

SECTION 08330

COILING DOORS AND GRILLES

PART GENERAL

SECTION INCLUDES

Overhead coiling service doors, high stress.
Overhead coiling service doors, weather sealed.
Overhead coiling service doors, sound resistant.
Overhead coiling service doors.
Overhead coiling service doors, economy torsion spring.
Overhead coiling grilles, aluminum and PVC.
Overhead coiling grilles, aluminum.
Overhead coiling fire doors.
Overhead coiling counter fire shutters.
Overhead coiling counter shutters.
Overhead coiling service doors, economy box spring.
Motor operators.
Accessories.

RELATED SECTIONS

Section 05120 - Structural Steel.
Section 08710 - Finish Hardware: Padlocks and lock cylinders.
Section 08310 - Access Doors and Panels.
Section 09900 - Paints and Coatings.
Section 16150 - Wiring Connections: Electrical wiring, conduit, and disconnects.

REFERENCES

ASTM A 653/A 653M - Standard Specification for Steel Sheet, Zinc-Coated (Galvanized) or Zinc-Iron Alloy-Coated (Galvannealed) by the Hot-Dip Process.

NFPA 70 - National Electrical Code.

NFPA 80 - Fire Doors and Windows.

SUBMITTALS

Submit under provisions of Section 01300.

Product Data: Provide manufacturer's standard details and catalog data. Provide installation instructions.

Shop Drawings: Submit for approval the following:
Shop drawings for the fabrication and installation of curtains and frames. Include details of each frame type, elevations, conditions at openings, details of construction, location, installation requirements of finished hardware and reinforcements, and details of joints and connections.
Schedule openings using same reference numbers for details and openings as those on the drawings.

Advise the Architect in writing should any doors be ineligible for standard fire resistance labels due to door size, hardware, vision openings, or other features required by the Contract Documents.

Submit manufacturer's recommended operation, cleaning, and maintenance instructions.

QUALITY ASSURANCE

Fire Rated Assemblies: Tested by one of the following and bearing label indicating conditions of use:
Underwriters Laboratories, Inc.
Factory Mutual.
California State Fire Marshal.
Underwriters Laboratories of Canada.
Warnock-Hersey.

Smoke Doors: Comply with requirements of the following:
ICBO Uniform Building Code.

BOCA National Building Code.
SBCCI Standard Building Code.
Underwriters Laboratories, Inc.
Factory Mutual.
California State Fire Marshal.
Underwriters Laboratories of Canada.
Warnock-Hersey.

DELIVERY, STORAGE, AND HANDLING

Store products indoors and protect from moisture, construction traffic, and damage.

PART PRODUCTS

MANUFACTURERS

Provide products fabricated by Alpine Overhead Doors, Inc.; 309 Nassau, Brooklyn, NY 11222. Telephone 800-257-4634 or 718-384-6100. Fax 718-486-6324.

OVERHEAD COILING SERVICE DOORS, HIGH STRESS

Provide "Redi-Storm" Model High Stress Doors.

Operation: Push-up.

Operation: Hand chain.

Operation: Hand-crank.

Operation: Motor operator.

Mounting: Interior face mounted on prepared opening.

Mounting: Interior mounted between jambs and under lintel in a prepared opening.

Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.

Slat finish: Mill phosphatized.

Slat finish: Baked enamel paint.

Slat shape: Standard flat slat.

Slat shape: Insulated flat slat.

Slat gage: Not less than 21 gage.

Slat gage: Not less than 20 gage.

Slat gage: Not less than 18 gage.

Endlocks: Cast iron, hot dipped galvanized, riveted to the ends of every slat with 4, 1/4-inch rivets.

Bottom bar: Reinforce curtain bottom with 2 galvanized steel angles, ASTM A 653/A 653M, provided with vinyl weatherstripping which extends into

guides.

Hood:

Material: 24 gage galvanized steel.
Material: Type 304 stainless steel, with No.4 polished finish.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Same as for curtain.
Finish: Phosphatized and primed.
Finish: Baked enamel paint.

Locking: Sidelocks on bottom bar, suitable for padlocks on coil side.

