



SECTION 32 31 00
SLIDING GATE HARDWARE

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PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Cantilever style sliding gate hardware and accessories.

1.2 RELATED SECTIONS

- A. Section 05 50 00 - Metal Fabrications.
- B. Section 32 39 33 - Artificial Rock Fabrications.

1.3 REFERENCES

- A. ASTM International (ASTM):
 1. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
 2. ASTM F2200 - Standard Specification for Automated Vehicular Gate Construction.
- B. Underwriters Laboratories (UL):
 1. UL 325 - Standard for Door, Drapery, Gate, Louver, and Window Operators and Systems.

1.4 SUBMITTALS

- A. Submit under provisions of Section 01 30 00 - Administrative Requirements.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
 1. Preparation instructions and recommendations.
 2. Storage and handling requirements and recommendations.
 3. Installation methods.
- C. Shop Drawings: For gates. Include plans, elevations, sections, details, and attachments to other work.

1.5 QUALITY ASSURANCE

- A. Manufacturer Qualifications: Minimum 5 year experience manufacturing similar products.
 - B. Installer Qualifications: Minimum 2 year experience installing similar products.
- 1.6 PRE-INSTALLATION MEETINGS
- A. Convene minimum two weeks prior to starting work of this section.
- 1.7 DELIVERY, STORAGE, AND HANDLING
- A. Deliver and store products in manufacturer's unopened packaging bearing the brand name and manufacturer's identification until ready for installation.
 - B. Handling: Handle materials to avoid damage.
- 1.8 PROJECT CONDITIONS
- A. Maintain environmental conditions (temperature, humidity, and ventilation) within limits recommended by manufacturer for optimum results. Do not install products under environmental conditions outside manufacturer's recommended limits.
- 1.9 SEQUENCING
- A. Ensure that products of this section are supplied to affected trades in time to prevent interruption of construction progress.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Architectural Iron Designs, Inc., which is located at: 950 S. 2nd St.; Plainfield, NJ 07063; Toll Free Tel: 800-784-7444; Tel: 908-757-2323; Fax: 908-757-3439; Email:[request info \(info@duragates.com\)](mailto:info@duragates.com);
Web:<http://www.duragates.com>|<https://www.locks4gates.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 60 00 - Product Requirements.

2.2 DESIGN CRITERIA.

- A. Galvanized Steel Hardware: For gates that weld or bolt directly to steel track
 1. Chain Link.
 2. Ornamental steel.
 3. Wood gates on a welded steel frame.
 4. Wood framed gates which bolt onto tabs welded to steel track.
- B. Aluminum Hardware: For gates that weld or bolt directly to aluminum track
 1. Ornamental aluminum.
 2. PVC gate on aluminum frame.
 3. Wood gate on aluminum frame.
- C. Stainless Steel Hardware: For Gates that weld or bolt directly to stainless steel track.
 1. Stainless steel gates.
 2. Unique and/or exotic metal gates or high corrosion industrial applications.
- D. Gate Application is Configured and Determined using the Following Data:

1. Opening Width of Gate; Post-to-Post Measurement: ____ inches (____ mm).
 2. Weight of Gate Over the Opening: ____ lbs (____ kg).
 3. Available Space in Open Position: ____ inches (____ mm).
 - a. Optimize for Minimum tail length.
 - b. Optimize for lowest hardware cost.
 4. Is gate flat on top (Yes/No): _____.
 5. Gate Locks:
 - a. Manually Operated Lock:
 - 1) Key operated lock.
 - 2) Mechanical code lock.
 - b. Automated Gate:
 - 1) Magnetic lock.
 - c. No lock required.
 6. Gate Automation Drive System:
 - a. Standard carriages.
 - b. Integrator carriages.
- E. Based on gate dimensions, the Manufacturer can supply the following:
1. Hardware family type required.
 2. Length of counterbalance.
 3. Pad Dimensions and Carriage spacing / placement.
 4. Bill of materials.
 5. Installation instructions.
 6. The Cantilever gate hardware offers a professional solution that satisfies your requirements for installing a cantilever gate, even with complicated applications or large dimensions. It is the perfect choice, with its complete line of accessories and a product configurator to calculate the correct dimensions for the gate. The bottom track covered carriages avoids many of the maintenance problems with traditional sliding gates. Moreover, the hardware can be used on any gate material. Steel / Aluminum / Stainless Steel / Wood / Chain Link / Vinyl. Delete article if not required or delete models not required.

