



SECTIONS 7, 21, 22, 23, 26, & 27
NON-PENETRATING SUPPORTS ROOFTOP ACCESSORIES
ROOFTOP ACCESSORIES SECURENESS & ANCHORING

PART 1 – GENERAL

1.1 SCOPE

- A. Plumbing & Pipe Accessories
- B. HVAC Equipment & Ducting
- C. Data & Power Equipment
- D. Cable Tray & Conduit

1.2 SUMMARY

- A. The work covered under this section consists of the furnishing of all necessary labor, supervision, materials, equipment, and services to properly execute the system of the rooftop accessories supports, secureness, and anchoring as described in this specification.

1.3 RELATED SECTIONS

- A. Section 07 00 00 - Thermal & Moisture Protection
- B. Section 07 71 00 - Roof Specialties
- C. Section 07 72 00 - Roof Accessories
- D. Section 21 00 00 - Fire Suppression
- E. Section 21 05 29 - Hangers & Supports for Fire Suppression Piping & Equipment
- F. Section 21 05 48 - Vibration & Seismic Controls for Plumbing, Piping & Equipment
- G. Section 22 00 00 - Plumbing
- H. Section 22 05 29 - Hangers & Supports for Plumbing, Piping & Equipment
- I. Section 22 05 48 - Vibration & Seismic Controls Plumbing, Piping & Equipment
- J. Section 22 33 00 - Air Duct Accessories
- K. Section 23 00 00 - Heating, Ventilating & Air Conditioning (HVAC)
- L. Section 23 05 29 - Hangers & Supports for HVAC
- M. Section 26 00 00 - Electrical
- N. Section 27 00 00 - Communications

1.4 REFERENCES

- A. ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- B. ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware
- C. ASTM A924/A924M Standard Specification for General Requirements for Steel Sheet, Metallic-Coated by the Hot-Dip Process

- D. ASTM A29/A29M Standard Specification for General Requirements for Steel Bars, Carbon and Alloy, Hot-Wrought
- E. ASTM A108 Standard Specification for Steel Bar, Carbon and Alloy, Cold-Finished
- F. ASTM D792 -Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement
- G. ASTM D638 - Standard Test Method for Tensile Properties of Plastics
- H. ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics
- I. ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials
- J. ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics
- K. ASTM D570 Standard Test Method for Water Absorption of Plastics
- L. MSS SP-58 - Pipe Hangers and Supports – Materials, Design and Manufacture; Manufacturers Standardization Society of the Valve and Fittings Industry.
- M. MSS SP-69 - Pipe Hangers and Supports – Selection and Application; Manufacturers Standardization Society of the Valve and Fittings Industry.
- N. OSHA, CAL/OSHA and ANSI Standards.
- O. ICC 2015 Wind Resistance
- P. ASCE-7 – Wind & Seismic Provisions
- Q. IMC Section 301
- R. FEMA P749 – Seismic Provisions

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 – Administrative Requirements
- B. Product Data: Manufacturer’s Data Sheets on each product to be used, including:
 - 1. Preparation instructions and recommendations
 - 2. Installation methods
- C. Shop drawings: physical size, installation and working space required
- D. Proof of roof membrane material compatibility

1.6 QUALITY ASSURANCE

- A. Product shall be manufactured by an ISO 9001 facility
- B. Acceptable manufacturer – nVent CADDY (www.erico.com/www.nvent.com)
- C. Acceptable anchor installer – qualified roofing installer according to roof membrane manufacturer’s guidelines

1.7 DELIVERY, STORAGE, AND HANDLING

- A. Deliver and store products in Manufacturer’s original packaging bearing the brand name and Manufacturer’s identification until ready for installation.
- B. Handle materials to avoid damage, protect from construction conditions.

1.8 WARRANTY

- A. Rooftop supports – 5 year limited warranty

- B. Rooftop anchors – Up to 20 year limited warranty when using compatible roof membrane materials and qualified installers

PART 2 - PRODUCTS

2.1 ACCEPTABLE MANUFACTURERS:

- A. Subject to compliance with these specifications, rooftop supports and anchoring systems shall be as manufactured by nVent, (formerly known as ERICO, Inc.) or approved equal.
- B. Products shall be manufactured in the United States of America

