C.H.I. Overhead Doors manufactures rolling steel doors and shutters to exceptional standards of quality. Our promise is to deliver an affordable, owner-friendly product that is reliable, architecturally pleasing and simple to maintain. C.H.I. rolling steel products are engineered to provide many years of durability and trouble-free operation. Therefore, we proudly offer the longest and most comprehensive warranties in the business.

SERIES 6000 SERVICE DOORS
The Series 6000 rolling service doors are engineered and designed for maximum strength and durability. Manufactured to stringent code standards, the Series 6000 line is an industrial product built without shortcuts to provide a high degree of confidence for the specifier and end user. A wide variety of slat profiles and color options are available.

MODEL 6241 MEDIUM DUTY SERVICE DOORS
Conceived and designed as a moderately priced dock and material handling solution, the Model 6241 Service Door features full-sized 24-gauge slats and incorporates structural steel guides, full-sized headplates, structural hood, self-aligning drive bearings and Quick-Release guides. The commercial design features of the Model 6241 accrue into a true feature-packed, value-added package.

SERIES 7000 FIRE DOORS
The Guardian™ Fire Door is engineered to meet ever-increasing demands of property owners and insurance underwriters in a simple to test and reset fire protection product. Utilizing standard chain hoist operation, the Guardian Fire Door features a reliable, safe, trouble-free procedure for frequent drop testing with a U.L. label rated from 1/2-hour to 4-hour protection. Manual push-up operation, Fail-Safe and automatic reset motor operation models are optional to the Guardian standard.

SERIES 9100/9200 SIDE-FOLDING GRILLES
Offering the most resourceful way to secure an opening for most any application the 9100 Series Side Folding Grilles and Closures are designed in a variety of configurations to complement surrounding architecture and allow for greater flexibility.

SERIES 9200 SIDE FOLDING EASY CLOSURE
Pre-installed in its own storage pocket including pocket door the 9200 Series offers a simple solution for storefronts and other applications. Installs quickly and can easily be adjusted on-site to fit your opening.

SERIES 9300 LIFT READY ROLLING GRILLE
The Series 9300 Lift ready is a revolutionary new design that reduces installation time and effort without compromising security. Equipped with an exclusive Smart-Lock System which allows end-users to engage the lock at a convenient height and then close the grille to the floor.
PART 1 - GENERAL

1.01 WORK INCLUDED: Rolling service doors to be C.H.I. Service Series 6000, flat or curved slat.

1.02 SELECTED OPTIONS:
   a. Section 04300 Concrete Block
   b. Section 05000 Metal Frameworks
   c. Section 06100 Wall Constructions
   d. Section 08000 Access Doors
   e. Section 08900 Painting
   f. Section 10000 Electrical

1.03 SUBMITTALS:
   a. Furnish all submittals according to guidelines of Section 01300 Submittal Procedures.
   b. Shop Drawings: Furnish shop drawings for architectural approval including elevations and details showing dimensions, finishes, profiles and curvature for each door.
   c. Product Literature: Include manufacturer’s brochures and literature describing product to be used.
   d. Provide manufacturer’s application instructions.

1.04 DELIVERY, STORAGE AND HANDLING:
   a. Refer to Section 01500 Material Storage and Handling Requirements.
   b. Deliver and store all materials in manufacturer provided packaging and protect from damage in a safe and dry location.

1.05 WARNINGS:
   a. Provide doors designed to withstand 25 pounds per square foot of windload.
   b. Limit slat deflection so as to prevent curtain from becoming misaligned or jammed.

1.06 WARRANTY: Provide manufacturer’s standard five-year warranty from date of point shipment against defects in materials and workmanship.

PART 3 - PRODUCTS

2.01 GENERAL: Forms and components described in the following paragraphs reflect current products manufactured by C.H.I. Overhead Doors, Inc., 707 E. Rike St., Arthur, Illinois, 61911, and may be changed without notice by the manufacturer without penalty or liability.

2.02 CURTAIN: Interlocking curtain slats formed from 32, 32-1/2 or 18-gauge stainless steel insulated slat. Provided call our AIA hotline at: (800)800-0209.

2.03 CURTAIN: Interlocking curtain slats formed from 32-1/2 or 18-gauge stainless steel insulated slat. Interlocking curtain slats contain expoylated phenolic insulations (R=4.7) or polyurethane (R=6.7), and 23-gauge steel backer. Lateral slat movement and curtain wear controlled by galvanized, malleable cast iron endlocks fastened to every other slat. Window wells as dictated by door size and weight. Flat Slats: 2-1/2’ thick high 6’ by 13’ door. Current Slats: 3-7/8’ high by 1-1/2’ inches thick. Insulated Slats: 2-1/2’ thick high 7’ by 13’ thick deep.

2.04 GUIDES: Furnished from three different 36 inch (914 mm) steel angles, bolted together to form guide channel.

2.05 HEADPLATES: For receiving the curtain, hood, and bottom bars to be furnished from minimum 1/2 inch thick plates. A set of headplates to be provided with precision, greaseable, sealed ball bearings in cast iron bearings.

2.06 BARREL: barrel fabricated from minimum 1/2 inch 0.3125 steel pipe. Deflection under full load not to exceed 0.03 inches per foot of span. Barrel provided with threaded rings or lugs welded to the barrel assembly for curtain attachment.

2.07 SPRINGS: Springs, tensioned assembly supported within barrel by precision ball bearings. Curtain weight counterbalanced by springless, vertically wound torsion springs, power packed and wound to steel tension shaft and suit springing plies. Torsion assembly designed for 200,000 cycle life standard. (Higher cycles optional.)

2.08 HOOKS: Hook fabricated from minimum 24 gauge steel sheet, shaped to fit within hook holes. Intermediate head support furnished as required.

