



June 12, 2023

Ryan Kwast  
Griplock Systems, LLC  
1029 Cindy Lane  
Carpinteria, CA 93013

Re: Griplock Cable Suspension System for HVAC Ducting

Dear Ryan:

The SMACNA Testing & Research Institute (STRI) verifies, in the attached Test & Verification Report, that Griplock Cable Suspension System for HVAC Ducting as submitted to be an acceptable alternative to the duct hanger systems prescribed in the SMACNA HVAC Duct Construction Standards (HVAC-DCS), 4<sup>th</sup> edition, Chapter 5, Tables 5-1, 5-1M and 5-2, subject to the conditions in the attached test report and strict conformance to the manufacturers installation requirements.

Professionally yours,

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

Eli P. Howard, III  
Executive Director  
SMACNA Testing & Research Institute



## SMACNA TESTING & RESEARCH INSTITUTE

### TEST & VERIFICATION REPORT

#### Griplock Cable Suspension System for HVAC Ducting

The SMACNA Testing & Research Institute (STRI) verifies Griplock Cable Suspension System for HVAC Ducting, as submitted and described below to be acceptable alternatives to the duct hanger systems prescribed in the SMACNA (ANSI) HVAC Duct Construction Standards (HVAC-DCS), 4<sup>th</sup> edition, Chapter 5, Tables 5-1, 5-1M and 5-2 subject to the following conditions and limitations:

1. Consistent with the HVAC-DCS requirements, upper attachments of the system directly to structures (without another device transferring the load between the wire rope and structure) shall have an allowable load not more than one-fourth of the wire rope system failure load.
2. Lower attachments, such as illustrated in the HVAC-DCS Figure 5-5, shall have a minimum safety factor of two and shall not be used in a manner that would deform the duct shape or cause excessive concentrated loads on the duct.

With respect to HVAC-DCS Figure 5-5, Griplock Cable Suspension System for HVAC Ducting referenced above may be adapted to any of the illustrated support configurations except the two-tier trapeze method in the lower right. This adaption also applies to the strut channel support in Figure 5-6.

Wire rope support of trapeze bars for oval suspension relative to the HVAC-DCS, Chapter 3 Flat Oval Duct Construction Standards.

Wire rope passed continuously under round and rectangular duct (with both ends attached overhead) is acceptable provided that duct shape is retained and points on contact with the duct are not overstressed. Use of stress distribution saddles shall be prescribed as necessary.

3. The HVAC-DCS Table 5-1 and 5-1M maximum hanger spacing of 10 feet and Table 5-2 maximum spacing of 12 feet shall be maintained (and decreased as necessary to conform to Griplock Cable Suspension System for HVAC Ducting working load limits).

Since Chapter 5 of the HVAC-DCS has prescribed uses and limits on duct size for single wire supports and the Griplock Cable Suspension System for HVAC Ducting uses wire rope that has larger load capacity, use is not restricted to the HVAC-DCS diametrical limits for single wires.

4. When Griplock Cable Suspension System for HVAC Ducting allows its hanger to be in a non-vertical orientation, it shall, in accordance with accepted engineering practice, provide users with adjustments to its allowable loads and, as necessary to conform to manufacturers recommendations, approve the method of transfer of loadings to supporting and supported members. This stipulation shall not be construed as preempting any duty of an installer to obtain approval of the support system by an appropriate authority prior to making the installation. The SMACNA (ANSI) HVAC Duct Construction Standards does not specifically provide for non-vertical hanger systems.
5. Criteria for use of the Griplock Cable Suspension System for HVAC Ducting for support of risers are not included in this verification.

Griplock Systems, LLC submitted their Griplock Cable Suspension System for HVAC Ducting which consisted of:

1. A system with the following components: a zinc coated 7x7 or 7x19 strand construction cable, a performed loop created and maintained thereon by a manufacturer supplied and attached ferrule typically connected to Griplock Cable Suspension System assembly and attachable loop fixing gripper device.
2. Each system was supplied with suitable matched, compatible load rated components with load rating performance data conducted by an accredited testing laboratory.

The SMACNA Testing & Research Institute conducted a comprehensive evaluation of the submittal as an acceptable alternative for use with the SMACNA HVAC Duct Construction Standards – Metal & Flexible, 4<sup>th</sup> edition. This analysis include: minimum and maximum working load ranges that will prevent slip and separation of components of the systems; breaking strength of the wire rope; load test results for wire rope systems and failure load tests.