

AISI Gravity and Wind Uplift Base Load Testing conducted by Force Engineering & Testing.

Roof Hugger, Inc. is the leader in the Metal-over-Metal reroofing market with projects going back to the early 1990's. To date, we have provided "Huggers" for over 50 million square feet of buildings throughout the U.S., Canada, Mexico and elsewhere. Our products are protected under U.S. Patent 5367848 as well as others that are patent pending. Performance of our products has gained approval by the American Society of Testing Material (ASTM) in accordance with E-1592 testing methods for structural performance.

We have also tested the affects of installing "Huggers" over existing pre-engineered building purlins insofar as what increase in structural load carrying increase capacity can be realized. According to the American Iron and Steel Institute (AISI) base load testing protocol, installing a "Hugger" over an existing 8" X 16-gauge zee-shaped purlin spanning a 25'-0" bay, the purlin's gravity load capacity is increased 79% and its wind uplift capacity by 94%. What this means to a design professional is existing metal buildings that are subject to increased design snow loading or accepting the added weight of the new reroof systems as well as wind speed increases can use "Huggers" to assist in upgrading the existing roof system to comply with changes in Building Code design load requirements. This is all accomplished without removal of the existing metal roofing. Building Code wind speed requirements have increased over the years, especially in coastal hurricane areas. Roof Hugger has the certified and tested answer for reroofing projects needing to be upgraded.

While the "Huggers" have this extensive of affect on the building's secondary roof framing system, they do not increase the primary supports (rigid frames). Further design analysis may be required by an independent professional engineer to determine what remedial work may be required. Below is a description of the testing and the results.

Purlin GA	Moment Reduction Factor w/ Hugger	Moment Reduction Factor w/o Hugger	% Increase
16	1.450	0.811	79%
14	1.394	0.840	66%
12	1.254	0.913	37%

AISI Wind Uplift Load Base Testing

New 26 GA Whirlwind Super Span Profile
Standard Model "C" Hugger ("R" Profile)
Over Existing 8"X 2 1/2"X 16 GA Zee Purlins and
Over Existing 8"X 2 1/2"X 12 GA Zee Purlins
Building Bay Spacing = 25'-0"
Dade County Lab Cert: No 05-1122.13

Purlin GA	Moment Reduction Factor w/ Hugger	Moment Reduction Factor w/o Hugger	% Increase
16	0.740	0.382	94%
14	0.754	0.458	65%
12	0.791	0.647	22%

Notes:

- All roof assemblies were tested with LGS standard Purlins with 26 GA roof panels attached to top flange
- All roof assemblies were tested with bottom flanges completely unbraced
- All roof assemblies were tested with a 2.875" tall X 16 GA notched Roof Hugger (Model "C" for 12" o.c. "R" profiles)
- All tests were conducted in compliance with AISI TS-8-02 Base Test Method for Purlins supporting a standing