

# LG

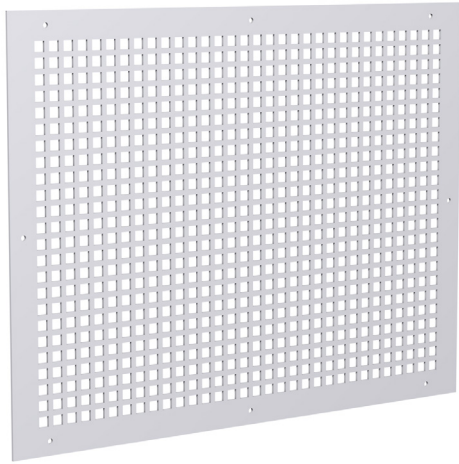
LATTICE GRILLE



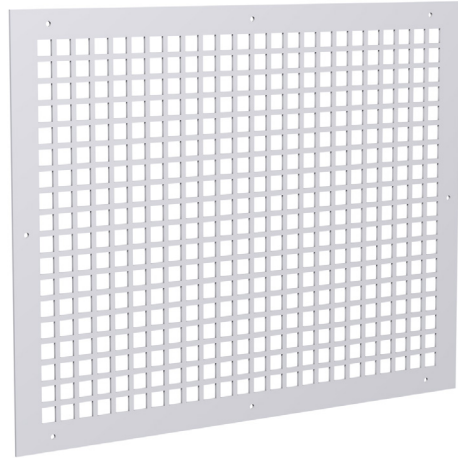
# LG Lattice Grille

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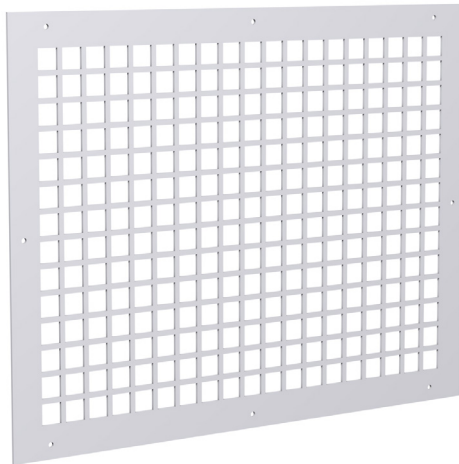
Lattice Grilles (LG) are available in a number of standard mesh patterns and can be fabricated in steel, stainless steel, or aluminum to suit the desired strength, corrosion and finish needs.



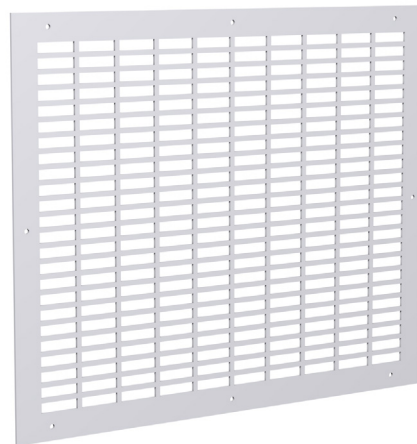
*1/2 in. mesh*



*3/4 in. mesh*



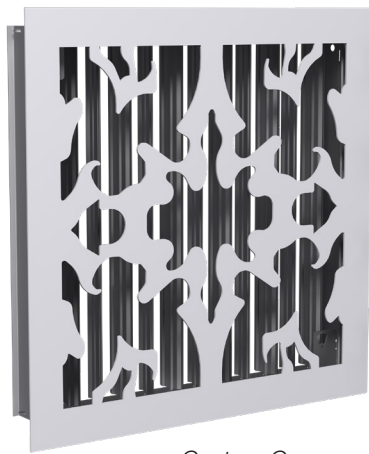
*1 in. mesh*



*2 in. x 1/2 in. mesh*

## COMPLETELY CUSTOMIZABLE

- + Full customization of LG grilles provides the flexibility required to meet even the most demanding architectural requirements.
- + The LG can be manufactured to match complex, customer supplied designs, a feature that is well suited to spaces with unique architectural requirements where aesthetics are of the utmost importance.



## TYPICAL APPLICATIONS

Lattice grilles are perfectly suited for retrofits, historical buildings, and applications where a thin profile is required. The thin design allows lattice grilles to cover other air distribution products to improve the aesthetic or minimize damage and tampering.

