**Price Heavy Duty Gym 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. Heavy Duty Gym Grilles.
	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 70 – Method of Testing the Performance of Air Outlets and Air Inlets
10. ASTM 610 – Standard Practice for Evaluating Degree of Rusting on Painted Steel Surfaces
11. ASTM 714 – Test Method for Evaluating Degree of Blistering of Paints
12. ASTM D1308 – Standard Test Method for Effect of Household Chemicals on Clear and Pigmented Organic Finishes
13. ASTM D1654 – Standard Test Method for Evaluation of Painted or Coated Specimens Subjected to Corrosive Environments
14. 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 aiflow, 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 (if applicable).
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 7800 - Closeout Submittals, for additional warranty requirements.
2. Provide 12 month manufacturer warranty from date of shipment of grilles and registers.

**PART 2 – PRODUCTS**

**2.01 Heavy Duty Gym Grille**

1. Basis of Design: Price Industries, Inc.
2. Steel Heavy Duty Gym Grille: Models 90, 91, 93, 95, 96
3. Aluminum Heavy Duty Gym Grille: Models 97, 98, 99
4. Heavy Duty Filter Return Gym Grille: Models 90FH, 91FH, 95FH, 96FH

**2.02 Steel Heavy Duty Gym Grille**

1. Description:
	1. Furnish and install Price Model [90], [91], [93], [95], or [96] steel heavy duty gym grilles and registers of sizes and mounting types designated by the plans and air distribution schedule.
2. Construction:
	1. The grille blades and border shall be steel construction.
	2. The 14 gauge steel border shall have smooth contours to reduce the possibility of injury to occupants when installed in a gymnasium.
	3. Grilles shall be fixed louver type, and shall have (**select one**):
		1. Zero (0) degree deflection, 3/8 inch on center blade spacing [Model 90].
		2. Forty-five (45) degree deflection, 3/8 inch on center blade spacing [Model 91].
		3. Forty-five (45) degree deflection, 1/2 inch on center blade spacing [Model 93].
		4. Zero (0) degree deflection, 3/4 inch on center blade spacing [Model 95].
		5. Forty-five (45) degree deflection, 3/4 inch on center blade spacing [Model 96].
	4. The grille blade orientation shall be (**select one**), as indicated on the outlet schedule.
		1. Front blades parallel to the long dimension.
		2. Front blades parallel to the short dimension.
	5. The grille shall be suitable for surface mounting with 1-1/4 inch flat border.
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. Opposed Blade Damper:
		1. The register shall be supplied with a coated steel (D) opposed blade damper. The damper shall be operable from the register face.
	2. Fastening:
		1. The grille shall be supplied with the following fastening method (**select one**):
	3. Countersunk screw holes complete with screws.
	4. Concealed fastening [**not applicable to Models 91 or 93**].
	5. No screw holes.

**2.03 Aluminum Heavy Duty Gym Grille**

1. Description:
	1. Furnish and install Price Model [97], [98], or [99] aluminum heavy duty gym grilles and registers of sizes and mounting types designated by the plans and air distribution schedule.
2. Construction:
	1. The grille blades and border shall be aluminum construction. The heavy duty extruded aluminum blades shall be held by mandrel tubes with spacing no greater than 12 inches on center.
	2. The 14 gauge steel border shall have smooth contours to reduce the possibility of injury to occupants when installed in a gymnasium.
	3. Grilles shall be fixed louver type, and shall have (**select one**):
		1. Zero (0) degree deflection, 1/2 inch on center blade spacing [Model 97].
		2. Forty-five (45) degree deflection, 1/2 inch on center blade spacing [Model 98].
		3. Thirty (30) degree deflection, 1/2 inch on center blade spacing [Model 99].
	4. The grille blade orientation shall be (**select one**), as indicated on the outlet schedule.
		1. Front blades parallel to the long dimension.
		2. Front blades parallel to the short dimension.
	5. The grille shall be suitable for surface mounting with 1-1/4 inch flat border.
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.
		3. Raw aluminum.
		4. Prepared aluminum with cleaned factory mill finish.
		5. Factory anodized by the manufacturer in the color specified in the plans.
4. Options:
	1. Opposed Blade Damper:
		1. The register shall be supplied with a [coated finish steel], or [mill finish aluminum] opposed blade damper. The damper shall be operable from the register face.
	2. Fastening:
		1. The grille shall be supplied with the following fastening method (**select one**):
			1. Countersunk screw holes complete with screws.
			2. Concealed fastening [**only applicable to Models 98 or 99**].
			3. No screw holes.

**2.04 Heavy Duty Filter Return Gym Grille**

1. Description:
	1. Furnish and install Price Model [90FH], [91FH], [95FH], or [96FH] steel heavy duty filter return gym grilles of sizes and mounting types designated by the plans and air distribution schedule.
2. Construction:
	1. The grille blades and border shall be steel construction.
	2. The 14 gauge steel border shall have smooth contours to reduce the possibility of injury to occupants when installed in a gymnasium.
	3. Grilles shall be fixed louver type, and shall have (**select one**):
		1. Zero (0) degree deflection, 3/8 inch on center blade spacing [Model 90FH].
		2. Forty-five (45) degree deflection, 3/8 inch on center blade spacing [Model 91FH].
		3. Zero (0) degree deflection, 3/4 inch on center blade spacing [Model 95FH].
		4. Forty-five (45) degree deflection, 3/4 inch on center blade spacing [Model 96FH].
	4. The grille blade orientation shall be (**select one**), as indicated on the outlet schedule.
		1. Front blades parallel to the long dimension.
		2. Front blades parallel to the short dimension.
	5. The grille shall be suitable for surface mounting with 1-1/4 inch flat border.
	6. The grille shall be supplied with a frame that will accept a standard [one inch] or [two inch] filter. Filter media shall be supplied by others.
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**):
5. Aluminum hinge on one side per factory standard.
6. Quarter-turn quick release fasteners on all four sides.

**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.