

SECTION 23 37 13

DIFFUSERS, REGISTERS, AND GRILLS

08/08

PART 1 GENERAL

1.1 REFERENCES

The publications listed below form a part of this specification to the extent referenced. The publications are referred to within the text by the basic designation only.

AMERICAN SOCIETY OF HEATING, REFRIGERATING AND AIR-CONDITIONING ENGINEERS (ASHRAE)

ASHRAE 113	(2005) Method of Testing for Room Air Diffusion (Repeatable Method of Testing Steady - State Air Diffusion Performance in Occupied Zones of Building Spaces)
ASHRAE EQUIP IP HDBK	(2004) Handbook, HVAC Systems and Equipment (IP Edition)
ASHRAE FUN IP	(2005) Fundamentals Handbook, I-P Edition

1.2 GENERAL REQUIREMENTS

Section 23 00 00 AIR SUPPLY, DISTRIBUTION, AND EXHAUST SYSTEMS applies to work specified in this section.

1.3 PERFORMANCE REQUIREMENTS

Certify air diffusion devices s having been tested and rated in accordance with ASHRAE EQUIP IP HDBK, Chapter 17; ASHRAE FUN IP, Chapter 31, and ASHRAE 113, where such certification is required.

Submit Equipment and Performance Data for air-diffusion devices consisting of sound data in terms of Noise Criteria (NC) index for the capacity range of the device. Where space or sound data are not specified or indicated, assume NC40.

1.4 SUBMITTALS

Government approval is required for submittals with a "G" designation; submittals not having a "G" designation are for Contractor Quality Control approval. Submit the following in accordance with Section 01 33 00 SUBMITTAL PROCEDURES:

SD-03 Product Data

Submit Equipment and Performance Data for air-diffusion devices in accordance with paragraph entitled, "Performance Requirements," of this section.

PART 2 PRODUCTS

2.1 AIR-DIFFUSION DEVICE CONSTRUCTION

Preclude flutter, rattle, or vibration on air-diffusion device construction and mounting. Refer to Section 23 05 48 VIBRATION AND SEISMIC CONTROLS FOR HVAC PIPING AND EQUIPMENT for vibration isolation considerations. Modify devices and provide accessories necessary for mounting in indicated surface construction.

Select color from Manufacturer's Standard Color Chart which indicate the manufacturer's standard color selections and finishes for air-diffusion devices.

Provide supply diffusers with combination damper and equalizing grid. Ensure dampers are extracting-splitter type, except as otherwise indicated.

Ensure air-diffusion device volume and pattern adjustments can be made from the face of the device. Make volume adjustments by removable key or screw driver.

Provide gaskets for supply-terminal air devices mounted in finished surfaces.

2.2 TYPES OF AIR-DIFFUSION DEVICES

2.2.1 Type DSA

Provide type DSA supply diffuser, square with four expanding flared members to provide radically diffused discharge air. Arrange flared members to provide a minimum of four air paths which simultaneously diffuse air at 20 to 50 fpm. Include pattern adjustments horizontal, vertical projection, and an intermediate position or range.

Provide a baked enamel finish.

Provide aluminum construction in area subject to moisture or high humidity (showers, etc.).

Provide integral extended surface to fit into module of lay-in ceiling.

2.2.2 Type GR

Provide type GR return grilles, single deflection type with fixed face bars.

Provide grilles installed in vertical surfaces with horizontal face bars set downward at 35 degrees from vertical.

Provide grilles installed in horizontal surfaces with face bars straight and parallel to short dimension.

Provide a baked enamel finish.

Provide aluminum construction in area subject to moisture or high humidity (showers, etc.).

2.2.3 Type RS

Provide type RS supply register, double-deflection type, with adjustable face bars parallel to short dimension and adjustable rear bars parallel to long dimension with opposed-blade type dampers.

Provide a baked enamel finish.

Provide aluminum construction in area subject to moisture or high humidity (showers, etc.).

2.2.4 Type RR

Provide type RR return register, single-deflection type with fixed face bars with opposed-blade dampers.

Provide registers installed in vertical surfaces with have horizontal face bars set downward at approximately 35 degrees from vertical.

Provide registers installed in horizontal surfaces with face bars set straight and parallel to short dimension.

Provide a baked enamel finish.

PART 3 EXECUTION

3.1 INSTALLATION

Install equipment as indicated and specified and in accordance with manufacturer's recommendations.

Mount wall-mounted supply registers 6 inches below ceiling.

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