ENGINEERING REPORT

TOPIC: Ruskin ELF375X, ELF375DX, and ELF6375DX High Performance Extruded Aluminum Louvers

Report No.694:1 **By: James Livingston**

Louver specifications have become more demanding in the last few years, particularly with respect to performance. It is not uncommon for specs to require 50 to 55% free area, low pressure drop, and beginning water penetration at 900 fpm or higher. Louvers capable of this performance are often referred to as high performance models.

Ruskin first entered this market with the 811-55 series, which included 4" and 6" drainable and non-drainable models. Our newest product aimed at this market is the X series, consisting of the ELF375X, ELF375DX, and the ELF6375DX models. These louvers are superior to the previous 55% free area series in performance and are among the top performers in the extruded louver market.

Design improvements over the 811-55 series include a redesigned drainable frame system. Since in most applications, the majority of the water that penetrates the louver rolls down the building face above the louver and passes over the head frame into the airstream, adding a drainable gutter to the head frame is an effective way to prevent penetration. The head frame gutter collects water before it enters the airstream and channels it to fully enclosed drain tubes in the jamb frames. Enclosing the jamb tubes eliminates the opportunity for the water to reenter the airstream at a different location on the louver. The drainable models also feature drain gutters in the front of each blade which direct water into a separate open channel in the jamb frame. Other improvements include redesigned blades with smoother profiles that help reduce pressure drop, larger caulking surfaces on the frames for the installing contractors, and full louver width sill frame construction which reduces the possibility of leaks.

All X models are licensed to bear the AMCA seal of air and water performance and possess a minimum of 55% free area on the 4" deep louvers and 57% on the 6" louver based on a 48" x 48" size. Air and water performance data is given in the chart below.

A variety of finishes and colors are available, as well as screen and frame options. All units feature welded construction and can be designed for various wind load requirements.

The Ruskin X models are the most innovative and efficient louvers we have offered, and are designed to meet or exceed high performance louver specifications. Their competitive value, wide variety of available options, and built-in Ruskin quality make them a natural choice for louver applications.

SPECIFICATIONS							PERFORMANCE 48" x 48" UNIT			
Louver Model	**Blade Material (Nom.)**	**Blade Style**	**Blade Angle**	**Blade Centers**	**Frame Material**	**Frame Depth**	**Free Area (Nom.)**	**Sq. Ft. Free Area**	**Free Area Velocity in FPM At .01 oz./sq. ft. Water Penetration**	**Approx. Free Area Velocity in FPM At .15 In. W.G. Pressure Drop**
ELF375X AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	J	37.5°	$5^{3}/_{32}$" (129)	6063T5 .080" (2.1) Extrud. Alum.	4" (102)	55%	8.74 (.81m^2)	924 (282 m/ min.)	825 (251 m/min.)
ELF375DX AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	Drain-able	37.5°	$5^{3}/_{32}$" (129)	6063T5 .080" (2.1) Extrud. Alum.	4" (102)	55%	8.74 (.81m^2)	1006 (307 m/ min.)	825 (251 m/min.)
ELF6375DX AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	Drain-able	37.5°	$5^{29}/_{32}$" (150)	6063T5 .080" (2.1) Extrud. Alum.	6" (152)	57%	9.19 (.85m^2)	1053 (319 m/ min.)	900 (274 m/min.)

Dimensions in parentheses ( ) indicate millimeters.

ENGINEERING REPORT

TOPIC: Acoustical Louvers

Report No. 594:1

By Randy Ketchum
James Livingston

SPECIFICATIONS							PERFORMANCE 48" x 48" UNIT				
Louver Model 222 222	**Blade Material (Nom.)**	**Blade Style**	**Blade Angle**	**Blade Centers**	**Frame Material**	**Frame Depth**	**Free Area (Nom.)**	**Sq. Ft. Free Area**	**Max. Rec. Air Flow Thru Free Area FPM**	**Air Flow CFM**	**Max. Pressure Drop, Inches W.G.**
ELF375X AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	J	37.5°	$5^{3}/_{32}$" (129)	6063T5 .080" (2.1) Extrud. Alum.	4" (102)	55%	8.74 (.81m^2)	925 (282 m/ min.)	8085 (229m^3/ min.)	.20 (.05 kPa)
ELF6375X AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	Drain-able	37.5°	$5^{3}/_{32}$" (129)	6063T5 .080" (2.1) Extrud. Alum.	4" (102)	55%	8.74 (.81m^2)	1006 (307 m/ min.)	8792 (249m^3/ min.)	.20 (.05 kPa)
ELF6375DX AMCA Licensed	6063T5 .080" (2.1) Extrud. Alum.	Drain-able	45°	$5^{29}/_{32}$" (150)	6063T5 .125" (3.2) Extrud. Alum.	6" (152)	57%	9.19 (.85m^2)	1053 (319 m/ min.)	9677 (275m^3/ min.)	.20 (.05 kPa)