



## **SECTION 23 05 53 - IDENTIFICATION FOR HVAC PIPING AND EQUIPMENT**

### **PART 1 - GENERAL**

#### **1.1 SUMMARY**

- A. Section Includes:
  - 1. Nameplates.
  - 2. Tags.
  - 3. Stencils.
  - 4. Pipe markers.
  - 5. Ceiling tacks.
  - 6. Labels.
  - 7. Lockout devices.
  - 8. Warning Signs & Labels.

#### **1.2 REFERENCES**

- A. American Society of Mechanical Engineers:
  - 1. ASME A13.1 - Scheme for the Identification of Piping Systems.

#### **1.3 SUBMITTALS**

- A. Product Data: Submit manufacturers catalog literature for each product required.
- B. Samples.
- C. Shop Drawings: Submit list of wording, symbols, letter size, and color coding for mechanical identification and valve chart and schedule, including valve tag number, location, function, and valve manufacturer's name and model number.

### **PART 2 - PRODUCTS**

#### **2.1 NAMEPLATES**

- A. Manufacturers:
  - 1. **Craftmark Pipe Markers.**
  - 2. **Seton Identification Products / Tricolor Direct / Brady Corporation.**
  - 3. **Kolbi Pipe Marker Company.**
- B. Product Description: Laminated three-layer plastic with engraved black letters on light contrasting background color.



C. Metal Labels for Equipment:

1. Material and Thickness: Brass, 0.032-inch minimum thickness, and having predrilled or stamped holes for attachment hardware.
2. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
3. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
4. Fasteners: Stainless-steel rivets.
5. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.

## 2.2 TAGS

A. Plastic Tags:

1. Manufacturers:
  - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
  - b. **Brady Worldwide, Inc.**
  - c. **Kolbi Pipe Marker Company.**
2. Laminated three-layer plastic with engraved black letters on light contrasting background color. Tag size minimum 1-1/2 inches diameter square.

B. Metal Tags:

1. Manufacturers:
  - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
  - b. **Brady Worldwide, Inc.**
  - c. **Kolbi Pipe Marker Company.**
2. Aluminum with stamped letters; tag size minimum 1-1/2 inches diameter with finished edges.

C. Tag Chart: Typewritten letter size list of applied tags and location in anodized aluminum frame plastic laminated.

## 2.3 STENCILS

A. Manufacturers:

- a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
- b. **Brady Worldwide, Inc.**
- c. **Kolbi Pipe Marker Company.**

B. Stencils: With clean cut symbols and letters of following size:

1. Up to 2 inches Outside Diameter of Insulation or Pipe: 1/2 inch high letters.



2. 2-1/2 to 6 inches Outside Diameter of Insulation or Pipe: 1-inch high letters.
3. Over 6 inches Outside Diameter of Insulation or Pipe: 1-3/4 inches high letters.
4. Ductwork and Equipment: 1-3/4 inches high letters.

C. Stencil Paint: Semi-gloss enamel.

## 2.4 PIPE MARKERS

A. Plastic Pipe Markers:

1. Manufacturers:
  - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
  - b. **Brady Worldwide, Inc.**
  - c. **Kolbi Pipe Marker Company.**
2. Factory fabricated, flexible, semi-rigid plastic, preformed to fit around pipe or pipe covering. Larger sizes may have maximum sheet size with spring fastener.

B. Plastic Tape Pipe Markers:

1. Manufacturers:
  - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
  - b. **Brady Worldwide, Inc.**
  - c. **Kolbi Pipe Marker Company.**
2. Flexible, vinyl film tape with pressure sensitive adhesive backing and printed markings.

## 2.5 CEILING TACKS

A. Manufacturers:

1. **Seton Identification Products / Tricor Direct / Brady Corporation.**
2. **Brady Worldwide, Inc.**
3. **Kolbi Pipe Marker Company.**

B. Description: Steel with 3/4 inch diameter color-coded head.

C. Color code as follows:

1. HVAC equipment: Yellow.
2. Fire dampers/smoke dampers: Red.
3. Plumbing valves: Green.
4. Heating/cooling valves: Blue.

