



# ABX Series

Cushion Tire Electric Lift Trucks • 3,000-3,500 lbs. Capacity

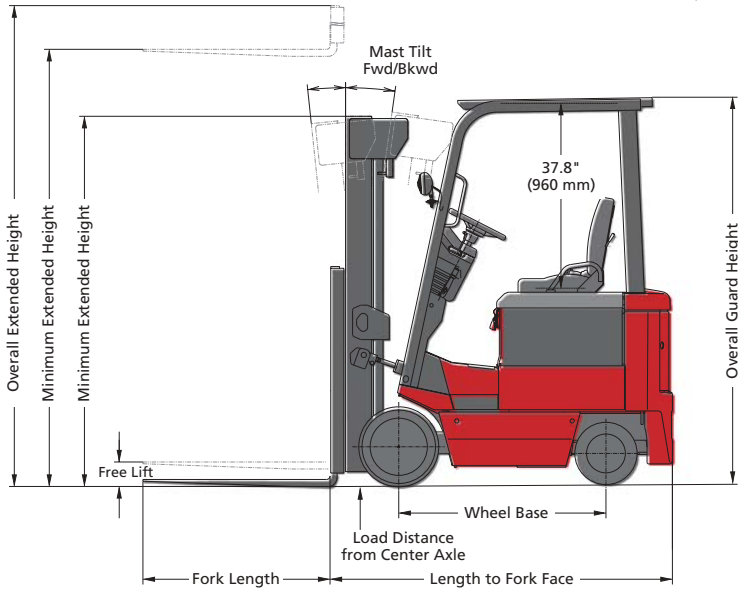
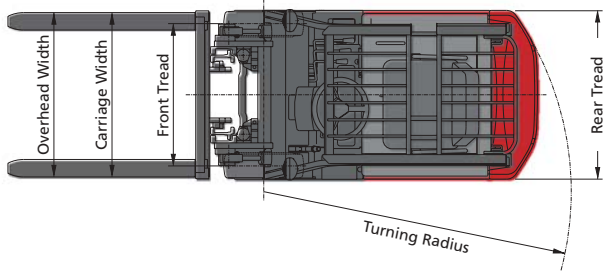


