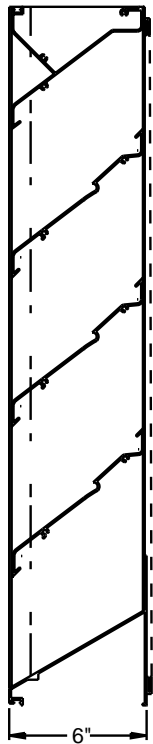




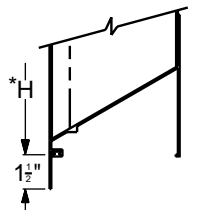
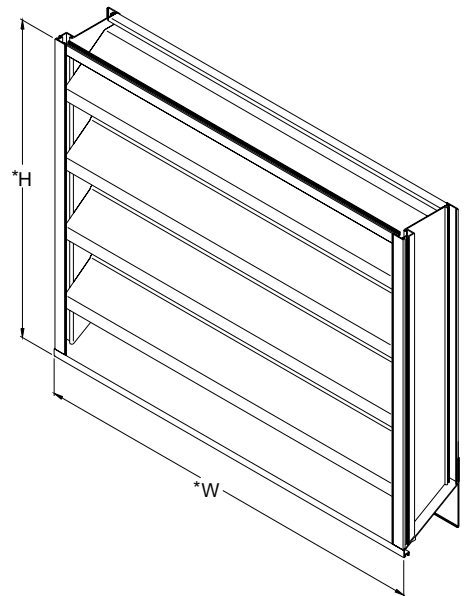
Application and Design

ESK-602 is a weather louver designed to protect air intake and exhaust openings in building exterior walls. Design incorporates K style blades with sloped sill and high free area to provide maximum resistance to rain and weather while providing minimum resistance to airflow. The ESK-602 is an extremely efficient louver with **AMCA LICENSED PERFORMANCE DATA** enabling designers to select and apply with confidence.



Standard Construction

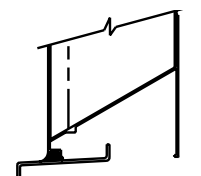
- Frame: Heavy gauge 6063T5 extruded aluminum, 6" x .081" nominal dimensions
- Blades: K style, 6063T5 extruded aluminum, .081" nominal wall thickness, positioned at 37° and 45° angles on approximately 6" centers
- Birdscreen: 3/4" x .051" flattened, expanded aluminum in removable frame. Screen is mounted on inside (rear)
- Finish: Mill
- Minimum Size: 12"W x 16"H
- Maximum Size: 120"W x 120"H (see page 4)



OPTIONAL FLANGE

Options (at additional cost)

- Flanged frame
- Extended sill
- A variety of bird and insect screens
- A variety of architectural finishes including:
 - Clear anodize
 - Integral color anodize
 - Baked enamel
 - Kynar
- Welded construction
- 0.125" nominal wall thickness
- Hinged frame
- Security bars
- Filter racks



OPTIONAL EXTENDED SILL

* W & H Dimensions furnished approximately 1/4" under size.

Quantity	Size		
	W Width	H Height	
Project			Location
Contractor			Design Specifier