OVERHEAD COILING SERVICE DOORS, WEATHER SEALED

Provide "Wind-Tite" Model Full Weather Sealed Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.
Slat material: Stainless steel.
Slat material: Aluminum.
Slat material: Bronze.
Slat material: Brass.
Slat finish: Mill phosphatized.
Slat finish: Baked enamel paint.
Slat finish: _____ for stainless steel.
Slat shape: Standard flat slat.
Slat shape: Option 1 flat slat.
Slat shape: Sound retardant flat slat.
Slat shape: Insulated flat slat.
Slat gage: Not less than 22 gage.
Slat gage: Not less than 20 gage.
Slat gage: Not less than 18 gage.
Endlocks: Cast iron, hot dipped galvanized, riveted to the ends of every slat with 4, 1/4-inch rivets.
Bottom bar: Reinforce curtain bottom with 2

galvanized steel angles, ASTM A 653/A 653M, provided with vinyl weatherstripping which extends into guides.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Same as for curtain.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking:

Sidelocks on bottom bar, suitable for padlocks on coil side.
Pinlocks.
Loc-Tite.

OVERHEAD COILING SERVICE DOORS, SOUND RESISTANT

Provide "Insul-Sound" Model Sound Resistant Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.
Slat material: Aluminum.
Slat finish: Mill phosphatized.
Slat finish: Baked enamel paint.
Slat finish: _____ for aluminum.
Slat shape: Sound retardant flat slat
Slat shape: Sound retardant flat slat with perforations.
Slat gage: Not less than 22 gage.
Slat gage: Not less than 20 gage.
Slat gage: Not less than 18 gage.
Slat gage: _____ inch aluminum.
Endlocks: Cast iron, hot dipped galvanized, riveted to the ends of every slat with 4, 1/4-inch rivets.

Bottom bar: Reinforce curtain bottom with 2 galvanized steel angles, ASTM A 653/A 653M, provided with vinyl weatherstripping which extends into guides.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Same as for curtain.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking:

Sidelocks on bottom bar, suitable for padlocks on coil side.
Pinlocks.
Loc-Tite.

OVERHEAD COILING SERVICE DOORS

Provide "Serv-Dawn" Model Industrial Service Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.
Slat finish: Mill phosphatized.
Slat finish: Baked enamel paint.
Slat shape: Large curve slat.
Slat shape: Curve slat.
Slat shape: Small curve slat.
Slat gage: Not less than 22 gage.
Slat gage: Not less than 20 gage.
Slat gage: Not less than 18 gage.
Slat gage: Not less than 16 gage.
Slat gage: Not less than 14 gage.
Endlocks: Cast iron, hot dipped galvanized, riveted to the ends of every slat with 1/4-inch rivets.

Bottom bar: Reinforce curtain bottom with 2 galvanized steel angles, ASTM A 653/A 653M, provided with vinyl weatherstripping which extends into guides.

Vision lights: Clear acrylic plastic sections over individual slat cutouts, each 6 inches by 1-1/4 inch, in sets of 9 cutouts, three slats high, three cutouts wide.

Hood:

Material: 24 gage galvanized steel.

Shape: Hexagon (standard).

Shape: Round.

Shape: Square.

Finish: Same as for curtain.

Finish: Mill finish.

Finish: Mill phosphatized.

Finish: Baked enamel paint.

Locking:

Sidelocks on bottom bar, suitable for padlocks on coil side.

Pinlocks.

Loc-Tite.

OVERHEAD COILING SERVICE DOORS, ECONOMY TORSION SPRING

Provide "Economy Serv-Dawn" Model Economy Torsion Spring Doors.

Operation: Push-up.

Operation: Hand chain.

Operation: Hand-crank.

Operation: Motor operator.

Mounting: Interior face mounted on prepared opening.

Mounting: Interior mounted between jambs and under lintel in a prepared opening.

Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.

Slat shape: 4 inch clam.

Slat gage: Not less than 22 gage.

Endlocks: Stamped steel, riveted to the ends of alternate slats with 3/16-inch rivets.

Bottom bar: Reinforce curtain bottom with a single galvanized steel angle, ASTM A 653/A 653M, provided with vinyl weatherstripping which extends into

guides.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Same as for curtain.

Locking:

Sidelocks on bottom bar, suitable for padlocks on coil side.
Pinlocks.

