



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

**** NOTE ** Edit this guide specification to meet project requirements.**

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FAAC Group designs manufactures and distributes the most secure, innovative and functional solutions worldwide for every pedestrian and vehicular need: automatic access - parking - access control. FAAC Group satisfies the service and reliability needs of residential, commercial and industrial clients. FAAC Group makes the city move, creating automation that simplifies the lives of those who live there.

Today, after more than fifty years of business and thanks to steady growth in all areas of automation and access control, FAAC has turned into a large multinational industrial group with over 80 countries served by sales offices or official distributors.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Removable Bollards:
 - 1. Access Control - perimeter security application Static bollards (Model JS 48 R)

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

**** NOTE ** Delete the standard which are not applicable to your area**

- A. Submit under provisions of Section 01 41 00 – Regulatory Requirements
- B. - PAS 68: Impact test specifications for vehicle security barrier systems
- C. - IWA 14-1: Vehicle Security Barriers - Part 1: Performance requirement, vehicle impact test method and performance rating
- D. - ASTM F2656: 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.
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- 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

**** NOTE ** Apply special warranty provided by local subsidiaries**

- 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 MANUFACTURERS

- A. Acceptable Manufacturer: FAAC SpA, which is located at: Via Calari, 10 - 40069 Zola Predosa, Bologna – Italy / Tel: (+39)-051-61724 / Fax: (+39)-051-758518 / Email: info@faacgroup.com / Web: www.faacgroup.com
- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of Section 01 25 00 - Substitution Procedures.

2.2 MODEL JS 48 R

- A. Overall Description: Removable bollard for semi-permanent perimeter security applications. Thanks to the verified crash resistance, the product is targeted for the perimeter protection of sensitive areas.
- B. Cylinder
 - 1. Height from ground: 1000 mm / 40 inches
 - 2. Diameter: 275 mm / 11 inches
 - 3. Material
 - a. Body: high performance steel
 - b. Sleeve: mDure® protective sleeve
 - 4. Head: Aluminium with Rilsan® resin coating
 - 5. Colour

- a. Body: Dark grey with FAAC design
- b. Head: Black
- C. Reflective strip
 - 1. Height: 55 mm / 2.2 inches
 - 2. Colour: White
- D. Suggested Usage: Perimeter protection
- E. Resistance Force: Break-in: 673.000 J according to:
 - PAS 68: Impact test specifications for vehicle security barrier systems
 - IWA 14-1: Vehicle Security Barriers - Part 1: Performance requirement, vehicle impact test method and performance rating
 - ASTM F2656: Standard Test Method for Vehicle Crash Testing of Perimeter Barriers
- F. Features
 - 1. Weight
 - a. Cylinder: 180 kg / 397 pounds
 - b. Underground base : 120 kg / 265 pounds

2.3 MODEL JS 48 R STAINLESS STEEL

- A. Overall Description: Removable bollard for semi-permanent perimeter security applications. Thanks to the verified crash resistance, the product is targeted for the perimeter protection of sensitive areas.
 - B. Cylinder
 - 1. Height from ground: 1000 mm / 40 inches
 - 2. Diameter: 275 mm / 11 inches
 - 3. Material
 - a. Body: high performance steel
 - b. Sleeve: mDure® + AISI 316L protective sleeve
 - 4. Head: Aluminium with Rilsan® resin coating
 - 5. Colour
 - a. Body: Silver with satin finishing
 - b. Head: Black
 - C. Reflective strip
 - 1. Height: 55 mm / 2.2 inches
 - 2. Colour: White
 - D. Suggested Usage: Perimeter protection
 - E. Resistance Force: Break-in: 673.000 J according to:
 - PAS 68: Impact test specifications for vehicle security barrier systems
 - IWA 14-1: Vehicle Security Barriers - Part 1: Performance requirement, vehicle impact test method and performance rating
 - ASTM F2656: Standard Test Method for Vehicle Crash Testing of Perimeter Barriers
 - F. Features
 - 1. Weight
 - a. Cylinder: 180 kg / 397 pounds
 - b. Underground base : 100 kg / 220 pounds
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2.4 ACCESSORIES

**** NOTE ** Add eventual extra accessories**

- A. Provide the optional accessories listed below:
An AISI 316L steel plate + mDure® base ground plate can be added

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 (for a 2 units array): 2.700 mm x 2.300 mm x 400 mm // 106 inches x 91 inches x 18 inches* (wide x deep x tall)
* add 10mm / 0.4 inches above the foundation to lay the pavement and 10mm / 0.4 inches below for the base of mud slab
 - 2. Concrete Specifications: Class C25/30 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
- 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