



LOADING DOCK EQUIPMENT

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Loading dock equipment of the following types:
 - 1. Vehicle (truck) restraints.
 - 2. Control stations.

1.2 RELATED SECTIONS

- A. Section 03100 - Concrete Forms and Accessories: Placement of anchors into concrete.
- B. Section 03300 - Cast-In-Place Concrete: Docks and pits.
- C. Section 05500 - Metal Fabrications: Metal angles for edge of dock.

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI MH29.1 - Industrial Scissor Lifts.
 - 2. ANSI MH30.1 - Industrial Loading Dock Boards (Ramps).
 - 3. ANSI MH30.3 - Vehicle Restraining Devices (Safety, Performance, and Testing).

1.4 SUBMITTALS

- A. Section 01330 - Submittals Procedures: Procedures for submittals.
- B. Product Data: For each product specified.
 - 1. Vehicle Restraints: Indicate unit dimensions, method of anchorage, details of construction, materials and finish, installation details, and operation of unit.
- C. Shop Drawings:
 - 1. Indicate required opening dimensions, tolerances of opening dimensions, placement dimensions, and perimeter conditions of construction.
 - 2. Wiring diagrams including location of control stations and disconnect switches.
- D. Assurance/Control Submittals:
 - 1. Certificates: Manufacturer's certificate that Products meet or exceed specified requirements.
 - 2. Qualification Documentation: Submit documentation of experience indicating compliance with specified qualification requirements.

1.5 QUALITY ASSURANCE

- A. Vehicle Restraints: Conform to requirements of ANSI MH30.3.

- B. Manufacturer Qualifications:
 - 1. Manufacturer specializing in manufacturing Products specified with minimum 30 years' experience.
 - 2. Manufacturer to have quality assurance improvement programs.
 - 3. Manufacturer shall be associated with Loading Dock Equipment Manufacturers (LODEM) setting ANSI standards.
 - 4. Manufacturers welding procedure compliant with A.W.S.D1 .1 specifications.
- C. Installer Qualifications: Company specializing in performing the Work of this Section with minimum 5 years' experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver, store and handle materials and products in strict compliance with manufacturer's instructions and recommendations and industry standards. Store materials within absolute limits for temperature and humidity recommended by manufacturer. Protect from damage.
- B. Store products in manufacturer's labeled packaging until ready for installation.

1.7 WARRANTY

- A. Warranty: Provide manufacturer's standard warranty.

PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Blue Giant Equipment Corporation, which is located at: 410 Admiral Blvd.; Mississauga, ON, Canada L5T 2N6; Toll Free Tel: 800-872-2583; Tel: 905-457-3900; Fax: 905-457-2313; Email: marketing@bluegiant.com; Web: <https://www.bluegiant.com>
- B. Substitutions: Not permitted.
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 VEHICLE (TRUCK) RESTRAINTS

- A. Vehicle restraint shall be Model IVR303 as manufactured by BLUE GIANT.
 - 1. Type: Electrically operated impact-style design. Wall-mounted. Comes complete with Blue Genius Touch Controls with interior / exterior lights communication package and driver warning signs.
 - 2. Size: Overall body dimensions 19 ½ inches W by 33 1/16 inches L by 28 ½ inches H (495mm by 839mm by 724mm). Refer to approval drawing for complete dimensional details.
 - 3. Function:
 - a. Vertical Restraining Range: From 9 inches to 29 5/8 inches (229mm to 752mm) above grade, minimum 4 inches (102mm) contact required.
 - b. Horizontal Restraining Range: From 4 inches to 13 inches (102mm to 330mm) beyond the face of the dock.
 - c. Mounting System: Dock face mounting using 15 anchor bolts 1/2 inch diameter by 4 1/2 inches long (12.7mm by 114mm).

4. Operation:
 - a. Operating System: Restraint arm is activated by control station's "ENGAGE" button and secures the RIG-bar. A spring-based compensation float ensures compatibility with air-ride suspension systems and a constant-force restraining grip prevents accidental separation due to cross-docking bounce and vibration. The sliding nose extension enables the restraint carriage to automatically position itself in accordance with each incoming truck's design, without damaging either the restraint or the RIG bar.
 - b. Lights Communication System: Advanced communication package includes LED-based communication system Red/Green/Yellow icon-based interior lights on control panel and LED exterior red/green traffic lights mounted on wall, along with mirror image driver warning signs. The lighting system alerts both dock attendant and truck driver to the status of the restraint. If vehicle has no restraining RIG bar, the interior communications lights will remain red while flashing yellow, and the exterior traffic lights will remain red, warning the dock attendant that the vehicle is not secured and requires wheel chocks.
 - c. Control Station: The Blue Genius® Connect or Blue Genius® Connect Plus Control Panel is a multiple touch button control station with "ENGAGE", and "RELEASE" touch buttons. NEMA4X/IP65 (wet and corrosion-resistant) rated polycarbonate enclosure. Overall dimensions Blue Genius Connect 12.8 x 10.83 x 7.09 inches (275 x 325 x 180mm) and Blue Genius Connect Plus 19.69 x 15.75 x 7.87 inch (400 x 500 x 200 mm).. Onboard diagnostics and communications feature a user-friendly LCD intelligent display and keypad with supervisory override features.
5. Rated Capacity:
 - a. Welding procedure is compliant with A.W.S.D1.1 specifications. Unit provides restraining strength of 35,000 lbs (15,909 kgs).
6. Construction and Finish:
 - a. Vehicle restraint: Restraint arm is a rotating yellow zinc dichromate arm. Constructed from 1 ¼ inch thick solid steel. The housing protects all components from damage due to weather, dirt, and debris. To resist corrosion and reduce maintenance, housing is zinc-plated.
 - b. Exterior LED Traffic Lights: Housing is constructed to withstand exterior weather conditions with a gasket mounting base, conduit punch-out provisions, and head with two visors and colored lenses.
 - a. Lights: LED 4 inches (102 mm) diameter of red and green color.
 - b. Overall Body (WxLxD): 5 x 10 x 3 inch (127 x 254 x 76 mm).
 - c. Voltage, 3-Wire: 12-24 V AC/DC 150-75 mA.
7. Warranty:
 - a. Warranties are subject to standard limitations on liability. Please consult Blue Giant warranties at <http://www.BlueGiant.com> for full details on warranty information and product registration.
8. Standard Accessories:
 - a. Fifteen mounting screw anchor bolts
 - b. Lip guide
 - c. Vehicle restraint bypass (allows the control station and traffic lights to be manually operated if the restraint cannot be engaged).
 - d. Interlock control station with interlock sensor to advise when dock is

- e. parked Audible alarm (mounted externally to the control station; aids alerting the dock attendant of unsafe or override conditions when the trailers rear impact guard is not secured)
- f. Audible touch buttons on the Blue Genius® provide instant sound feedback to user input

PART 3 EXECUTION

3.1 EXAMINATION

- A. Section 01700 - Execution Requirements: Verification of existing conditions before starting work.
- B. Verification of Conditions: Verify that field measurements, surfaces, substrates and conditions are as required, and ready to receive Work.

3.2 INSTALLATION

- A. Install vehicle restraint in prepared opening in accordance with manufacturer's instructions.
- B. Set square and level.
- C. Anchor unit securely, flush with dock.

3.3 ADJUSTING

- A. Adjust installed unit for smooth and balanced operation.

END OF SECTION