### CONSTRUCTION

- + Core Style
  - ½ in. mesh (LG50)
  - ¾ in. mesh (LG75)
  - 1 in. mesh (LG100)
  - 2 in. x ½ in. rectangular mesh (LG250)
- + Material
  - Steel - 14 gauge
  - Aluminum - 14 gauge
  - Stainless steel - 20 gauge
- + Size
  - Minimum: 6 in. x 4 in.
  - Maximum (one piece): 24 in. x 96 in.
  - Oversized construction available
- + Options
  - Integral damper
  - Heavy gauge construction
  - Custom core pattern



# PERFORMANCE DATA

## LG75 – 3/4 in. Square Mesh - Daylight Opening Schedule

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
1	3/4 in.	3/4 in.
2	13/4 in.	13/4 in.
3	2 3/4 in.	2 3/4 in.
4	3 3/4 in.	3 3/4 in.
5	4 3/4 in.	4 3/4 in.
6	5 3/4 in.	5 3/4 in.
7	6 3/4 in.	6 3/4 in.
8	7 3/4 in.	7 3/4 in.
9	8 3/4 in.	8 3/4 in.
10	9 3/4 in.	9 3/4 in.
11	10 3/4 in.	10 3/4 in.
12	11 3/4 in.	11 3/4 in.
13	12 3/4 in.	12 3/4 in.
14	13 3/4 in.	13 3/4 in.
15	14 3/4 in.	14 3/4 in.
16	15 3/4 in.	15 3/4 in.
17	16 3/4 in.	16 3/4 in.
18	17 3/4 in.	17 3/4 in.
19	18 3/4 in.	18 3/4 in.
20	19 3/4 in.	19 3/4 in.
21	20 3/4 in.	20 3/4 in.
22	21 3/4 in.	21 3/4 in.
23	22 3/4 in.	22 3/4 in.
24	23 3/4 in.	23 3/4 in.
25	24 3/4 in.	24 3/4 in.
26	25 3/4 in.	25 3/4 in.
27	26 3/4 in.	26 3/4 in.
28	27 3/4 in.	27 3/4 in.
29	28 3/4 in.	28 3/4 in.
30	29 3/4 in.	29 3/4 in.
31	30 3/4 in.	30 3/4 in.
32	31 3/4 in.	31 3/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
33	32 3/4 in.	32 3/4 in.
34	33 3/4 in.	33 3/4 in.
35	34 3/4 in.	34 3/4 in.
36	35 3/4 in.	35 3/4 in.
37	36 3/4 in.	36 3/4 in.
38	37 3/4 in.	37 3/4 in.
39	38 3/4 in.	38 3/4 in.
40	39 3/4 in.	39 3/4 in.
41	40 3/4 in.	40 3/4 in.
42	41 3/4 in.	41 3/4 in.
43	42 3/4 in.	42 3/4 in.
44	43 3/4 in.	43 3/4 in.
45	44 3/4 in.	44 3/4 in.
46	45 3/4 in.	45 3/4 in.
47	46 3/4 in.	46 3/4 in.
48	47 3/4 in.	47 3/4 in.
49	48 3/4 in.	48 3/4 in.
50	49 3/4 in.	49 3/4 in.
51	50 3/4 in.	50 3/4 in.
52	51 3/4 in.	51 3/4 in.
53	52 3/4 in.	52 3/4 in.
54	53 3/4 in.	53 3/4 in.
55	54 3/4 in.	54 3/4 in.
56	55 3/4 in.	55 3/4 in.
57	56 3/4 in.	56 3/4 in.
58	57 3/4 in.	57 3/4 in.
59	58 3/4 in.	58 3/4 in.
60	59 3/4 in.	59 3/4 in.
61	60 3/4 in.	60 3/4 in.
62	61 3/4 in.	61 3/4 in.
63	62 3/4 in.	62 3/4 in.
64	63 3/4 in.	63 3/4 in.

