



March 7, 2007

James R. Myers
Sheet Metal Connectors, Inc.
5850 Main Street N.E.
Minneapolis, MN 55432-5439

Re: E-Z Flange
E-Z Flange Jr.

Dear Jim:

The SMACNA Testing & Research Institute (STRI) verifies in the attached Test Report & Moment of Inertia Report, the E-Z Flange and E-Z Flange, Jr. as submitted and tested to be applicable to the ANSI/SMACNA HVAC Duct Construction Standards, 3rd Edition 2006; Chapter 3 Round, Oval and Flexible Duct as follows:

- Table 3-7, 3-8 & 3-13
- E-Z Flange = Reinforcement Class C
- E-Z Flange Jr. = Reinforcement Class A

Professionally yours,
SMACNA Testing & Research Institute

A handwritten signature in black ink that reads 'Eli P. Howard, III'.

Eli P. Howard, III
Executive Director

SUMMARY OF ENGINEERING ANALYSIS & SPECIMEN TESTING

The following conclusions have been reached from the attached Report on Moment of Inertia (Engineering Analysis) and Pressure Tests (Specimen Testing):

- Considering that a ten foot section of 24” diameter, 24 gage galvanized steel, longitudinal seam duct, unstiffened except for the 24” diameter E-Z Flange Jr. connectors used to connect the test specimen to the two end sections of the test set-up, is rated to operate at up to negative 4” wg with Class A rings per table 3-7 of the ANSI/SMACNA HVAC-DCS 3rd Edition, and that the test sample taken to failure began to fail at a negative 9.956” wg, with final collapse at 10.439” wg. This provides evidence of a safety factor of between 2.49 and 2.62, well in excess of the 2.0 safety factor expected of HVAC Round Duct. Further, since the structural performance of the duct test specimen exceeded that on which its operational rating is based, it can be determined that the E-Z Flange Jr. connectors performed within the Class A rating of stiffeners;
- Considering that a twelve foot section of 54” diameter, 18 gage galvanized steel, longitudinal seam duct, unstiffened except for the 54” diameter E-Z Flange connectors used to connect the test section to the two end sections of the test set-up, is rated to operate at up to negative 6” wg with Class C rings per Table 3-8 of the ANSI/SMACNA HVAC-DCS 3rd Edition, and that the test sample taken to failure began to fail at a negative 13.03” wg, with final collapse at 14.16” wg. This provides evidence of a safety factor of between 2.17 and 2.41, well in excess of the 2.0 safety factor expected of HVAC Round Duct. Further, since structural performance of the duct test specimen exceeded that on which its operational rating is based, it can be determined that the E-Z Flange connectors performed within the Class C rating of stiffeners;
- Considering that a ten foot section of 24” diameter, 24 gage galvanized steel, spiral lock seam pipe, unstiffened except for the 24” diameter E-Z Flange Jr. connectors used to connect the test section to the two end sections of the test set-up, is rated to operate at up to negative 10” wg with Class A rings per Table 3-13 of the ANSI/SMACNA HVAC-DCS 3rd Edition, and that the test sample taken to failure began to fail at negative 21.14” wg, providing evidence of a safety factor of 2.11, also in excess of the 2.0 safety factor expected of HVAC Round Duct. Further, since structural performance of the duct test section exceeded that on which its operational rating is based, it can be determined that the E-Z Flange connectors are performing with the Class A rating of stiffeners.