| GENERAL  |                       | 300CBS                               | 350CBS                               |
|--|-----------------------|--------------------------------------|--------------------------------------|
| Capacity @ 24-in. (600 mm) Load Center             | lbs. (kg)             | 3,000 (1,360)                        | 3,500 (1,570)                        |
| Height to Overhead Guard                           | in. (mm)              | 86.5 (2,200)                         | 86.5 (2,200)                         |
| Tilting Angle, 2-Stage Masts (fwd./back)           | Degrees (°)           | 6 / 8                                | 6 / 8                                |
| Tilting Angle, 3-Stage Masts (fwd./back)           | Degrees (°)           | 6 / 6                                | 6 / 6                                |
| Carriage Width (ITA class II)                      | in. (mm)              | 37 (940)/II                          | 37 (940)/II                          |
| Ground Clearance under Mast                        | in. (mm)              | 3.5 (90)                             | 3.5 (90)                             |
| Ground Clearance Center of Frame                   | in. (mm)              | 3.9 (100)                            | 3.9 (100)                            |
| Steering Type                                      |                       | Hydraulic                            | Hydraulic                            |
| Maximum Hydraulic Pressure                         | psi (bar)             | 2500 (172)                           | 2500 (172)                           |
| Hydraulic Tank Capacity                            | U.S. gallons (liters) | 6.6 (25)                             | 6.6 (25)                             |
| SCR Controller                                     |                       | GE EV100LXT                          | GE EV100 LXT                         |
| Load Distance from Center Axle (2-stage)           | in. (mm)              | 15.1 (385)                           | 15.1 (385)                           |
| Load Distance from Center Axle (3-stage)           | in. (mm)              | 15.3 (390)                           | 15.3 (390)                           |
| SIZE SPECIFICATIONS                                |                       |                                      |                                      |
| Battery Compartment Size (W-L-H)                   | in. (mm)              | 27.0 x 36.2 x 24.2 (685 x 920 x 615) | 27.0 x 36.2 x 24.2 (685 x 920 x 615) |
| Wheel Base   | in. (mm)              | 46.7 (1,185)                         | 46.7 (1,185)                         |
| Length to Face of Forks (2-stage) [L]              | in. (mm)              | 74.7 (1,900)                         | 76.7 (1,950)                         |
| Length to Face of Forks (3-stage) [R]              | in. (mm)              | 74.6 (1,895)                         | 76.6 (1,945)                         |
| Overall Width                                      | in. (mm)              | 38.0 (965)                           | 38.0 (965)                           |
| Forks, Thickness                                   | in. (mm)              | 1.6 (40)                             | 1.6 (40)                             |
| Forks, Width                                       | in. (mm)              | 3.9 (100)                            | 3.9 (100)                            |
| Forks, Length                                      | in. (mm)              | 42.1 (1,070)                         | 42.1 (1,070)                         |
| Tread (center of tires), Front/Rear                | in. (mm)              | 32.1 / 32.1 (815 / 815)              | 32.1 / 32.1 (815 / 815)              |
| Outside Turning Radius [OTR]                       | in. (mm)              | 65.0 (1,650)                         | 66.9 (1,700)                         |
| Right Angle Stacking Aisle (2-stage) + Load Length | in. (mm)              | 80.1 (2,035)                         | 82.0 (2,085)                         |
| Right Angle Stacking Aisle (3-stage) + Load Length | in. (mm)              | 80.0 (2,030)                         | 81.9 (2,080)                         |
| Minimum Battery Weight                             | lbs. (kg)             | 1940 (880)                           | 1940 (880)                           |
| Maximum Battery Weight                             | lbs. (kg)             | 2490 (1,130)                         | 2490 (1,130)                         |
| Service Weight, including Minimum Weight Battery   | lbs. (kg)             | 6850 (3,105)                         | 7360 (3,340)                         |
| Tire Size, Front                                   | in.                   | 18 x 6 x 12.12                       | 18 x 6 x 12.12                       |
| Tire Size, Rear                                    | in.                   | 14 x 4.5 x 8                         | 14 x 4.5 x 8                         |
| PERFORMANCE - 36 VOLT                              |                       |                                      |                                      |
| Maximum Travel Speed, Forward, Loaded              | mph (km/h)            | 7.5 (12.0)                           | 7.1 (11.5)                           |
| Maximum Travel Speed, Forward, Unloaded            | mph (km/h)            | 8.1 (13.0)                           | 7.8 (12.5)                           |
| Lifting Speeds, Loaded/Unloaded (2-stage)          | fpm (mm/s)            | 65 / 108 (330 / 550)                 | 61 / 108 (310 / 550)                 |
| Lifting Speeds, Loaded/Unloaded (3-stage)          | fpm (mm/s)            | 59 / 89 (300 / 450)                  | 55 / 89 (280 / 450)                  |
| Lowering Speed, Loaded/Unloaded (2-stage)          | fpm (mm/s)            | 98 / 89 (500 / 450)                  | 98 / 89 (500 / 450)                  |
| Lowering Speed, Loaded/Unloaded (3-stage)          | fpm (mm/s)            | 96 / 75 (490 / 380)                  | 96 / 75 (490 / 380)                  |
| Maximum Drawbar Pull                               | lbs. (N)              | 1,540 (6900)                         | 1,540 (6900)                         |
| Gradeability, Loaded/Unloaded                      | percent (%)           | 20 / 20                              | 17/18                                |
| Drive Motor, 1-Hour Rating                         | HP (kW)               | 11.4 (8.5)                           | 11.4 (8.5)                           |
| Pump Motor, 5-Minute Rating                        | HP (kW)               | 10.6 (7.9)                           | 10.6 (7.9)                           |
| Power Steering Motor, 1-Hour Rating                | HP (kW)               | .60 (0.45)                           | .60 (0.45)                           |
| Minimum Battery Capacity                           | Ah/6 hr. rate         | 680                                  | 680                                  |
| Maximum Battery Capacity                           | Ah/6 hr. rate         | 990                                  | 990                                  |
| PERFORMANCE - 48 VOLT                              |                       |                                      |                                      |
| Maximum Travel Speed, Forward, Loaded              | mph (km/h)            | 9.0 (14.5)                           | 8.7 (14.0)                           |
| Maximum Travel Speed, Forward, Unloaded            | mph (km/h)            | 9.9 (16.0)                           | 9.6 (15.5)                           |
| Lifting Speeds, Loaded/Unloaded (2-stage)          | fpm (mm/s)            | 89 / 138 (450 / 700)                 | 85 / 138 (430 / 700)                 |
| Lifting Speeds, Loaded/Unloaded (3-stage)          | fpm (mm/s)            | 79 / 114 (400 / 580)                 | 77 / 114 (390 / 580)                 |
| Lowering Speed, Loaded/Unloaded (2-stage)          | fpm (mm/s)            | 98 / 89 (500 / 450)                  | 98 / 89 (500 / 450)                  |
| Lowering Speed, Loaded/Unloaded (3-stage)          | fpm (mm/s)            | 96 / 75 (490 / 380)                  | 96 / 75 (490 / 380)                  |
| Maximum Drawbar Pull                               | lbs. (N)              | 1,540 (6900)                         | 1,540 (6900)                         |
| Gradeability, Loaded/Unloaded                      | percent (%)           | 24 / 20                              | 22/18                                |
| Drive Motor, 1-Hour Rating                         | HP (kW)               | 15.9 (11.9)                          | 15.9 (11.9)                          |
| Pump Motor, 5-Minute Rating                        | HP (kW)               | 13.1 (9.8)                           | 13.1 (9.8)                           |
| Power Steering Motor, 1-Hour Rating                | HP (kW)               | .60 (0.45)                           | .60 (0.45)                           |
| Minimum Battery Capacity                           | Ah/6 hr. rate         | 525                                  | 525                                  |
| Minimum Battery Capacity                           | Ah/6 hr. rate         | 770                                  | 770                                  |

