SECTION 08 33 00
VisionAire®
ROLLING GRILLES – OPEN DESIGN

PART 1 GENERAL

1.1 SUMMARY

A. **Section Includes:** electric operated overhead rolling grilles.
B. **Related Sections:**
1. 05 50 00 Metal Fabrications. Door opening jamb and head members.
2. 06 10 00 Rough Carpentry. Door opening jamb and head members.
3. 08 31 00 Access Doors and Panels. Access doors.
4. 08 70 00 Hardware. Masterkeyed cylinders.
5. Division 26. Electrical wiring and conduit, fuses, disconnect switches, connection of operator to power supply, and installation of control station and wiring.

1.2 SYSTEM DESCRIPTION

A. **Design Requirements:**
1. **Cycle Life:**
a. Design grilles of standard construction for normal use of up to 5 cycles per day maximum, and an overall maximum of 50,000 operating cycles for the life of the grille.

1.3 SUBMITTALS

A. **Reference Section 01 33 00 Submittal Procedures; submit the following items:**
1. **Product Data.**
2. **Shop Drawings:** Include special conditions not detailed in Product Data. Show interface with adjacent work.
3. **Quality Assurance/Control Submittals:**
a. Provide proof of manufacturer ISO 9001:2015 registration.
b. Provide proof of manufacturer and installer qualifications - see 1.3 below.
c. Provide manufacturer's installation instructions.
d. Provide manufacturer’s Health Product Declaration (HPD) for each product
4. **Closeout Submittals:**
a. Operation and Maintenance Manual.
b. Certificate stating that installed materials comply with this specification.

1.4 QUALITY ASSURANCE

A. **Qualifications:**
1. **Manufacturer Qualifications:** ISO 9001:2015 registered and a minimum of five years experience in producing grilles of the type specified.
2. **Installer Qualifications:** Manufacturer's approval.

1.5 DELIVERY STORAGE AND HANDLING

A. Reference Section 01 66 00 Product Storage and Handling Requirements.
B. Follow manufacturer's instructions.

1.6 WARRANTY

A. **Standard Warranty:** Two years from date of shipment against defects in material and workmanship.
B. **Maintenance:** Submit for owner's consideration and acceptance of a maintenance service agreement for installed products.

PART 2 PRODUCTS

2.1 MANUFACTURER

A. **Manufacturer:**
1. **Cornell** - 24 Elmwood Ave. Mountain Top, PA 18707. Telephone: (800) 233-8366. Underwriters Laboratories, Inc. (UL), ISO 9001:2008 Registered.
2. **Cookson**
3. **Clopay**

B. **Model:** ESG12

2.2 MATERIALS

A. **Curtain:**
1. **ESG12 Brick Pattern**
a. **Horizontal Rods:** Solid 5/16 inch (8 mm) diameter, 5056 H32 aluminum alloy sleeved with horizontal aluminum tube spacers to separate vertical links.
1. Vertical Spacing 2 inches (50.8 mm)
b. **Vertical Links:** Heavy duty aluminum links, ¾ inch (19mm) wide, positioned by tube spacers on 9 inch (228.6 mm) staggered centers. End links to be held in place by self-locking retaining rings.

2. **Bottom Bar:** 2 x 3-1/2 inch (50.8 x 88.9 mm) extruded aluminum tubular section.

3. **Finish:**
a. Zirconium treatment followed by baked-on polyester powder coat, with [color as selected by Architect from manufacturer's standard color range, over 180 colors] [custom color as selected by Architect]; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better

B. **Guides, Tube Mounted:** Heavy duty extruded aluminum sections with polypropylene pile runners on both sides of curtain. Provide steel tubes, floor saddles and hardware as recommended by manufacturer to support grille.
1. **Finish, Aluminum Guide Components:**
a. Clear anodized.

2. **Finish, Steel** Tubes:
a. Unpainted.

C. **Counterbalance Shaft Assembly:**
1. **Barrel:** Steel pipe capable of supporting curtain load with maximum deflection of 0.03 inches per foot (2.5 mm per meter) of width.
2. **Spring Balance:** Oil-tempered, heat-treated steel helical torsion spring assembly designed for proper balance of grille to ensure that maximum effort to operate will not exceed 25 lbs (110 N). Provide wheel for applying and adjusting spring torque.