ESK-602 Louver Performance Data

AMCA
CERTIFIED
RATINGS

WATER
PENETRATION

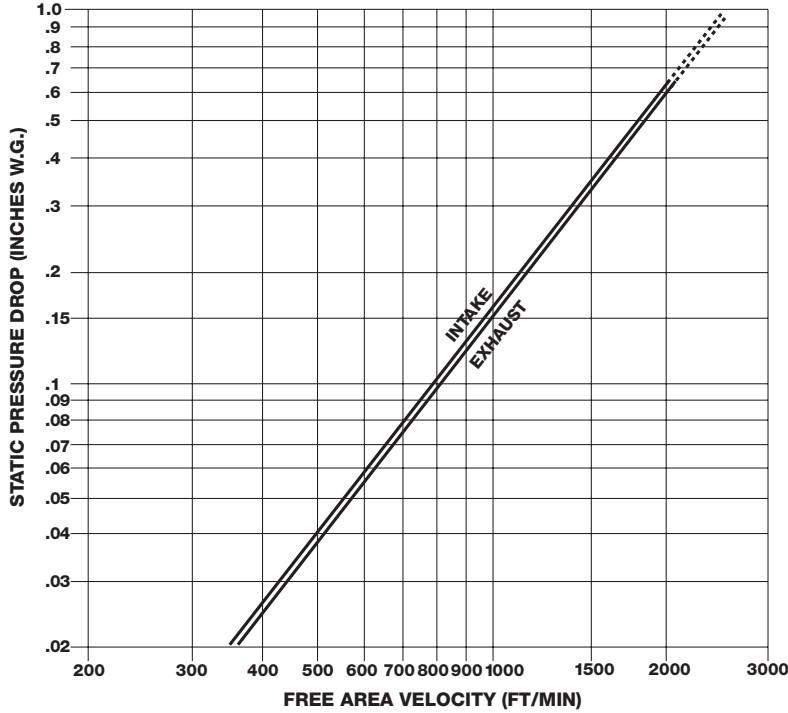
AIR
PERFORMANCE

AIR
MOVEMENT
AND CONTRACT
ASSOCIATION, INC.

PROMOTING THE BEST USE OF AMERICA

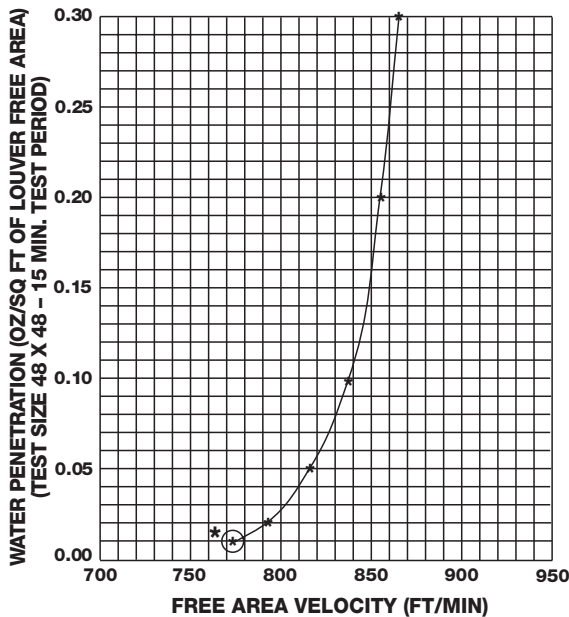
Greenheck certifies that the ESK-602 louvers shown herein are licensed to bear the AMCA Seal. The ratings shown are based on tests and procedures performed in accordance with AMCA Publication 511 and comply with the requirements of the AMCA Certified Ratings Program. The AMCA Certified Ratings Seal applies to air performance and water penetration ratings.

Airflow Resistance (Standard Air - .075 lb/ft³)



Model ESK-602 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.

Water Penetration (Standard Air - .075 lb/ft³)



The AMCA Water Penetration Test provides a method for comparing various louver models and designs as to their efficiency in resisting the penetration of rainfall under specific laboratory test conditions. The beginning point of water penetration is defined as that velocity where the water penetration curve projects through .01 oz. of water (penetration) per sq. ft. of louver free area. ***The beginning point of water penetration for Model ESK-602 is 772 fpm free area velocity.** These performance ratings do not guarantee a louver to be weatherproof or stormproof and should be used in combination with other factors including good engineering judgement in selecting louvers.

Louver Selection and Application

Application of any louver involves selecting an airflow velocity through the louver free area (free area velocity in fpm) that produces an acceptable pressure drop and for intake applications minimizes carry through of normally encountered rain water.

No louver manufacturer warrants their louver to prevent water penetration under all possible combinations of wind and rain. Water penetration through Model ESK-602 begins at 772 fpm free area velocity. Intake air louver selection using free area velocity below 772 fpm is recommended. Louver selection involves the following two steps, and depending on given conditions, either step may come first.