NOTE: Most values shown in this publication are rounded. Therefore, direct conversion between metric and English or Imperial may be slightly different from those shown. The performance of machines is affected by the condition of the vehicle and how it is equipped as well as the nature and condition of the operating area. If these specifications are critical or if your needs exceed the specifications shown here, discuss the proposed application with your authorized Tusk dealer.

## Mast Data

CALL YOUR LOCAL TUSK DEALER FOR MAST & ATTACHMENT OPTIONS.



## Tusk, The Smart Buy...

### SPECIAL FEATURES

- Powerful 11.5" drive motor for top level performance and low maintenance
- Low and wide side steps for easier on and off
- Convenient hinged side access cover provides fast access to power steering and hydraulic motors and pumps
- Steer axle supported in two large rubber mounts for smoother ride and road shock absorption
- Easy opening, all steel, swing up battery cover
- Overhead with full lattice top design and angled front cross member offers exceptional upward view for the operator
- Time tested, user proven, reliable, easy to service, GE SCR drive motor controller

**...our commitment to focusing energies and resources around building an internal support system capable of allowing our dealers and customers a hassle-free environment in which to grow their businesses. In addition, Tusk will continue to produce high quality, state-of-the-art products delivered on time and at competitive industry pricing.**

### STANDARD EQUIPMENT

- GE EV-100 LXT SCR drive motor controller
- Regenerative braking
- Tilt steering column
- Overhead guard (ANSI)
- Full hydraulic power steering (FHPS)
- Load backrest
- Battery and operator restraint systems
- Headlights – OHG mounted
- 3-way valve
- Battery discharge indicator
- Lift Interrupt

### OPTIONAL EQUIPMENT

- Strobe lights
- Rear, stop and tail lamps
- Back-up alarm
- Internal hydraulic hosing
- 4-way hydraulic valve
- 10° fwd/6° back (bottler tilt)
- Side shift carriage
- Forks to 72" length
- UL-EE rating
- Sealed motors
- Battery slide system
- Semi-suspension seat
- Drive-in rack overhead guard
- Cold storage/freezer protection

## Technical Descriptions

### MOTORS

General Electric, series-wound, drip proof, fan cooled, Class H insulation, sealed ball bearings on both ends of armature shaft.

Drive Motors: One hour rated  
36V, 8.5kw x 11.4hp; 48V, 11.9kw x 13.1hp

Pump Motors: Five minutes rated  
36V, 7.9kw x 10.8hp; 48V, 9.8kw x 13.1hp

Power Steering Motor: Permanent magnet type with class F insulation.

