

## SECTION 11160



### LOADING DOCK EQUIPMENT

#### 1.1 SECTION INCLUDES

- A. Loading dock equipment of the following types:
  - 1. Control stations.

#### 1.2 RELATED SECTIONS

- A. Section 03100 (03 10 00) - Concrete Forms and Accessories: Placement of anchors into concrete.
- B. Section 03119 (03 11 19) - Insulating Concrete Forming.
- C. Section 03300 (03 30 00) - Cast-In-Place Concrete: Docks and pits.
- D. Section 05500 (05 50 00) - 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).
- B. Occupational Safety and Health Administration (OSHA):
  - 1. OSHA 1910.178(k)(1) – Materials Handling; Powered Industrial Trucks

#### 1.4 SUBMITTALS

- A. Section 01330 - Submittals Procedures: Procedures for submittals.
- B. Product Data: For each product specified. Indicate unit dimensions, method of anchorage, and details of construction. Indicate materials and finish, installation details, roughing-in measurements, 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. Dock Lifts: Conform to requirements of ANSI MH29.1.
- B. Dock Levelers: Conform to requirements of ANSI MH30.1.
- C. Vehicle Restraints: Conform to requirements of ANSI MH30.3.
- D. Manufacturer Qualifications:
  - 1. Specializing in manufacturing Products specified with 30 years' experience.
  - 2. Quality assurance improvement programs and ISO certified.
  - 3. Manufacturer must be associated with Loading Dock Equipment Manufacturers (LODEM) setting ANSI standards.
  - 4. Manufacturers welding procedure compliant with A.W.S.D1.1.
- E. 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](mailto: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 CONTROL STATIONS

- A. Blue Genius Connect Control Panel: As manufactured by BLUE GIANT.
  - 1. Type: Multiple touch-button control station.
  - 2. Standard Features:
    - a. Polycarbonate Enclosure: NEMA 4X / IP 65 resistant to both corrosion and washdown wet conditions.
    - b. Printed circuit board technology.
    - c. Microprocessor-based software control technology.
    - d. Touch control system with coded supervisory override.
    - e. Pluggable network connections, bidirectional communication.
    - f. Onboard diagnostics and self-testing.
    - g. High-Resolution full color 7-inch LCD display.
    - h. LED-based communication system Red/Green/Yellow icon-based interior lights on control.

- i. Audible alarm system for additional safety warnings.
    - j. Finger safeguard against risk of shock.
    - k. UL approved.
  - 3. Function: Controls a combination of dock equipment; dock leveler, vehicle restraint, overhead door, dock light/fan, and inflatable seal.
    - a. Software-Based Operating Sequence: to suit application requirements.
    - b. LED-based Communication System: interior control mounted icon-based LED lights (Red/Yellow/Green) for operator guidance.
    - c. Safety Devices: Include door interlock terminals, 24 VDC provided,
  - 4. Operating System: Control Panel is controlled via touch-buttons.
  - 5. Lights Communication System: LED screen with red/yellow/green lights mounted on control station and a set of exterior red/green traffic lights mounted on exterior wall, on driver's side of dock entrance. This system alerts both dock attendant and truck driver to current safety conditions.
  - 6. Power: \_\_ Phase \_\_ V, \_\_ Amps, \_\_ Hz. (select power feed)
    - a. 1PH 115V 50/60Hz, voltage range : 110-130V.
    - b. 1PH 220V 50/60Hz, voltage range : 208-240V.
    - c. 3PH 220V 50/60Hz, voltage range : 220-240V.
    - d. 3PH 415V 50/60Hz, voltage range : 400-480V.
    - e. 3PH 460V 50/60Hz, voltage range : 440-480V.
    - f. 3PH 575V 60Hz, voltage range : 575-600V.
  - 7. Overall Dimensions (LxWxD): 12.8 x 10.83 x 7.09 inches (275 x 325 x 180mm).
  - 8. 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.
  - 9. Warranty: Subject to standard limitations on liability. Consult manufacturer for full details on warranty information and product registration.
- B. Blue Genius Connect Plus Control Panel: As manufactured by BLUE GIANT.
- 1. Type: Multiple touch-button control station.
  - 2. Standard Features:
    - a. Polycarbonate Enclosure: NEMA 4X / IP 65 resistant to both corrosion and washdown wet conditions.
    - b. Printed circuit board technology.
    - c. Microprocessor-based software control technology.
    - d. Touch control system with coded supervisory override.
    - e. Pluggable network connections, bidirectional communication.
    - f. Onboard diagnostics and self-testing.
    - g. High-Resolution full color 7-inch LCD display.
    - h. LED-based communication system Red/Green/Yellow icon-based interior lights on control.
    - i. Integral power rotary disconnect, non-fused.
    - j. Step-down transformer for adaptable power requirements.
    - k. Audible alarm system for additional safety warnings
    - l. Finger safeguard against risk of shock.
    - m. UL approved.
  - 3. Function: Controls a combination of dock equipment; dock leveler, vehicle restraint, overhead door, dock light/fan, and inflatable seal.
    - a. Software-Based Operating Sequence: to suit application requirements.
    - b. LED-based Communication System: interior control mounted icon-based LED lights (Red/Yellow/Green) for operator guidance.
    - c. Safety Devices: Include door interlock terminals, 24 VDC provided,

4. Operating System: Control Panel is controlled via touch-buttons.
5. Lights Communication System: LED screen with red/yellow/green lights mounted on control station and a set of exterior red/green traffic lights mounted on exterior wall, on driver's side of dock entrance. This system alerts both dock attendant and truck driver to current safety conditions.
6. Power: \_\_\_ Phase \_\_\_ V, \_\_\_ Amps, \_\_\_ Hz. (select power feed)
  - a. 1PH 115V 50/60Hz, voltage range : 110-130V.
  - b. 1PH 220V 50/60Hz, voltage range : 208-240V.
  - c. 3PH 220V 50/60Hz, voltage range : 220-240V.
  - d. 3PH 415V 50/60Hz, voltage range : 400-480V.
  - e. 3PH 460V 50/60Hz, voltage range : 440-480V.
  - f. 3PH 575V 60Hz, voltage range : 575-600V.
7. Overall Dimensions (LxWxD): 19.69 x 15.75 x 7.87 inch (400 x 500 x 200 mm).
8. Exterior LED Traffic Lights: The 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
9. Warranty: Subject to standard limitations on liability. Consult manufacturer for full details on warranty information and product registration.
10. Integral power rotary disconnect (non-fused) for quick power shutoff during servicing.
11. Step-Down Transformer: for vehicle restraint, or dock light/fan, or inflatable seal if equipment voltage does not match the power.

## PART 3 EXECUTION

### 3.1 EXAMINATION

- A. Do not proceed with installation until substrates are properly prepared and deviations from manufacturer's recommended tolerances corrected. Commencement of the installation constitutes acceptance of conditions.
- B. Prepare substrates using the methods recommended by the manufacturer for achieving the best result for the substrate under the project conditions.
- C. If preparation is the responsibility of another installer, notify Architect, in writing, of deviations from manufacturer's recommended installation tolerances and conditions.
- D. Verification of Conditions: Verify that field measurements, surfaces, substrates, and conditions are as required, and ready to receive Work.

### 3.2 INSTALLATION

- A. Install products in prepared opening in accordance with manufacturer's instructions. Set square and level. Anchor unit securely, flush with dock. Weld back of dock leveler to pit frame. Touch-up welds with matching paint.
- B. Install dock bumpers in accordance with manufacturer's instructions.

### 3.3 ADJUSTING

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

END OF SECTION