



## SECTIONS 15, 21, 22, 23

### NON-PENETRATING ROOFTOP PIPE, CONDUIT AND EQUIPMENT SUPPORTS

#### A. PORTABLE, NON-PENETRATING, ROOFTOP SUPPORTS FOR:

1. Piping.
2. Conduits and cable tray.
3. HVAC equipment.
4. Plumbing equipment

#### B. REFERENCES

ASTM A 123/A 123M - Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products.

ASTM A 153/A 153M - Standard Specification for Zinc Coating (Hot-Dip) on Iron and Steel Hardware.

ASTM D792 -Standard Test Methods for Density and Specific Gravity (Relative Density) of Plastics by Displacement

ASTM D638 - Standard Test Method for Tensile Properties of Plastics

ASTM D695 - Standard Test Method for Compressive Properties of Rigid Plastics

ASTM D790 - Standard Test Methods for Flexural Properties of Unreinforced and Reinforced Plastics and Electrical Insulating Materials

ASTM D256 - Standard Test Methods for Determining the Izod Pendulum Impact Resistance of Plastics

ASTM D570 Standard Test Method for Water Absorption of Plastics

MSS SP-58 - Pipe Hangers and Supports -- Materials, Design and Manufacture; Manufacturers Standardization Society of the Valve and Fittings Industry.

MSS SP-69 - Pipe Hangers and Supports -- Selection and Application; Manufacturers Standardization Society of the Valve and Fittings Industry.

#### C. ROOFTOP SUPPORT DESCRIPTION

Rooftop supports for piping, conduit, cable tray or equipment shall be provided for installation without requiring roof penetrations, flashing, or damage to the roofing material. Support Bases and Pipe Rollers shall be made of an engineered thermoplastic with appropriate additives for UV protection. All structural steel components shall be hot-dipped galvanized. Height-adjustable supports must be used where necessary. The support shall have a continuous bottom surface to provide even load distribution and minimize point loading of the roof membrane. The support base will have a radiused edge to enhance compatibility with roof membranes. Pipe and equipment supports shall be the nVent CADDY Pyramid ST or RL series as manufactured by nVent.

The rooftop strut support shall provide a fixed-height mounting platform with a minimum of 4" or 6" off of the roof and a usable strut length of up to 6", 10", 16", 24", 30", 36", 42", 48" or 60".



The adjustable-height strut support shall allow elevations changes of up to 18" off of the roof and a usable strut length of up to 10" or 16".

The rooftop roller support shall provide roller capacity for up to 6" (nominal) steel pipe with a minimum 5-1/2" fixed height off of the roof.

The adjustable-height roller support shall provide roller capacity for up to 6" (nominal) steel pipe and accommodate elevation changes of up to 16" off of the roof. The rollers shall be polymeric. The roller axle, fittings and other hardware shall be manufactured of hot-dipped galvanized steel or polymeric material.

## **D. SUBMITTALS**

Submit under provisions as specified by the consulting engineer.

Product Data: Submit for all products proposed for use, describing physical characteristics and method of installation.

Shop Drawings: Show product details and provide installation instructions.

## **E. QUALITY ASSURANCE**

Manufacturer Qualifications: Company specializing in manufacturing pipe supports with a minimum of five years of documented experience.

## **F. DELIVERY, STORAGE, AND HANDLING**

Deliver all materials to project site in manufacturer's original packaging, marked with manufacturer's name, product model names and catalog numbers, identification numbers, and other related information. Store materials under cover until needed for installation.

## **G. WARRANTY**

nVent CADDY will provide a 5 year limited warranty to repair or replace, at our option, any products we find to be structurally defective in material or workmanship. Warranty is not valid if product was modified or installed incorrectly.

## **H. MANUFACTURERS**

Acceptable Manufacturer: nVent CADDY  
31700 Solon Road, Solon, Ohio 44139  
Tel: (440) 248-0100  
[www.nVent.com](http://www.nVent.com)

Requests for substitutions will be considered in accordance with provisions as set forth by the consulting engineer.

## **I. APPLICATIONS**

Support pipes and conduit minimum of 4-6 inches above roof surface.  
Support Spacing: \_\_\_\_ feet. (10 feet MAXIMUM)



Strut-Based:

For strut supports with a fixed-height mounting platform with a minimum of 4" or 6" above roof and 6", 10", 16", 24", 30", 36", 42", 48" or 60" of usable strut length: nVent CADDY Pyramid: PSF6C, PSF10C, PSF16C, PSF10D, PSF16D, PSB24A, PSB30A, PSB32A, PSB36A, PSB42A, PSB48A, PSB60A

For strut supports which allow elevation change of up to 18" above roof and up to 10" or 16" of usable strut length: nVent CADDY Pyramid: PSA10CH13, PSA16AH18

Roller-Based:

For Electrical and Gas Lines 2 inches Diameter or less, up to 5.8 inches above roof: nVent CADDY Pyramid: PRF2

For Electrical and Gas Lines 3 inches Diameter or less, up to 6.25 inches above roof: nVent CADDY Pyramid: PRF3

For Electrical and Gas Lines 3 inches in Diameter or Less, up to 12 inches above roof: nVent CADDY Pyramid: PRA3H12

For Electrical and Gas Lines 6 inches Diameter or less, up to 6.25 inches above roof: nVent CADDY Pyramid: PRF6

For Electrical and Gas Lines 6 inches Diameter or less, up to 16 inches above roof: nVent CADDY Pyramid: PRA6H16

## J. MATERIALS

Rooftop Supports: Engineered supports specifically designed for installation without the need for roof penetrations or flashings, and without causing damage to the roofing membrane.

Design supports using high density / high impact thermo-plastic with additives for UV protection.

Bases: Injection molded high density / high impact thermo-plastic with UV-inhibitors and anti-oxidants, conforming to the following:

Moisture Content: Negligible.

Shrinkage/Swelling Due to Moisture: Negligible.

Density: 51.8 lb/cu ft (894 kg/cu m).

Insect Resistance: No known insect damage potential.

Chemical Resistance: (oil, brake fluid, gasoline, diesel, antifreeze, battery acid, and sulfuric acid) No visual or physical change apparent.

Sized as required by loading conditions and as indicated on the drawings.

Do not use bases containing carbonated plastics, press molded recycled rubber and plastics, steel, stainless steel, or any injection molded threaded receivers.

Do not use bases having discontinuities, cutouts, or pockets on the surface contacting the roof

Do not use bases having sharp outside edges. Edges in contact with roof must be radiused.

Accessories: Clamps, bolts, nuts, washers, and other devices as required for a complete system.

Carbon Steel: Hot-dip galvanized in accordance with ASTM A 153/A 153M.



Stainless Steel: Mill finish.

## **K. EXECUTION**

### **INSTALLATION**

#### Pipe, Conduit, and Equipment Support Systems:

Locate supports as indicated on drawings and as specified herein. Provide complete and adequate support of all piping and conduit, whether or not all required devices are shown.

The use of wood for supporting piping is NOT permitted.

Provide supports spaced so deflection of piping does not exceed 1/240 of span.

Consult manufacturer of existing or new roofing system as to the type of isolation pads required between the roof and support.

Set isolation pads in adhesive if required by manufacturer's instructions.

Place supports on isolation pads as required.

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