OVERHEAD COILING GRILLES, ALUMINUM AND PVC

Provide "Econo Grille" Model Commercial Grille Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Continuous solid 5/16-inch hot dipped galvanized steel rods spaced 2 inches on center, covered with tubular spacers and connected by vertical aluminum links and horizontal PVC sleeves.
Brick pattern.
Straight link pattern.
Tube and link finish: Bronze.
Tube and link finish: Black.
Tube and link finish: Silver.
Tube and link finish: Gold.
Endlinks: Designed to retain curtain in side guides.
Bottom bar: Reinforce curtain bottom with a single angle.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Mill finish.

Locking:

Hasp and pins, suitable for padlocks on coil side.
Pinlocks.
Loc-Tite.

OVERHEAD COILING GRILLES, ALUMINIUM

Provide "Mall-Dawn" Model Rolling Grille Doors.

Operation: Push-up.
Operation: Lift handles on bottom bar.
Operation: Removable awning type crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Continuous solid 5/16-inch hot dipped galvanized steel rods spaced 2 inches on center, covered with tubular spacers and connected by vertical aluminum links and horizontal aluminum sleeves.
Brick pattern.
Straight lattice pattern.
Tube and link finish: Clear anodized finish
Tube and link finish: _____ stainless steel finishes.
Endlinks: Designed to retain curtain in side guides.
Bottom bar: Reinforce curtain bottom with an extruded aluminum T.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon.
Shape: Round.
Shape: Square.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking:

Sidelocks on bottom bar, prepared for padlocks on coil side.
Loc-Tite.
Mortise cylinder, in tubular bottom bar.

OVERHEAD COILING FIRE DOORS

Provide "Fire-Tite" Model Fire Rated Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.
Slat material: Stainless steel.
Slat finish: Mill finish.
Slat finish: _____ for stainless steel.
Slat shape: 4 inch clam curve.
Slat shape: 3 inch clam curve
Slat shape: 3 inch flat slat.
Bottom bar: Reinforce curtain bottom with 2 steel angles matching curtain material.

Hood:

Material: 24 gage galvanized steel.
Shape: Hexagon (standard).
Shape: Round.
Shape: Square.
Finish: Same as for curtain.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking: Slide bolts for latching.

OVERHEAD COILING COUNTER FIRE SHUTTERS

Provide "Fire-Shut" Model Counter-Shutter Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M.

Slat material: Stainless steel.
Slat material: Prime painted steel sheet.
Slat finish: Mill finish.
Slat finish: _____ for stainless steel.
Slat finish: Baked enamel paint.
Slat shape: 2 inch baby curve.
Slat shape: 1-1/4 inch baby flat.

Hood:

Material: 24 gage galvanized steel.
Material: Stainless steel.
Shape: Square.
Finish: Same as for curtain.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking:

Slide bolts, prepared for padlocks on coil side.
Cabinet type cylinder lock.
Cylinder lock operable from coil side.
Cylinder lock operable from both sides.

OVERHEAD COILING COUNTER SHUTTERS

Provide "Counter-Shutter" Model Rolling Counter Doors.

Operation: Push-up.
Operation: Hand chain.
Operation: Hand-crank.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Extruded aluminum, 0.050-inch thick.
Slat material: Galvanized steel, G90/2275 coating, Structural Quality grade C, ASTM A 653/A 653M, 22 gage.
Slat material: Stainless steel, 22 gage.
Slat finish: Clear anodized finish.
Slat finish: Mill phosphatized with baked on prime coat.
Slat finish: No.4 satin brushed.
Slat shape: 1-1/4 inch baby flat.
Slat shape: 2 inch clam.
Slat shape: 1-1/4 inch baby flat perforated.

Bottom bar: Match curtain material and finish,
provide vinyl astragal.

Hood:

Material: 24 gage galvanized steel.
Material: Stainless steel.
Shape: Square.
Finish: Same as for curtain.
Finish: Mill finish.
Finish: Mill phosphatized.
Finish: Baked enamel paint.

Locking:

Slide bolts, prepared for padlocks on coil side.
Cabinet type cylinder lock.
Cylinder lock operable from coil side.
Cylinder lock operable from both sides.

