**Price Industrial Grille**

**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. Industrial Grille.
	1. **Related Requirements**
2. Section 01 30 00 – Administrative Requirements
3. Section 01 40 00 – Quality Requirements
4. Section 01 60 00 – Product Requirements
5. Section 01 74 21 – Construction/Demolition Waste Management and Disposal
6. Section 01 78 00 – Closeout Submittals
7. Section 01 79 00 – Demonstration and Training
	1. **Reference Standards**
8. All referenced standards and recommended practices in this section pertain to the most recent publication thereof, including all addenda and errata.
9. ASHRAE 55 – Thermal Environmental Conditions for Human Occupancy.
10. ASHRAE 70 – Method of Testing the Performance of Air Outlets and Air Inlets.
11. ASTM D610 – Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces.
12. ASTM D714 – Standard Test Method for Evaluating Degree of Blistering of Paints.
13. ASTM D1308 – Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes.
14. ASTM D4752 – Standard Practice for Measuring MEK Resistance of Ethyl Silicate (Inorganic) Zinc-Rich Primers by Solvent Rub.
15. NFPA 90A – Standard for the Installation of Air-Conditioning and Ventilating Systems.

**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. **Warranty**
2. See Section 01 78 00 - Closeout Submittals, for additional warranty requirements.
3. Provide 12 month manufacturer warranty from date of shipment of grilles and registers.

**PART 2 – PRODUCTS**

**2.01 Industrial Grilles**

1. Basis of Design: Price Industries, Inc.
2. Industrial Grille, 1.5 inch spacing: Model 151, 152, 152G
3. Industrial Grille, 3.0 inch spacing: Model 301, 301G, 302, 302G
4. Modular Industrial Grille, 1.5 inch spacing: Model MIG

**2.02 Industrial Grilles, 1.5 Inch Spacing**

1. Description:
	1. Furnish and install Price Model [151], [152], [152G] industrial supply grilles of sizes and mounting types indicated on the plans and air distribution schedule.
2. Construction:
	1. The grilles shall be [single deflection (**Model 151**)] or [double deflection (**Models 152 and 152G**)] type with [one set] or [two sets] of fully adjustable 1-1/4 inch deep streamlined deflection blades spaced 1-1/2 inches on center. The front blades shall run parallel to the [long] or [short] dimension of the grille, as indicated on the outlet schedule.
	2. The grille blades, border, and mullions material shall be heavy extruded aluminum construction.
	3. The individually adjustable blades shall index and lock into position at 0, 15, 30, and 45 degrees deflection in either direction. The grille indexing device shall be stainless steel construction.
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. Options:
	1. Gang-operated Blades:
		1. The [front] or [rear] blades shall be linked and gang operable from a face mounted pole operator. The blades, frame, pole operator, and movement bar shall be extruded aluminum construction.
	2. Opposed Blade Damper:
		1. The grille shall be supplied with [a coated steel (D)] or [an aluminum with mill finish (DAL)] opposed blade damper.
		2. The damper shall be operable from the grille face.
		3. [Optional]: The damper shall be coated heavy duty 18 gauge cold rolled steel construction, and shall come fitted with a face accessible screw type blade locking mechanism.
	3. Border Style:
		1. The grille shall be suitable for sidewall mounting, complete with a border in the following style (**select one**):
			1. Surface Mount with 1-1/4 inch flat border.
			2. Trunk Latch border (**not available for model 152G**).
			3. Inverted frame, no latch.
	4. Mounting Frames:
		1. The grille shall be supplied with a 3/8 inch flat border mounting frame.
	5. Fastening:
		1. The grille shall be supplied with the following fastening method (**select one**):
			1. Countersunk screw holes with factory-supplied screws.
			2. No screw holes.

**2.03 Industrial Grilles, 3 Inch Spacing**

1. Description:
	1. Furnish and install Price Model [301], [301G], [302], [302G] industrial supply grilles of sizes and mounting types indicated on the plans and air distribution schedule.
2. Construction:
	1. The grilles shall be [single deflection (**Models 301 and 301G**)] or [double deflection (**Models 302 and 302G**)] type with [one set] or [two sets] of fully adjustable 3 inch deep streamlined deflection blades spaced 3 inches on center. The front blades shall run parallel to the [long] or [short] dimension of the grille, as indicated on the outlet schedule.
	2. The grille blades and mullions shall be heavy extruded aluminum construction. The border shall be heavy gauge steel construction.
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. Options:
	1. Gang-operated Blades:
		1. The [front] or [rear] blades shall be linked and gang operable from a face mounted pole operator. The blades, frame, pole operator, and movement bar shall be extruded aluminum construction.
	2. Opposed Blade Damper:
		1. The grille shall be supplied with [a coated steel (D)] or [an aluminum with mill finish (DAL)] opposed blade damper.
		2. The damper shall be operable from the grille face.
		3. [Optional]: The damper shall be coated heavy-duty 18 gauge cold rolled steel construction, and shall com fitted with a face accessible screw type blade locking mechanism.
	3. Border Style:
		1. The grille shall be suitable for sidewall mounting, complete with a surface mount with a 1-1/4 inch flat border border.
	4. Mounting Frames:
		1. The grille shall be supplied with a 3/8 inch flat border mounting frame.
	5. Fastening:
		1. The grille shall be supplied with the following fastening method (**select one**):
			1. Countersunk screw holes with factory-supplied screws.
			2. No screw holes.

**2.04 Modular Industrial Grilles**

1. Description:
	1. Furnish and install Price Model MIG modular industrial grilles of sizes and mounting types indicated on the plans and air distribution schedule.
2. Construction:
	1. The grilles shall consist of [single] or [multiple] square grilles mounted to a heavy gauge steel panel with quick-release fasteners.
	2. The grilles shall be double deflection type with two sets of fully adjustable 1-1/4 inch deep streamlined deflection blades spaced 1.5 inches on center. The blades shall run parallel to the [long] or [short] dimension of the grille, as indicated on the outlet schedule.
	3. The individually adjustable blades shall index and lock into position at 0, 15, 30, and 45 degrees deflection.
	4. The grille blades and frame shall be heavy extruded aluminum construction. The grille indexing device shall be stainless steel construction.
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. Options:
	1. Fastening:
		1. The grille shall be supplied with the following fastening method (**select one**):
			1. Countersunk screw holes with factory-supplied screws.
			2. No screw holes.

**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 grilles and registers.

**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.