



SECTION 11 13 00

LOADING DOCK EQUIPMENT
Display hidden notes to specifier.

PART 1 GENERAL

1.1 SECTION INCLUDES

- A. Dock Lifts equipment of the following types:
 - 1. Scissor Dock Lifts.

1.2 RELATED SECTIONS

- A. Section 03 11 19 - Insulating Concrete Forming.
- B. Section 03 30 00 - Cast-in-Place Concrete.
- C. Section 05 50 00 - Metal Fabrications.

1.3 REFERENCES

- A. American National Standards Institute (ANSI):
 - 1. ANSI MH29.1 - Industrial Scissor Lifts.

1.4 SUBMITTALS

- A. Section 01 33 26 - Source Quality Control Reporting.
- 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 Levelers: Conform to requirements of ANSI MH30.1.
- B. Manufacturer Qualifications:
 - 1. Manufacturer specializing in manufacturing Products specified with minimum 30 years' experience.
 - 2. Manufacturer to have quality assurance improvement programs and ISO certified.
 - 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 01 60 00 - Product Requirements.

2.2 DOCK LIFTS

- A. Scissor Dock Lifts: Stationary type LoMaster Series Model DL - Stationary Hydraulic as manufactured by BLUE GIANT.
 1. Type: Floor or pit installed, single scissor dock lift. Electro-hydraulic operated. Lift speed based on evenly distributed loads. Single axle rolling load capacity 80 percent across ends and 50 percent across sides. Other lowered heights available. A vertical travel of 59 in. (1499 mm). Other vertical travels available. Consult factory.
 2. DL5-60x96-10: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
 3. DL5-72x96-10: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
 4. DL5-84x96-10: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
 5. DL5-96x96-10: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
 6. DL5-60x108-12: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
 7. DL5-72x108-12: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
 8. DL5-84x108-12: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
 9. DL5-96x108-12: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
 10. DL5-60x120-12: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
 11. DL5-72x120-12: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
 12. DL5-84x120-12: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
 13. DL5-96x120-12: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
 14. DL5-60x144-12: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
 15. DL5-72x144-12: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
 16. DL5-84x144-12: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
 17. DL5-96x144-12: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
 18. DL6-60x96-10: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
 19. DL6-72x96-10: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
 20. DL6-84x96-10: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
 21. DL6-96x96-10: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
 22. DL6-60x108-12: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
 23. DL6-72x108-12: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
 24. DL6-84x108-12: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
 25. DL6-96x108-12: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
 26. DL6-60x120-12: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
 27. DL6-72x120-12: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
 28. DL6-84x120-12: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
 29. DL6-96x120-12: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
 30. DL6-60x144-12: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
 31. DL6-72x144-12: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.

32. DL6-84x144-12: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
33. DL6-96x144-12: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
34. DL8-60x96-12: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
35. DL8-72x96-12: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
36. DL8-84x96-12: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
37. DL8-96x96-12: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
38. DL8-60x108-12: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
39. DL8-72x108-12: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
40. DL8-84x108-12: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
41. DL8-96x108-12: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
42. DL8-60x120-12: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
43. DL8-72x120-12: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
44. DL8-84x120-12: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
45. DL8-96x120-12: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
46. DL8-60x144-12: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
47. DL8-72x144-12: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
48. DL8-84x144-12: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
49. DL8-96x144-12: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
50. DL10-60x96-14: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
51. DL10-72x96-14: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
52. DL10-84x96-14: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
53. DL10-96x96-14: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
54. DL10-60x108-14: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
55. DL10-72x108-14: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
56. DL10-84x108-14: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
57. DL10-96x108-14: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
58. DL10-60x120-14: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
59. DL10-72x120-14: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
60. DL10-84x120-14: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
61. DL10-96x120-14: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
62. DL10-60x144-14: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
63. DL10-72x144-14: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
64. DL10-84x144-14: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
65. DL10-96x144-14: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
66. DL12-60x96-14: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
67. DL12-72x96-14: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
68. DL12-84x96-14: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
69. DL12-96x96-14: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
70. DL12-60x108-14: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
71. DL12-72x108-14: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
72. DL12-84x108-14: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
73. DL12-96x108-14: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
74. DL12-60x120-14: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
75. DL12-72x120-14: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
76. DL12-84x120-14: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
77. DL12-96x120-14: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
78. DL12-60x144-14: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
79. DL12-72x144-14: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
80. DL12-84x144-14: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
81. DL12-96x144-14: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
82. DL15-60x96-14: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
83. DL15-72x96-14: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
84. DL15-84x96-14: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
85. DL15-96x96-14: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
86. DL15-60x108-21: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
87. DL15-72x108-21: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
88. DL15-84x108-21: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
89. DL15-96x108-21: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
90. DL15-60x120-21: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
91. DL15-72x120-21: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
92. DL15-84x120-21: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.

