

SECTION 08334 – OVERHEAD COILING GRILLES

PART 1 - GENERAL

1.1 SUMMARY

- A. This section includes: Electric operated Rolling Grille Door.
 - 1. Cycle life: Design doors of standard construction for normal use of 10,000 cycles standard up to 400,000 cycles.
- B. Related Sections: Related to this section, but not limited to, the following (based on Master Format 2004):
 - 1. Section 05120 – Structural Steel Framing.
 - 2. Section 06100 – Rough Carpentry.
 - 3. Section 08311 – Access Doors and Frames.
 - 4. Section 08710 – Door Hardware.
 - 5. Section 09290 – Gypsum Board Assemblies
 - 6. Division 16 – Electrical.

1.2 REFERENCES

- A. ASTM A 653/A 653M – Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process
- B. ASTM A 36 – Standard Specification for Carbon Structural Steel, Hot Rolled Steel
- C. ASTM A 123 – Standard Specification for Zinc (Hot-Dip Galvanized) Coatings on Iron and Steel Products
- D. ASTM A 641/A 641M – Standard Specification for Zinc-Coated (Galvanized) Carbon Steel Wire
- E. ASTM A 312 – Standard Specification for Seamless, Welded, and Heavily Cold Worked Austenitic Stainless Steel Pipes
- F. ASTM A 240 – Standard Specification for Chromium and Chromium-Nickel Stainless Steel Plate, Sheet, and Strip for Pressure Vessels and for General Applications
- G. ASTM A 276 – Standard Specification for Stainless Steel Bars and Shapes

1.3 SUBMITTALS

- A. Submit under provisions of General Conditions.

- B. Product Data: Provide manufacturer's standard details and catalog data. Provide installation instructions.
- C. Shop Drawings: Furnish shop drawings for architect's approval. Include elevation, sections, and details indicating dimensions, materials, finishes, conditions for anchorage and support of each door.
- D. Submit manufacturer's recommended operation, troubleshooting, and maintenance instructions.

1.4 QUALITY ASSURANCE

- A. Manufacturer: Rolling doors shall be manufactured by a firm with a minimum of five years experience.
- B. Single-Source Responsibility: Manufacturer shall provide doors, tracks, motors, and accessories for each type of door. Secondary components shall come from a source acceptable to the manufacturer of the primary components.

1.5 DELIVERY, STORAGE and HANDLING

- A. Deliver materials in original packaging supplied by manufacturer with intact labels. Store materials away from harmful environmental conditions and construction.

1.6 WARRANTY

- A. Door Warranty: Provide one year written warranty from date of installation against deficiencies due to defects in materials or workmanship. Installer agrees to repair or replace any defects in materials or workmanship.

PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Manufacturer: Alpine Overhead Doors, Inc.; 8 Hulse Road Suite 1S, East Setauket, NY 11733. Telephone 800-257-4634 or 631-473-9300. Fax 631-642-0800.
 - 1. Basis of Design: Model: MALL-DAWN® Rolling Grille Door or approved equal.

2.2 MATERIALS

- A. Curtain:
 - 1. Grille: Furnish Brick pattern 6".
 - a. Horizontal rods: Solid 5/16" galvanized steel rods covered with tubular spacers. Continuous end links are to be designed to prevent the curtain from leaving the side guide rails.

