

## ELM90 and ELM811 ADJUSTABLE LOUVER EXTRUDED ALUMINUM

### STANDARD CONSTRUCTION

#### FRAME

ELM811 – 4" (102) deep, 6063T5 extruded aluminum with .081" (2.1) nominal wall thickness. Caulking surfaces provided.

ELM90 – 6" (152) deep, 6063T5 extruded aluminum with .125" (3.2) nominal wall thickness. Caulking surfaces provided.

#### BLADES

6063T5 extruded aluminum with .081" (2.1) nominal wall thickness. J-style blades are adjustable to 45° angle on ELM811 and 70° angle on ELM90. Blade spacing is approximately 43/4" (121) center to center.

#### SCREEN

3/4" x .051" (19 x 1.3) expanded, flattened aluminum bird screen in removable frame. Screen adds approximately 1/2" (13) to louver depth.

#### BEARINGS

Stainless steel sleeve pressed into frame.

#### AXLES

1/2" (13) plated steel hex.

#### FINISH

Mill.

#### LINKAGE

Concealed in frame.

#### ACTUATOR

Locking louver quadrant.

#### MINIMUM SIZE

12"w x 12"h (305 x 305).

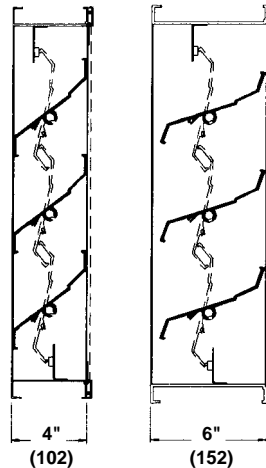
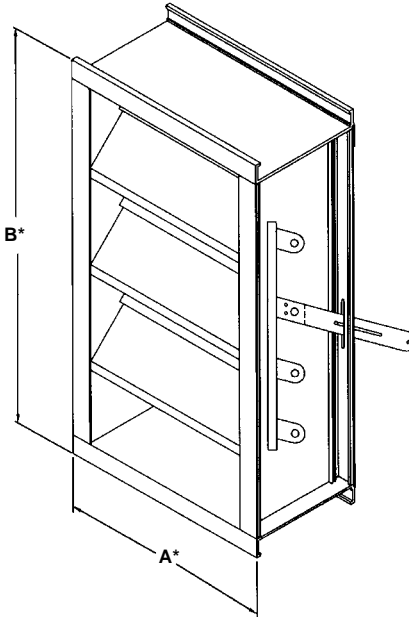
#### APPROXIMATE SHIPPING WEIGHT

ELM811 – 4 lbs. per sq. ft.

ELM90 – 4.5 lbs. per sq. ft.

#### MAXIMUM FACTORY ASSEMBLY SIZE

Shall be 60" x 96" (1524 x 2438). Louvers with optional blade and jamb seals shall be 48" x 96" (1219 x 2438). Louvers larger than the maximum factory assembly size will require field assembly of smaller sections.



### FEATURES

The ELM811 and ELM90 offer:

- Low torque operation and architecturally pleasing appearance with low leakage performance.
- Hexagonal shaped axles assure positive blade alignment and low operating torque.
- Concealed blade linkage is protected from weather exposure and reduces required installation depth.
- Blade and jamb seal options provide tight blade-to-blade and blade-to-frame closure, allowing less than 4 cfm per sq. ft. at 1/2" pressure differential.

### VARIATIONS

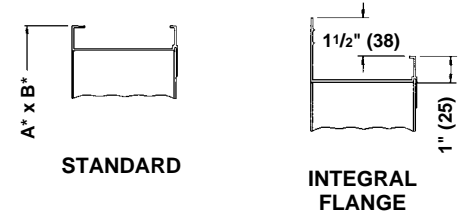
Variations to the basic design of this louver are available at additional cost. They include:

- Extended sill
- Front or rear security bars
- A variety of bird and insect screens
- Filter racks
- Selection of finishes: prime coat, baked enamel (modified fluoropolymer), epoxy, Pearledize 50 & 70, Kynar, clear and color anodize. (Some variation in anodize color consistency is possible.)
- Blade edge and jamb seals.
- Manual, electric or pneumatic actuators.