### ELECTRICAL SYSTEM

GE Model EV-100 LXT controller is available in 36 or 48 volt. Features include anti-roll back, static return to off, thermal protection, low voltage protection, regenerative braking, steer pump time delay, and pulse monitor trip (PMT) for maximum operator safety. Onboard diagnostics feature Stored Status Code for fault recall. The digital display mounted on tilting steering console includes battery discharge indicator with lift interrupt, hour meter, operation error code, and parking brake warning light.

### DRIVE AXLE

Cast steel drive axle housing supports weight of truck and load. Drive motor power is transferred through integral hypoid gears to a single reduction four pinion differential. High-tensile alloy-steel, full floating drive shafts transmit torque without bearing weight.

### BRAKES

Self-energizing and self-adjusting shoe-type hydraulic brakes with high friction bonded non-asbestos linings. Serviceability of brakes is facilitated by drive hub design and accessibility of drive axle cap screws and bearing nut. Hand parking brake applies service brake, warning horn alerts operator to apply parking brake when dismounting.

### FRAME

All-welded, box-type frame with integral hydraulic reservoir 6.6 gallon capacity, designed for maximum strength and accessibility of components.

### MASTS

For good visibility open mast designs are available in 2-stage limited, 2-stage full free lift, and 3-stage full free lift. They feature four roller carriages with sealed-for-life bearings. Optional single and double auxiliary hose lines are mounted internally to mast assemblies for maximum protection and visibility.

### OPERATOR'S COMPARTMENT

Large heavy-duty, vinyl covered seat with hip restraint and retractable seat belt provides lasting comfort to carry the operator through a long, productive day. 6-inch fore and aft adjustment of seat and tilting steering console provide additional comfort. Low, wide, open step on both sides of walk-through compartment provide safe access or egress.

Full instrumentation is always at operator's full view on the tilting console which includes the digital display, key switch, headlight switch and forward/reverse directional lever. Parking brake and hydraulic control levers are within easy reach. Seat support assembly incorporates a positive battery restraint. Overhead guard provides excellent visibility, meets current government standards and includes a right-hand slot for battery removal.

### POWER STEERING

Hydrostatic power steering standard. Vinyl-covered steering wheel for comfortable handling. Articulated steer axle, trunnion mounted in heavy rubber mounts provides comfortable ride. Lubrication fittings at king pins and rod connection points. Double-acting and double-ended power steering cylinder mounted integral to the axle eliminates drag links and tie rods. King pins are mounted with caged needle bearings and steel ball thrust bearing. Power steering pump and motor as well as lift pump and motor are accessible through a drop-down panel on side of truck.

### HYDRAULIC SYSTEM

Rebuildable gear-driven, high-capacity pump mounted to powerful motor provides the operator complete control for either high-speed or delicate lifting requirements. Three-spool valve standard. Fully filtered system includes suction strainer, return line filter and breather cap filter.

### SERVICEABILITY

To help ease the burden of regular maintenance, the battery hood opens to the rear and the pump motor slides out. Both of these arrangements allow easy access to both the battery and the pump motor to make inspection of both components smoother while providing ease in replacement of battery.

### ADDITIONAL FEATURES

*Hand Controls:* Hydraulic function handles are equipped with contoured grips with international symbols for function identification.

*Uncluttered Floor:* Use of one-brake pedal as well as installing the tilt cylinder bracket underneath the floor plates frees floor space to comfortably accommodate operator's legs. Brake pedals are covered with no-slip rubber and floor-mounted for maximum ease of operation.

*Low Noise:* Rubber mounted control valves and high-torque/low RPM motor suppresses vibration while the hydraulic piping is specially designed to conduct fluid more smoothly with less noise. Extra oil is guided through a bypass circuit to the reservoir, which prevents unnecessary load exertion upon hydraulic components and eliminates fluid noise when passing relief valves.

### COMPLIANCE & APPROVALS

Meets or exceeds American National Standards Institute, ASME # B56.1 – Part III Safety Standards for Powered Industrial Trucks. Classified by Underwriter's Laboratories, Inc. as to fire and electric shock hazard only; Type ES Industrial Trucks.



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