- 1) Vertical spacing: Stainless Steel vertical links, 2" on center.
 - b. Rod Material:
 - 1) ASTM A 641/A 641M Galvanized Carbon Steel Wire
 - a) Finish: Galvanized
 - c. Tubular Spacer Material:
 - 1) ASTM 240 Stainless steel 300 series
 - a) Finish: #4 satin finish
 - d. Vertical Spacing Material:
 - 1) ASTM 240 Stainless steel 300 series
 - a) Finish: #4 satin finish
 - 2. Bottom Bar: (Size dependent on dimensions per manufacturer's standard)
 - a. Double Angle Bottom Bar:
 - 1) ASTM 240 Stainless steel 300 series
 - a) Finish: #4 satin finish
- B. Guides:
 - 1. Wall mounted: Heavy duty extruded aluminum sections with [snap on cover to conceal fasteners], wool pile runners. Provide steel [aluminum] mounting angle as required for face of wall installation. Provide removable bellmouth curtain stops to allow for curtain maintenance without removal of guides. Bellmouth stops shall be flush with guide groove. Guides shall be fastened with 3/8" bolts at 30" o.c.
 - 2. Tube Mounted: Heavy duty extruded aluminum sections with snap-on cover to conceal fasteners, wool pile runners. Provide steel [aluminum] tubes (floor saddles and hardware provided by others).
 - a. Material: (Stainless steel not for tubes)
 - 1) ASTM A 36 Carbon Structural Steel
 - a) ASTM 276 Stainless Steel 300 Series
 - 1. Finish: #4 finish satin
- C. Door Support Brackets and Mounting Plates:
 - 1. Steel plate not less than 1/4" thick. Drive end bracket plate is to be fitted with a sealed ball bearing. Bolt plates to wall mounting angles with minimum 1/2" fasteners. Plate supports counterbalance assembly and forms end closures.
 - a. ASTM 240 Stainless Steel 300 Series
 - 1) Finish: Mill Finish #2B
 - b. Stop Lock bearing: To prevent door from free falling in the event drive operation fails.
- D. Counterbalance Assembly: Torsion
 - 1. Counterbalance assembly: Steel pipe barrel of a size capable of carrying a curtain load with a maximum deflection of 0.03" per foot of door width. Heat-treated helical torsion springs encased in a steel pipe and designed to include an overload factor of 25% to ensure minimum effort to operate. Sealed and prelubricated high speed ball bearing at rotating support points. Torsion spring charge wheel for applying spring torque and for future adjustments.
 - a. Material:
 - 1) A 312 Stainless Steel 300 Series
 - a) Finish: Mill finish

- b. Life Cycle: High Cycle springs designed to satisfy 10m through 400m life cycles. Consult engineering if height exceeds width for any cycle above 20m. (Cycle defined as one time opening and closing of door)
*NOTE: Hood may not be necessary if coil is mounted above ceiling. If so, delete the following section.

E. Hood: Not required for mounting above ceiling.

F. Locking:

- 1. Slide locks: For use with "T" or Double Angle Bottom Bar. Provide padlockable slide locks for latching and locking door on coil side bottom bar at each jamb extending into slots in guides. (Electric Interlocks recommended with motorized doors only).

2.3 OPERATION:

A. Opening/Closing: Motor Operator.

B. Motor Operators:

- 1. For 7 foot wide grille: Industrial-Duty, Alpine® Model Redi-Lift™ driven by heavy-duty V-belt with chain/sprocket secondary reduction. Maximum 1 hp. For use on doors up to 12' x 12'.
- 2. For 18 foot wide grille: Heavy Industrial-Duty, Alpine® Model Redi-Master™ driven by heavy-duty worm gear in oil bath reduction. Standard auxiliary chain hoist. Horsepower as required by manufacturer.
- 3. Sensing Edges (for double angle bottom bar): For motorized doors, sensing edges allow door to go up in case of obstruction. Wireless edge.
 - a. Colors: White
- 4. Emergency Egress for 7 foot grilles: Offers protection from problems that may arise from a power outage during a fire or blackout. This device, which is activated by pulling a lever, will release door motor resistance and lift the door 3 feet from the ground permitting egress. (For use with Redi-Lift®, motors).

2.4 Mounting:

A. Interior face mounted on prepared opening.

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Verify that dimensions are correct and project conditions are in accordance with manufacturer's installation instructions; do not proceed with installation until unacceptable conditions have been corrected.

3.2 INSTALLATION

- A. Install units in accordance with manufacturer's instructions.
- B. Ensure that units are installed plumb and true, free of warp or twist, and within tolerances specified by manufacturer for smooth operation.

3.3 FIELD TESTING

- A. Test doors for regular operation.

3.4 DEMONSTRATION

- A. Instruct the Owner's personnel in correct operation and maintenance of units.

3.5 ADJUST and CLEAN

- A. Clean units in accordance with manufacturer's instructions.
- B. Restore slight blemishes in finishes in accordance with manufacturer's instructions to match original finish. Remove and provide new units where repairs are not acceptable to the Architect.