

SECTION 32 39 13
MANUFACTURED METAL BOLLARDS
ALTERNATIVE SECTIONS 05 74 00 Decorative Metal Castings

Fast Gate Openers – (Part of the DF Supply, Inc. Family)

www.fastgateopeners.com

(800) 878-7829

10050 Wellman Road
Streetsboro, OH 44241

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Static Bollards:
 - 1. Access Control - perimeter security application Hydraulic Automatic retractable bollards (Model J355 M50 F)

1.2 RELATED REQUIREMENTS

- A. Section 02 22 19 – Traffic Assessment
- B. Section 32 31 00 – Fences and Gates
- C. Section 34 71 13 - Paving and Accessories
- D. Section 03 30 00 - Cast-In-Place Concrete

1.3 REFERENCES

- A. Submit under provisions of Section 01 42 00 – References
- B. Abbreviations and Acronyms
 - 1. F: Type bollard (Static)

1.4 REGULATORY REQUIREMENTS

- A. Submit under provisions of Section 01 41 00 – Regulatory Requirements
- B. ASTM F 2656 Standard Test Method for Vehicle Crash Testing of Perimeter Barriers

1.5 SUBMITTALS

- A. Submit under provisions of Section 01 33 00 – Submittal Procedures
- B. Product Data: Provide for each product equipment list, system description and manufacturer's data sheets, including:
 - 1. Product information, manufacturer's names and identification of product.
 - 2. Component connections and details.
 - 3. Storage and handling requirements and recommendations.

- C. Shop Drawings: Submit shop drawings showing layout, product components, including anchorage, excavation details and accessories:
 1. Drawings, including wiring diagrams.
 2. Risers, layouts, hardware location and accessories predispositions.
 3. Special wiring diagrams for optional configurations.
- D. Manufacturer's Instructions:
 1. Preparation instructions and recommendations.
 2. Operation and installation instructions and manuals.
- E. Manufacturer's Certificates: Certify products meets or exceed specified compliances
- F. Maintenance Data: provide manufacturer's maintenance instructions that include:
 1. Lists of periodic checking and maintenance programs
 2. Spare parts lists
 3. Equipment inter-connection diagrams

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Submit under provisions of Section 01 66 00 – Product Storage and Handling Requirements
- B. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and industry standards.
- C. Store products indoors in manufacturer's original containers and packaging, with labels clearly identifying product name and manufacturer. Protect from damage.

1.7 QUALITY ASSURANCE

- A. Submit under provisions of Section 01 43 00 – Quality Assurance
- B. Manufacturer Qualifications:
 1. ISO 9001 Certified Manufacturer
 2. Manufacturer with minimum of 50 year experience
- C. Installer Qualifications: Installation performed by installer specifically trained in bollards operation systems of the type found within this section.
- D. Furnish bollards, all components and accessories by one manufacturer.

1.8 SITE CONDITIONS

- A. Submit under provisions of Section 01 71 00 – Examination and Preparation
- B. 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 absolute limits.
- C. Verify installation required dimensions before installing.
- D. Ensure that excavating surface is appropriate for installation:
 1. The characteristic of the ground must guarantee sufficient solidity of the foundation plinth.
 2. No tubes or electrical cables should be present in the digging area.

1.9 WARRANTY

- A. Submit under provisions of Section 01 78 00 – Closeout Submittals
- B. Manufacturer's Standard Limited Warranty:
 - 1. Warranty Period: 2 years of free repair or replacement from date of installation
 - 2. Special warranty extensions may apply