2.3 CANTILEVER SLIDING GATE HARDWARE - GALVANIZED STEEL TRACK

- A. Product: Comunello Cantilever Gate System as manufactured by Fratelli Comunello sPA and distributed by DuraGates a division of Architectural Iron Designs.
- B. Model CGS-350.5XL: Extra-large steel cantilever hardware.
 1. Opening and Weight Range: 30 ft up to 7700 lbs (9.1 m up to 3493 kg).
 2. Opening and Weight Range: 65 ft up to 4400 lbs (10.7 m up to 1996 kg).
 3. Carriage: Extra-large carriage monobloc body.
 4. Tracks: CGS-345XL. Extra-large galvanized track.
 - a. Dimensions: (WxH): 7-1/4 x 6-1/2 inches (70 x 165 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 5. Accessories:
 - a. End Wheel: CGS-347XL, UL325 compliance.
 - b. Bottom End Cup: CGS-346XL.
 - c. Gate Receiver: CG-30P, 3-3/8 to 4-1/2 inches (86 to 114 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15G.
 - e. Adjustable Mounting Brackets for Receiver: CG-15P.
 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M20, Galvanized M20 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05G.
 7. Adjustable Guiding Plate with Covered Rollersto Avoid Pinch Points:
 - a. No. 256-300. For frames up to 4-1/2 inch (110 mm).
 - 1) Use 2 each Top Guides for lateral gate stability.

- C. Model CGS-350.8G: Grande Galvanized Steel Cantilever Hardware.
1. Opening and Weight Range: 16 ft up to 4000 lbs (4.9 up to 1814 kg).
 2. Opening and Weight Range: 60 ft up to 1800 lbs (18.3 up to 816.5 kg).
 3. Grande Carriage Monobloc Body: CGS-350.8G.
 4. Tracks: CGS-345G. Grande Galvanized Track.
 - a. Dimensions (WxH): 5-1/2 x 5-1/2 inches (140 x 140 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 5. Accessories:
 - a. End Wheel: CGS-347G, UL325 compliance.
 - b. Bottom End Cup: CGS-346G.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15G.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M20, Galvanized M20 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05G.
 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 256-300. For frames up to 4-1/2 inch (110 mm).
 - 1) Use 2 each Top Guides for lateral gate stability.
- D. Model CGS-350.8P: Large galvanized steel cantilever hardware.
1. Opening and Weight Range: 10 ft up to 1700 lbs (3 m up to 771 kg).
 2. Opening and Weight Range: 26 ft up to 1000 lbs (7.9 m up to 454 kg).
 3. Large Carriage Monobloc Body: CGS-350.8P.
 4. Tracks: CGS-345P. Large Galvanized Track.
 - a. Dimensions (WxH): 4 x 3-1/2 inches (102 x 89 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 5. Accessories:
 - a. End Wheel: CGS-347P, UL325 compliance.
 - b. Bottom End Cup: CGS-346P.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15G.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 256-220. For up to 3 inch (80 mm) frames.
 - 1) In high wind applications, use 2 each Top Guides for lateral gate stability.
- E. Model CGS-250.8P: Large galvanized steel cantilever hardware.
1. Opening and Weight Range: 8 ft up to 1300 lbs (2.4 m up to 590 kg).
 2. Opening and Weight Range: 19 ft up to 800 lbs (3 m up to 363 kg).
 3. Large Carriage Monobloc Body: CGS-250.8P.
 4. Tracks: CGS-245P: Large Galvanized Track.
 - a. Dimensions (WxH): 4 x 3-1/2 inches (102 x 89 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 5. Accessories:
 - a. End Wheel: CGS-347P, UL325 compliance.
 - b. Bottom End Cup: CGS-346P.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15P.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.