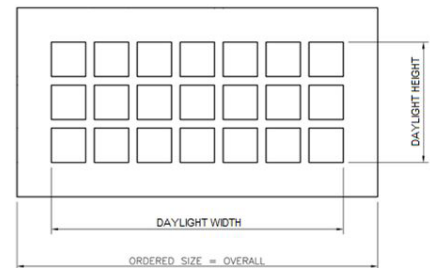
Hole quantity per row/column	Daylight width (in)	Daylight height (in)
65	64 3/4 in.	64 3/4 in.
66	65 3/4 in.	65 3/4 in.
67	66 3/4 in.	66 3/4 in.
68	67 3/4 in.	67 3/4 in.
69	68 3/4 in.	68 3/4 in.
70	69 3/4 in.	69 3/4 in.
71	70 3/4 in.	70 3/4 in.
72	71 3/4 in.	71 3/4 in.
73	72 3/4 in.	72 3/4 in.
74	73 3/4 in.	73 3/4 in.
75	74 3/4 in.	74 3/4 in.
76	75 3/4 in.	75 3/4 in.
77	76 3/4 in.	76 3/4 in.
78	77 3/4 in.	77 3/4 in.
79	78 3/4 in.	78 3/4 in.
80	79 3/4 in.	79 3/4 in.
81	80 3/4 in.	80 3/4 in.
82	81 3/4 in.	81 3/4 in.
83	82 3/4 in.	82 3/4 in.
84	83 3/4 in.	83 3/4 in.
85	84 3/4 in.	84 3/4 in.
86	85 3/4 in.	85 3/4 in.
87	86 3/4 in.	86 3/4 in.
88	87 3/4 in.	87 3/4 in.
89	88 3/4 in.	88 3/4 in.
90	89 3/4 in.	89 3/4 in.
91	90 3/4 in.	90 3/4 in.
92	91 3/4 in.	91 3/4 in.
93	92 3/4 in.	92 3/4 in.
94	93 3/4 in.	93 3/4 in.

## LG250 – 2 x 1/2 in. Rectangular Mesh - Daylight Opening Schedule

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
1	2 in.	1/2 in.
2	4 1/4 in.	1 1/4 in.
3	6 1/2 in.	2 in.
4	8 3/4 in.	2 3/4 in.
5	11 in.	3 1/2 in.
6	13 1/4 in.	4 1/4 in.
7	15 1/2 in.	5 in.
8	17 3/4 in.	5 3/4 in.
9	20 in.	6 1/2 in.
10	22 1/4 in.	7 1/4 in.
11	24 1/2 in.	8 in.
12	26 3/4 in.	8 3/4 in.
13	29 in.	9 1/2 in.
14	31 1/4 in.	10 1/4 in.
15	33 1/2 in.	11 in.
16	35 3/4 in.	11 3/4 in.
17	38 in.	12 1/2 in.
18	40 1/4 in.	13 1/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
19	42 1/2 in.	14 in.
20	44 3/4 in.	14 3/4 in.
21	47 in.	15 1/2 in.
22	49 1/4 in.	16 1/4 in.
23	51 1/2 in.	17 in.
24	53 3/4 in.	17 3/4 in.
25	56 in.	18 1/2 in.
26	58 1/4 in.	19 1/4 in.
27	60 1/2 in.	20 in.
28	62 3/4 in.	20 3/4 in.
29	65 in.	21 1/2 in.
30	67 1/4 in.	22 1/4 in.
31	69 1/2 in.	-
32	71 3/4 in.	-
33	74 in.	-
34	76 1/4 in.	-
35	78 1/2 in.	-
36	80 3/4 in.	-

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
37	83 in.	-
38	85 1/4 in.	-
39	87 1/2 in.	-
40	89 3/4 in.	-
41	92 in.	-



**NOTES:**

Daylight height is the lattice opening in the vertical direction.  
Daylight width is the lattice opening in the horizontal direction.