93. DL15-96x120-21: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
94. DL15-60x144-21: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
95. DL15-72x144-21: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
96. DL15-84x144-21: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
97. DL15-96x144-21: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
98. DL20-60x96-21: Deck Size - 60 in. (1524 mm) W by 96 in. (2438 mm) L.
99. DL20-72x96-21: Deck Size - 72 in. (1829 mm) W by 96 in. (2438 mm) L.
100. DL20-84x96-21: Deck Size - 84 in. (2134 mm) W by 96 in. (2438 mm) L.
101. DL20-96x96-21: Deck Size - 96 in. (2438 mm) W by 96 in. (2438 mm) L.
102. DL20-60x108-21: Deck Size - 60 in. (1524 mm) W by 108 in. (2743 mm) L.
103. DL20-72x108-21: Deck Size - 72 in. (1829 mm) W by 108 in. (2743 mm) L.
104. DL20-84x108-21: Deck Size - 84 in. (2134 mm) W by 108 in. (2743 mm) L.
105. DL20-96x108-21: Deck Size - 96 in. (2438 mm) W by 108 in. (2743 mm) L.
106. DL20-60x120-21: Deck Size - 60 in. (1524 mm) W by 120 in. (3048 mm) L.
107. DL20-72x120-21: Deck Size - 72 in. (1829 mm) W by 120 in. (3048 mm) L.
108. DL20-84x120-21: Deck Size - 84 in. (2134 mm) W by 120 in. (3048 mm) L.
109. DL20-96x120-21: Deck Size - 96 in. (2438 mm) W by 120 in. (3048 mm) L.
110. DL20-60x144-21: Deck Size - 60 in. (1524 mm) W by 144 in. (3658 mm) L.
111. DL20-72x144-21: Deck Size - 72 in. (1829 mm) W by 144 in. (3658 mm) L.
112. DL20-84x144-21: Deck Size - 84 in. (2134 mm) W by 144 in. (3658 mm) L.
113. DL20-96x144-21: Deck Size - 96 in. (2438 mm) W by 144 in. (3658 mm) L.
114. Function:
 - a. Lowered Height: _____.
 - b. Vertical Travel: Standard available 59 inch (1499 mm).
 - c. Travel Speed: As indicated by model number. Lowering speed is factory preset for safe lowering with rated load. Up travel limit switch.
115. Operation:
 - a. Power Unit: Remote 5HP (up to 12,000 lb. (5443 kg) capacity models) or 7-1-2 HP (15,000 to 20,000 lb. (6804 to 9072 kg) capacity models) power pack on 12 feet (3,657 mm) hydraulic hose. Includes all major components, motor, high-pressure gear pump, manifold, oil filters and oil reservoir. Power unit includes a pressure relief valve, load holding check valve, fixed pressure compensated flow control valve and poppet-type lowering solenoid valve. Oil filter located in the valve manifold (oil reservoir).
 - b. Remote push-button control station: Remote on 12 feet (3,657 mm) electrical cord. NEMA4 rated dual button control station, constant pressure type, complete with 'UP' and 'DOWN' buttons, 2-1-4 in. W by 4 in. H by 2-1-2 in. D (57 mm by 102 mm by 64 mm) in size. Controller includes a three pole magnetic motor starter with adjustable overload and a fuse protected 24VAC control transformer. Terminals provided for incoming power connection. Controller components are installed in NEMA12 rated enclosure, pre-wired and dielectric tested.
116. Construction:
 - a. Platform: Fabricated of heavy non-skid high tensile steel checker plate and reinforced with steel beams for maximum strength and rigidity. Platform sides have 8 inch (203 mm) beveled toe guard protection.
 - b. Hinged Bridge: Standard lip is piano-hinge type on deck side, 18 in. long by 60 in. wide (457 mm by 1,524 mm), while lip edge is beveled. Lip is fabricated of non-skid high tensile steel checker plate. Plated lifting chain is provided.
 - c. Removable Guard rails: Steel square tube 1.5 in. (38 mm) construction, 42 in. (1,067 mm) high, with mid-rail and 4 in. (102 mm) high kick plate. Guard rail sockets are flush with platform surface. Dual chains are provided at both open ends between the rails.
 - d. Scissor Mechanism: Legs are fabricated from solid steel sections.
 - e. Cylinders: Minimum two piston type hydraulic cylinders. Rods constructed of hard-chrome steel and include: self-adjusting polyurethane seals, positive internal stops, and fitted with vent lines. Hydraulic velocity fuse "fall safe" to prevent platform free fall is attached to each cylinder.
 - f. Bearings: All pivot points fitted with permanently lubricated Teflon impregnated bushings. Pivot pins made of hard-chrome plated steel.
117. Rated Capacity:
 - a. Welding procedure compliant with A.W.S.D1.1 specifications. All units are constructed in compliance with ANSI MH29.1-1994. UL approved electrical components. All units are rated for evenly distributed loads. Single axle rolling load capacities are 80 percent across the ends and 50 percent across the sides.
118. Power: __ V, __ Amps, __ Phase.