6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 255-220-C. For up to 2-3/8 inch (60 mm) frames.
- F. Model CGS-250.8M: Small galvanized steel cantilever hardware.
1. Opening and Weight Range: 8 ft up to 900 lbs (2.4 m up to 408 kg).
 2. Opening and Weight Range: 14 ft up to 500 lbs (3 m up to 227 kg).
 3. Small Carriage Monobloc Body: CGS-250.8M.
 4. Tracks: CGS-245M. Small Galvanized Track.
 - a. Dimensions (WxH): 2-3/4 x 2-3/4 inches (70 x 70 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 5. Accessories:
 - a. End Wheel: CGS-347M, UL325 compliance.
 - b. Bottom End Cup: CGS-346M.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15M.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 255-220-C. For up to 2-3/8 inch (60 mm) frames.
- G. Model CGS-KIT150: Small galvanized steel cantilever hardware.
1. Opening and Weight Range: 8 ft up to 660 lbs (2.4 m up to 272 kg).
 2. Opening and Weight Range: 13 ft up to 330 lbs (4 m up to 150 kg).
 3. Mini Carriage Multiplate Body: CGS-150.5M.
 4. Tracks: CGS-245M. Small Galvanized Track.
 - a. Dimensions (WxH): 2-3/4 x 2-3/4 inches (70 x 70 mm).
 - b. Track Length: 19 ft 8 inches (6 m).
 - c. Track Length: 9 ft 10 inches (3 m).
 - d. Track Length: 6 ft 6 inches (2 m).
 5. End Wheel: CGS-347M, UL325 compliance.
 6. Bottom End Cup: CGS-346M.
 7. Adjustable Guiding Plate with Rollers Covers to Avoid Pinch Points:
 - a. No. 255-220-C. For up to 2-3/8 inch (60 mm) frames.

2.4 CANTILEVER SLIDING GATE HARDWARE - ALUMINUM TRACK

- A. Product: Comunello Cantilever Gate System as manufactured by Fratelli Comunello sPA and distributed by DuraGates a division of Architectural Iron Designs.
- B. Model CGA-350.5P: Large Aluminum cantilever hardware
 1. Opening and Weight Range: 20 ft up to 700 lbs (6 m up to 317.5 kg).
 2. Opening and Weight Range: 30 ft up to 400 lbs (9 m up to 181.4 kg).
 3. Large Carriage Monobloc Body and Nylon Wheels: CGA-350.5P.
 4. Tracks: CGA-345P. Large Aluminum Track.
 - a. Dimensions (WxH): 4-3/16 x 4-1/32 inches (106 x 102 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 5. Accessories:
 - a. End Wheel: CGA-347P, UL325 compliance.
 - b. Bottom End Cup: CGA-346P.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).

- d. Adjustable Mounting Brackets for End Cup: CG-15P.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 - 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 - 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 256-220. For up to 3 inch (80 mm) frames.
 - 1) In high wind applications, use 2 each Top Guides for lateral gate stability.
- C. Model CGA-350.5M: Small Aluminum cantilever hardware
- 1. Opening and Weight Range: 10 ft up to 550 lbs (3 m up to 249 kg).
 - 2. Opening and Weight Range: 16 ft up to 300 lbs (4.9 m up to 136 kg).
 - 3. Small Carriage Monobloc Body and Nylon Wheels: CGA-350.5M.
 - 4. Tracks: CGA-345M. Large Aluminum Track.
 - a. Dimensions (WxH): 3-1/4 x 3-1/8 inches (82.5 x 79 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 - 5. Accessories:
 - a. End Wheel: CGA-347M, UL325 compliance.
 - b. Bottom End Cup: CGA-346M.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15M.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 - 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 - 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 255-220-C. For frames up to 2-3/8 inch (60 mm).

2.5 CANTILEVER SLIDING GATE HARDWARE - STAINLESS STEEL TRACK

- A. Product: Comunello Cantilever Gate System as manufactured by Fratelli Comunello sPA and distributed by DuraGates a division of Architectural Iron Designs.
- B. Model CGI-350.5P: Large Stainless Steel cantilever hardware
 - 1. Opening and Weight Range: 13 ft up to 700 lbs (4 m up to 317.5 kg).
 - 2. Opening and Weight Range: 26 ft up to 400 lbs (7.9 m up to 181.4 kg).
 - 3. Large Carriage Monobloc Body and Nylon Wheels: CGI-350.5P.
 - 4. Tracks: CGI-345P. Large Stainless Steel Track.
 - a. Dimensions (WxH): 4 x 3-1/2 inches (102 x 89 mm).
 - b. Track Length: 9 ft 10 inches (3 m).
 - c. Track Length: 19 ft 8 inches (6 m).
 - 5. Accessories:
 - a. End Wheel: CGI-347P, UL325 compliance.
 - b. Bottom End Cup: CGI-346P.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15P.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 - 6. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 - 7. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. CGI-251. For frames up to 2-1/2 to 4 inch (100 mm).

