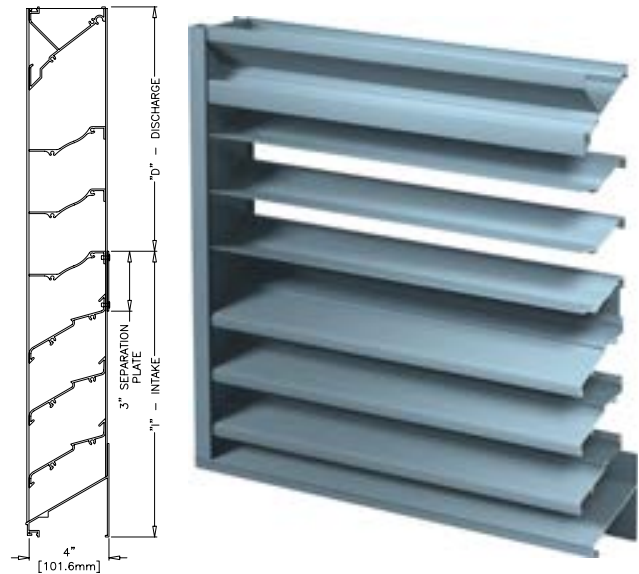


Standard Construction

Frame	Heavy gauge extruded 6063-T5 aluminum, 4 in. (102 mm) x 0.081 in. (2 mm) nominal wall thickness
Blades	K style, heavy gauge extruded 6063-T5 aluminum, 0.081 in. (2 mm) nominal wall thickness, positioned 30° on approximately 3.13 in. (79 mm) centers
Louver Depth	4 in. (102 mm)
Construction	Mechanically fastened
Finish	Mill
Minimum Size	12 in. W x 16 in. H (305 mm W x 406 mm H) <i>(discharge only)</i> 12 in. W x 20 in. H (305 mm W x 508 mm H) <i>(intake/discharge)</i>
Maximum Single Section Size	60 in. W x 120 in. H (1524 mm W x 3048 mm H)
Wind Load	25 PSF (1.2 kPa)



Standard Details

[ESID-430 Standard Details](#)

Structural reinforcing members may be required to adequately support and install multiple louver sections within a large opening. Structural reinforcing members along with any associated installation hardware is not provided by Greenheck unless indicated otherwise by Greenheck. Options and accessories including, but not limited to, screens, filter racks, louver doors, and blank off panels are not subject to structural analysis unless indicated otherwise by Greenheck.

Document Links

[Louver Finishes & Colors](#)

[Louver Product Selection Guide](#)

[Louver Products Catalog](#)

[Louver Warranty Statement](#)

Options and Accessories

- [Bird Screen](#)
- [Blank Off Panels](#)
- [Extended Sill](#)
- [Flange Frame](#)
- [Hinged Frame](#)
- [Insect Screen](#)
- [Mounting Angles](#)
- [Variety of Architectural Finishes](#)
- Welded Construction
- 0.125 in. (3 mm) Nominal Frame

Free Area Chart - Intake Dimensions

Free Area Chart shows free area in inches and square feet.

Intake Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	48	54	60
6.625	0.00	0.01	0.01	0.01	0.01	0.02	0.02	0.02	0.02
12	0.19	0.31	0.43	0.55	0.68	0.77	0.89	1.01	1.14
18	0.43	0.70	0.98	1.26	1.53	1.74	2.02	2.29	2.57
24	0.66	1.10	1.53	1.96	2.39	2.71	3.14	3.58	4.01
30	0.90	1.48	2.07	2.65	3.23	3.67	4.25	4.84	5.42
36	1.14	1.87	2.61	3.35	4.08	4.64	5.37	6.11	6.85
42	1.38	2.27	3.16	4.06	4.95	5.62	6.51	7.41	8.30
48	1.62	2.68	3.73	4.78	5.83	6.62	7.68	8.73	9.78
54	1.87	3.09	4.30	5.52	6.73	7.64	8.85	10.07	11.28
60	2.12	3.50	4.87	6.25	7.63	8.66	10.03	11.41	12.78
66	2.37	3.91	5.45	6.98	8.52	9.67	11.21	12.75	14.29
72	2.59	4.27	5.95	7.63	9.31	10.57	12.25	13.93	15.60
78	2.82	4.66	6.49	8.32	10.15	11.52	13.36	15.19	17.02
84	3.06	5.04	7.03	9.01	11.00	12.49	14.47	16.45	18.44
90	3.30	5.43	7.57	9.71	11.85	13.45	15.59	17.73	19.87
96	3.54	5.83	8.12	10.41	12.71	14.43	16.72	19.01	21.31
102	3.77	6.22	8.66	11.11	13.56	15.39	17.84	20.28	22.73
108	4.01	6.61	9.20	11.80	14.40	16.35	18.95	21.55	24.15
113.75	4.24	6.99	9.74	12.49	15.24	17.30	20.05	22.80	25.55