2.09 LOCKING: Manual push-up doors furnished with interior plated steel tube bolt locks with pin lock provisions. Chain hoist operated doors furnished with chain hoist suitable for pushing.

2.10 OPERATION: Manual push up, chain hoist, (standard), or motor operation.

2.11 FINISHES: Certain slats and hood hot-dipped galvanized, per ASTM A66, A-6, with baked epoxy primer and polyester finish coat in solid gray, gray and white or tan and white. Guides and hood fabrication shop painted black. Bottom bars to be shop painted or galvanized. Non-dipped galvanized parts and bottom bars optional. Powder-coating is optional.

PART 2 - EXECUTION

3.01 EXAMINATION:
   a. Examine site and notify architect of non-conformance or conditions.
   b. Arrange procedures and corrections necessary to accommodate installation.

3.02 INSTALLATION: C.H.I. rolling service doors shall be installed and adjusted according to C.H.I. assembly instructions by trained door systems technicians.

3.1 CLEANING AND PRESENTATION:
   a. Clean all finished surfaces after installation for a factory original appearance.
   b. Replace any damaged components before final inspection.
   c. Remove all packaging and debris from installation area at the completion of installation.
   d. Present operation and maintenance instructions to owner after characterizing proper care and operation of doors.

CROSS SECTION OF A POLYURETHANE INSULATED SLAT

Note: For downloadable specifications, please visit our website at www.chiod.com or call our AIA hotline at: (800)800-0209.

PART 2 - EXECUTION

3.01 EXAMINATION:
   a. Examine site and notify architect of non-conformance or conditions.
   b. Arrange procedures and corrections necessary to accommodate installation.

3.02 INSTALLATION: C.H.I. rolling service doors shall be installed and adjusted according to C.H.I. assembly instructions by trained door systems technicians.

3.1 CLEANING AND PRESENTATION:
   a. Clean all finished surfaces after installation for a factory original appearance.
   b. Replace any damaged components before final inspection.
   c. Remove all packaging and debris from installation area at the completion of installation.
   d. Present operation and maintenance instructions to owner after characterizing proper care and operation of doors.

3.10 Operation is available with a full array of safety and activation options.
Loading dock and material handling locations demand a street-tough rolling service door that represents an exceptional value at a moderate price. The Model 6241 utilizes an aggressive, yet innovative design approach to deliver sensible, high-performance features that meet these demands.

FEATURES:

- Standard sized commercial 2-1/2” interlocking flat slats in 24-gauge steel are hot-dipped galvanized, pre-painted in gray and white, and maintain high security with lighter weight and reduced cost.
- Cast iron, malleable endlocks exceed industry expectations for performance and wear in a light industrial door.
- Structural steel three-angle guides utilize integral ball mouths, curtain stops for higher security, maximum durability and no-hassle, simplified repair requirements.
- Repairs are quickly and inexpensively expedited with common, readily available components.
- Full-sized headplates provide a solid platform for chain hoist or motor operation.
- Half-hexagonal formed heads, pre-finished in white, deliver superior structural rigidity and high aesthetic appeal.
- Heavy-duty, 3.5:1 chain hoists install quickly and provide a fine balance between operator effort and cycling speed.
- Security is enhanced with plated slide locks for manual operation, or a chain keeper suitable for padlocking for chain hoist operation.
- Value is enhanced by building real time performance expectations into time and materials.

SPECIFICATIONS

S 1.01 WORK INCLUDED: Rolling service doors to be C.H.I. Model 6241, flat slat.
1.02 RELATED SECTIONS:
   a. Section 04200 Concrete Block
   b. Section 05500 Metal Fabrications
   c. Section 06100 Wall Construction
   d. Section 08300 Access Doors
   e. Section 09900 Painting
   f. Section 10000 Electrical

1.03 SUBMITTALS:
   a. Furnish all submittals according to guidelines of Division 1.
   b. Shop Drawings: Furnish shop drawings for architectural approval including elevations and details showing dimensions, finishes, profiles and surfaces, etc. for each door.
   c. Product Literature: Submit manufacturer’s brochures and literature describing product to be used.
   d. Provide manufacturer’s installation instructions.
   e. DEVELOPMENT, STORAGE AND HANDLING:
      a. Refer to Division 1 Material Storage and Handling Requirements.
      b. Deliver and store all materials in manufacturer provided packaging and protect from damage in a safe and dry location.
   f. 1.05 WINDLOAD:
      a. Provide doors designed to withstand minimum 25 pounds per square foot of windload.
   f. 1.06 WARRANTY:
      a. Provide manufacturer’s standard one-year warranty from date of plant shipment against defects in materials and workmanship.

HEADERS & DIMENSIONS (INCHES)

DETAILS: CLEARANCES & DIMENSIONS 1. Steel 2. Wood or Masonry

AREA CHART* Model 6241 Service Doors

Consult factory if headroom is critical or for sizes not listed.

When using Area Charts, if size falls on a zone divider line, go up or right to the next zone.
SERIES 7000
Guardian™ Fire Doors

A MODERN PERSPECTIVE
Guardian™ Fire Doors promote achievable standards for drop test compliance by making the job safe, understandable and simple for everyone. Simple test fire doors are our standard for chain hoist and motor operated doors.

A Solid Investment: Selected most often for practical drop test compliance and making the job safe, understandable and simple for everyone. Simple test fire doors are our standard for chain hoist and motor operated doors.

