**Price Slot Diffusers**

**Division 23 – Heating, Ventilating, and Air Conditioning**

**Section 23 37 13 – Diffusers, Registers, and Grilles**

The following specification is for a defined application. Price would be pleased to assist in developing a specification for your specific need.

**PART 1 – GENERAL**

* 1. **Section includes**:
1. Slot Diffusers
	1. **Related Requirements**
2. Section 01 30 00 – Administrative Requirements
3. Section 01 40 00 – Quality Requirements
4. Section 01 74 21 – Construction/Demolition Waste Management and Disposal
5. Section 01 78 00 – Closeout Submittals
6. Section 01 79 00 – Demonstration and Training
	1. **Reference Standards**
7. All referenced standards and recommended practices in this section pertain to the most recent publication thereof, including all addenda and errata.
8. ASHRAE 70 – Standard Method of Testing the Performance of Air Outlets and Air Inlets
9. ASTM D610 – Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces
10. ASTM D714 – Standard Test Method for Evaluating Degree of Blistering of Paints
11. ASTM D1308 – Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes
12. ASTM D1654 – Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments
13. ASTM D4752 – Standard Practice for Measuring MEK Resistance of Ethyl Silicate (Inorganic) Zinc-Rich Primers by Solvent Rub

**1.04 Submittals**

1. See Section 01 30 00 – Administrative Requirements for submittal procedures.
2. Product Data: Provide data indicating configuration, general assembly, and materials used in fabrication. Include catalog performance ratings that indicate airflow, and NC designation.
3. Shop Drawings: Indicate configuration, general assembly, and materials used in fabrication.
4. Project Record Documents: Record actual locations of units and control components.
5. Operation and Maintenance Data: Include manufacturer's descriptive literature, operating instructions (if applicable), and maintenance and repair data.
6. Warranty: Submit manufacturer warranty and ensure forms have been completed in Owner's name and registered with manufacturer.
7. Maintenance Materials: Furnish the following for Owner's use in maintenance of project.

**1.06 Quality Assurance**

1. Manufacturer Qualifications: Company specializing in manufacturing the type of products specified in this section, with minimum ten years of documented experience.

**1.07 Warranty**

1. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
2. Provide 12 month manufacturer warranty from date of shipment of diffusers.

**PART 2 – PRODUCTS**

**2.01 Manufacturer**

1. Basis of Design: Price Industries, Inc.
2. Slot Diffusers: Model SD
3. Sloped Shoulder Slot Diffuser Plenum: Model SDA
4. Straight Shoulder Slot Diffuser Plenum: Model SDB

