface Absorptive -- Carpet, Acoustical Tile, Drapes, or Open to the Outside.
Medium	(4) Surfaces Hard, (2) Surfaces Absorptive
Medium Soft	(3) Surfaces Hard, (3) Surfaces Absorptive
Soft	



**Acoustical Performance for 2' x 4' x 1-1/2" Thick Baffles Tested in a Typical Suspended Layout**

Center Frequency (Hz)	Absorption Coefficient		Sabins/Baffles	
	<i>Polly Wrapped</i>	<i>Fill Only</i>	<i>Polly Wrapped</i>	<i>Fill Only</i>
125	0.13	0.16	2.0	2.5
250	0.37	0.41	5.9	6.5
500	0.74	0.77	11.9	12.3
1000	0.90	0.94	14.4	15.1
2000	0.76	1.00	12.2	16.0
4000	0.49	1.51	7.8	18.4
NRC	0.70	0.80		

**Specifications**

Noise Control Baffles shall be constructed from 2.7 pcf (43 kg/m<sup>3</sup>) fiberglass sized 2'0" x 4'0" (610 mm x 1219 mm) x 1-1/2" (38 mm) thick.

Fiberglass shall be completely wrapped and sealed with a 3 mil (76 micron) thick white vinyl film cover. The vinyl shall be heat sealed along three (3) edges which shall provide an air-tight seam. Each baffle shall have a quantity of two (2) brass grommets sized 3/8" (10 mm) I.D. along the top edge of the baffle.

Baffles used in food processing plants shall be covered with a white Tyvec material which has been approved by the United States Department of Agriculture for use in food processing plants.

Baffles shall have a minimum NRC Rating of 0.74 for 1-1/2" (38 mm) thickness.

The cover material of the baffles shall be Class 1 and shall exhibit a flame spread rating of 15, and a smoke development of 105 when tested in accordance with UL-723.

Noise control baffles shall be Model KB-803 as manufactured by Kinetics Noise Control, Inc.



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Kinetics Noise Control, Inc. is continually upgrading the quality of our products. We reserve the right to make changes to this and all products without notice.