An Exceptional Choice: The National Fire Protection Association and other model codes recognize frequent drop testing of fire doors to assure a continuous state of operational readiness. C.H.I. strongly promotes these recommendations with the Guardian™ advanced design features:

FEATURES:
- Safe, simple, inexpensive and repeatable drop testing is now made possible in any facility with a flip of a handle
- No ladders, tools or equipment are required to drop test and reset Guardian™ Simple Test Fire Doors
- Drop speed is controlled by a quiet governor between 6” to 24” per second
- Gear reduced chain hoist operation is standard, efficient and economical
- No ladders, tools or equipment are required to drop test and reset Guardian™ Simple Test Fire Doors
- Safe, simple, inexpensive and repeatable drop testing is now made possible in any facility with a flip of a handle

PART 1 - GENERAL

1.01 WORK INCLUDED: Rolling steel fire doors to be C.H.I. Guardian™ Series 7000, and comply with Underwriters Laboratory requirements for 4, 2, 1-1/2, and 3/4-hour exterior or interior locations.

1.02 RELATED SECTIONS:
- Section 4530 Exterior Black
- Section 0500 Metal Fabrications
- Section 0510 Wall Construction
- Section 0600 Access Doors
- Section 0900 Painting
- Section 1600 Electrical

1.03 SUBMITTALS:
- Provide all submittals according to guidelines of Division 1 Submittal Procedures.

1.04 DELIVERY, STORAGE AND HANDLING:
- Refer to Division 1 Material Storage and Handling Requirements.
- Deliver and store all materials in manufacturer provided systems are optional.

1.05 MINIMUMS:
- Curtains designed to withstand minimum 20 pounds per square foot of windload.
- Provide high quality fasteners.
- Limit slat deflection to an amount that prevents curtain from handling or being blown out of guides.

1.06 WARRANTY:
- Guardian™ products are guaranteed for a period of one year from the date of plant shipment against defects in materials and workmanship.

2.01 CURTAIN:
- 165 degree fusible links are provided as standard detection/release devices.

2.02 SPRINGS:
- Chain hoist operated doors provided with chain spring assembly supported within barrel by precision, greaseable, sealed ball bearings in cast iron housing.

2.03 HEADPLATES:
- Heads for mounting the curtain, hood, and barrel assembly are fabricated from minimum 1/4-inch steel plate. Holes are provided with precision, preassembled, sealed ball bearings in cast iron housing.

2.04 GUIDES:
- Guides fabricated from three minimum 3/16-inch structural steel angles, bolted together to form guide channel and wall mount assembly.

2.05 DROP TESTING:
- Drop speed to be between 6” and 24” per second per NFPA-80. Closing speed regulated by centrifugal or viscous governor.

2.06 BARREL:
- Barrel constructed from minimum 4-1/2 inch 0.75 steel pipe. Collection order: Full test load to exceed 0.003 inches per foot of span. Barrel designed with threaded cap or lugs welded to barrel assembly for constant attachment.

2.07 SPRINGS:
- Springs, fitted assembly supported within barrel by precision bearings. Curtain, hood and barrel assembly are designed for 20,000 complete cycles standard (Higher cycles optional).

2.08 HOOD:
- Hood has been formed of minimum 3/4-gauge steel sheet, shaped to fit within headplates. Intermediate head support(s) as required.

2.09 LOCKING:
- Chain head operated doors provided with chain spring assembly for protection. Plate lock is optional.

2.10 OPERATION:
- Standard chain hoist operation, standard. Motor operation or manual push-up operation is optional. Manual push-up operation does not include simple test feature.

2.11 AUTOMATIC CLOSING:
- 165-degree fusible links provided as standard. Closing speed regulated by centrifugal or viscous governor. Drop speed to be between 6” and 24” per second per NFPA-80.

2.12 OPERATIONS:
- Manual push-up, (without simple test feature), chain head or electric motor.

2.13 DROP TESTING:
- Floor level release and reset handle. Drop test activated by raising release handle. Reset assembly by assuring the release handle to original starting position. No ladders or tools shall be required to reset or reset door. Manual push-up door drop tested to partial tension release and requires reset by a qualified door technician.

2.14 FINISHES:
- Curtain slats and hood hot-dipped galvanized per ASTM A 653. Door, with blanket edge paper and polyurethane finish coat in solid gray, gray and white or tan and white. Guides and headplates shop painted black. Powder coating optional. Bases bars to be shop painted or finished.

PART 3 - EXECUTION

3.01 EXAMINATION:
- A sample size and notify architect of non-compliance conditions or construction.

3.02 INSTALLATION:
- C.H.I. rolling steel doors shall be installed and adjusted according to C.H.I. assembly instructions for trained fire door systems technicians.

3.03 CLEANING AND PRESENTATION:
- Clean all finished surfaces after installation for a factory original appearance.

3.04 DROP TESTING:
- On delivery, door shall be drop tested before appropriate rehearse to assure successful drop operation and reset.

3.05 SCHEDULED TESTING:
- Complete the Rolling Fire Door Inspection and Drop Test form that accompanies each door.

3.06 OPERATIONS:
- Manual push-up operation or motor operated conlain for factory demonstration.

GUARDIAN™ CHAINHOIST HEADER CLEARANCES & DIMENSIONS (INCHES)

For manual push-up operation or motor operated conlain for factory demonstration.

NOTE: (When using Area Chart, if size falls on a zone divide line, go up to the next zone.)

