

POWERS FASTENERS

Sample Specification

Section 26 05 xx – Hangers and Supports for Electrical Systems

The intent of this Sample Specification is to illustrate the use of ICC-ES Acceptance Criteria standards to aid in the correct specification of concrete anchors and fasteners which meet the requirements of the International Building Code. Powers Fasteners assumes no liability for any errors and omissions within this Sample Specification and/or its improper use. Please consult with a design professional prior to specifying any product.

SECTION 26 05 XX
HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

PART 1 GENERAL

1.01 SECTION INCLUDES

- A. Conduit and equipment supports.
- B. Anchors and fasteners.

1.02 REFERENCE STANDARDS

- A. ICC-ES AC01 - Acceptance Criteria for Expansion Anchors in Masonry Elements; **2009**.
- B. ICC-ES AC106 - Acceptance Criteria for Predrilled Fasteners (Screw Anchors) in Masonry Elements; **2006**
- C. ICC-ES AC193 - Acceptance Criteria for Mechanical Anchors in Concrete Elements; **2010**
- D. ICC-ES AC308 - Acceptance Criteria for Post-Installed Adhesive Anchors in Concrete Elements; **2009**.
- E. ICC-ES AC70 - Acceptance Criteria for Fasteners Power-driven into Concrete, Steel and Masonry Elements; **2010**.
- F. NECA 1 - Standard Practices for Good Workmanship in Electrical Contracting; National Electrical Contractors Association; **2006**.
- G. NFPA 70 - National Electrical Code; National Fire Protection Association; **2008**.

1.03 SUBMITTALS

- A. See Section **01 3000** - Administrative Requirements, for submittal procedures.
- B. Product Data: Provide manufacturer's catalog data for fastening systems.
- C. Manufacturer's Instructions: Indicate application conditions and limitations of use stipulated by product testing agency. Include instructions for storage, handling, protection, examination, preparation, and installation of product.

1.04 QUALITY ASSURANCE

- A. Conform to requirements of NFPA 70.
- B. Products: Listed and classified by <<**Underwriters Laboratories Inc.; testing firm acceptable to the authority having jurisdiction; or _____**>> as suitable for the purpose specified and indicated.

PART 2 PRODUCTS

2.01 MANUFACTURERS

- A. _____.
- B. _____.
- C. _____.

SECTION 26 05 XX

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

D. Substitutions: <<See Section 01 6000 - Product Requirements; or Not permitted>>.

2.02 MATERIALS

A. Hangers, Supports, Anchors, and Fasteners - General: Corrosion-resistant materials of size and type adequate to carry the loads of equipment and conduit, including weight of wire in conduit.

B. Supports: Fabricated of structural steel or formed steel members; <<galvanized; painted; or _____>>.

C. Anchors and Fasteners:

1. Obtain permission from **Architect** before using <<powder-actuated anchors; or _____>>.
2. Concrete Structural Elements: Use <<precast inserts; concrete wedge expansion anchors; concrete screw type anchors; concrete adhesive type anchors; powder-actuated anchors; preset inserts; or _____>>.
3. Steel Structural Elements: Use <<beam clamps; steel spring clips; welded fasteners; powder-actuated anchors; gas-actuated anchors; or _____>>.
4. Concrete Surfaces: Use <<self-drilling anchors; concrete wedge expansion anchors; concrete screw type anchors; concrete adhesive type anchors; powder-actuated anchors; preset inserts; or _____>>.
5. Solid Masonry Walls: Use <<masonry wedge expansion anchors; masonry screw type anchors; preset inserts; or _____>>.
6. Hollow Masonry, Plaster, and Gypsum Board Partitions: Use <<toggle bolts; hollow wall fasteners; or _____>>.
7. Sheet Metal: Use sheet metal screws.
8. Wood Elements: Use wood screws.

D. Fastener Types:

1. Concrete Wedge Expansion Anchors: Complying with ICC-ES AC193.
2. Masonry Wedge Expansion Anchors: Complying with ICC-ES AC01.
3. Concrete Screw Type Anchors: Complying with ICC-ES AC193.
4. Masonry Screw Type Anchors: Complying with ICC-ES AC106.
5. Concrete Adhesive Type Anchors: Complying with ICC-ES AC308.
6. Powder Actuated Anchors: Complying with ICC-ES AC70.
7. Gas Actuated Anchors: Complying with ICC-ES AC70.
8. Other Types: As required.
9. Manufacturers:

SECTION 26 05 XX

HANGERS AND SUPPORTS FOR ELECTRICAL SYSTEMS

a. Powers Fasteners, Inc: www.powers.com.

b. _____.

c. _____.

d. Substitutions: <<See Section 01 6000 - Product Requirements; or Not permitted>>.

E. Formed Steel Channel:

1. Product: _____ manufactured by _____.

2. Substitutions: <<See Section 01 6000 - Product Requirements; or Not permitted>>.

F. Powder-Actuated Anchors:

1. Product: _____ manufactured by _____.

2. Substitutions: <<See Section 01 6000 - Product Requirements; or Not permitted>>.

G. Steel Spring Clips:

1. Product: _____ manufactured by _____.

2. Substitutions: <<See Section 01 6000 - Product Requirements; or Not permitted>>.

PART 3 EXECUTION

3.01 INSTALLATION

A. Install hangers and supports as required to adequately and securely support electrical system components, in a neat and workmanlike manner, as specified in NECA 1.

1. Do not fasten supports to pipes, ducts, mechanical equipment, or conduit.

2. Obtain permission from **Architect** before drilling or cutting structural members.

B. Rigidly weld support members or use hexagon-head bolts to present neat appearance with adequate strength and rigidity. Use spring lock washers under all nuts.

C. Install surface-mounted cabinets and panelboards with minimum of four anchors.

D. In wet and damp locations use steel channel supports to stand cabinets and panelboards **1inch (25 mm)** off wall.

E. Use sheet metal channel to bridge studs above and below cabinets and panelboards recessed in hollow partitions.

END OF SECTION