Free Area Chart shows free area in meters and square meters.

Intake Height Inches	Louver Width in Inches								
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52
0.17	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.30	0.02	0.03	0.04	0.05	0.06	0.07	0.08	0.09	0.11
0.46	0.04	0.07	0.09	0.12	0.14	0.16	0.19	0.21	0.24
0.61	0.06	0.10	0.14	0.18	0.22	0.25	0.29	0.33	0.37
0.76	0.08	0.14	0.19	0.25	0.30	0.34	0.39	0.45	0.50
0.91	0.11	0.17	0.24	0.31	0.38	0.43	0.50	0.57	0.64
1.07	0.13	0.21	0.29	0.38	0.46	0.52	0.60	0.69	0.77
1.22	0.15	0.25	0.35	0.44	0.54	0.62	0.71	0.81	0.91
1.37	0.17	0.29	0.40	0.51	0.63	0.71	0.82	0.94	1.05
1.52	0.20	0.33	0.45	0.58	0.71	0.80	0.93	1.06	1.19
1.68	0.22	0.36	0.51	0.65	0.79	0.90	1.04	1.18	1.33
1.83	0.24	0.40	0.55	0.71	0.86	0.98	1.14	1.29	1.45
1.98	0.26	0.43	0.60	0.77	0.94	1.07	1.24	1.41	1.58
2.13	0.28	0.47	0.65	0.84	1.02	1.16	1.34	1.53	1.71
2.29	0.31	0.50	0.70	0.90	1.10	1.25	1.45	1.65	1.85
2.44	0.33	0.54	0.75	0.97	1.18	1.34	1.55	1.77	1.98
2.59	0.35	0.58	0.80	1.03	1.26	1.43	1.66	1.88	2.11
2.74	0.37	0.61	0.85	1.10	1.34	1.52	1.76	2.00	2.24
2.89	0.39	0.65	0.90	1.16	1.42	1.61	1.86	2.12	2.37

Free Area Chart - Discharge Dimensions

Free Area Chart shows free area in inches and square feet.