DETAILS CLEARANCES & DIMENSIONS

1. Steel
2. Wood or Masonry
3. Wood, Masonry or Dual

C.H.I. Listing Label
C.H.I. Oversize Label

SPECIFICATIONS
Features:
- 45-minute, 90-minute and 3-hour U.L. labels with full compliance to NFPA 80 standards
- Standard curtain features 1-1/2” pre-painted, hot-dipped galvanized steel slats
- Optional stainless steel curtain and guides available in a ‘W’ finish
- Shop painted guides in a medium gloss black matches well with many powder-coat options
- Reliable visor governor provides smooth, quiet drop testing
- Easily drop tested and reset with a minimum of downtime to assure operational readiness
- Designed for face of wall mount and between-jamb mounting configurations.
- Manual push-up operation is standard for all shutters up to 10’ x 8’ and the gear reduced awning crank operation is optional - all larger fire shutters it is standard
- Bottom bar slide bolt locks are standard with cylinder locking optional.
- 180-degree fusible links are provided as standard detection/release devices
- May be installed with all approved detection and release devices
- Attractive, compact hood is designed for maximum efficiency in tight areas

Specifications:
- 1.01 Work Included: Rolling shutters to be C.H.I. Fire Shutter Series 7500 and comply with Underwriter’s Laboratories requirements for 3, 1-1/2 and 2-1/2-hour fire ratings.
- 1.02 Related Sections:
  - Section 40500 Metal Fashions
  - Section 40600 Metal Construction
  - Section 40800 Access Doors
  - Section 40900 Painting
  - Section 16000 Electrical
- 1.03 Submittals:
  - Provide all submittals according to guidelines of Section 01300 Submittal Procedures.
  - Shop Drawings: Furnish shop drawings for architectural approval including elevations and details showing dimensions, finishes, profiles and surfaces for each item.
  - Product Literature: Submit manufacturer’s brochures and literature describing product to be used.
  - Provide manufacturer’s installation instructions.
- 1.04 Delivery, Storage and Handling:
  - Refer to Division 1 Material Storage and Handling Requirements.
  - Edit and store all materials in manufacturer supplied packaging and protect from damage in a safe and dry location.
- 1.05 Warranty:
  - Provide manufacturer’s standard five-year warranty on all shutters, curtain and components against defects in materials and workmanship. Manufacturer’s brochure and literature describing product to be used.

Part 2 - Products

2.01 General:
- All components described in the following paragraphs reflect current products manufactured by C.H.I. Overhead Doors, Inc., 1200 East 268, Aurora, Illinois, 60501, and may be changed without notice by the manufacturer without prior notice or liability.

2.02 Curtain:
- Interlocking curtain slats of self-released 22-gauge steel. Lateral slat movement and curtain wear controlled by galvanized, resilient curtain face mounted to each other slat. Welded steel back bar attached as obtained by weldmark requirements. Interlocking curtain face mounted to galvanized steel rail mounted to each other slat. Welded steel back bar attached as obtained by weldmark requirements. Interlocking curtain face mounted to galvanized steel rail mounted to each other slat. Welded steel back bar attached as obtained by weldmark requirements. Interlocking curtain face mounted to galvanized steel rail mounted to each other slat. Welded steel back bar attached as obtained by weldmark requirements. Interlocking curtain face mounted to galvanized steel rail mounted to each other slat. Welded steel back bar attached as obtained by weldmark requirements.
- Bottom Bar: Bottom bar steel or stainless steel angle, bolted to curtain.
- Bump Guides: Bumper shaped guide fabricated from 11-gauge steel or stainless steel with integral hood and curtain stops.
- Barrel: Barrel constructed from minimum 4-1/2 inch O.D. steel pipe. Deflection under full load not to exceed 0.03 inches per foot of span. Barrel provided with threaded rings or legs welded to barrel assembly for certain installations.
- Springs: Springs (tension) and end barrel assembly fabricated with self-aligning ball bearing assembly to support barrel assembly. Curtain weight counterbalanced by all tempered, hot-dipped galvanized tension springs, possibly packed and covered on steel tension shafts.
- Rods: Rectangular head format of minimum 30 gauge steel sheet, shaped to fit within headplates. Intermediate hood support(s) furnished as required.
- Operation: Manual push-up operation is standard up to 10 feet wide, moving crank operated available for all sizes.
- Automatic Closure: Thermally actuated by 180-degree fusible link, or self-closing door release devices.

3.01 Examinations:
- Furnish all finished surfaces after installation for a factory original appearance.
- Reinspect any damaged components before final inspection.
- Remove all packaging and labels from installation area at the conclusion of installation.

4.10 Drop Testing:
- A door installation, drop testing shall be performed by an independent testing laboratory certified by the American Society for Testing and Materials.
- Complete all Finish Door Inspections and Drop Test forms that accompanies each door.
- Correct inspection and maintenance instructions to owner after demonstration, drop tests and reset is witnessed.

3.02 Installation:
- C.H.I. rolling fire shutters shall be installed and adjusted according to C.H.I. installation instructions by trained door systems technicians.

3.03 Clearing and Presentation:
- Clean all finished surfaces after installation for a factory original appearance.
- Reinspect any damaged components before final inspection.
- Remove all packaging and labels from installation area at the conclusion of installation.

3.04 Operation and Maintenance:
- Correct inspection and maintenance instructions to owner after demonstration, drop tests and reset is witnessed.

3.05 Scheduled Testing:
- NFPA 80 and model code groups mandate annual inspection and drop testing of fire doors to check for proper operation and full closure.

Header Clearances & Dimensions (Inches)
Security and beauty blended with smooth, quiet and effortless operation, the C.H.I. Series 6500 counter shutter is a wonderfully refined, architecturally pleasing enclosure.