2.6 CANTILEVER MOTORIZED SLIDING GATE HARDWARE - GALVANIZED STEEL TRACK

- A. Product: Integrator Cantilever Gate System as manufactured by Fratelli Comunello sPA and

distributed by DuraGates a division of Architectural Iron Designs.

- B. Model CGS-500.8G: Steel motorized sliding gate.
1. Drive System: Hidden drive.
 2. Drive System: Integrated drive.
 3. Drive System: Automation ready drive.
 4. Opening Range: Up to 52 ft (15.8 m).
 5. Weight: Up to 2645 lbs (11.54 kg).
 6. Integrator Carriages: CGS-500.8G. Primary/Secondary 8-Wheel Carriage Set.
 - a. Driven Primary Carriage. Secondary Carriage.
 7. Track: CGS-345G. Large, galvanized steel.
 - a. Dimensions (WxH): 5-1/2 x 5-1/2 inches (140 x 140 mm).
 - b. Length: 9 ft 10 inches (3 m).
 - c. Length: 19 ft 8 inches (6 m).
 8. Rack: CG-50G. 4 ft 11 inch (1.5 m) with adjustable mounting screws.
 9. Template: CG-55G. Gear rack centering device. Set of 2 pieces. Installation tool to center and align gear rack in track.
 10. Adapter: CG-58G. Drive Shaft Coupling. To match gate operator output.
 11. Typical Accessories:
 - a. End Wheel: CGS-347G, UL325 compliance.
 - b. Bottom End Cup: CGS-346G.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15G.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 - f. Anchoring and Installation Accessories:
 - g. J-Bolt: CG-348-M20, Galvanized M20 x 15 inches (381 mm).
 - h. Foundation Plate: CG-05G.
 12. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 256-300. For frames up to 4-1/2 inch (110 mm).
 - 1) Use 2 each Top Guides for lateral gate stability.
- C. Model CGS-500.8P: Galvanized steel motorized sliding gate.
1. Opening Range: Up to 26 ft (7.9 m).
 2. Weight: Up to 1760 lbs (800 kg).
 3. Integrator Carriages: CGS-500.8P. Primary/Secondary 8-Wheel Carriage Set.
 - a. Driven Primary Carriage. Secondary Carriage.
 4. Track: CGS-345P. Large, galvanized steel.
 - a. Dimensions (WxH): 4 x 3-1/2 inches (102 x 89 mm).
 - b. Length: 9 ft 10 inches (3 m).
 - c. Length: 19 ft 8 inches (6 m).
 5. Rack: CG-50P. 4 ft 11 inch (1.5 m) with adjustable mounting screws.
 6. Template: CG-55P. Gear rack centering device. Set of 2 pieces. Installation tool to center and align gear rack in track.
 7. Adapter: CG-58. Drive Shaft Coupling. To match gate operator output.
 8. Typical Accessories:
 - a. End Wheel: CGS-347P, UL325 compliance.
 - b. Bottom End Cup: CGS-346P.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15P.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 9. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 10. Adjustable Guiding Plate with covered Rollers to Avoid Pinch Points:
 - a. No. 256-220. For frames up to 3 inch (80 mm).
 - 1) In high wind applications, use 2 each Top Guides for lateral gate stability.

- D. Model CGS-500.8M: Galvanized steel motorized sliding gate.
 - 1. Opening Range: Up to 23 ft (7 m).
 - 2. Weight: Up to 1100 lbs (499 kg).
 - 3. Integrator Carriages: CGS-500.8M. Primary/Secondary 8-Wheel Carriage Set.
 - a. Driven Primary Carriage. Secondary Carriage.
 - 4. Track: CGS-345M. Small, galvanized steel.
 - a. Dimensions (WxH): 2-3/4 x 2-3/4 inches (70 x 70 mm).
 - b. Length: 9 ft 10 inches (3 m).
 - c. Length: 19 ft 8 inches (6 m).
 - 5. Rack: CG-50M. 4 ft 11 inch (1.5 m) with Mounting screws.
 - 6. Template: CG-55M. Gear rack centering device. Set of 2 pieces. Installation tool to center and align gear rack in track.
 - 7. Adapter: CG-58. Drive Shaft Coupling. To match gate operator output.
 - 8. Typical Accessories:
 - a. End Wheel: CGS-347M, UL325 compliance.
 - b. Bottom End Cup: CGS-346M.
 - c. Gate Receiver: CG-30M, gate receiver 2 to 3 inches (51 to 76 mm).
 - d. Adjustable Mounting Brackets for End Cup: CG-15M.
 - e. Adjustable Mounting Brackets for Receiver: CG-15M.
 - 9. Anchoring and Installation Accessories:
 - a. J-Bolt: CG-348-M16, Galvanized M16 x 15 inches (381 mm).
 - b. Foundation Plate: CG-05P.
 - 10. Adjustable Guiding Plate with Covered Rollers to Avoid Pinch Points:
 - a. No. 255-220-C. For frames up to 2-3/8 inch (60 mm).

