

# TEXAS DEPARTMENT OF INSURANCE

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

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## PRODUCT EVALUATION

Effective December 1, 2011

RV-53

*The following product has been evaluated for compliance with the wind loads specified in **International Residential Code (IRC)** and the **International Building Code (IBC)**. This product shall be subject to reevaluation **November 2015**.*

*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.*

**Gravity Vent, Model GR**, manufactured by

**Loren Cook Company**  
2015 East Dale Street  
Springfield, Missouri 65803  
Telephone: (417) 869-6474  
[www.lorencook.com](http://www.lorencook.com)

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

## PRODUCT DESCRIPTION

The Model GR roof vents are high efficiency, roof mounted, gravity relief ventilators. The ventilators are comprised of a hood, manufactured of either minimum 18 gauge aluminum or 20 gauge galvanized steel, that is bolted to a support structure, manufactured of either minimum 8 gauge aluminum or 12 gauge steel. Refer to Figure 1 for an illustration of the gravity relief ventilator. The gravity relief ventilators are available in throat sizes ranging from 12" x 12" to 36" x 36". The ventilators have an overall maximum size of 57" wide by 51 1/2" long by 19 1/2" high.

**Ventilator Construction (aluminum or steel):** The roof ventilator is manufactured from galvanized steel. The mounting flange on the base is sealed with a foam gasket and secured to the curbing No. 12 x 2" self-drilling screws with a 1/4" metal washer with a neoprene grommet located 6 inches from each corner and 6 inches on center thereafter. Two C-channel mounting rails are secured to the base with 5/16" x 3/4" hex flange washer bolts with flange nuts located 2 inches from each end of the base and on 11 inch centers thereafter. Hood mounting brackets are secured to the C-channel ends with one 5/16" x 3/4" hex washer bolt with flange nut. A four panel vent hood is secured to the hood mounting brackets self-drilling screws at each end. The hood panels are secured together with crimp seams. An end panel is crimped to each side of the hood and secured through the crimp with self-drilling screws located 2 inches from the edge and on 9 inch centers. A wire mesh bird screen with a grid is attached to the underneath side of the hood with self-tapping screws and washers located 2 inches from each corner and on 11 inch centers thereafter.

## LIMITATIONS

### Design Wind Pressures:

**Aluminum Vent:**  $\pm 60$  psf

**Gravity Vent:**  $\pm 130$  psf

**Roof Framing:** The roof framing required to secure the vent shall be minimum nominal 2 inch wide Southern Yellow Pine dimension lumber with a minimum nominal  $1\frac{5}{32}$ " plywood deck.

**Roof Slope:** The vent shall be installed on a flat roof. Positive drainage of the roof is required.

**Impact Resistance:** These vent assemblies satisfy the Texas Department of Insurance's criteria for protection from windborne debris in the **Inland I** and the **Seaward zone**. The vent assemblies passed Missile Level D specified in ASTM E 1996-04. The vent assemblies may be installed at any height on the structure as long as the design pressure rating for the assemblies is not exceeded.

## INSTALLATION INSTRUCTIONS

### General Installation Requirements:

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

### Installation:

The curb of the vent set is secured to the nominal 2" wide Southern Yellow Pine roof framing with minimum  $\frac{5}{16}$ " x  $1\frac{1}{2}$ " lag bolts. The fasteners shall be located approximately 4 inches from each corner and 12 inches on center. The fastener shall be long enough to penetrate a minimum of  $1\frac{1}{2}$  inches into the wood wall framing.



Figure 1. Gravity ventilator, Model GR

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