Available with .125" (3.2) construction throughout, refer to as **ELM811H** and **ELM90H**.

Consult Ruskin for other special requirements.

### FRAME CONSTRUCTION



Dimensions in inches, parenthesis ( ) indicate millimeters.

Units furnished 1/4" (6) smaller than given opening dimensions.

TAG	QTY.	SIZE		FRAME	VARIATIONS
		A*-WIDE	B*-HIGH		
PROJECT ARCH./ENGR. REPRESENTATIVE				LOCATION CONTRACTOR DATE	

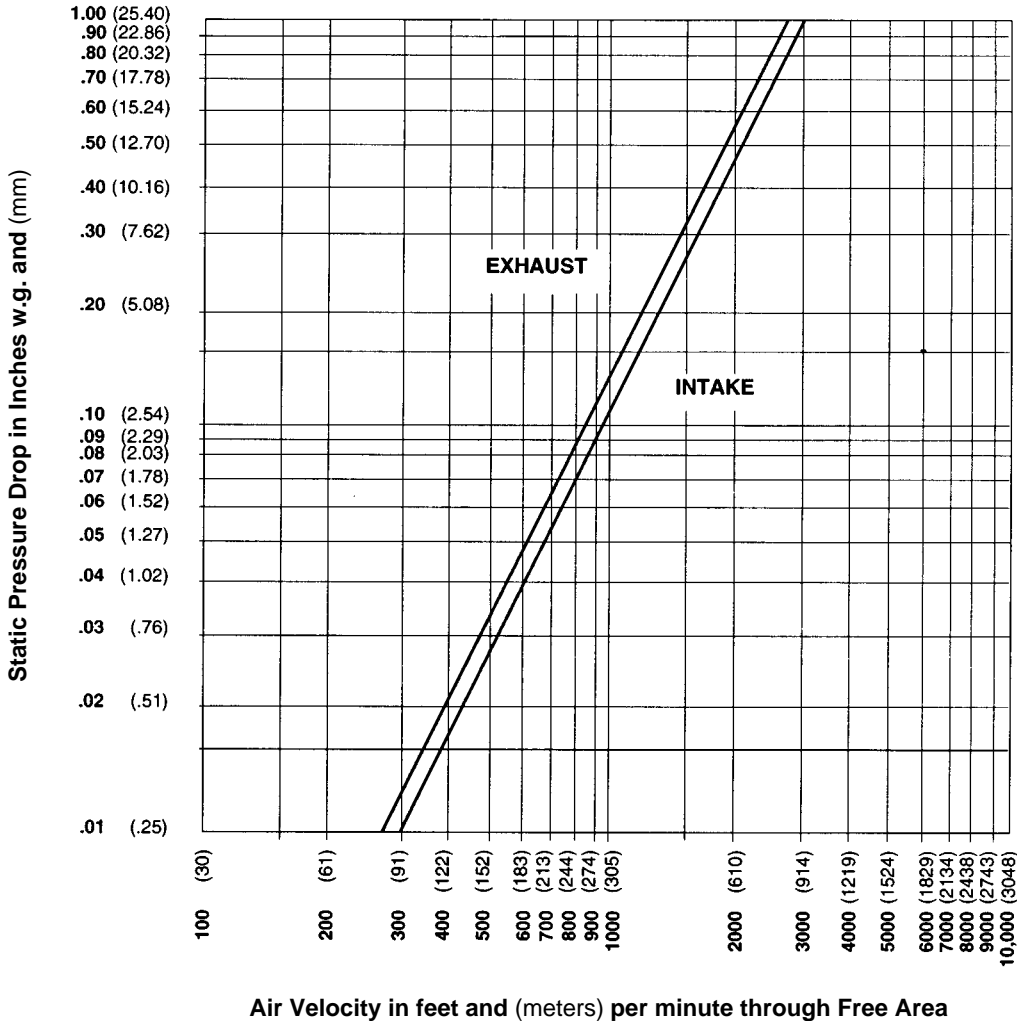
# FREE AREA GUIDE

Free Area Guide shows free area in ft<sup>2</sup> and m<sup>2</sup> for various sizes of ELM811.

