

PART 1 GENERAL**1.01 SUMMARY**

- A. Model HG Grilles shall be manufactured by Lawrence Roll-Up Doors, Inc.

1.02 SYSTEM DESCRIPTION

- A. Grilles to 30'-0" wide, 16'-0" high shall be designed for 50,000 cycles usage (20,000 cycles minimum on larger sizes).
B. Grilles shall be suitable for use in parking structures or other typically larger size openings and higher usage applications.

1.03 WARRANTY

- A. Grilles shall be warranted against defects in workmanship and materials for two years from date of shipment, provided designed cycle life is not exceeded. Factory finishes are excluded from warranty.

PART 2 PRODUCTS**2.01 MATERIALS**

- A. **Curtain** shall be a straight link SL9 pattern, assembled from horizontal 5/16" diameter aluminum rods on 2" vertical centers, passing through flexibly connected 3/4" wide vertical aluminum 3-hole links on 9" horizontal centers. Vertical links shall be alternating 1/8" thick single links and 1/16" thick double links assembled with grommets to form vertical chains. Curtain alignment shall be maintained by aluminum spacer tubes placed between end links on alternating rods and between all links on every 6th rod. Ends of rods with spacer tubes shall be drilled and fitted with cotter pins. Ends of other rods shall be fitted with retaining rings.
- B. **Bottom bar** shall be a rectangular aluminum extrusion, 4 5/8" high x 1 3/4" wide, attached to bottom of curtain to limit vertical and lateral deflection. Bottom bar shall be self-leveling to accommodate slopes up to 1/2". A bottom cover plate 2" wide shall be provided.
- C. **Guides** shall be extruded aluminum channels, formed with return flanges to retain curtain, and fitted with HDPE wear strips. Channels shall incorporate an integral system to allow for field adjustment of curtain stops and lock bar heights. Channels shall be bolted to 3/16" minimum structural steel wall angles. Guides shall be assembled with 1/4" minimum bolts no more than 24" on center and attached to wall with 3/8" minimum bolts no more than 24" on center. Removable curtain stops shall be provided.
- D. **Barrel** shall be 6 5/8" minimum diameter steel pipe, sized to contain counterbalance assembly and support curtain with a maximum deflection of 0.03" per ft. of width. Counterbalance assembly shall consist of torsion spring(s) and fittings mounted to a continuous cold finished steel shaft. Precision ground grease packed sealed bearings shall be used to support each end of counterbalance assembly. Spring tension shall be adjustable by adjusting wheel outside bracket.
- E. **Brackets** shall be 3/16" minimum steel plates bolted to wall angles [tube supports]. Plates shall be sized to support curtain and barrel and provided with 1/8" flanges for hood attachment (when provided). Bracket on operator side shall be fitted with a precision ground grease packed sealed bearing.
- F. **Hood** shall be formed from 24 gauge minimum galvanized steel sheet with top and bottom reinforcements to reduce deflection [option on all grilles]. Intermediate support(s) shall be provided when necessary.
- G. **Operation** of grilles shall be as follows:
PUSH-UP operated on grilles to 12'-0" wide, 10'-0" high.
CHAIN HOIST operated with cast iron reduction gears on larger grilles [option on push-up operated grilles].
AWNING CRANK operated with removable handle on grilles to 20'-0" wide, 10'-0" high [option on all grilles].
MOTOR operated with UL Listed inline gear drive assembly, mounted horizontally in front of and parallel to grille coil, and not requiring additional clearance above top of coil [option on all grilles].
NOTE: Wall-mounted egress handle to activate partial opening of a motor operated grille for emergency exit can be provided and may be required by local building codes.
- H. **Locking** shall be by a double throw-bolt enclosed in bottom bar that engages steel lock bars into bottom of each guide. Locking shall be activated by a single lever and secured by a guarded mortise thumb turn or cylinder coil side or opposite coil side. [option on all grilles]
NOTE: Motor operators provide self-locking gear reduction – if cylinder locks are required on motor operated grilles, a motor operator with internal lock sensor, or guide mounted electrical interlocks, are required to prevent opening grille with locks engaged.

2.02 FINISHES

- A. Aluminum curtain [hood] shall be mill finish [clear anodized] [bronze anodized] [color anodized]. Aluminum bottom bar and guides shall be clear [bronze] [color] anodized. Steel brackets and wall angles shall be shop painted with a black [silver] color rust-inhibiting primer. [Galvanized steel hood shall be bare [pre-finished with baked-on primer and polyester top coat (off-white, tan or grey color)].

PART 3 EXECUTION**3.01 INSTALLATION**

- A. Grilles shall be installed in accordance with Lawrence Roll-Up Doors, Inc. installation instructions.

Usage	Designs for 100,000 cycles usage (or 50,000 cycles where 20,000 is standard)
Mounting	Between-jamb mounting (includes filler angles) Under lintel mounting Guides and brackets attached directly to steel tube supports (in lieu of wall angles) <i>NOTE: Tube supports are not to be considered structural building components</i>
Curtain	Straight heavy link HL9 pattern (2-hole, 3/16" thick x 3/4" wide link, with rods on 1 1/2" vertical centers) Straight compact link CL9 pattern (2-hole link, requires less head clearance) Straight link SL4 pattern with vertical links on 4 1/2" horizontal centers Straight link patterns with other vertical link spacings Brick BL9 pattern with offset vertical links on 4 1/2" horizontal centers Stainless steel grille curtain (available in CL9 pattern) Fixed frame with grille curtain panel insert
Bottom Bar	4" wide bottom cover plate Sensing edge to reverse closing of a motor operated grille upon contact with an obstruction Sloping or irregular shaped bottom bar for non-level sill (24" maximum slope)
Barrel	Internal tension wheel (inside the bracket) on aluminum grilles to 14' wide, 10' high, 120 sq. ft.
Hood & Covers	Bare or painted 24 gauge galvanized steel hood (<i>hood is not standard</i>) Fascia to close area behind brackets when no wall is present End caps to enclose operating or tension brackets (recommended on grilles mounted to the exterior of a building or when operating device is less than 8 feet above the floor) Motor cover (recommended on motor operators less than 8 feet above the floor or on the exterior of a building) Aluminum or stainless steel hood, fascia, end caps and motor cover
Operation	Emergency egress release to activate partial opening of a motor operated grille for emergency exit (grille must be unlocked) Through-wall operations (operable from opposite side of wall to which grille is mounted)
Locking	Mortise cylinder or thumb turn activated double throw bolt Master keying or special brand cylinders
Finishes	Clear, bronze, black, or other color anodized aluminum curtain, bottom bar, guides and hood Powder coated bottom bar, guides and hood 2B finish on stainless steel curtain (as-rolled finish on rods), brushed finish stainless steel hood