Select Free Area Velocity:

Using the **Airflow Resistance Chart**, select a free area velocity that produces an acceptable pressure drop with minimal water penetration. (Water penetration need not be considered when selecting exhaust louvers.)

Determine Louver Free Area:

Using the free area velocity from previous step and total cfm, determine Louver Free Area required. Using **Louver Free Area Chart**, select a louver with the required free area. If louver size is given, determine free area from chart and work backwards to determine maximum airflow. See examples below.

Free Area Chart

Louver Height Inches	Louver Width in Inches																			Louver Height Inches
	12	18	24	30	36	42	48	54	60	66	72	78	84	90	96	102	108	114	120	
16	0.41	0.68	0.94	1.21	1.47	1.74	2.01	2.21	2.47	2.74	3	3.27	3.53	3.8	4	4.27	4.53	4.8	5.06	16
18	0.48	0.78	1.09	1.4	1.71	2.02	2.33	2.56	2.86	3.17	3.48	3.79	4.1	4.41	4.64	4.95	5.25	5.56	5.87	18
24	0.71	1.18	1.64	2.1	2.56	3.03	3.49	3.84	4.3	4.76	5.22	5.69	6.15	6.61	6.96	7.42	7.89	8.35	8.81	24
30	0.97	1.59	2.22	2.84	3.47	4.1	4.72	5.19	5.82	6.44	7.07	7.7	8.32	8.95	9.42	10.05	10.67	11.3	11.92	30
36	1.22	2.01	2.8	3.59	4.38	5.18	5.97	6.56	7.35	8.14	8.93	9.73	10.52	11.31	11.9	12.69	13.48	14.27	15.07	36
42	1.47	2.43	3.39	4.35	5.3	6.26	7.22	7.93	8.89	9.85	10.8	11.76	12.72	13.67	14.39	15.35	16.3	17.26	18.22	42
48	1.73	2.85	3.98	5.1	6.22	7.34	8.46	9.31	10.43	11.55	12.67	13.8	14.92	16.04	16.88	18	19.13	20.25	21.37	48
54	1.98	3.27	4.56	5.85	7.14	8.42	9.71	10.68	11.96	13.25	14.54	15.83	17.11	18.4	19.37	20.65	21.94	23.23	24.52	54
60	2.24	3.69	5.14	6.59	8.04	9.49	10.94	12.03	13.48	14.94	16.39	17.84	19.29	20.74	21.83	23.28	24.73	26.18	27.63	60
66	2.49	4.11	5.72	7.34	8.95	10.57	12.18	13.4	15.01	16.63	18.24	19.86	21.47	23.09	24.3	25.92	27.53	29.15	30.76	66
72	2.74	4.52	6.3	8.09	9.87	11.65	13.43	14.76	16.54	18.32	20.1	21.88	23.66	25.44	26.78	28.56	30.34	32.12	33.9	72
78	3	4.94	6.89	8.83	10.78	12.72	14.67	16.13	18.07	20.02	21.96	23.91	25.86	27.8	29.26	31.2	33.15	35.1	37.04	78
84	3.25	5.36	7.47	9.58	11.69	13.8	15.91	17.49	19.6	21.71	23.82	25.93	28.04	30.15	31.73	33.84	35.95	38.06	40.16	84
90	3.5	5.77	8.04	10.31	12.58	14.85	17.12	18.82	21.09	23.36	25.63	27.9	30.17	32.44	34.14	36.41	38.68	40.95	43.22	90
96	3.75	6.18	8.61	11.04	13.47	15.9	18.33	20.15	22.58	25.02	27.45	29.88	32.31	34.74	36.56	38.99	41.42	43.85	46.28	96
102	4	6.59	9.18	11.77	14.37	16.96	19.55	21.49	24.09	26.68	29.27	31.86	34.46	37.05	38.99	41.59	44.18	46.77	49.36	102
108	4.25	7	9.76	12.51	15.27	18.02	20.77	22.84	25.59	28.35	31.1	33.86	36.61	39.37	41.43	44.19	46.94	49.7	52.45	108
114	4.5	7.41	10.33	13.25	16.17	19.08	22	24.19	27.11	30.02	32.94	35.86	38.78	41.69	43.88	46.8	49.72	52.63	55.55	114
120	4.75	7.83	10.91	13.99	17.07	20.15	23.23	25.54	28.62	31.7	34.78	37.86	40.94	44.02	46.34	49.42	52.5	55.58	58.66	120