Discharge Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	48	54	60
6	0.21	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
9.125	0.07	0.12	0.16	0.21	0.26	0.29	0.34	0.38	0.43
12.25	0.14	0.24	0.33	0.42	0.51	0.58	0.67	0.77	0.86
15.375	0.21	0.35	0.49	0.63	0.77	0.87	1.01	1.15	1.29
18.5	0.29	0.47	0.66	0.84	1.03	1.16	1.35	1.53	1.72
21.625	0.36	0.59	0.82	1.05	1.28	1.45	1.69	1.92	2.15
24.75	0.43	0.71	0.98	1.26	1.54	1.75	2.02	2.30	2.58
27.875	0.50	0.82	1.15	1.47	1.79	2.04	2.36	2.68	3.01
31	0.57	0.94	1.31	1.68	2.05	2.33	2.70	3.07	3.44
34.125	0.64	1.06	1.47	1.89	2.31	2.62	3.04	3.45	3.87
37.25	0.71	1.18	1.64	2.10	2.56	2.91	3.37	3.83	4.30
40.375	0.78	1.29	1.80	2.31	2.82	3.20	3.71	4.22	4.73
43.5	0.86	1.41	1.97	2.52	3.08	3.49	4.05	4.60	5.16
46.625	0.93	1.53	2.13	2.73	3.33	3.78	4.38	4.99	5.59
49.75	1.00	1.65	2.29	2.94	3.59	4.07	4.72	5.37	6.02
52.875	1.07	1.76	2.46	3.15	3.84	4.36	5.06	5.75	6.45
56	1.14	1.88	2.62	3.36	4.10	4.66	5.40	6.14	6.88
59.125	1.21	2.00	2.78	3.57	4.36	4.95	5.73	6.52	7.31
62.25	1.28	2.12	2.95	3.78	4.61	5.24	6.07	6.90	7.74
65.375	1.35	2.23	3.11	3.99	4.87	5.53	6.41	7.29	8.17
68.5	1.43	2.35	3.28	4.20	5.13	5.82	6.74	7.67	8.59
71.625	1.50	2.47	3.44	4.41	5.38	6.11	7.08	8.05	9.02
74.75	1.57	2.59	3.60	4.62	5.64	6.40	7.42	8.44	9.45
77.875	1.64	2.70	3.77	4.83	5.89	6.69	7.76	8.82	9.88
81	1.71	2.82	3.93	5.04	6.15	6.98	8.09	9.20	10.31
84.125	1.78	2.94	4.10	5.25	6.41	7.27	8.43	9.59	10.74
87.25	1.85	3.06	4.26	5.46	6.66	7.57	8.77	9.97	11.17
90.375	1.93	3.17	4.42	5.67	6.92	7.86	9.11	10.35	11.60
93.5	2.00	3.29	4.59	5.88	7.18	8.15	9.44	10.74	12.03
96.625	2.07	3.41	4.75	6.09	7.43	8.44	9.78	11.12	12.46
99.75	2.14	3.53	4.91	6.30	7.69	8.73	10.12	11.50	12.89
102.875	2.21	3.64	5.08	6.51	7.95	9.02	10.45	11.89	13.32
106	2.28	3.76	5.24	6.72	8.20	9.31	10.79	12.27	13.75

Free Area Chart shows free area in meters and square meters.

Discharge Height Inches	Louver Width in Inches								
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52
0.15	0.02	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
0.23	0.01	0.01	0.01	0.02	0.02	0.03	0.03	0.04	0.04
0.31	0.01	0.02	0.03	0.04	0.05	0.05	0.06	0.07	0.08
0.39	0.02	0.03	0.05	0.06	0.07	0.08	0.09	0.11	0.12
0.47	0.03	0.04	0.06	0.08	0.10	0.11	0.13	0.14	0.16
0.55	0.03	0.05	0.08	0.10	0.12	0.13	0.16	0.18	0.20
0.63	0.04	0.07	0.09	0.12	0.14	0.16	0.19	0.21	0.24
0.71	0.05	0.08	0.11	0.14	0.17	0.19	0.22	0.25	0.28
0.79	0.05	0.09	0.12	0.16	0.19	0.22	0.25	0.29	0.32
0.87	0.06	0.10	0.14	0.18	0.21	0.24	0.28	0.32	0.36
0.95	0.07	0.11	0.15	0.20	0.24	0.27	0.31	0.36	0.40
1.03	0.07	0.12	0.17	0.21	0.26	0.30	0.34	0.39	0.44
1.10	0.08	0.13	0.18	0.23	0.29	0.32	0.38	0.43	0.48
1.18	0.09	0.14	0.20	0.25	0.31	0.35	0.41	0.46	0.52
1.26	0.09	0.15	0.21	0.27	0.33	0.38	0.44	0.50	0.56
1.34	0.10	0.16	0.23	0.29	0.36	0.41	0.47	0.53	0.60
1.42	0.11	0.17	0.24	0.31	0.38	0.43	0.50	0.57	0.64
1.50	0.11	0.19	0.26	0.33	0.41	0.46	0.53	0.61	0.68
1.58	0.12	0.20	0.27	0.35	0.43	0.49	0.56	0.64	0.72
1.66	0.13	0.21	0.29	0.37	0.45	0.51	0.60	0.68	0.76
1.74	0.13	0.22	0.30	0.39	0.48	0.54	0.63	0.71	0.80
1.82	0.14	0.23	0.32	0.41	0.50	0.57	0.66	0.75	0.84
1.90	0.15	0.24	0.33	0.43	0.52	0.59	0.69	0.78	0.88
1.98	0.15	0.25	0.35	0.45	0.55	0.62	0.72	0.82	0.92
2.06	0.16	0.26	0.37	0.47	0.57	0.65	0.75	0.85	0.96
2.14	0.17	0.27	0.38	0.49	0.60	0.68	0.78	0.89	1.00
2.22	0.17	0.28	0.40	0.51	0.62	0.70	0.81	0.93	1.04
2.30	0.18	0.29	0.41	0.53	0.64	0.73	0.85	0.96	1.08
2.37	0.19	0.31	0.43	0.55	0.67	0.76	0.88	1.00	1.12
2.45	0.19	0.32	0.44	0.57	0.69	0.78	0.91	1.03	1.16
2.53	0.20	0.33	0.46	0.59	0.71	0.81	0.94	1.07	1.20
2.61	0.21	0.34	0.47	0.60	0.74	0.84	0.97	1.10	1.24
2.69	0.21	0.35	0.49	0.62	0.76	0.86	1.00	1.14	1.28