## 2.6 LABELS

A. Manufacturers:

1. **Seton Identification Products / Tricor Direct / Brady Corporation.**



2. **Brady Worldwide, Inc.**
  3. **Kolbi Pipe Marker Company.**
- B. Description: Aluminum, size 1.9 x 0.75 inches, adhesive backed with printed identification.
- C. Pipe Labels:
1. General Requirements for Manufactured Pipe Labels: Preprinted, color-coded, with lettering indicating service, and showing flow direction.
  2. Pretensioned Pipe Labels: Precoiled, semirigid plastic formed to partially cover circumference of pipe and to attach to pipe without fasteners or adhesive.
    - a. NPS 5 (DN 125) and smaller: Attach to pipe without fasteners or adhesive.
    - b. NPS 6 (DN 150) and larger: Attach to pipe with stainless steel spring fasteners.
  3. Pipe Label Contents: Include identification of piping service using same designations or abbreviations as used on Drawings, pipe size, and an arrow indicating flow direction.
    - a. Flow-Direction Arrows: Integral with piping system service lettering to accommodate both directions or as separate unit on each pipe label to indicate flow direction.
    - b. Lettering Size: At least 1-1/2 inches high.
  4. Maximum Temperature: Able to withstand temperatures up to 180 deg F (83 deg C).
- D. Duct Labels:
1. Material and Thickness: Multilayer, multicolor, plastic labels for mechanical engraving, 1/8 inch thick, and having predrilled holes for attachment hardware.
  2. Letter Color: Black.
  3. Background Color: Blue.
  4. Maximum Temperature: Able to withstand temperatures up to 160 deg F.
  5. Minimum Label Size: Length and width vary for required label content, but not less than 2-1/2 by 3/4 inch.
  6. Minimum Letter Size: 1/4 inch for name of units if viewing distance is less than 24 inches, 1/2 inch for viewing distances up to 72 inches, and proportionately larger lettering for greater viewing distances. Include secondary lettering two-thirds to three-fourths the size of principal lettering.
  7. Fasteners: Stainless-steel rivets.
  8. Adhesive: Contact-type permanent adhesive, compatible with label and with substrate.
  9. Duct Label Contents: Include identification of duct service using same designations or abbreviations as used on Drawings, duct size, and an arrow indicating flow direction.
    - a. Flow-Direction Arrows: Integral with duct system service lettering to accommodate both directions or as separate unit on each duct label to indicate flow direction.
    - b. Lettering Size: At least 1-1/2 inches high.



## 2.7 LOCKOUT DEVICES

- A. Lockout Hasps:
  - 1. Manufacturers:
    - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
    - b. **Brady Worldwide, Inc.**
    - c. **Kolbi Pipe Marker Company.**
  - 2. Anodized aluminum hasp with erasable label surface; size minimum 7-1/4 x 3 inches.
- B. Valve Lockout Devices:
  - 1. Manufacturers:
    - a. **Seton Identification Products / Tricor Direct / Brady Corporation.**
    - b. **Brady Worldwide, Inc.**
    - c. **Kolbi Pipe Marker Company.**
  - 2. Steel device preventing access to valve operator, accepting lock shackle.

## PART 3 - EXECUTION

### 3.1 PREPARATION

- A. Degrease and clean surfaces to receive adhesive for identification materials.
- B. Prepare surfaces for stencil painting.

### 3.2 INSTALLATION

- A. Apply stencil painting.
- B. Install identifying devices after completion of coverings and painting.
- C. Install plastic nameplates with corrosive-resistant mechanical fasteners, or adhesive.
- D. Install labels with sufficient adhesive for permanent adhesion and seal with clear lacquer. For unfinished canvas covering, apply paint primer before applying labels.
- E. Install tags using corrosion resistant chain. Number tags consecutively by location.

END OF SECTION 23 05 53