- a. Motors: 1 HP rated at 110-120V, 60 Hz, single phase.
 - b. Motors: 1 HP rated at 208-240V, 60 Hz, single phase.
 - c. Motors: 1 HP rated at 208-240V, 60 Hz, three phase.
 - d. Motors: 1 HP rated at 440-480V, 60 Hz, three phase.
 - e. Motors: 1 HP rated at 575V, 60 Hz, three phase.
 - f. Motors: 3 HP rated at 380-415V, 50 Hz, three phase.
 - g. Motors: 3 HP rated at 110-120V, 60 Hz, single phase.
 - h. Motors: 3 HP rated at 208-240V, 60 Hz, single phase.
 - i. Motors: 3 HP rated at 208-240V, 60 Hz, three phase.
 - j. Motors: 3 HP rated at 440-480V, 60 Hz, three phase.
 - k. Motors: 3 HP rated at 575V, 60 Hz, three phase.
 - l. Motors: 3 HP rated at 380-415V, 50 Hz, three phase.
 - m. Motors: 5 HP rated at 110-120V, 60 Hz, single phase.
 - n. Motors: 5 HP rated at 208-240V, 60 Hz, single phase.
 - o. Motors: 5 HP rated at 208-240V, 60 Hz, three phase.
 - p. Motors: 5 HP rated at 440-480V, 60 Hz, three phase.
 - q. Motors: 5 HP rated at 575V, 60 Hz, three phase.
 - r. Motors: 5 HP rated at 380-415V, 50 Hz, three phase.
 - s. Motors: 7.5 HP rated at 110-120V, 60 Hz, single phase.
 - t. Motors: 7.5 HP rated at 208-240V, 60 Hz, single phase.
 - u. Motors: 7.5 HP rated at 208-240V, 60 Hz, three phase.
 - v. Motors: 7.5 HP rated at 440-480V, 60 Hz, three phase.
 - w. Motors: 7.5 HP rated at 575V, 60 Hz, three phase.
 - x. Motors: 7.5 HP rated at 380-415V, 50 Hz, three phase.
 - y. Motors: 10 HP rated at 110-120V, 60 Hz, single phase.
 - z. Motors: 10 HP rated at 208-240V, 60 Hz, single phase.
 - aa. Motors: 10 HP rated at 208-240V, 60 Hz, three phase.
 - bb. Motors: 10 HP rated at 440-480V, 60 Hz, three phase.
 - cc. Motors: 10 HP rated at 575V, 60 Hz, three phase.
 - dd. Motors: 10 HP rated at 380-415V, 50 Hz, three phase.
 - ee. Motors: Provide motors for unique applications, consult (option).
119. Lift Times Selection: __ Seconds, __ GPM, __ HP. Lift time (in seconds) is determined by the pump rate (in Gallons per Minute or GPM) and the power (in Horsepower or HP) ratings of the motor when compared to the dock lift size (in inches) and capacity (in pounds).
- a. 1.9 GPM
 - 1) Deck - 96 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 52 sec., Motor: 3 HP.
 - 2) Deck - 96 in. L, Capacity: 8,000, 10,000, 12,000, 15,000, 20,000 lbs, Lift time: 114 sec., Motor: 3 HP.
 - 3) Deck - 108 in. L, Capacity: 5,000 lbs, Lift time: 57 sec., Motor: 3 HP.
 - 4) Deck - 108 in. L, Capacity: 6,000, 8,000, 10,000, 12,000 lbs, Lift time: 114 sec., Motor: 3 HP.
 - 5) Deck - 108 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 165 sec., Motor: 3 HP.
 - 6) Deck - 120 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 83 sec., Motor: 3 HP.
 - 7) Deck - 120 in. L, Capacity: 8,000, 10,000, 12,000 lbs, Lift time: 127 sec., Motor: 3 HP.
 - 8) Deck - 120 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 165 sec., Motor: 3 HP.
 - 9) Deck - 144 in. L, Capacity: 5,000 lbs, Lift time: 93 sec., Motor: 3 HP.
 - 10) Deck - 144 in. L, Capacity: 6,000, 8,000, 10,000, 12,000, 15,000, 20,000 lbs, Lift time: 186 sec., Motor: 3 HP.
 - b. 3.8 GPM
 - 1) Deck - 96 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 26 sec., Motor: 5 HP
 - 2) Deck - 96 in. L, Capacity: 8,000, 10,000, 12,000, 15,000, 20,000 lbs, Lift time: 57 sec., Motor: 5 HP
 - 3) Deck - 108 in. L, Capacity: 5,000 lbs, Lift time: 29 sec., Motor: 5 HP
 - 4) Deck - 108 in. L, Capacity: 6,000, 8,000, 10,000, 12,000 lbs, Lift time: 57 sec., Motor: 5 HP
 - 5) Deck - 108 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 83 sec., Motor: 5 HP
 - 6) Deck - 120 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 42 sec., Motor: 5 HP
 - 7) Deck - 120 in. L, Capacity: 8,000, 10,000, 12,000 lbs, Lift time: 64 sec., Motor: 5 HP
 - 8) Deck - 120 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 83 sec., Motor: 5 HP
 - 9) Deck - 144 in. L, Capacity: 5,000 lbs, Lift time: 47 sec., Motor: 5 HP
 - 10) Deck - 144 in. L, Capacity: 6,000, 8,000, 10,000, 12,000, 15,000, 20,000 lbs, Lift time: 93