**2.02 Slot Diffusers**

1. Description:
	1. Furnish and install Price model SD slot supply and return slot diffusers in sizes and capacities as shown by the plans and air distribution schedule.
	2. Provide drawings accompanied by an itemized list indicating the unit locations and appropriate product submittal drawings provided by the manufacturer. Exact dimensions of the walls and ceiling are per the architectural drawings.
2. Construction:
	1. The diffusers shall have [1 to 10] discharge slots with [1/2 inch], [3/4 inch], [1 inch], or [1-1/2 inch] slot width. (**select all that apply**)
	2. The supply diffusers shall have aerodynamically curved “ice-tong” shaped pattern controllers for 180 degree air pattern control and airflow dampering, if required.
	3. The return units shall match the supply units in appearance.
	4. The diffuser border shall be extruded aluminum construction with extruded aluminum spacers and [mitered end flanges], [open ends], [flush end caps], or [flange end caps].
	5. Continuous length units shall be provided with factory assembled corner modules to suit drawings and site conditions. Splice plates and alignment plates shall be provided to align continuous slot assemblies. The maximum section length shall be 72 inches.
	6. The linear slot diffusers shall be compatible for [surface mounting] or [T-bar lay in mounting] with the following border style (**select one**):
		1. Flange frame, [screw-mounted], [no screw holes], or [concealed mounting]
		2. Flush fixture frame, concealed mounting
		3. Flush plaster frame, concealed mounting
		4. Flange plaster frame, concealed mounting
		5. Concealed Plaster frame, [concealed mounting] or [countersunk screws]
		6. Suspended ceiling, [3/4 inch] or [7/8 inch frame]
		7. Concealed spline
		8. Inverted T-bar, 15/16 inch [lay-in flush], or [lay-on] frame
		9. Inverted T-bar, 9/16 inch lay-in flush face
		10. Curved face for spiral duct
		11. Narrow member T-bar, 9/16 inch x 5/16 inch width
		12. Techzone ceiling
		13. Techstyle ceiling
3. Performance:
	1. Performance of the selected slot diffusers shall be based on catalogued data obtained with the pattern controllers set in the normal operating position and a compatible Price supply air plenum, and tested in accordance with ASHRAE 70.
4. Paint Specification:
	1. Paint finish shall be (**select one**):
		1. Baked-on powder coat finish.
			1. The paint film thickness shall be a minimum of 2 mils.
			2. The finish shall have a hardness of 2H as tested in accordance with ASTM D3363.
			3. The finish shall pass an ASTM B117 Corrosive Environment Salt Spray Test for 1000 hours with no measurable creep, rusting or blistering as per ASTM D1654, D610 and D714.
			4. The finish shall pass an ASTM D870 Water Immersion test of a minimum of 500 hours with no measurable with no rusting or blistering as per ASTM D610 and D714.
			5. The finish shall have an impact resistance of 100 inch-pounds in accordance with ASTM D2794.
		2. All components shall have a custom finish in a color to match a customer supplied sample.
		3. The diffuser shall have an anodized finish.
5. Options (**select all that apply**):
	1. Mitered Corners:
		1. The diffuser shall be supplied with inactive [90 degree] or [135 degree] mitered corner assemblies. The mitered corners shall be extruded aluminum construction, with an all welded, factory assembled miter, finished to match the associated straight sections of the slot diffuser.
	2. Blank off:
		1. The diffuser shall be supplied with [vinyl] or [metal] blank off sections. The blank-offs shall cover inactive sections of the slot diffuser, and shall be shipped loose for field cutting and installation.
	3. Alignment Strips:
		1. The diffuser shall include alignment strips when the diffuser is supplied in multiple sections to provide linear alignment to the continuous slot diffuser.
	4. Plaster Frame Spacers:
		1. The diffuser shall be supplied with plaster frame spacers to provide the correct spacing of the plaster frame prior to installation of the diffuser.
	5. Field Cut Diffusers:
		1. The diffuser shall be supplied six inches longer than specified to allow the diffuser to be cut to size in the field. Field cutting shall be specified where a continuous run of diffuser is required, and where there may be a duct length variation.
	6. Equalizing Core:
		1. The diffuser shall be supplied with an equalizing core to equalize the air velocity over the face of the diffuser (**standard with spiral duct frame**).

**2.03 Sloped Shoulder Slot Diffuser Plenum**

1. Description:
	1. Slot supply and return slot diffusers shall be furnished and installed with Price model SDA slope shoulder plenum in sizes and capacities as shown by the plans and air distribution schedule.
2. Construction:
	1. The plenums shall be constructed of zinc coated steel.
	2. The plenum assembly shall have sloped shoulders for enhanced spread characteristics.
	3. The plenum assembly shall have a side inlet configuration in sizes to fit Model SD slot diffusers with one to four slots.
	4. The plenum shall be available to suit both drywall and lay-in installations.
	5. [Optional] The plenum shall be internally lined with 1/4 inch thick [fiberglass] or [fiber free] insulation.

**2.04 Straight Shoulder Slot Diffuser Plenum**

1. Description:
	1. Slot supply and return slot diffusers shall be furnished and installed with Price model SDB slope shoulder plenum in sizes and capacities as shown by the plans and air distribution schedule.
2. Construction:
	1. The plenums shall be constructed of zinc coated steel.
	2. The plenum assembly shall have straight shoulders for enhanced throw characteristics.
	3. The plenum assembly shall have a side inlet configuration in sizes to fit Model SD slot diffusers with one to four slots.
	4. The plenum shall be available to suit both drywall and lay-in applications.
	5. [Optional] The plenum shall be internally lined with 1/4 inch thick [fiberglass] or [fiber free] insulation.

**PART 3 – EXECUTION**

**3.01 Examination**

1. Verify that conditions are suitable for installation.
2. Verify that field measurements are as shown on the drawings.

**3.02 Installation**

1. Install in accordance with manufacturer’s instructions.
2. See drawings for the size(s) and locations of diffusers.

**3.03 Field Quality Control**

1. See Section 01 40 00 – Quality Requirements for additional requirements.

**3.05 Cleaning**

1. See Section 01 74 19 – Construction Waste Management and Disposal for additional requirements.

**3.06 Closeout Activities**

1. See Section 01 78 00 – Closeout Submittals for closeout documentation requirements.
2. See Section 01 79 00 – Demonstration and Training for addition.