D. **Brackets:** Fabricate from minimum 3/16 inch (4.76 mm) steel plate with permanently lubricated ball or roller bearings at rotating support points to support counterbalance shaft assembly and form end closures.

1. **Finish:**

a. **SpectraShield® Coating System (Color Selected by Architect):** Zirconium treatment followed by baked-on polyester powder coat, [color as selected by Architect from manufacturer's standard color range, over 180 colors] [custom color as selected by Architect]; minimum 2.5 mils (0.065 mm) cured film thickness; ASTM D-3363 pencil hardness: H or better

E. **Hood and Fascia:**

1. **No hood provided** when coil is above ceiling

2.3 OPERATION

A. **Supply Model EverGard Electric Motor Operator with back-up power control box**, Limited Duty (up to 10 cycles per hour), cULus listed, TENV gear head operator, 24DVC. Horsepower as recommended by manufacturer. Provide complete with electric motor and factory pre-wired motor control terminals, maintenance free solenoid actuated brake, emergency manual chain hoist and control station(s). Motor shall be high starting torque, industrial type, with overload protection. Primary speed reduction shall be heavy-duty gears running in maintenance free, sealed gear box with mechanical braking to hold the door in any position. The emergency manual chain hoist assembly is automatically disengaged when motor is energized. A disconnect chain shall not be required to engage or release the manual chain hoist. Operator drive and door driven sprockets shall be provided with minimum #50 roller chain. Operator shall be capable of driving the door at a speed of up to 9” per second or as recommended for door size. Fully adjustable, driven linear screw type cam limit switch mechanism shall synchronize the operator with the door. The motor shall be removable without affecting the limit switch settings. The electrical contractor shall mount the control stations and supply the appropriate disconnect switch, all conduit and wiring per the overhead door wiring instructions.

1. **Supply model EverGard with programmable logic board and back-up power supply**. 120v AC input power with auto switch to 24v DC back-up power. Back-up power to provide minimum 10 open/close cycles and 48 hr stand-by.
   a. (2) 12v rechargeable lead sealed batteries.
   b. Programmable battery load testing
   c. Monitoring points for open/close position, AC power loss and battery low voltage
   d. 12’-0” (standard) wiring whip to connect control box and motor (up to 120’-0” available)
   e. Emergency Push Button (EPB): Flush mounted, single red push button station wired for emergency OPEN function only. If grille is at full open (normal business hours), depressing EPB will not affect the grille’s position.
   f. Door power indicator: Flush mounted voltage monitor for battery back-up system. Flashing red light indicates low battery power and maintenance check-up. Can be located up to 150 ft. away from motor control box.
   g. Non-resettable cycle counter
   h. UL325 & UL864 compliant system.

B. **Control Station:**

1. **Flush mounted:** "Open/Close" key switch with small format Best type 7-pin cylinder; NEMA 1B.

C. **Entrapment Protection:** Provide the following primary entrapment protection device to enable momentary contact close operation.

1. **Smartsync Wireless Edge Kit –** continuously monitored, wireless sensing/weather edge seal extending full width of door bottom bar. Contact before door fully closes shall cause door to immediately stop downward travel and reverse direction to the fully opened position. Wireless edge kit will use Zigbee wireless technology. Radio band wireless sensing edges will not be permitted.

PART 3 EXECUTION

3.1 EXAMINATION

A. Examine substrates upon which work will be installed and verify conditions are in accordance with approved shop drawings.
B. Coordinate with responsible entity to perform corrective work on unsatisfactory substrates.
C. Commencement of work by installer is acceptance of substrate.

3.2 INSTALLATION

A. General: Install grille and operating equipment with necessary hardware, anchors, inserts, hangers and supports.
B. Follow manufacturer's installation instructions.

3.3 ADJUSTING

A. Following completion of installation, including related work by others, lubricate, test, and adjust grilles for ease of operation, free from warp, twist, or distortion.

3.4 CLEANING

A. Clean surfaces soiled by work as recommended by manufacturer.
B. Remove surplus materials and debris from the site.

3.5 DEMONSTRATION

A. Demonstrate proper operation to Owner's Representative.
B. Instruct Owner's Representative in maintenance procedures.

END OF SECTION