- sec., Motor: 5 HP
- c. 5 GPM
- 1) Deck - 96 in. L, Capacity: 8,000 lbs, Lift time: 43 sec., Motor: 5 HP.
 - 2) Deck - 96 in. L, Capacity: 20,000 lbs, Lift time: 43 sec., Motor: 5 HP.
 - 3) Deck - 108 in. L, Capacity: 6,000, 8,000 lbs, Lift time: 40 sec., Motor: 5 HP.
 - 4) Deck - 108 in. L, Capacity: 15,000, 20,000 lbs Lift time: 63 sec., Motor: 5 HP.
 - 5) Deck - 120 in. L, Capacity: 8,000, lbs, Lift time: 48 sec., Motor: 5 HP.
 - 6) Deck - 120 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 63 sec., Motor: 5 HP.
 - 7) Deck - 144 in. L, Capacity: 6,000, 8,000 lbs, Lift time: 71 sec., Motor: 5 HP.
 - 8) Deck - 144 in. L, Capacity: 10,000, 12,000 lbs, Lift time: 71 sec., Motor: 5 HP.
 - 9) Deck - 144 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 71 sec., Motor: 5 HP.
 - 10) Deck - 96 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 20 sec., Motor: 7.5 HP.
 - 11) Deck - 96 in. L, Capacity: 10,000 lbs, Lift time: 43 sec., Motor: 7.5 HP.
 - 12) Deck - 96 in. L, Capacity: 12,000, 15,000 lbs, Lift time: 43 sec., Motor: 7.5 HP.
 - 13) Deck - 108 in. L, Capacity: 5,000 lbs, Lift time: 22 sec., Motor: 7.5 HP.
 - 14) Deck - 108 in. L, Capacity: 10,000, 12,000 lbs, Lift time: 43 sec., Motor: 7.5 HP.
 - 15) Deck - 120 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 32 sec., Motor: 7.5 HP.
 - 16) Deck - 120 in. L, Capacity: 10,000, 12,000 lbs, Lift time: 48 sec., Motor: 7.5 HP.
 - 17) Deck - 144 in. L, Capacity: 5,000 lbs, Lift time: 36 sec., Motor: 7.5 HP.
- d. 7.3 GPM
- 1) Deck - 96 in. L, Capacity: 8,000, 20,000 lbs, Lift time: 30 sec., Motor: 7.5 HP.
 - 2) Deck - 108 in. L, Capacity: 6,000, 8,000 lbs, Lift time: 30 sec., Motor: 7.5 HP.
 - 3) Deck - 108 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 43 sec., Motor: 7.5 HP.
 - 4) Deck - 120 in. L, Capacity: 8,000 lbs, Lift time: 33 sec., Motor: 7.5 HP.
 - 5) Deck - 120 in. L, Capacity: 15,000, 20,000 lbs, Lift time: 43 sec., Motor: 7.5 HP.
 - 6) Deck - 144 in. L, Capacity: 6,000, 8,000 lbs, Lift time: 49 sec., Motor: 7.5 HP.
 - 7) Deck - 144 in. L, Capacity: 10,000, 12,000, 15,000, 20,000 lbs, Lift time: 49 sec., Motor: 7.5 HP.
