

TEXAS DEPARTMENT OF INSURANCE

Engineering Services / MC 103-3A 333 Guadalupe Street P.O. Box 149104 Austin, Texas 78714-9104
Phone No. (512) 322-2212 Fax No. (512) 463-6693

PRODUCT EVALUATION LVR-01

Effective July 1, 2008

*The following product has been evaluated for compliance with the wind loads specified in the **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation 3 years after the effective date.*

This product evaluation is not an endorsement of this product or a recommendation that this product be used. The Texas Department of Insurance has not authorized the use of any information contained in the product evaluation for advertising, or other commercial or promotional purpose.

This product evaluation is intended for use by those individuals who are following the design wind load criteria in Chapter 3 of the IRC and Section 1609 of the IBC. The design loads determined for the building or structure shall not exceed the design load rating specified for the products shown in the limitations section of this product evaluation. This product evaluation does not relieve a Texas licensed engineer of his responsibilities as outlined in the Texas Insurance Code, the Texas Administrative Code and the Texas Engineering Practice Act.

Model DC-638 Aluminum Louvers, Individual and Muller Units, Impact Resistant, as manufactured by

Leader Industries Inc.
P.O. Box 40913
Nashville, TN 37204
(615) 256-3500

will be accepted for use in designated catastrophe areas along the Texas Gulf Coast when installed in accordance with the manufacturer's installation instructions and this product evaluation.

PRODUCT DESCRIPTION

General: The louvers and blades are constructed of 0.125" thick, 6063T5 extruded aluminum. The louver blades are positioned at 38° angles and spaced approximately 4 ³/₄" o.c. Individual louvers are available in a minimum size of 12" x 12" and a maximum size of 84" x 120". The louvers referenced in this report are impact resistant.

The models included in this evaluation are as follows:

DC-638-1 (Extruded Aluminum Louver)
DC-638-2 (Extruded Aluminum Louver – Flanged Bottom Sill)
DC-638-3 (Extruded Aluminum Louver – Sleeved with Flanged Bottom Sill)
DC-638-4 (Extruded Aluminum Louver – Flanged Sleeved with Flanged Bottom Sill).

LIMITATIONS

Design Wind Pressure:

Assembly	Maximum Overall Width (inches)	Maximum Overall Height (inches)	Allowable Design Pressure Rating
DC-638-1	84	120	±160
DC-638-2	84	120	±160
DC-638-3	84	120	±160
DC-638-4	84	120	±160
Triple DC-638	251	120	±150

Impact Resistance: These louver assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in both the **Inland I zone** and the **Seaward zone**. The louver

assemblies passed an impact standard equivalent to Missile Level D specified in ASTM E 1996-04. The louvers may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded. These louver assemblies will not need to be protected with an impact protective system.

Acceptance of Smaller Assemblies: Louver assemblies with dimensions equal to or smaller than those specified above are acceptable within the limitations specified in this report.

INSTALLATION INSTRUCTIONS

General Installation Requirements:

All requirements specified in the International Residential Code (IRC) and the International Building Code (IBC) must be satisfied and manufacturer's installation instructions followed, unless otherwise specified by this product evaluation.

Anchorage Method:

DC-638-1 and DC-638-2:

Aluminum angle clips (2" x 2" x $\frac{3}{16}$ ") are anchored to Southern Yellow Pine framing members with Trubolt wedge anchors $\frac{3}{8}$ " diameter x 2 $\frac{3}{4}$ " long. For the head and sill, six (6) anchors are located 8" from each end and spaced 13 $\frac{1}{2}$ " o.c. Along each jamb, seven (7) anchors are located 6" from each end and spaced a maximum of 18" o.c. thereafter. The aluminum clips are attached to the louvers with two (2) #12-14 x 0.88" Tek screws.

DC-638-3 (Sleeved with Flanged Bottom Sill):

A continuous aluminum angle (2" x 2" x $\frac{3}{16}$ ") is provided around the perimeter, and the angle is anchored to Southern Yellow Pine framing members with Trubolt wedge anchors $\frac{3}{8}$ " diameter x 2 $\frac{3}{4}$ " long. For the attachment of the angle along the head and sill, six (6) anchors are located 8" from each end and spaced 13 $\frac{1}{2}$ " o.c. Along each jamb, seven (7) anchors are located 6" from each end and spaced a maximum of 18" o.c. thereafter. The continuous angle is attached to a 10 gauge aluminum sleeve that is welded to the louver. The angle is fastened to the sleeve with #12-14 x 0.88" Tek screws located as follows: six (6) anchors in the head and sill are located 8" from each end and spaced 13 $\frac{1}{2}$ " o.c.; and seven (7) anchors are located in the jambs, 6" from each end and spaced a maximum of 18" o.c.

DC-638-4 (Flanged Sleeved with Flanged Bottom Sill):

A continuous aluminum angle (2" x 2" x $\frac{3}{16}$ ") is provided around the perimeter of the opening, and the louver is mounted into the opening using the flanges to fit to the width of the wall without mechanically attaching to the wall framing. The continuous angle is attached to a 10 gauge aluminum sleeve that is welded to the louver. The angle is fastened to the sleeve with #12-14 x 0.88" Tek screws located as follows: six (6) anchors in the head and sill are located 8" from each end and spaced 13 $\frac{1}{2}$ " o.c.; and seven (7) anchors are located in the jambs, 6" from each end and spaced a maximum of 18" o.c.

Triple Louvers:

Aluminum angle clips (2" x 2" x $\frac{3}{16}$ ") located around the perimeter of the mulled unit are anchored to Southern Yellow Pine framing members with Trubolt wedge anchors $\frac{3}{8}$ " diameter x 2 $\frac{3}{4}$ " long. The wedge anchors are located 8" from each end and spaced 18" o.c. thereafter. The angle clips are anchored to the louvers with two (2) #12-14 x 0.88" Tek screws. At the ends of the mullions, there are 7" long retaining clips, 2" x 2" x $\frac{3}{16}$ ". The retaining clip is connected to the louvers with four (4) #12-14 x

0.88 Tek screws. The retaining clips are connected to the framing members with two (2) Trubolt wedge anchors $\frac{3}{8}$ " diameter x $2\frac{3}{4}$ " long.

The mulled units utilize a concealed 10 gauge galvanized steel mullion to connect louvers together. The concealed mullion consists of three formed steel pieces continuous the length of the louver. The three pieces are connected with $\frac{5}{16}$ " x 1" bolts and nuts, located 1" from each end and spaced a maximum of 12" o.c. Then, the louvers are connected using $\frac{3}{8}$ " diameter x $2\frac{1}{2}$ " long bolts with lock washers and nuts, located at $3\frac{3}{4}$ " from the ends of the mullions and spaced $14\frac{1}{4}$ " o.c. thereafter. The bolts penetrate the mullion on its centerline.

Note: The manufacturer's installation instructions shall be available on the job site during installation. All fasteners shall be corrosion resistant as specified in the International Residential Code (IRC) and the International Building Code (IBC).