Louver Free Area in Square Feet

ESK-602 Selection and Examples

Example 1:

Airflow given as 6000 cfm – select louver size.

- A. Determine louver free area by dividing airflow by free area velocity (do not exceed 772 fpm on intake louver application).

$$\frac{6000 \text{ cfm}}{\text{Airflow}} \div \frac{772 \text{ fpm}}{\text{Free Area Velocity}} = \frac{7.77 \text{ ft.}^2}{\text{Required Louver Free Area}}$$

- B. Select a louver with at least the required louver free area from **Free Area Chart** above.

$$\frac{54'' \text{ W} \times 42'' \text{ H}}{7.93 \text{ ft.}^2 \text{ free area}} = 756 \text{ fpm free area velocity (6000 cfm} \div 7.93 \text{ ft.}^2 \text{ F.A.)}$$

(Other selections available – See **Free Area Chart** above.)

- C. Check the pressure drop of the selected louver at the given airflow (**Airflow Resistance Chart** on Page 2).

$$\Delta P \text{ at } \frac{756 \text{ fpm}}{\text{Free Area Velocity}} = \frac{0.092 \text{ in. w.g.}}{\text{Pressure Drop}}$$

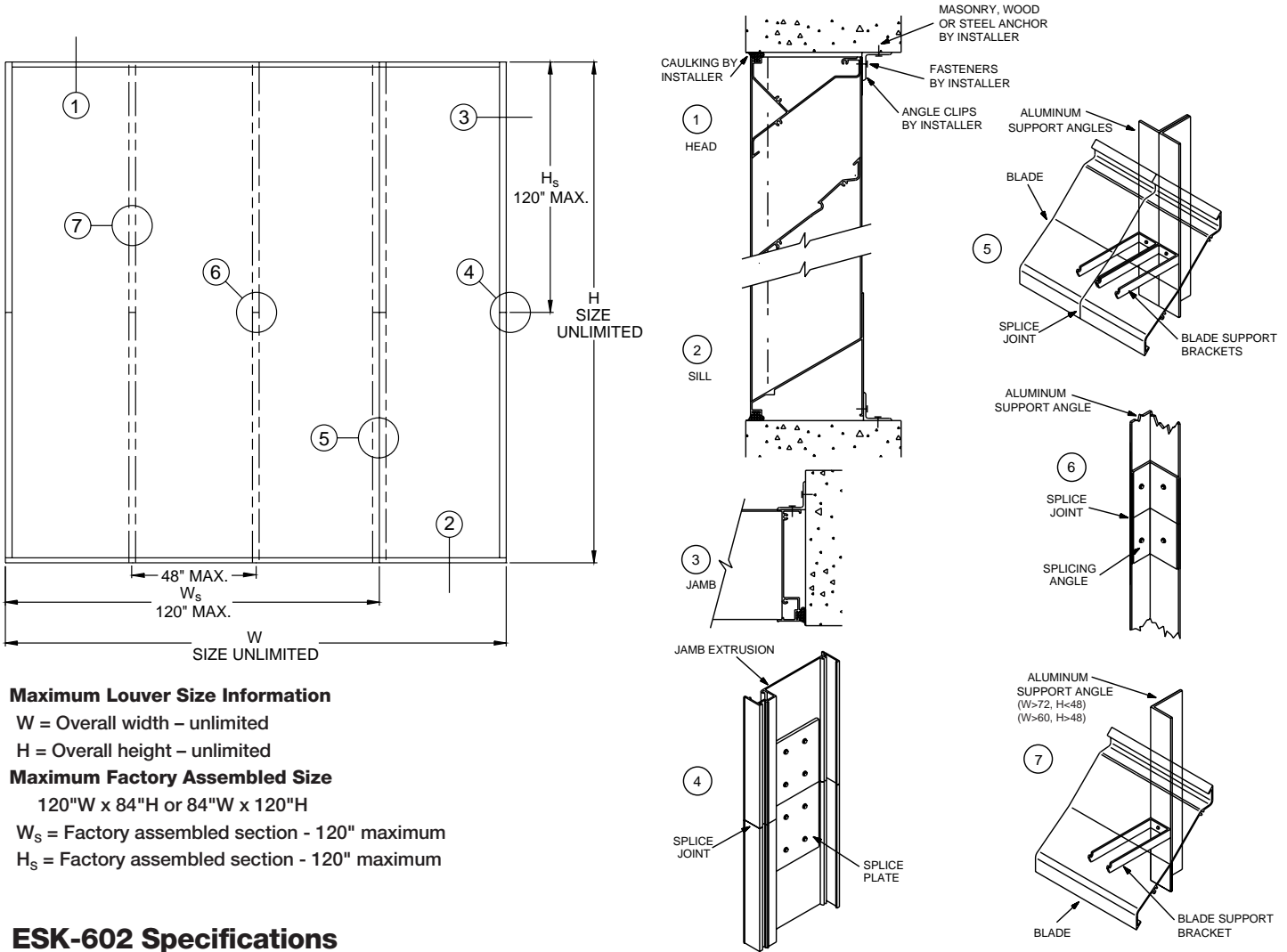
Example 2:

