**Price Concentric Ring Nozzle 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. Concentric Ring Nozzle 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 – Method of Testing the Performance of Air Outlets and Air Inlets.
9. ASTM 610 – Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces.
10. ASTM 714 – 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.
14. UL 94 – Standard for Tests for Flammability of Plastic Materials for Parts in Devices and Appliances.

**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, static pressure, and NC designation.
3. Shop Drawings: Indicate configuration, general assembly, and materials used in fabrication.
4. Certificates: Certify that air capacities, pressure drops, and selection procedures meet or exceed specified requirements.
5. Project Record Documents: Record actual locations of units and control components.
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. Air Nozzle Diffusers: Model AND
3. Air Nozzle Diffuser with Core: Model ANR
4. Air Nozzle Diffuser without Core: Model ANF

**2.02 Air Nozzle Diffusers**

1. Description:
	1. Furnish and install Price model AND nozzle diffusers of sizes and mounting styles shown on the plans and air distribution schedule.
2. Construction:
	1. The air nozzle diffuser shall be 16 gauge cold rolled steel construction, with a series of concentric round nozzles.
	2. The inner nozzle [assembly] or [assemblies] shall be manually adjustable to produce a swivel range of +/- 30 degrees within a fixed arc.
	3. The nozzle diffuser shall be supplied (**select one**):
		1. As a single diffuser.
		2. With [two], [three], or [four] nozzles mounted within a common panel.
3. 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.
4. Mounting Frame:
	1. The diffuser shall be supplied with a frame suitable for (**select one**):
		1. T-bar lay-in mounting with acoustic tile and plenum by others. The tile thickness shall be [1/2 inch], [5/8 inch], or [3/4 inch]. The panel size shall be [24 x 24 inches], [26 x 26 inches], [28 x 28 inches], or [30 x 30 inches].
		2. Ceiling or wall surface mounting.
		3. Surface mounting with a panel.
5. Fastening:
	1. The diffuser shall be supplied with (select one):
		1. Straight holes.
		2. Countersunk holes [**with panel mounting frame only**].
		3. No screw holes [**default for T-bar lay in**].

**2.03 Air Nozzle Diffuser with Core**

1. Description:
	1. Furnish and install Price model ANR nozzle diffusers of sizes and mounting styles shown on the plans and air distribution schedule.
2. Construction:
	1. The air nozzle diffuser shall be aluminum construction, with a series of concentric round nozzles.
	2. The inner nozzle assembly shall be manually adjustable to produce a swivel range of +/- 30 degrees..
3. Paint Specification:
	1. Paint finish shall have a baked-on powder coat finish.
4. Mounting Frame:
	1. The diffuser shall be supplied with a frame suitable for ceiling or wall surface mounting.
5. Fastening:
	1. The diffuser shall be supplied with (select one):
		1. EZ fastener [**3 inch to 5 inch size only**].
		2. Concealed mounting ring [**6 inch to 16 inch size only**].

**2.04 Air Nozzle Diffuser without Core**

1. Description:
	1. Furnish and install Price model ANF nozzle diffusers of sizes and mounting styles shown on the plans and air distribution schedule.
2. Construction:
	1. The air nozzle diffuser shall be aluminum construction.
3. Paint Specification:
	1. Paint finish shall have a baked-on powder coat finish.
4. Mounting Frame:
	1. The diffuser shall be supplied with a frame suitable for ceiling or wall surface mounting.
5. Fastening:
	1. The diffuser shall be supplied with (select one):
		1. EZ fastener [**3 inch to 5 inch size only**].
		2. Concealed mounting ring [**6 inch to 16 inch size only**].

**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 additional requirements.