Free Area Chart - Discharge Unit Only

Free Area Chart shows free area in inches and square feet.

Discharge Height Inches	Louver Width in Inches								
	12	18	24	30	36	42	48	54	60
16	0.44	0.72	1.00	1.28	1.57	1.78	2.06	2.35	2.63
18	0.52	0.86	1.20	1.54	1.88	2.14	2.48	2.81	3.15
24	0.83	1.37	1.90	2.44	2.98	3.38	3.92	4.46	5.00
30	1.15	1.89	2.64	3.38	4.12	4.68	5.43	6.17	6.91
36	1.47	2.42	3.37	4.32	5.27	5.98	6.93	7.88	8.83
42	1.77	2.92	4.07	5.22	6.37	7.23	8.38	9.53	10.68
48	2.07	3.42	4.77	6.11	7.46	8.47	9.81	11.16	12.50
54	2.38	3.92	5.46	7.00	8.54	9.70	11.24	12.78	14.32
60	2.68	4.42	6.15	7.89	9.63	10.93	12.67	14.41	16.14
66	2.98	4.91	6.85	8.78	10.71	12.16	14.10	16.03	17.97
72	3.28	5.41	7.54	9.67	11.80	13.40	15.53	17.66	19.79
78	3.58	5.91	8.24	10.56	12.89	14.63	16.96	19.28	21.61
84	3.89	6.41	8.93	11.45	13.97	15.86	18.38	20.91	23.43
90	4.19	6.91	9.62	12.34	15.06	17.10	19.81	22.53	25.25
96	4.49	7.41	10.32	13.24	16.15	18.33	21.25	24.16	27.08
102	4.81	7.92	11.04	14.16	17.27	19.61	22.73	25.84	28.96
108	5.12	8.45	11.77	15.09	18.42	20.91	24.23	27.55	30.88
114	5.44	8.97	12.49	16.02	19.55	22.20	25.72	29.25	32.78
120	5.74	9.46	13.19	16.91	20.64	23.43	27.15	30.88	34.60