Louver size given as 48 x 60 – determine maximum airflow.

- A. Use **Free Area Chart** to determine
Free Area = 10.94 ft.²
- B. Multiply Free Area x Free Area Velocity (Do not exceed 772 fpm on intake louver applications).
 $\frac{10.94 \text{ ft.}^2 \times 772 \text{ fpm}}{\text{Free Area} \quad \text{Free Area Velocity}} = \frac{8,445 \text{ cfm}}{\text{Maximum Airflow}}$
- C. Check the pressure drop of the selected louver at the given airflow (**Airflow Resistance Chart** on Page 2).
 $\Delta P \text{ at } \frac{772 \text{ fpm}}{\text{Free Area Velocity}} = \frac{0.10 \text{ in. w.g.}}{\text{Pressure Drop}}$

Maximum Size and Installation Information

Because of Model ESK-602's architectural style design, its maximum size is unlimited. Louvers larger than approximately 120"W x 84"H or 84"W x 120"H require field assembly from smaller louver sections to make up the overall louver size. (Louvers with other than mill finish may require smaller sections.) With intermediate support mullions (hidden architectural style) spaced on 48" (maximum) centers, all sections are designed to withstand wind loadings of 25 pounds per square foot (100 mph wind equivalent), however, louver frames, hidden mullions, and all section joints require bracing or support from the building structure to provide overall structural integrity. Angles, clips, bolts, and other fasteners and installation hardware are not provided with the louvers and must be supplied by the installing contractor. Details shown are general in nature. Additional information on louver installation may be found in AMCA Publication #501, Louver Application Manual.