FEATURES:
- The Model 6544 features a clear anodized, extruded aluminum curtain and guides
- The Model 6522 features a painted steel curtain with clear anodized, extruded aluminum guides
- The Model 6566 features a stainless steel curtain with a #4 finish and stainless steel "J" guides
- Blends-in exterior: The Models 6544 and 6522 feature hidden headplates, guides and wall fasteners for a well-blended, architecturally sensitive appearance
- Visible seams and shadow lines are eliminated from extruded aluminum guides due to unique joint designs
- Soft brush guide runners silence curtain operation and seal out dust and noise
- Integral lifting due to unique joint designs
- Thumb turn locks are spring assisted, and secure each side of the bottom bar into hidden recesses in the guides. Cylinder locking is optional for each side
- Integral lift rails on the bottom bar provide full-width manual access and simplified lifting
- Invisible tubular motor operation, awning crank operation, or exterior mount motor is optional
- Compact in design, the Series 6500 installs into minimum head and side room dimensions

PART 1 - GENERAL
1.01 WORK INCLUDED: Rolling counter shutters to be C.H.I. Series 6500.
1.02 RELATED SECTIONS:
  a. Section 04200 Ceramico Block
  b. Section 05200 Metal Fabrications
  c. Section 06100 Wood Construction
  d. Section 06200 Acoustic Doors
  e. Section 09000 Painting
  f. Section 16000 Electrical
1.03 SUBMITTALS:
  a. Furnish all submittals according to guidelines of Division 1 Material Submission Procedures.
  b. Shop Drawings: Furnish shop drawings for architectural approval including elevations and details showing dimensions, tolerances, profiles and surfaces for each door.
  c. Product Literature: Submit manufacturer's literature describing product to be used.
  d. Provide manufacturer's installation instructions.
1.04 DELIVERY, STORAGE AND HANDLING:
  a. Refer to Division 1 Material Storage and Handling Requirements.
  b. Deliver and store all materials in manufacturer provided packaging and protect from damage in a safe and dry location.
  c. Warranty: Provide manufacturer's standard two-year warranty from date of shipment against defects in materials and workmanship.

PART 2 - PRODUCTS
2.01 GENERAL: Terms and apparatus described in the following paragraphs reflect current products manufactured by C.H.I. Door Systems, Inc. ("C.H.I."). In all circumstances, operation, concealed tube motor operation and outside motor shall be controlled by manual override.
2.02 CURTAIN: Extruded, interlocking aluminum slats, interlocking roll-formed slats in 22-gauge steel, or interlocking roll-formed slats in 22-gauge stainless steel. Curtain slat movement and curtain wear controlled by nylon轨道s fastened to every other slat. Track applied as designed by shutter size and material requirements. Slit profile is 1-1/4" high by 1/2" wide deep.
2.03 BOTTOM BAR: Extruded aluminum with integral #10 rolls and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
2.04 GUIDES: Extruded, clear anodized aluminum. Box shaped, bell mouth configuration with soft brush guide runners. Bell mouth and travel stops. Guides for stainless steel are box shaped, #4 stainless steel with integral bell mouths and center stops.
2.05 HEADPLATES: Headplates for mounting curtain, hood, and bottom bar. Powder-coating optional for all steel and aluminum components.
2.06 HOOD:
  a. Rectangular hood formed of minimum 24-gauge steel, formed to fit within headplates. Powder-coating optional for all steel and aluminum components.
  b. Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
2.07 SPRINGS:
  a. Spring (tension) end of barrel assembly fabricated from steel plate. Drive axle supported by precision, self-aligning bearings.
  b. Section 16000 Electrical
  c. Section 09900 Painting
  d. Section 05500 Metal Fabrications
2.08 HOOD:
  a. Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
  b. Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
2.09 LOCKING: Manual or push-up doors furnished with thumb turn locks. Stainless steel folder locks provided with stainless steel curtain.
2.10 OPERATION:
  b. Reduced drive awning crank operation, concealed tube motor operation and outside motor operation standard.
2.11 FINISHES:
  a. Extruded aluminum curtain, guides and bottom bar to be clear anodized. Stainless steel curtain and hood hot-dipped galvanized, per ASTM A-653, G-90, with baked epoxy primer and polyester finish coat in grey and white.
  b. Stainless shutters furnished with clear extruded extruded aluminum or guides and bottom bar. Stainless shutters furnished with #4 finished curtain, guides and bottom bar. Powder-coating optional for all steel and aluminum components.

PART 3 - EXECUTION
3.01 EXAMINATION:
  a. Examine site and notify architect of non-conformities or construction.
  b. Arbitrate procedures and corrections necessary to accommodate installations.
3.02 INSTALLATION:
  a. C.H.I. rolling steel doors shall be installed and adjusted according to C.H.I. assembly instructions by trained door systems technicians.
3.03 CLEANING AND PRESENTATION:
  a. Clean all finished surfaces after installation for a factory original appearance.
  b. Replace any damaged components before final inspections.
  c. Rmuse all packaging and debris from installation area at the completion of installation.
  d. Prevent operation and maintenance instructions to ensure after satisfactory operating properties and operation of doors.

**SPECIFICATIONS**

**HEADER CLEARANCES & DIMENSIONS (INCHES)**

**AREA CHART** Series 6500 Counter Shutters

**PART 2 - PRODUCTS**

**3.02 CURTAIN**: Extruded, interlocking aluminum slats, interlocking roll-formed slats in 22-gauge steel, or interlocking roll-formed slats in 22-gauge stainless steel. Curtain slat movement and curtain wear controlled by nylon rollers fastened to every other slat. Track applied as designed by shutter size and material requirements. Slit profile is 1-1/4" high by 1/2" wide deep.

**2.03 BOTTOM BAR**: Extruded aluminum with integral #10 rolls and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.04 GUIDES**: Extruded, clear anodized aluminum. Box shaped, bell mouth configuration with soft brush guide runners, bell mouth and travel stops. Guides for stainless steel are box shaped, #4 stainless steel with integral bell mouths and center stops.

**2.05 HEADPLATES**: Headplates for mounting curtain, hood, and bottom bar. Powder-coating optional for all steel and aluminum components.

**2.06 HOOD**

- Rectangular hood formed of minimum 24-gauge steel, formed to fit within headplates. Powder-coating optional for all steel and aluminum components.
- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.07 SPRINGS**

- Spring (tension) end of barrel assembly fabricated from steel plate. Drive axle supported by precision, self-aligning bearings.
- Section 16000 Electrical
- Section 09900 Painting
- Section 05500 Metal Fabrications

**2.08 HOOD**

- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.09 LOCKING**

- Manual push-up doors furnished with thumb turn locks. Stainless steel folder locks provided with stainless steel curtain.
- Rectangular hood furnished with cylinder locking option.