Width – Inches and Meters

Height – Inches and Meters	12		18		24		30		36		42		48		54		60		66		72		78		84		90		96		
	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	ft	m	
12	.30	.46	.61	.76	.91	1.07	1.22	1.37	1.52	1.68	1.83	1.96	2.13	2.29	2.44																
18	.42	.68	.93	1.19	1.45	1.71	1.96	2.22	2.48	2.73	2.99	3.25	3.51	3.76	4.02																
24	.55	.88	1.22	1.55	1.88	2.22	2.55	2.89	3.22	3.56	3.89	4.23	4.56	4.89	5.23																
30	.76	1.23	1.69	2.16	2.62	3.09	3.55	4.02	4.48	4.95	5.41	5.88	6.34	6.81	7.27																
36	.93	1.49	2.06	2.62	3.19	3.76	4.32	4.89	5.45	6.02	6.58	7.15	7.72	8.28	8.85																
42	1.11	1.79	2.47	3.15	3.83	4.51	5.19	5.87	6.55	7.23	7.91	8.59	9.27	9.95	10.63																
48	1.30	2.09	2.88	3.67	4.46	5.26	6.05	6.84	7.63	8.42	9.21	10.01	10.80	11.59	12.38																
54	1.42	2.29	3.16	4.03	4.90	5.77	6.64	7.51	8.38	9.25	10.11	10.98	11.85	12.72	13.59																
60	1.64	2.64	3.64	4.64	5.64	6.64	7.64	8.64	9.64	10.64	11.64	12.64	13.64	14.64	15.64																
66	1.80	2.90	4.00	5.10	6.20	7.30	8.40	9.51	10.61	11.71	12.81	13.91	15.01	16.11	17.21																
72	1.99	3.20	4.42	5.63	6.84	8.06	9.27	10.49	11.70	12.92	14.15	15.34	16.56	17.77	18.99																
78	2.17	3.50	4.82	6.15	7.48	8.80	10.13	11.46	12.78	14.11	15.44	16.76	18.09	19.42	20.74																
84	2.30	3.70	5.11	6.51	7.91	9.32	10.72	12.13	13.53	14.93	16.34	17.74	19.14	20.55	21.95																
90	2.51	4.05	5.58	7.12	8.65	10.19	11.72	13.25	14.79	16.32	17.86	19.39	20.93	22.46	24.00																
96	2.68	4.31	5.95	7.58	9.22	10.85	12.49	14.12	15.76	17.39	19.03	20.67	22.30	23.94	25.57																

## PRESSURE DROP



Ratings do not include the effect of a bird screen.