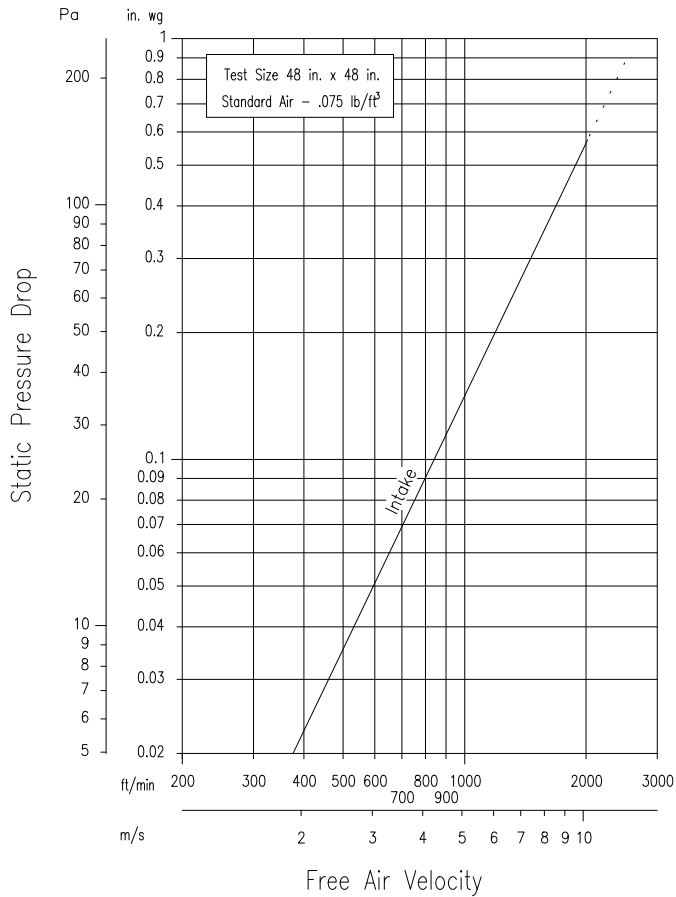
Free Area Chart shows free area in meters and square meters.

Discharge Height Inches	Louver Width in Inches								
	0.30	0.46	0.61	0.76	0.91	1.07	1.22	1.37	1.52
0.41	0.04	0.07	0.09	0.12	0.15	0.17	0.19	0.22	0.24
0.46	0.05	0.08	0.11	0.14	0.17	0.20	0.23	0.26	0.29
0.61	0.08	0.13	0.18	0.23	0.28	0.31	0.36	0.41	0.46
0.76	0.11	0.18	0.25	0.31	0.38	0.43	0.50	0.57	0.64
0.91	0.14	0.22	0.31	0.40	0.49	0.56	0.64	0.73	0.82
1.07	0.16	0.27	0.38	0.48	0.59	0.67	0.78	0.89	0.99
1.22	0.19	0.32	0.44	0.57	0.69	0.79	0.91	1.04	1.16
1.37	0.22	0.36	0.51	0.65	0.79	0.90	1.04	1.19	1.33
1.52	0.25	0.41	0.57	0.73	0.89	1.02	1.18	1.34	1.50
1.68	0.28	0.46	0.64	0.82	0.99	1.13	1.31	1.49	1.67
1.83	0.30	0.50	0.70	0.90	1.10	1.24	1.44	1.64	1.84
1.98	0.33	0.55	0.77	0.98	1.20	1.36	1.58	1.79	2.01
2.13	0.36	0.60	0.83	1.06	1.30	1.47	1.71	1.94	2.18
2.29	0.39	0.64	0.89	1.15	1.40	1.59	1.84	2.09	2.35
2.44	0.42	0.69	0.96	1.23	1.50	1.70	1.97	2.24	2.52
2.59	0.45	0.74	1.03	1.32	1.60	1.82	2.11	2.40	2.69
2.74	0.48	0.79	1.09	1.40	1.71	1.94	2.25	2.56	2.87
2.90	0.51	0.83	1.16	1.49	1.82	2.06	2.39	2.72	3.05
3.05	0.53	0.88	1.23	1.57	1.92	2.18	2.52	2.87	3.21

Airflow Resistance

Standard Air - 0.075 lb/ft³ (1.2 kg/m³)

Test size 48 in. x 48 in. (1219 mm x 1219 mm)



Model ESID-430 resistance to airflow (pressure drop) varies depending on louver application (air intake or air exhaust). Free area velocities (shown) are higher than average velocity through the overall louver size. See louver selection information. (Test Figure 5.5-6.5)