**3.02 CURTAIN**: Extruded, interlocking aluminum slats, interlocking roll-formed slats in 22-gauge steel, or interlocking roll-formed slats in 22-gauge stainless steel. Curtain slat movement and curtain wear controlled by nylon rollers fastened to every other slat. Track applied as designed by shutter size and material requirements. Slit profile is 1-1/4" high by 1/2" wide deep.

**2.03 BOTTOM BAR**: Extruded aluminum with integral #10 rolls and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.04 GUIDES**: Extruded, clear anodized aluminum. Box shaped, bell mouth configuration with soft brush guide runners, bell mouth and travel stops. Guides for stainless steel are box shaped, #4 stainless steel with integral bell mouths and center stops.

**2.05 HEADPLATES**: Headplates for mounting curtain, hood, and bottom bar. Powder-coating optional for all steel and aluminum components.

**2.06 HOOD**

- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.07 SPRINGS**

- Spring (tension) end of barrel assembly fabricated from steel plate. Drive axle supported by precision, self-aligning bearings.
- Section 16000 Electrical
- Section 09900 Painting
- Section 05500 Metal Fabrications

**2.08 HOOD**

- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.
- Rectangular hood formed of minimum 24-gauge steel, extruded aluminum with integral lift rails and dual bottom astragal standard for aluminum and steel curtains. Stainless steel model with bottom astragal provided for stainless curtains.

**2.09 LOCKING**

- Manual push-up doors furnished with thumb turn locks. Stainless steel folder locks provided with stainless steel curtain.
- Rectangular hood furnished with cylinder locking option.
Staggered Rod
Wide Glass

PART 1 - GENERAL
1.01 WORK INCLUDED: Side folding aluminum grilles/closures to be C.H.I. Series 9100/9200.

1.02 RELATED SECTIONS:
- Division 01: Administrative, procedural, and temporary work requirements.
- Section 063100 Metal Fabrication.
- Section 067000 Door Hardware.
- Section 069000 Access Doors.

1.03 SUBMITTALS:
- Provide all submittals according to guidelines of Division 1 Submittal Procedure.
- Shop Drawings: Furnish changes for architectural approval including alterations and details showing dimensions, finishes, patterns and sections for each grille/closure.
- Product Literature: Submit manufacturer’s brochures and literature for all material to be used.
- Provide manufacturer’s installation instructions.

1.04 DELIVERY - STORAGE - HANDLING
- Note to Division 2 Hospital Storage and Handling Requirements.
- Deliver and store all materials in manufacturer provided packaging and protect from damage in a safe and dry location.

1.05 WARRANTY:
Provide manufacturer’s standard two-year warranty from date of shipment against defects in material and workmanship.

PART 2 - PRODUCTS
2.01 GENERAL:
Describe in the following subsections recent current products manufactured by C.H.I. Overhead Doors, Inc., P.O. Box 300, Harvey, IL 60426, and may be changed without notice by the manufacturer without penalty or liability.

2.02 ROOD & LINK STANDARD CURTAIN (9100 or 9200):
- 6-1/4 inch wide with 2 inch wide top and bottom plate, truss-like aluminum. Panels connected with 1/6 inch x 1-1/2 inch aluminum rod vertically spaced 12 inches apart; every other rod covered with 3/8 inch aluminum tubes.
  - Pattern: Straight **Staggered** (Black). **Staggered**

2.03 ROOD & LINK WIDE BODY CURTAIN (9100 or 9200):
- 11-1/4 inch wide with 1-1/4 inch high bottom and top plates, truss-like aluminum and 1 inch wide intermediate aluminum plates vertically spaced 12 inches apart; three 15/16 inch vertical rods horizontally spaced 1-7/8 inch on center, every other rod covered with 3/8 inch aluminum tubes.
  - Pattern: Straight **Staggered** (Black). **Staggered**

2.04 ROOD & LINK NARROW BODY CURTAIN (9100 or 9200):
- 4-1/4 inch wide with 1-1/4 inch high bottom and top plates, truss-like aluminum and 1 inch wide intermediate aluminum plates horizontally spaced 1-1/2 inch on center, every other rod covered with 3/8 inch aluminum tubes.
  - Pattern: Straight

2.05 GLASS STANDARD BODY CURTAIN (9100 or 9200):
- 7-1/4 inches wide with minimum 4 inch high bottom and 5-1/4 inch high top plates, truss-like aluminum, with 12 gauge powder coated steel panels vertically spaced by 1 inch truss-like aluminum plates. 6-1/4 inch wide panels have 375 millimeters above a 1/4 inch center, 51 percent viewable area. Panels connected with two-piece vertical aluminum tubular hinges.

2.06 GLASS WIDE BODY CURTAIN (9100):
- 11-1/4 inches wide with 5-1/4 inch high bottom and top plates, truss-like aluminum and 1 inch wide intermediate aluminum plates vertically spaced 12 inches apart; three 15/16 inch vertical rods horizontally spaced 1-7/8 inches on center, covered with 1/2 inch aluminum tubes. Panels connected with two-piece vertical aluminum tubular hinges.

2.07 PERFORATED STANDARD BODY CURTAIN (9100 or 9200):
- 7-1/4 inches wide with minimum 4 inch high bottom and 5-1/4 inch high top plates, truss-like aluminum, with 18 gauge powder coated perforated steel panels vertically spaced by 1 inch truss-like aluminum plates. B-11/16 inch wide panels have 375 millimeters above a 1/4 inch center, 51 percent viewable area. Panels connected with two-piece vertical aluminum tubular hinges.

