



## 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. 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.
- B. 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 Corp., which is located at: 85 Heart Lake Rd. S., Brampton, ON, Canada L6W 3K2  
Toll Free Tel: 800-668-7078 Tel: 905-457-3900  
Email: [marketing@bluegiant.com](mailto:marketing@bluegiant.com)  
Web: [www.BlueGiant.com](http://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 TL85 as manufactured by BLUE GIANT.
1. Type: Electro-hydraulic operated non-impact design. Wall or ground mounted. Comes complete with Blue Genius Touch Controls with interior/exterior communications light package and driver warning signs.
  2. Size: Overall body dimension 13 inches W by 28 inches L by 11-3/4 inches H (330 by 711 by 298 mm) plus back mounting plate.
  3. Function:
    - a. Vertical Restraining Range: From 12 inches to 26 inches (305 mm to 660 mm) above grade.
    - b. Horizontal Restraining Range: From 0 inch to 12 inches (0 mm to 305 mm) beyond the face of the dock.
    - c. Mounting System: Dock face mounting using 6 wedge anchor bolts 5/8 inch diameter by 6 inches long (16 by 152 mm). Transfer of pulling force to driveway improves restraining strength by equalizing forces on anchors. Trailer rear impact guard (ICC bar) during backing in does not

impact restraint's body.

4. Operation:
  - a. Operating System: 1/2 HP remote wall-mounted pack. 24V control, NEMA4X/IP65 (Wet and corrosion resistant) rated control station with touch buttons for engage or disengage or reset of restraint. Onboard diagnostics and communications feature a user-friendly, LCD intelligent display and keypad with supervisory override features. Stop button provides complete motion freeze of restraint and interlocked components.
  - b. Lights Communication System: Advanced communication package includes LED interior red/yellow/green lights mounted on controller and 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 ICC 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 Gold Series II is a multiple touch button control station with "ENGAGE", and "RELEASE" touch buttons. NEMA4X/IP65 (wet and corrosion-resistant) rated polycarbonate enclosure. Overall dimensions 11-1/4 inches L x 7-1/2 inches W x 5-1/2 inches D (287 x 190 x 140 mm). Onboard diagnostics and communications feature a user-friendly LCD intelligent display and keypad with supervisory override features. STOP button cuts power to the restraint: should the arm be in mid-travel, it will lower to a hard stop via gravity.
5. Rated Capacity:
  - a. Welding procedure is compliant with A.W.S.D1.1 specifications. Unit provides restraining strength 32,000 lb (14,545 kg) and mounting force of 100,000 lb (45,454 kg).
6. Construction and Finish:
  - a. Vehicle restraint: Welded structural steel housing. Restraint arm is constructed of 1-1/2 inch (38 mm) thick solid steel and coloured safety yellow. The housing protects all components from damage from weather, dirt and debris. NEMA4 weather rated wand sensors, remote wall-mounted power pack location and cylinder vented to power pack reservoir protects from water damage. To resist corrosion and reduce maintenance, the unit is zinc plated, main hinge pin is made of stainless steel and cylinder rod has nitride coating.
  - b. Exterior LED Traffic Lights: Housing shall be one-piece, weatherproof constructed and made of ultra high molecular weight plastic. The lights shall be 4 inch (101 mm) diameter of red and green color. Overall body 5 inches W x 11-1/2 inch L x 1/2 inch D (127 x 292 x 13 mm) in size.
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. Accessories:
  - a. Six mounting bolts.
  - b. Manual override (to lower the restraining arm in the event of a power

- failure).
  - c. Vehicle restraint bypass (allows the control station and traffic lights to be manually operated if the restraint cannot be engaged).
  - d. Forty-five degree actuated arm lock, which increases service range.
  - e. Interlock control station with interlock sensor to advise when dock is parked.
  - f. 'STOP' button that permits the operator to halt the restraint in mid-motion should an unsafe condition arise.
  - g. 'Ice breaker' feature that breaks apart or dislodges obstructions that prevent the restraint arm from parking.
  - h. 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).
  - i. Audible touch buttons and keypad on the Blue Genius™ provide instant sound feedback to user input.
9. Optional Accessories:
- a. Self-contained power pack.
  - b. Extension plates to suit extended dock leveler pits and edge of dock levelers.
  - c. Arctic oil (temperature range of -57 to 150 degrees C).
  - d. Biodegradable oil (temperature range of -36 to 230 degrees C) in lieu of standard hydraulic oil

## 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