 - 8) Deck - 96 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 14 sec., Motor: 10 HP.
 - 9) Deck - 96 in. L, Capacity: 10,000, 12,000, 15,000 lbs, Lift time: 30 sec., Motor: 10 HP.
 - 10) Deck - 108 in. L, Capacity: 5,000 lbs, Lift time: 15 sec., Motor: 10 HP.
 - 11) Deck - 108 in. L, Capacity: 10,000, 12,000 lbs, Lift time: 30 sec., Motor: 10 HP.
 - 12) Deck - 120 in. L, Capacity: 5,000, 6,000 lbs, Lift time: 22 sec., Motor: 10 HP.
 - 13) Deck - 120 in. L, Capacity: 10,000, 12,000 lbs, Lift time: 33 sec., Motor: 10 HP.
 - 14) Deck - 144 in. L, Capacity: 5,000 lbs, Lift time: 25 sec., Motor: 10 HP.
120. Safety Devices:
- a. Built-in, maintenance strut attached to frame.
 - b. Safety velocity fuses on each cylinder.
 - c. Tapered toe guard protection and safety striping.
 - d. Warning labels.
 - e. Bolted guard rails and safety chains.
121. Finish and Color:
- a. Powder Coated and bake cure, resistant to chemicals, corrosion, and incorporates UV inhibitors to reduce fading of colors (standard).
 - b. Deck, lip, frame, scissor legs, guard rails powder coated blue or color as specified.
 - c. Guard rails powder coated safety yellow as specified by ANSI Z535.1. High visibility OSHA safety striping on stationary side toe guards.
 - a. Remainder of unit zinc enriched powder (option).
 - b. Remainder of unit non-slip grit on deck, lip (option).
 - c. Remainder of unit galvanized coated (option).
122. Warranty: Warranties are subject to standard limitations on liability. Consult manufacturer for full details on warranty information and product registration.
123. Custom lip size and configuration.
124. Spring assisted lips for ease of handling on heavier capacity.
125. Aluminum lips.
126. Hydraulically actuated lip.
127. Electric trip bars (to stop unit in case of down travel obstruction).
128. Accordion safety skirting.
129. 3 HP remote power packs.
130. 10HP remote power packs.
131. Mechanical roll-off barrier.

132. Warning bell (to indicate lift in motion).
133. Warning horn with adjustable volume control mounted on power unit (to indicate lift in motion).
134. Flashing amber warning beacon mounted on power pack (to indicate lift in motion).
135. Return line oil filter.