2.08 PERFORATED WIDE BODY CURTAIN (9100 or 9200):
- 11-1/4 inches wide with minimum 4 inch high bottom and 5-1/4 inch high top plates, truss-like aluminum, with 18 gauge powder coated perforated steel panels vertically spaced by 1 inch truss-like aluminum plates. B-11/16 inch wide panels have 375 millimeters above a 1/4 inch center, 51 percent viewable area. Panels connected with two-piece vertical aluminum tubular hinges.

2.09 EMERGENCY EGRESS DOOR:
- 90 degree 22 inch standard radius curved track.
- C.H.I. Series 9100/9200.

2.10 OPERATION:

2.11 FINISHES:
- Aluminum: Anodized clear.

PART 3 - EXECUTION
3.01 EXAMINATION:
- Examine site and notify architect of non-specified conditions or construction.
- Advise procedures and corrections necessary to accommodate installation.

3.02 INSTALLATION:
- C.H.I. products shall be installed and adjusted according to C.H.I. recommended installation instructions. Refer to Submittals for instructions.

3.03 CLEANING AND PRESENTATION:
- Doors of all finishes shall be carefully wrapped for a factory work appearance.
- Remove any damaged components before final installation.
- Provide manufacturer’s standard locking posts of aluminum extrusions:
- Pocket Door - [either/bolt lock] [screw/keyed lock]
- End Post: [keyed cylinder]
- Intermediate Post: [keyed cylinder]
- Exterior: [keyed cylinder]
- Intermediate Post (if applicable) - [keyed drop bolt]
- End Post: [keyed cylinder]

3.04 OVERHEAD TRANSACTION:
- Extruded aluminum, 1-3/4 inch wide, 5-1/4 inch high, continuous profile secured with adjustment box and track pins or options. Write in drawing for layout.

3.05 CURTAIN CARRIERS:
- Dual bearing trolleys with 1-1/8 inch diameter trolley.

3.06 CURTAIN HANGERS:

PART 3 - EXECUTION
3.01 EXAMINATION:
- Examine site and notify architect of non-specified conditions or construction.
- Advise procedures and corrections necessary to accommodate installation.

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- Intermediate Post: [keyed cylinder]
- Exterior: [keyed cylinder]
- Intermediate Post (if applicable) - [keyed drop bolt]
- End Post: [keyed cylinder]

3.04 OVERHEAD TRANSACTION:
- Extruded aluminum, 1-3/4 inch wide, 5-1/4 inch high, continuous profile secured with adjustment box and track pins or options. Write in drawing for layout.

3.05 CURTAIN CARRIERS:
- Dual bearing trolleys with 1-1/8 inch diameter trolley.

3.06 CURTAIN HANGERS:

SPECIAL FEATURES:

Cleances & Dimensions (inches)

Clearances and dimensions are available upon request for any design layout or allow C.H.I. to assist with your design. Just forward your floor plan and C.H.I. will offer suggestions of how to best close your opening.

ARCHITECTS
For assistance with specifying or detailing any of our commercial doors call our AIA Hotline at 800/590-0559, e-mail us at aia@chiohd.com or fax us at 217-843-4454.
The Series 9300 Lift Ready is a revolutionary new design that reduces installation time and effort without compromising security. Choose from four grille patterns that best suit your application.

9300 designs:

- Straight Grille Pattern
- Brick Grille Pattern
- Polycarbonate Panel
- Perforated Aluminum

The Life Ready Series comes equipped with the following standard features making installation and operation as easy as possible:

- Classic grille looks offers you security, visibility and ventilation while well engineered design features streamline the installation process to save time and money
- Features a protective clear anodized finish
- Manual push, chain hoist, awning crank, in the tube motor or standard motor operation
- Optional hoods and fascias in steel or aluminum are available for exposed coil applications
- The Quick-Lock System allows the user to engage the lock at a convenient device to apply tension.
- The ground breaking optional telescoping support tube system is easier to locate and install than traditional steel tubes
- Aluminum telescoping support tubes makes locating the tubes to the site easier: eliminating the time needed to center up the curtain

The pioneering installation features include the curtain factory wrapped on the aluminum barrel for ease in moving to the site
- Slotted headplates allow for drop in installation of the barrel and curtain eliminating the time needed to center up the curtain
- Built in ratcheting mechanism makes it faster and safer to wind the spring
- The ground breaking optional telescoping support tube system is easier to locate and install than traditional steel tubes
- Features a protective clear anodized finish

**PART 1 - GENERAL**

**1.01 WORK INCLUDED:** Rolling aluminum grilles to be C.H.I. Series 9300.

**1.02 RELATED SERVICES:**
- Section 40300 Ceramic Black
- Section 40500 Metal Fabrication
- Section 40900 Wall Counterflats
- Section 60000 Access Doors
- Section 16000 Electrical

**1.03 SUBMITTALS:**
- Provide all submittals according to guidelines of Division 1 Submittal Procedures.
- Shop Drawings: Final shop drawings for architectural approval including details showing dimensions, finishes and sections for each grille.
- Product Literature: Submit manufacturer’s brochures and literature describing product to be used.
- Provide manufacturer’s installation instructions.
- 1.04 DELIVERY - STORAGE - HANDLING
- a. Notes to Division 1 Material Storage and Handling Requirements
- b. Delivered and stored all materials in manufacturer provided packaging and protect from damage in a safe and dry location.
- 1.05 WARRANTY: Provide manufacturer’s standard two-year warranty (two years from date of shipment against defects in materials and workmanship.