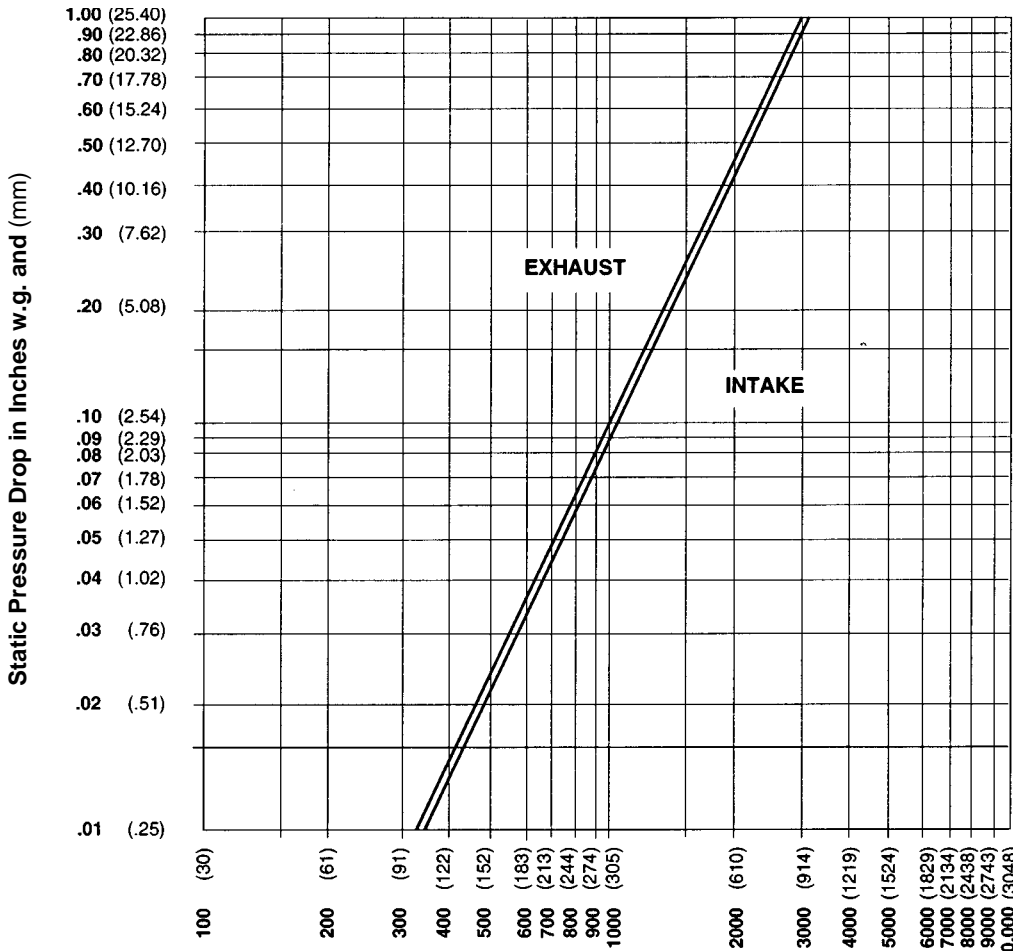
# FREE AREA GUIDE

Free Area Guide shows free area in ft<sup>2</sup> and m<sup>2</sup> for various sizes of ELM90.