PART 2 PRODUCTS

2.1 MODEL J355 H1200 M50 F – PAINTED VERSION.

- A. Overall Description: Static bollard for perimeter security applications. Thanks to the verified crash resistance, the product is targeted for the traffic control and the perimeter protection of sensitive areas.
- B. Cylinder
 - 1. Height from ground: 1200mm / 47 inches
 - 2. Diameter: 355mm / 14 inches
 - 3. Material
 - a. Body: Steel S355JR EN 10210 (16mm / 0.6 inches thick)
 - b. Finishes: anti- corrosive Cataphoresis and polyester powder painted
 - 4. Head: AISI 304 stainless steel
 - 5. Colour
 - a. Body: Dark grey metallized - RAL 7021
 - b. Head: Grey
- C. Reflective strip
 - 1. Height: 55mm / 2.2 inches
 - 2. Colour: White
- D. Suggested Usage: Perimeter protection
- E. Resistance Force in a 3 units installation - Break-in: 1680000 J (according to ASTM F 2656-07 Standard Test Method for Vehicle Crash Testing of Perimeter Barriers)
- F. Features
 - 1. Weight
 - a. Total: 680 kg / 1500 pounds
 - b. Total including packaging: 730 kg / 1610 pounds

2.2 MODEL J355 H1200 M50 F – SATIN FINISHING STAINLESS STEEL VERSION

- A. Overall Description: Static bollard for perimeter security applications. Thanks to the verified crash resistance, the product is targeted for the traffic control and the perimeter protection of

sensitive areas.

- B. Cylinder
 - 1. Height from ground: 1200mm / 47 inches
 - 2. Diameter: 355mm / 14 inches
 - 3. Material
 - a. Body: Steel S355JR EN 10210 (16mm 0.6 inches thick)
 - b. Satin finishing AISI 316L Stainless Steel
 - 4. Head: AISI 304 stainless steel
 - 5. Colour
 - a. Body: Dark grey metallized - RAL 7021
 - b. Head: Grey
- C. Reflective strip
 - 1. Height: 55mm / 2.2 inches
 - 2. Colour: White
- D. Suggested Usage: Perimeter protection
- E. Resistance Force in a 3 units installation - Break-in: 1680000 J (according to ASTM F 2656-07 Standard Test Method for Vehicle Crash Testing of Perimeter Barriers)
- F. Features
 - 1. Weight
 - a. Total: 685 kg / 1510 pounds
 - b. Total including packaging: 735 kg / 1620 pounds

2.3 ACCESSORIES

- A. Provide the optional accessories listed below:
 - 1. Aluminium ground plate can, to obtain a perfect aesthetic coherency with the automatic (HA) version.

PART 3 EXECUTION

3.1 EXAMINATION AND PREPARATION

- A. Verify that all site conditions, installation and operating conditions are compliant to the sections and manufacturer's requirements express in the instructions.
- B. Inspect and prepare substrates and surface properly in accordance to the manufacturer's recommendations.
- C. If preparation is the responsibility of another installer, notify Architect in writing of deviations from manufacturer's recommended installation tolerances and conditions.
- D. Clean surfaces thoroughly prior to installation.
- E. Verify that required drainage and electrical services are in place as required for the installation.
- F. Verify that the product surrounding area is clear from obstacle and flying electric wiring for proper beam motion

- G. It is suggested to provide an adequate protection against accidental impact if product will be exposed to vehicles, when possible

3.2 INSTALLATION

- A. Foundation
 1. Required excavation dimensions: 4000 x 2300 x 350mm / 158 x 90 x 14 inches (wide x deep x tall)
 2. Concrete Specifications: Class C30/37 Concrete with 10-30 aggregate according to EN 12620 standard. Bollard shall be installed after at least 7 days of concrete setting
 3. Surrounding ground compacting index: $\geq 90\%$ of the Proctor optimum curve, according to EN 13286-2:2005 standard
 4. Reinforcing foundation bars: $\geq \varnothing 12\text{mm}$ / 0.5 inches iron bars B450C Class, according to ASTM A615 - Grade 60.
- B. Install in accordance with manufacturer's instructions. Test for proper operation and adjust until satisfactory results are obtained.
- C. Clean all metal surfaces promptly after installation.

3.3 FINAL ADJUSTMENT

- A. Check safety devices and compliance to safety regulations, otherwise adjust parameters or replace defective parts until satisfactory results are obtained.

3.4 PROTECTION

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

END OF SECTION