**PART 2 - PRODUCTS**

**2.01 GENERAL:** Items described in the following paragraphs reflect current products manufactured by C.H.I.

-描绘....
- Tube Mounting: Extruded aluminum, 3 x 1-1/2 inches with shoulders for curtain retention, fitted with vinyl stripping both sides of curtain.
- BRIDGE PLATES: Front loading off-set type of size recommended by grille manufacturer
- BARREL: Aluminum barrel with enclosed hollow torsion spring with groove anodized ball bearings or self lubricating graphite bearings for rotating members, steel to grille weight with maximum deflection of 0.025 inch per foot of width.
- SPRINGS: Curtain weight counterbalanced by oil-tempered, hollow wound torsion spring, ground packed and mounted on steel torsion shaft. Spring (tension) end of barrel to include ratcheting device to apply tension.

**2.02 CURTAIN:** 2-3/16 inch diameter extruded aluminum side spaced 3/4 inch on center vertically by 1-3/4 x 5/8 x 4-1/4 inch aluminum links horizontally spaced 3/4 inch on center and covered by 1/2 inch aluminum starter tacks on every other end.
- Pattern: Straight "H" Staggered (Black).
- 2.03 CURTAIN: 3-15/16 inch high panel with 3 inch wide raiselike aluminum end plates and full width perforated aluminum panels containing 1/16 inch diameter holes spaced 1/4 inch on center; 61 percent viewable area.
- a. Panels connected with single piece 5/8 x 1-1/2 inch horizontal aluminum hinges.
- 2.04 GUIDES:
- 2.05 BOTTOM BAR: Tubular aluminum extension.
- 2.06 BARREL:
- 2.07 LOCKING:
- 2.08 HOOD AND FASCIA:

**PART 2 - EXECUTION**

**3.01 EXAMINATION:**
- a. Examine site and notify architect of non-compliant conditions or construction.

**3.02 INSTALLATION:**
- a. Clean all finished surfaces for a factory original appearance.
- b. Remove all packaging and debris from installation area at the completion of installation.
- c. Provide all necessary hooks and hooks to facilitate installation and operation at the completion of installation.
- d. Provide operation and maintenance instructions to owner after demonstrating proper care and operation of the grille.

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**S P E C I F I C A T I O N S**

**PART 2 - PRODUCTS**

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- Steel to grille weight with maximum deflection of 0.025 inch per foot of width.

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**HORSEPOWER SELECTION CHART**

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<thead>
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<th>HP Type</th>
<th>20 Glaze</th>
<th>20/18 Glaze</th>
<th>Insulated</th>
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<td>400</td>
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**TUBULAR MOTORS**

ILL-rated shutter motors address a broad range of torque requirements with various horsepower, voltage and phase options to cover virtually any shutter application. Our space conscious tube motors require only 1-1/2 inches of additional side room and feature a standard five-year warranty.

**WALL MOUNT**

For larger doors and heaviest use, high-starting torque 46/1 drive reduction using heavy-duty gears running in an oil bath. Available in a variety of horsepower and voltage requirements in single or three-phase operation.

**MODEL H**


**INERTIA BRAKES**

Inertia brakes are available for Series 9000 industrial service doors. Located on the drive shaft, these brakes sense a sudden increase in rpm and apply immediate braking to prevent curtain free-fall.

**FRONT HEADPLATE MOUNT**

All motor operators are U.L. listed and feature integrated chain hoist, emergency disconnect and a solenoid actuated brake as standard. The standard control is a radio control terminal is standard for convenient connection. Other controls, timers, disconnect and a solenoid actuated brake as standard. The standard control is a

**SERIES COMPARISON CHART**

<table>
<thead>
<tr>
<th>Door Model</th>
<th>Insulated</th>
<th>L/L Rating</th>
<th>Operation</th>
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<td>3/8</td>
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</tbody>
</table>

**MODEL GH**

For larger doors and heaviest use, high-starting torque 46/1 drive reduction using heavy-duty gears running in an oil bath. Available in a variety of horsepower and voltage requirements in single or three-phase operation.

**LIMITED WARRANTY**

C.H.I. coiling doors are available in a wide variety of choices and finished with a unique paint coat standard offers a tan or gray exterior with a white interior; colors may be reversed if desired.

The door steel is treated with a hot-dipped galvanized coating, followed by a baked-on enamel primer coat and a polyester finish coat. This process becomes the base to which powder-coat is applied. Select powder-coat options from a palette of 100 colors. ALL numbers are provided for each color to ensure that your selection is consistent and right on target the first time.

- **9300 Aluminum**
- **7566 Stainless Steel**
- **7440 Gray/White**
- **7340 Gray/Gray**
- **7430 Brown/Gray**
- **7330 Tan/White**
- **7420 Gray/Gray**
- **7320 Gray/White**
- **7410 Brown/White**
- **7310 Tan/White**
- **7400 Gray/White**
- **7300 White**

Please note that all color options are not available for all models. Refer to samples in your local C.H.I. distributor for color side strips.

**COLOR SELECTIONS**

- **WHITE**
- **TAN**
- **BROWN**

**FINISHES**

C.H.I. coiling doors are available in a wide variety of choices and finished with a unique paint coat standard offers a tan or gray exterior with a white interior; colors may be reversed if desired.

*Note: Depend on model and dimensions.*

**MOTOR OPERATION**

for Rolling Steel Doors & Shutters

**DOOR SELECTION PROCEDURE**

- Refer to the motor operator area chart below to select operator type based on door dimensions and gauge.
- You may choose between wall mount or front of headplate mount in the charts below to determine headroom, sideway and backroom clearance requirements.
- Operator mounting brackets are available for front of headplate mount.
- Front of headplate and wall mount operator covers are available for exterior mount doors.

**INERTIA BRAKES**

Inertia brakes are available for Series 9000 industrial service doors. Located on the drive shaft, these brakes sense a sudden increase in rpm and apply immediate braking to prevent curtain free-fall.