Width – Inches and Meters

Height – Inches and Meters		12	18	24	30	36	42	48	54	60	66	72	78	84	90	96
	12	.30	.46	.61	.76	.91	1.07	1.22	1.37	1.52	1.68	1.83	1.96	2.13	2.29	2.44
	.30	.03	.05	.07	.08	.10	.12	.14	.16	.18	.19	.21	.23	.25	.27	.29
	18	.59	.95	1.32	1.68	2.04	2.40	2.77	3.14	3.49	3.85	4.21	4.58	4.94	5.30	5.66
	.46	.06	.09	.12	.16	.19	.22	.26	.29	.32	.36	.39	.43	.46	.49	.53
	24	.81	1.30	1.79	2.28	2.77	3.26	3.76	4.25	4.74	5.23	5.72	6.22	6.71	7.20	7.69
	.61	.07	.12	.17	.21	.26	.30	.35	.39	.44	.49	.53	.58	.62	.67	.71
	30	1.11	1.78	2.46	3.13	3.81	4.48	5.16	5.83	6.51	7.18	7.86	8.53	9.21	9.88	10.56
	.76	.10	.17	.23	.29	.35	.42	.48	.54	.60	.67	.73	.79	.86	.92	.98
	36	1.36	2.18	3.01	3.84	4.67	5.50	6.33	7.15	7.98	8.81	9.64	10.47	11.30	12.12	12.95
	.91	.13	.20	.28	.36	.43	.51	.59	.66	.74	.82	.90	.97	1.05	1.13	1.20
	42	1.71	2.76	3.81	4.85	5.90	6.95	8.00	9.04	10.09	11.14	12.18	13.23	14.28	15.33	16.37
	1.07	.16	.26	.35	.45	.55	.65	.74	.84	.94	1.03	1.13	1.23	1.33	1.42	1.52
	48	1.98	3.20	4.41	5.62	6.83	8.04	9.25	10.47	11.68	12.89	14.10	15.31	16.53	17.74	18.95
	1.22	.18	.30	.41	.52	.63	.75	.86	.97	1.08	1.20	1.31	1.42	1.54	1.65	1.76
	54	2.20	3.54	4.88	6.22	7.56	8.90	10.25	11.59	12.93	14.27	15.61	16.95	18.30	19.64	20.98
1.37	.20	.33	.45	.58	.70	.83	.95	1.08	1.20	1.33	1.45	1.58	1.70	1.82	1.95	
60	2.50	4.02	5.55	7.07	8.60	10.12	11.65	13.17	14.70	16.22	17.75	19.27	20.80	22.32	23.85	
1.52	.23	.37	.52	.66	.80	.94	1.08	1.22	1.37	1.51	1.65	1.79	1.93	2.07	2.22	
66	2.75	4.42	6.10	7.78	9.46	11.14	12.81	14.49	16.17	17.85	19.53	21.21	22.88	24.56	26.24	
1.68	.26	.41	.57	.72	.88	1.03	1.19	1.35	1.50	1.66	1.81	1.97	2.13	2.28	2.44	
72	3.10	5.00	6.90	8.79	10.69	12.59	14.49	16.38	18.28	20.18	22.07	23.97	25.87	27.76	29.66	
1.83	.29	.46	.64	.82	.99	1.17	1.35	1.52	1.70	1.87	2.05	2.23	2.40	2.58	2.76	
78	3.37	5.44	7.50	9.56	11.62	13.68	15.74	17.81	19.87	21.93	23.99	26.05	28.11	30.17	32.24	
1.96	.31	.50	.70	.89	1.08	1.27	1.46	1.65	1.85	2.04	2.23	2.42	2.61	2.80	2.99	
84	3.59	5.78	7.97	10.16	12.35	14.54	16.74	18.93	21.12	23.31	25.50	27.69	29.88	32.08	34.27	
2.13	.33	.54	.74	.94	1.15	1.35	1.55	1.76	1.96	2.17	2.37	2.57	2.78	2.98	3.18	
90	3.89	6.26	8.64	11.01	13.39	15.76	18.13	20.51	22.88	25.26	27.63	30.01	32.38	34.76	37.13	
2.29	.36	.58	.80	1.02	1.24	1.46	1.68	1.91	2.13	2.35	2.57	2.79	3.01	3.23	3.45	
96	4.14	6.67	9.19	11.72	14.25	16.78	19.30	21.83	24.36	26.89	29.42	31.94	34.47	37.00	39.53	
2.44	.38	.62	.85	1.09	1.32	1.56	1.79	2.03	2.26	2.50	2.73	2.97	3.20	3.44	3.67	