Maximum Louver Size Information

W = Overall width – unlimited
 H = Overall height – unlimited

Maximum Factory Assembled Size

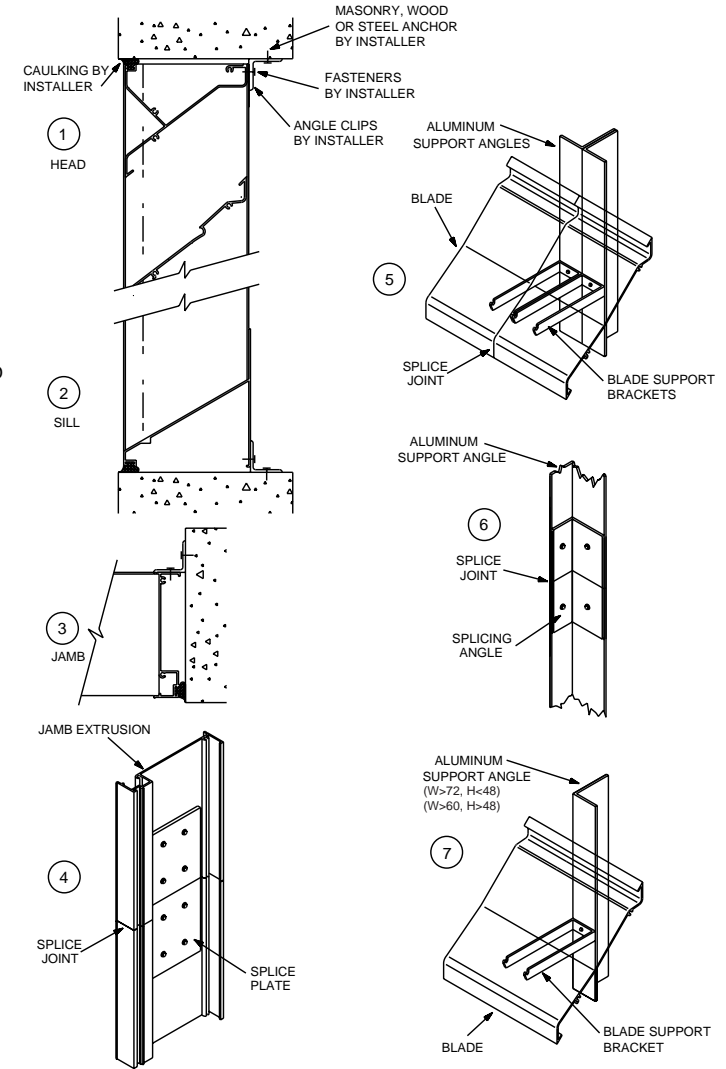
120"W x 84"H or 84"W x 120"H
 W_s = Factory assembled section - 120" maximum
 H_s = Factory assembled section - 120" maximum

ESK-602 Specifications

Louvers meeting the following specifications shall be furnished and installed where shown on the plans and/or as described in schedules. Louvers shall be stationary type with K style blades in a 6" louver frame. Each factory-assembled louver section shall be designed to withstand wind loadings of 25 pounds per square foot (100 mph wind equivalent). Louvers too large for complete factory assembly shall be built up by the installing contractor from factory-assembled louver sections. Louver frames, mullions, and section joints shall be adequately supported from the building structure to withstand this same wind loading.

Louver performance data shall be licensed under the AMCA Certified Ratings Program and shall bear the AMCA Certified Ratings Seal. This certified performance data shall include airflow pressure loss and water penetration, and shall demonstrate performance equal to or better than the Greenheck model specified.

Louvers shall be Greenheck Model ESK-602 stationary type fabricated from 6063T5 aluminum extrusions of .081" nominal



wall thickness. Blades shall be positioned at 37° and 45° angles approximately on 6" centers. Each louver shall be equipped with a framed, removable, rear-mounted screen of 3/4" x .051" expanded, flattened aluminum.

Specifier select one of the following finish specifications:

Louvers shall be supplied with standard mill finish.

Louvers shall be supplied with a baked enamel finish applied after a thorough cleaning and preparation of the metal surface. A total dry film thickness of approximately 1.2 mils shall be provided. Color shall be (specify color from standard color chart).

Louvers shall be supplied with a Kynar finish applied following a thorough cleaning and pretreatment of the metal surface. Dry film thickness of the Kynar shall be approximately 1.2 mils after baking at 450°F. Color shall be (specify color from standard color chart).