2.7 OPTIONAL EQUIPMENT FOR CANTILEVER SLIDING GATE HARDWARE

- A. Top Guide Options: As applicable to project:
 - 1. Adjustable Guiding Plate with Rollers Covers to Avoid Pinch Points:
 - a. No. 255-220-C. For up to 2-3/8 inch (60 mm) frames.
 - b. No. 256-220. For up to 3 inch (76 mm) frames.
 - c. No. 256-300. For up to 4-1/2 inches (114 mm) frames.
 - d. No. CGI-251. Stainless steel for 2-1/2 to 4 inch (64 mm to 102 mm) frames.
- B. Side Mount Guide Options: For gates with arched tops or protruding pickets.
 - 1. Galvanized and Aluminum Guide Rail:
 - a. No. CG-254. Galvanized 1-1/2 inch (38 mm) U-Channel.
 - 1) Length: 9 ft 10 inches (3 m).
 - b. No. RG-387. Galvanized 1-1/4 inch (32 mm)U-Channel.
 - 1) Length: 9 ft 10 inches (3 m).
 - 2) Length: 19 ft 8 inches (6 m).
 - c. No. CG-237. Aluminum 1-1/2 inch (38 mm) U-Channel.
 - 1) Length: 20 ft (6096 mm).
 - 2. Single Roller Bracket: No. CG-252.
 - a. Diameter: 1-1/2 inch (38 mm).
 - 3. Double Rollers: No. CG-258-30.
 - a. Diameter: 1-1/4 inch (32 mm).
 - 4. Side Rollers: No. CG-253. Use two per gate minimum.
 - a. Attached to guide / fall-over protection posts.
 - b. Length: 10 inches (254 mm).
 - c. Diameter: 1-1/4 inch (32 mm).
 - d. Clearance: 2 inches (51 mm).
 - 5. Nylon Replacement Roller: No. 230-40.
 - a. Diameter: 1-1/2 inch (38 mm).
- C. Tension Bar: No. CGI-40. For long term adjustment of gate sag.

1. Material: Stainless Steel.
 2. Fits 50 mm metric tubing, USA 2-1/2 inch square minimum (shimmed).
 3. Turnbuckle action.
- D. Gate Locks:
1. Manually Operated Lock:
 - a. Key operated lock.
 - b. Mechanical code lock.
 2. Automated Gate:
 - a. Magnetic lock.
 - b. Electromechanical lock
 3. No lock required.
- E. Gate Automation Drive System:
1. Standard carriages.
 2. Integrator carriages.

PART 3 EXECUTION

3.1 EXAMINATION

- A. Do not begin installation until substrates have been properly prepared.
- B. If substrate preparation is the responsibility of another installer, notify Architect of unsatisfactory preparation before proceeding.

3.2 PREPARATION

- A. Clean surfaces thoroughly prior to installation.
- B. Prepare substrates using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions. Do not proceed with installation until substrates have been properly prepared. Commencement of installation constitutes acceptance of conditions.

3.3 INSTALLATION

- A. Install in accordance with manufacturer's instructions.
- B. Install products in strict compliance with manufacturer's recommendations.
- C. Adjust gates to operate smoothly, easily, and quietly, free of binding, warp, or excessive distortion.
- D. Adjust hardware and moving parts as recommended by manufacturer

3.4 PROTECTION

- A. Protect installed products until completion of project.
- B. Touch-up, repair or replace damaged products before Substantial Completion.

END OF SECTION