

# UNICARRIERS® [ FORKLIFT ]

## Electric Tow Tractor

24 Volt AC-Powered  
10,000 lbs. Rolling Load Capacity



# TGX(E) Series SPECIFICATIONS

### MAIN TRUCK SPECIFICATIONS

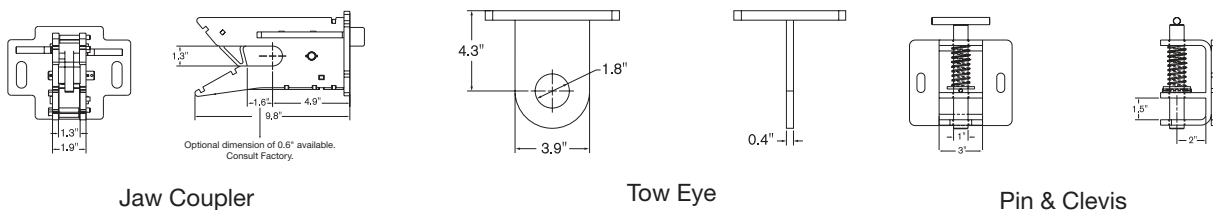
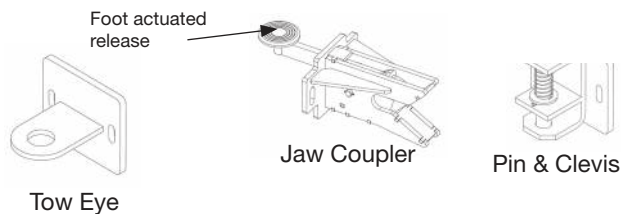
CHARACTERISTICS	1 Manufacturer's Name			UniCarriers	UniCarriers	
	2 Model		Model designation	TGX20B	TGXE20B	
	3		Long model code	TGXT2W4G20BV	TGXE2W4G20V	
CHARACTERISTICS	4	Rolling Load Capacity	lb (kg)	10,000 (4535)	10,000 (4535)	
	5	Power Type	Electric	24v	24v	
	6	Operator Type	Stand-up	Walkie / Rider	Walkie / Rider	
	7	Tire Type	Drive tire	Solid Rubber	Solid Rubber	
	8		Trail wheels	Poly	Poly	
	9	Wheels	Drive / trail	(x=driven) 1x / 2	1x / 2	
	DIMENSIONS	10	Overall Dimensions	Width	in (mm) 35.1 (890)	35.1 (890)
		11		Length (less coupler)	in (mm) 52.8 (1340)	52.8 (1340)
		12		Height - to top of steer head	in (mm) 55.7 (1415)	55.7 (1415)
13		Wheelbase	in (mm) 32.7 (830)	32.7 (830)		
14		Front Overhang	in (mm) 8.25 (210)	8.25 (210)		
15		Grade Clearance	Under chassis	% 31	31	
16		Turning Radius	Minimum outside	in (mm) 41.0 (1040)	41.0 (1040)	
17			Including handle (at 90°)	in (mm) 46.3 (1175)	41.0 (1040)	
18		Tires / Wheels	Drive tire - diameter x width	in (mm) 10 x 4 (255 x 100)	10 x 4 (255 x 100)	
19			Trail wheels - diameter x width	in (mm) 7 x 3 (180 x 75)	7 x 3 (180 x 75)	
SPEED	20	Truck weight	No load, without battery	lbs (kg) 1195 (545)	1270 (580)	
	21	Speed - Travel	No load	mph (kph) 9.1 (14.6)	9.1 (14.6)	
	22		Full load	mph (kph) 5.6 (9.0)	5.6 (9.0)	
	23	Drawbar Pull	Normal	lb (N) 225 (1000)	225 (1000)	
BATTERY	24		Maximum	lb (N) 710 (3158)	710 (3220)	
	25	Compartment Size*	Length x Width x Height	in (mm) 33.3 x 13.5 x 31.6 (850 x 345 x 805)	33.3 x 13.5 x 31.6 (850 x 345 x 805)	
	26	Amp Hr Capacity	Max (6-hr)	Ah 840	840	
	27	Weight	Min / Max	lb (kg) 855 / 1500 (390 / 680)	855 / 1500 (390 / 680)	
	28	Lead Length	Position "B"	in (mm) 20 (508)	20 (508)	
	29	Connector	type	SB-175 Red	SB-175 Red	
	30	Battery Roller (Option)	Height from floor (forks lowered)	in (mm) 7.05 (180)	7.05 (180)	

\*Battery compartment size with optional rollers and side gates: 30.9 x 13.5 x 31.6 (785 x 345 x 805)