# PERFORMANCE DATA

## LG100 – 1 in. square mesh - Daylight Opening Schedule

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
1	1 in.	1 in.
2	2 1/4 in.	2 1/4 in.
3	3 1/2 in.	3 1/2 in.
4	4 3/4 in.	4 3/4 in.
5	6 in.	6 in.
6	7 1/4 in.	7 1/4 in.
7	8 1/2 in.	8 1/2 in.
8	9 3/4 in.	9 3/4 in.
9	11 in.	11 in.
10	12 1/4 in.	12 1/4 in.
11	13 1/2 in.	13 1/2 in.
12	14 3/4 in.	14 3/4 in.
13	16 in.	16 in.
14	17 1/4 in.	17 1/4 in.
15	18 1/2 in.	18 1/2 in.
16	19 3/4 in.	19 3/4 in.
17	21 in.	21 in.
18	22 1/4 in.	22 1/4 in.
19	23 1/2 in.	23 1/2 in.
20	24 3/4 in.	24 3/4 in.
21	26 in.	26 in.
22	27 1/4 in.	27 1/4 in.
23	28 1/2 in.	28 1/2 in.
24	29 3/4 in.	29 3/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
25	31 in.	31 in.
26	32 1/4 in.	32 1/4 in.
27	33 1/2 in.	33 1/2 in.
28	34 3/4 in.	34 3/4 in.
29	36 in.	36 in.
30	37 1/4 in.	37 1/4 in.
31	38 1/2 in.	38 1/2 in.
32	39 3/4 in.	39 3/4 in.
33	41 in.	41 in.
34	42 1/4 in.	42 1/4 in.
35	43 1/2 in.	43 1/2 in.
36	44 3/4 in.	44 3/4 in.
37	46 in.	46 in.
38	47 1/4 in.	47 1/4 in.
39	48 1/2 in.	48 1/2 in.
40	49 3/4 in.	49 3/4 in.
41	51 in.	51 in.
42	52 1/4 in.	52 1/4 in.
43	53 1/2 in.	53 1/2 in.
44	54 3/4 in.	54 3/4 in.
45	56 in.	56 in.
46	57 1/4 in.	57 1/4 in.
47	58 1/2 in.	58 1/2 in.
48	59 3/4 in.	59 3/4 in.
49	61 in.	61 in.
50	62 1/4 in.	62 1/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
51	63 1/2 in.	63 1/2 in.
52	64 3/4 in.	64 3/4 in.
53	66 in.	66 in.
54	67 1/4 in.	67 1/4 in.
55	68 1/2 in.	68 1/2 in.
56	69 3/4 in.	69 3/4 in.
57	71 in.	71 in.
58	72 1/4 in.	72 1/4 in.
59	73 1/2 in.	73 1/2 in.
60	74 3/4 in.	74 3/4 in.
61	76 in.	76 in.
62	77 1/4 in.	77 1/4 in.
63	78 1/2 in.	78 1/2 in.
64	79 3/4 in.	79 3/4 in.
65	81 in.	81 in.
66	82 1/4 in.	82 1/4 in.
67	83 1/2 in.	83 1/2 in.
68	84 3/4 in.	84 3/4 in.
69	86 in.	86 in.
70	87 1/4 in.	87 1/4 in.
71	88 1/2 in.	88 1/2 in.
72	89 3/4 in.	89 3/4 in.
73	91 in.	91 in.
74	92 1/4 in.	92 1/4 in.
75	93 1/2 in.	93 1/2 in.

## LG50 – 1/2 in. square mesh - Daylight Opening Schedule

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
1	1/2 in.	1/2 in.
2	1 1/4 in.	1 1/4 in.
3	2 in.	2 in.
4	2 3/4 in.	2 3/4 in.
5	3 1/2 in.	3 1/2 in.
6	4 1/4 in.	4 1/4 in.
7	5 in.	5 in.
8	5 3/4 in.	5 3/4 in.
9	6 1/2 in.	6 1/2 in.
10	7 1/4 in.	7 1/4 in.
11	8 in.	8 in.
12	8 3/4 in.	8 3/4 in.
13	9 1/2 in.	9 1/2 in.
14	10 1/4 in.	10 1/4 in.
15	11 in.	11 in.
16	11 3/4 in.	11 3/4 in.
17	12 1/2 in.	12 1/2 in.
18	13 1/4 in.	13 1/4 in.
19	14 in.	14 in.
20	14 3/4 in.	14 3/4 in.
21	15 1/2 in.	15 1/2 in.
22	16 1/4 in.	16 1/4 in.
23	17 in.	17 in.
24	17 3/4 in.	17 3/4 in.
25	18 1/2 in.	18 1/2 in.
26	19 1/4 in.	19 1/4 in.
27	20 in.	20 in.
28	20 3/4 in.	20 3/4 in.
29	21 1/2 in.	21 1/2 in.
30	22 1/4 in.	22 1/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
31	23 in.	23 in.
32	23 3/4 in.	23 3/4 in.
33	24 1/2 in.	24 1/2 in.
34	25 1/4 in.	25 1/4 in.
35	26 in.	26 in.
36	26 3/4 in.	26 3/4 in.
37	27 1/2 in.	27 1/2 in.
38	28 1/4 in.	28 1/4 in.
39	29 in.	29 in.
40	29 3/4 in.	29 3/4 in.
41	30 1/2 in.	30 1/2 in.
42	31 1/4 in.	31 1/4 in.
43	32 in.	32 in.
44	32 3/4 in.	32 3/4 in.
45	33 1/2 in.	33 1/2 in.
46	34 1/4 in.	34 1/4 in.
47	35 in.	35 in.
48	35 3/4 in.	35 3/4 in.
49	36 1/2 in.	36 1/2 in.
50	37 1/2 in.	37 1/2 in.
51	38 in.	38 in.
52	38 3/4 in.	38 3/4 in.
53	39 1/2 in.	39 1/2 in.
54	40 1/4 in.	40 1/4 in.
55	41 in.	41 in.
56	41 3/4 in.	41 3/4 in.
57	42 1/2 in.	42 1/2 in.
58	43 1/4 in.	43 1/4 in.
59	44 in.	44 in.
60	44 3/4 in.	44 3/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
61	45 1/2 in.	45 1/2 in.
62	46 1/4 in.	46 1/4 in.
63	47 in.	47 in.
64	47 3/4 in.	47 3/4 in.
65	48 1/2 in.	48 1/2 in.
66	49 1/4 in.	49 1/4 in.
67	50 in.	50 in.
68	50 1/4 in.	50 1/4 in.
69	51 1/2 in.	51 1/2 in.
70	52 1/4 in.	52 1/4 in.
71	53 in.	53 in.
72	53 3/4 in.	53 3/4 in.
73	54 1/2 in.	54 1/2 in.
74	55 1/4 in.	55 1/4 in.
75	56 in.	56 in.
76	56 3/4 in.	56 3/4 in.
77	57 1/2 in.	57 1/2 in.
78	58 1/4 in.	58 1/4 in.
79	59 in.	59 in.
80	59 3/4 in.	59 3/4 in.
81	60 1/2 in.	60 1/2 in.
82	61 1/4 in.	61 1/4 in.
83	62 in.	62 in.
84	62 3/4 in.	62 3/4 in.
85	63 1/2 in.	63 1/2 in.
86	64 1/4 in.	64 1/4 in.
87	65 in.	65 in.
88	65 3/4 in.	65 3/4 in.
89	66 1/2 in.	66 1/2 in.
90	67 1/4 in.	67 1/4 in.

