

SECTION 16xxx WIRE ROPE SYSTEM

PART 1 – GENERAL

1.1 SCOPE

- A. CADDY® SPEED LINK (2.3A)

1.2 SUMMARY

- A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, and services to completely execute the wire rope system for static load as described in this specification.

1.3 DEFINITIONS

- A. BS: British Standard
- B. UL: Underwriters Laboratories, Inc.
- C. cULus: Listed by Underwriters Laboratories based on both Canadian and US (United States) standard requirements.
- D. DIN: Deutsche Industrie Norm (German Industry Standard)
- E. NFPA: National Fire Protection Association
- F. ITS: INTERTEK Testing Services ETL SEMKO WARNOK HERSEY DEKRA

1.4 SUBMITTALS

- A. Submit product data on wire rope system, including attachment methods. Product data to include, but not limited to materials, finishes, approvals, load ratings, and dimensional information.

1.5 QUALITY ASSURANCE

- A. Wire rope system shall be listed by Underwriters Laboratories based on both Canadian and US standards (cULus).
- B. Wire rope system shall meet the fire rating requirements of DIN 4102-2 for 30 minutes at 30 percent of rated load.
- C. Wire rope system shall be evaluated for mechanical strength.
- D. 100% of the wire rope/hook crimping connections shall be subjected to a pull test under working load during the manufacturing process.
- E. 100% of the locking devices shall be subjected to a function test during the manufacturing process.
- F. The manufacturing process shall include scientific samplings of locking devices subjected to a pull-out test under working load.
- G. The locking device shall have the manufacturer's name and part number stamped on the part for identification.
- H. Manufacturer: Company specializing in manufacturing fastening, fixing and support products with a minimum of five years documented experience in the industry, and certified ISO 9001:2000.

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS

- A. Subject to compliance with these specifications, wire rope system shall be as manufactured by ERICO, Inc or approved equal.

2.2 REFERENCES

- A. NFPA 70 National Electrical Code®
- B. UL2239 Standard for Conduit, Tubing and Cable Support Hardware
- C. UL1598 for Luminaire Support
- D. BS476 part 20 for Fire Rating
- E. DIN 4102-2 for Fire Rating.
- F. ITS verification for mechanical strength based on ASTM E-4.

2.3 WIRE ROPE SYSTEM

A. CADDY® SPEED LINK

1. All components shall be made of steel.
2. Locking device shall accept 2 mm and 3 mm wire rope.
3. Cover (housing) of locking device shall be stainless steel.
4. Wire rope shall be of aircraft quality consisting of seven bundles of seven galvanized steel strands each.
5. Wire rope system with 1.5 mm (0.059 in.) steel cable shall support a load of 44 lbs. (20 kg) with a 5-to-1 safety factor (breaking load \geq 220 lbs. = \geq 100 kg).
6. Wire rope system with 2 mm (0.079 in.) steel cable shall support a load of 100 lbs. (45 kg) with a 5-to-1 safety factor (breaking load \geq 500 lbs. = \geq 225 kg).
7. Wire rope system with 3 mm (0.118 in.) steel cable shall support a load of 200 lbs. (90 kg) with a 5-to-1 safety factor (breaking load \geq 1,000 lbs. = \geq 450 kg).
8. The 1.5mm wire rope system shall be available in lengths of 2 m (6.6 ft.), 5 m (16.4 ft.) and 10 m (32.8 ft.).
9. The 2mm and 3mm wire rope system shall be available in lengths of 1 m (3.3 ft.), 2 m (6.6 ft.), 3 m (9.9 ft.), 5 m (16.4 ft.) and 10 m (32.8 ft.). Other lengths may be requested on special order.
10. A hook with a spring latch is permanently attached to the wire rope.
11. Wire rope support length shall be adjustable, utilizing a provided release key or a small screwdriver.
12. Professional-grade cutter for wire rope shall be available.
13. Concrete attachment clip for installation by powder-actuated tool shall be available.
14. Assorted eyebolts for various applications shall be available.
15. A variety of spring steel fasteners and fixings shall be available for attachment to building structure and substructures.
16. Plastic corner protectors for ductwork shall be available.
17. Wire insulation protection tube for installation at beams, etc. shall be available.
18. Air duct support attachments shall be available.
19. Various clips for MC/AC cable shall be available.
20. A ¼" lighting clip (50 lb. ultimate static load limit) shall be available.

2.4 FINISHES

- A. ASTM B633 Standard Specification for Electro-deposited Coatings of Zinc on Iron and Steel
ASTM B 695 Standard Specification for Coatings of Zinc Mechanically Deposited on Iron and Steel

PART 3 - EXECUTION

3.1 INSTALLATION

- A. Installation and configuration shall conform to the manufacturer's installation instructions and local regulations.
- B. Do not exceed load ratings specified by manufacturer.
- C. Coordinate all installations with other trades prior to installation.
- D. Attach wire rope with hook to support structure (ceiling, wall, beam, strut, etc.) using eyebolt, beam clamp, fastener or looping it around beam, strut, etc. Use protection tubing as necessary.
- E. Thread locking device onto the wire rope (observe arrow).
- F. Wrap wire rope around load (pipe, duct, conduit, cable tray, etc.) or thread through lighting clips attached to luminaires or through air duct support attachments. Use air duct corner protectors as required.
- G. Thread wire rope into other side of locking device (observe arrow).
- H. Adjust load position as necessary. For upward adjustment pull loose end of wire rope. For downward adjustment, first support load independent of the wire rope system; then insert the release key or a small screwdriver into the opening next to the wire rope to be released. This will release the catch; now adjust wire rope to the desired length.
- I. Ensure that the angle between the two wire ropes exiting the locking device is less than 60 degrees.

Warning

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