2.2 NON-PENETRATING SUPPORTS - ROOFTOP ACCESSORIES

- A. All exposed metallic components and fasteners shall be of the following:
 - 1. Hot dip galvanized coating per ASTM A924/A924M; A 123/A 123M; A 153/A 153M
 - 2. Stainless steel per ASTM A29/A29M; A108
- B. Support Bases and Pipe Rollers shall be made of an engineered thermoplastic with appropriate additives for UV protection
- C. All supports shall be comprised of materials that are compatible with commercially available roof membrane materials (i.e. no slip sheets required)
- D. All support shall have smooth surfaces and radius edges to avoid “hot spots” on the roof membrane. The support must evenly distribute load to the membrane surface.
- E. CADDY PYDRAMID SUPPORTS: Plumbing, Pipe Accessories, & Conduit
 - 1. Fixed Height –
 - i. Strut Based: PSF6C, PSF10C, PSF10D, PSF16C, PSF16D; PSB24A, PSB30A, PSB36A, PSB42A, PSB48A, PSB60A; PBU6, PBU10, PBU16
 - ii. Roller: PRF2, PRF3, PRF6
 - iii. Tool Free: PTF6, PTF10, PTF16; RPSE1H, RPSE1H24, RPSE1H57, RPSE2H46, RPSE4H46;
 - 2. Adjustable Height –
 - i. Strut Based: PSA10CH13, PSA16H18
 - ii. Roller: PRA3H12, PRA6H16
 - 3. H-Frame -
 - i. Small: PBU16
 - ii. Large: PHB, PHBR; PHK, PHKR; HFRMHDW
- F. CADDY PYDRAMID SUPPORTS: HVAC Equipment & Ducting
 - 1. Fixed Height –
 - i. Strut Based: PSF6C, PSF10C, PSF10D, PSF16C, PSF16D; PSB24A, PSB30A, PSB36A, PSB42A, PSB48A, PSB60A; PBU6, PBU10, PBU16
 - 2. Adjustable Height –
 - i. Strut Based: PSA10CH13, PSA16H18
 - 3. H-Frame -

- i. Small: PBU16
 - ii. Large: PHB, PHBR; PHK, PHKR; HFRMHDW
4. Equipment Supports -
- i. Bases: PEK4B, PEK6B; PEB
 - ii. Extensions & Adjustments: PEKEF; PEH31
 - iii. Clamps: PEC

G. CADDY PYDRAMID SUPPORTS: Data, Cable Tray, & Power Equipment

- 1. Fixed Height –
 - i. Strut Based: PSF6C, PSF10C, PSF10D, PSF16C, PSF16D; PSB24A, PSB30A, PSB36A, PSB42A, PSB48A, PSB60A; PTF6P, PTF10P, PTF16P
- 2. Adjustable Height –
 - i. Strut Based: PSA10CH13, PSA16H18
- 3. H-Frame -
 - i. Small: PBU16
 - ii. Large: PHB, PHBR; PHK, PHKR; HFRMHDW
- 4. Equipment Supports -
 - i. Bases: PEK4B, PEK6B; PEB
 - ii. Extensions & Adjustments: PEKEF; PEH31
 - iii. Clamps: PEC

2.3 ROOFTOP ACCESSORIES SECURENESS & ANCHORING

- A. All exposed metallic components and fasteners shall be of the following:
 - 1. Hot dip galvanized coating per ASTM A924/A924M; A 123/A 123M; A 153/A 153M
 - 2. Stainless steel per ASTM A29/A29M; A108
- B. All anchoring seal/flashing shall be comprised of materials that are compatible with commercially available roof membrane materials (i.e. match manufacturer's material requirements)
- C. All anchoring components shall have smooth surfaces and radius edges to avoid "hot spots" on the roof membrane
- D. All deck screws shall be rated for use on single ply roof membrane and modified asphalt construction.
- E. CADDY PYDRAMID ANCHOR SYSTEM:
 - 1. Anchors –
 - i. EPDM: CRAU24Exyy
 - ii. PVC: CRAU24Pxxy
 - iii. TPO: CRAU24Txxy
 - iv. Modified asphalt: CRAU26Sxxy
 - v. x- Color; yy – membrane manufacturer
 - 2. Secureness & Bracing –
 - i. Cable kits: CRA36SS38Lx (x-length)

- ii. Spools: CSB36CBLSS
 - iii. Mounting points: CSBURCxxSS (xx- hole size)
3. Deck Screws -
- i. A927WxxxPyyy (xxx – length; yyy - quantity)

PART 3 - EXECUTION

3.1 ACQUISITION OF MATERIAL:

- A. Mechanical Electrical Plumbing Contractor to purchase CADDY Pyramid Anchor Products and CADDY Pyramid Supports through approved distribution channel

3.2 COORDINATION OF TRADES:

- A. General Contractor to coordinate installation between the roofer and MEP trades

3.3 INSTALLATION:

- A. Qualified roofing contractor to install the CADDY Pyramid Anchor
- B. MEP contractor to install CADDY Pyramid Supports
- C. Either roof or MEP contractors may install cable and/or rigid bracing
- D. Follow CADDY and roof membrane manufacturer's installation requirements
 - 1. Inspect substrate for readiness
 - 2. Surface preparation
 - 3. Placement
 - 4. Location & spacing

3.4 NOTES:

Layout, Design, PE Services

nVent CADDY may provide all product layout, design, and stamped PE drawing services