Hole quantity per row/column	Daylight width (in)	Daylight height (in)
91	68 in.	68 in.
92	68 3/4 in.	68 3/4 in.
93	69 1/2 in.	69 1/2 in.
94	70 1/4 in.	70 1/4 in.
95	71 in.	71 in.
96	71 3/4 in.	71 3/4 in.
97	72 1/2 in.	72 1/2 in.
98	73 3/4 in.	73 3/4 in.
99	74 in.	74 in.
100	74 3/4 in.	74 3/4 in.
101	75 1/2 in.	75 1/2 in.
102	76 1/4 in.	76 1/4 in.
103	77 in.	77 in.
104	77 3/4 in.	77 3/4 in.
105	78 1/2 in.	78 1/2 in.
106	79 1/4 in.	79 1/4 in.
107	80 in.	80 in.
108	80 3/4 in.	80 3/4 in.
109	81 1/2 in.	81 1/2 in.
110	82 1/4 in.	82 1/4 in.
111	83 in.	83 in.
112	83 3/4 in.	83 3/4 in.
113	84 1/2 in.	84 1/2 in.
114	85 1/4 in.	85 1/4 in.
115	86 in.	86 in.
116	86 3/4 in.	86 3/4 in.
117	87 1/2 in.	87 1/2 in.
118	88 1/4 in.	88 1/4 in.
119	89 in.	89 in.
120	89 3/4 in.	89 3/4 in.

## PERFORMANCE DATA

### Sound

$$NC = 14 \text{ LOG } A + 84 \text{ LOG } V - 218$$

$$A = \text{Free Area, ft}^2$$

$$V = \frac{\text{Air Flow, cfm}}{\text{Free Area, ft}^2}$$

NC based on 10dB room absorption.

### Negative Static Pressure

$$S.P. = 1.36 \left( \frac{V}{4005} \right)^2$$

$$V = \frac{\text{Air Flow, cfm}}{\text{Free Area, ft}^2}$$

S.P. = Static Pressure Drop, in. w.g.

### Free Area

$$F.A. = \text{No. of Holes} \times \begin{matrix} .0017 \text{ (LG50)} \\ .0039 \text{ (LG75)} \\ .0069 \text{ (LG100)} \\ .0069 \text{ (LG250)} \end{matrix}$$

Number of holes are determined from Daylight Opening Schedules

### Example

Determine performance of an LG100 grille with a daylight opening of 6 in. x 16 in. at 400 cfm.

$$\text{No. of Holes: } 6 \text{ in.} = 5$$

$$16 \text{ in.} = 13$$

$$5 \times 13 = 65$$

$$F.A. = 65 \times .0069 = .449 \text{ ft}^2$$

$$V = 400 / .449 = 891 \text{ fpm}$$

$$S.P. = 1.36 \left( \frac{891}{4005} \right)^2 = .067 \text{ in. w.g.}$$

$$NC = 14 \text{ LOG } (.449) + 84 \text{ LOG } (891) - 218 = 25$$





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