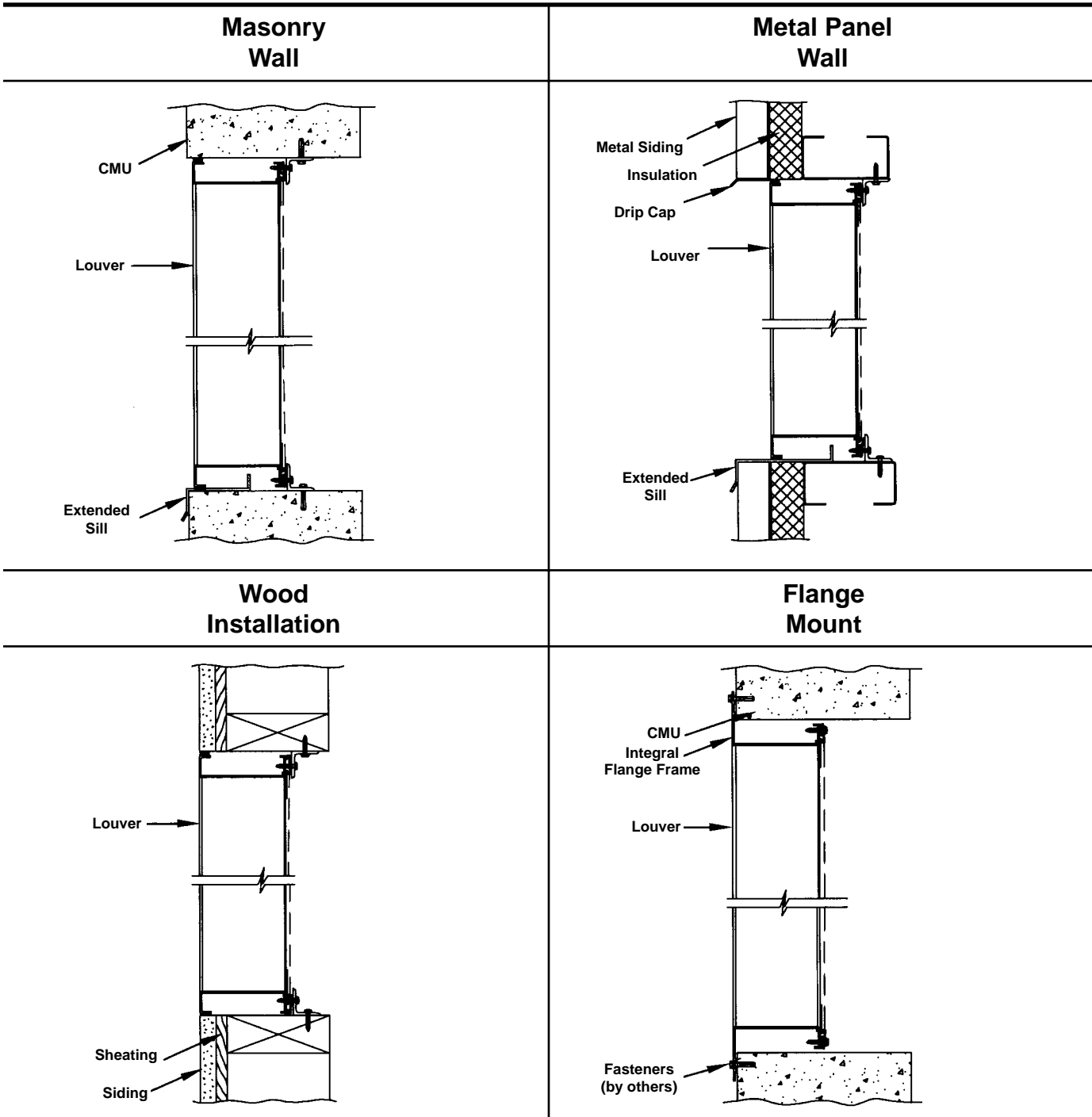
## PRESSURE DROP



Ratings do not include the effect of a bird screen.

Air Velocity in feet and (meters) per minute through Free Area

# TYPICAL INSTALLATION DETAILS



## SUGGESTED SPECIFICATION

Accessories at additional cost.

Furnish and install louvers as hereinafter specified where shown on plans or as described in schedules. Louvers shall be adjustable type entirely contained within a 4" (102) or 6" (152) frame. Louver components (heads, jambs, sills, blades & mullions) shall be factory assembled by the louver manufacturer. Louver sizes too large for shipping shall be built up by the contractor from factory assembled louver sections to provide overall sizes required. Louver design shall limit span between visible mullions to 5 ft. (1530) and shall incorporate structural supports required to withstand a wind load of 20 lbs. per sq. ft. (.96kPa, equivalent of a 90 mph wind [145 KPH] - specifier may substitute any loading required).

Louvers shall be Ruskin Model ELM90 or ELM811 6063T5 extruded aluminum alloy construction as follows:

- Frame: .081" (2.1) extruded aluminum (ELM811).  
.125" (3.2) extruded aluminum (ELM90).
- Blades: .081" (2.1) wall thickness on approximately 43/4" (121) centers.
- Screen: 3/4" x .051" (19 x 1.3) expanded, flattened aluminum bird screen in removable frame.
- Finish: Select finish specification from Ruskin Finishes Brochure.

# RUSKIN®

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