OVERHEAD COILING SERVICE DOORS, ECONOMY BOX SPRING

Provide "Dawn 4 Door" Model Economy Box Spring Doors.

Operation: Push-up.
Operation: Motor operator.
Mounting: Interior face mounted on prepared opening.
Mounting: Interior mounted between jambs and under
lintel in a prepared opening.
Mounting: Exterior face mounted on prepared opening.

Curtain:

Slat material: Galvanized steel, G90/2275 coating,
Structural Quality grade C, ASTM A 653/A 653M, 22
gage.
Slat material: Galvanized steel, G60 coating,
Structural Quality grade C, ASTM A 653/A 653M, 22
gage.
Slat shape: 4 inch curve slat.
Slat shape: 3 inch curve slat.
Slat shape: 4 inch curve slat perforated.
Slat shape: Flat slat perforated.

Hood:

Material: 24 gage galvanized steel.
Material: 24 gage steel sheet.
Shape: Hexagon (standard).
Shape: Square.
Finish: Mill finish.
Finish: Prime painted.

Locking:

Hasp and pins, prepared for padlocks on coil side.
Pinlocks.
Loc-Tite.

COMPONENTS

Overhead Coiling Door/Counter Shutter/Grille

Counterbalances:

Counterbalance: Housed in a steel pipe of diameter and wall thickness to restrict maximum deflection to 0.03 inch per foot of door width.

Springs: Helical torsion springs designed to include an overload factor of 25 percent and for optimum ease of operation; grease packed and mounted on a cold rolled steel inner shaft.

Spring tension: Adjustable from outside of end bracket plate, except on integral frame construction.

Ball bearings: Sealed to minimize wear of pipe shaft rotation around inner shaft.

Motorized Doors: High cycle springs to satisfy up to 500,000 cycles.

Box spring: Flat blue steel spring wrapped around a 2 inch pipe shaft and mounted into a spring box.

Overhead Coiling Door/Counter Shutter/Grille Bracket

Plates:

Bracket plates carrying pipe counterbalancing shaft: Steel plate not less than 3/16 inch thickness; house ends of door coil.

Drive end bracket plate: Fitted with a sealed ball bearing.

Overhead Coiling Door Guide and Wall Angle Assemblies, unless otherwise indicated:

Structural steel angles; 3/16 inch minimum thickness.

Depth to provide adequate slat penetration to satisfy specified windloading or fire rating, as applicable.

Stop Lock Bearings: Prevent door/grille from falling completely to floor in event of damage to spring counterbalance or pipe shaft.

Pass Door: 3-foot by 7-foot hollow metal pedestrian door within rolling door. Hollow metal door frame hinged to rolling door guide so that frame and metal door will swing clear of opening. Provide heavy duty hinges and

lock set with cylinder lock outside and night latch inside.

Overhead Coiling Door/Grille Hoods:

Laterally reinforced to prevent sag.

Intermediate hood supports: Furnish where door width exceeds 16 feet.

Internal baffle: Furnish PVC baffle to prevent outside air from entering the building through the hood.

Heated hood baffle: Furnish a heated hood baffle to prevent ice build-up.

MOTOR OPERATED UNIT COMPONENTS

Motor Operators: Model _____.

Sensor Edge:

Cable edge.

Electric edge: Foam rubber astragal with vinyl-coated nylon cover, continuous foil tape electrical contacts.

Pneumatic edge: Neoprene astragal with air hose.

Treadle edge.

Photoelectric sensors.

Panic Release Device: Allow emergency egress for motor operated units; comply with ADA requirements.

PART EXECUTION

EXAMINATION

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.

INSTALLATION

Install units in accordance with manufacturer's instructions.

Ensure that units are installed plumb and true, free of warp or twist, and within tolerances specified by manufacturer for smooth operation.

Install electrical components in accordance with NFPA 70.

RATED DOORS

Install doors in accordance with requirements of tested assembly.

Drop test doors after installation. Notify the Architect prior to testing.

Fire Rated Doors/Shutters: Install in accordance with NFPA 80.

DEMONSTRATION

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

ADJUST AND CLEAN

Clean units in accordance with manufacturer's instructions.

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.

END OF SECTION