### ADJUSTABLE COUPLER PLATES

Coupler plate allows each type of coupler to be adjustable in 1" increments

Type		Coupler Heights	
		Minimum	Maximum
Jaw Coupler	in (mm)	9.0 (228)	14.9 (380)
Tow Eye	in (mm)	9.3 (236)	15.3 (387)
Pin & Clevis	in (mm)	7.3 (186)	13.3 (337)



## STANDARD EQUIPMENT- TGX and TGXE

- 24-volt AC drive motor
- DC pump motor
- Electronic motor controller system with AC inverter
- Digital CAN-bus communications
- Cold storage conditioning (to -20°F / -28°C)
- Programmable performance parameters (requires service handset)
- Four position adjustable steer head with rotary travel speed and directional controls <sup>2</sup>
- Fingertip control of horn buttons
- Low profile operator platform with cushioned mat
- Electric horn
- Multi-function digital indicator
  - Battery discharge indicator with lift interrupt
  - Hour meter gauge
  - Fault code display
- On/off key switch
- SB-175 red battery connector
- Rubber drive tire (10" x 4") with string guard
- Heavy-duty, poly trail wheels (7" x 3") with string guards
- Heavy-duty automatic jaw coupler with foot operated release
- Regenerative braking
- Spring applied/electronically released brake system
- Sealed switches and controller for wet, cooler and freezer applications
- Motor and controller thermal protection
- Coast control with sidetracker <sup>1</sup>
- Tilt adjustable steer head (20 Fwd / 20 Rev) <sup>1</sup>
- Coast control <sup>2</sup>
- Electric power steering <sup>2</sup>
- 24 - Volt AC Steer Motor <sup>2</sup>

## OPTIONAL EQUIPMENT- TGX AND TGXE

- Multi-function LCD display with:
  - PIN access
  - Selectable performance modes
  - BDI and speedometer
  - On-board diagnostics and troubleshooting
- Magnetic mount convenience tray with stretch wrap holder
- On/off toggle switch\*
- Operator compartment knee pad
- Battery compartment rollers with side gates
- Battery gate interlock switches
- Travel alarm
- Twin picking steps
- 4" extended jaw coupler
- Pin and clevis\*
- Towing eye\*
- Solid or non-marking rubber trail wheels
- Non-marking rubber, traction rubber or flat poly drive tire options
- Fixed Steerhead <sup>1</sup>
- Hood mounted pick switches <sup>2</sup>

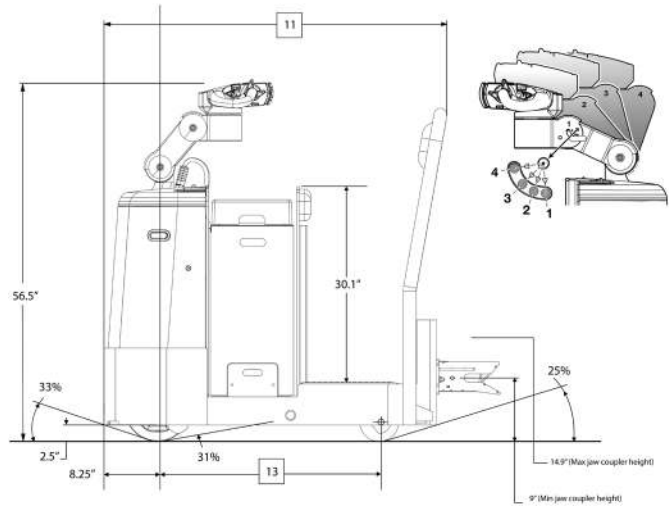
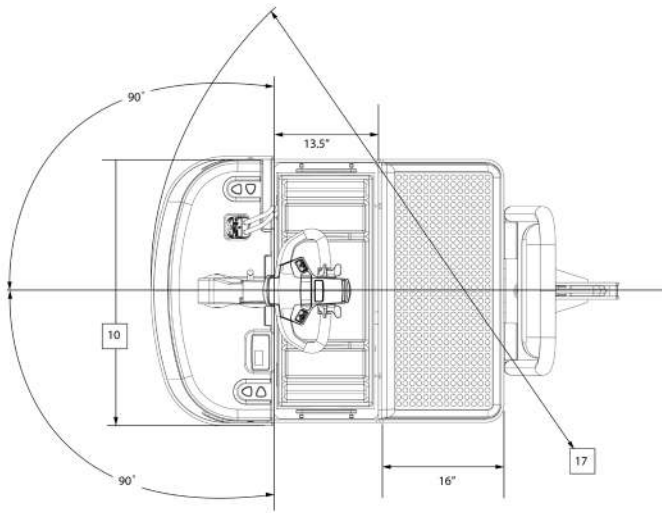
<sup>1</sup> - TGX only

<sup>2</sup> - TGXE only

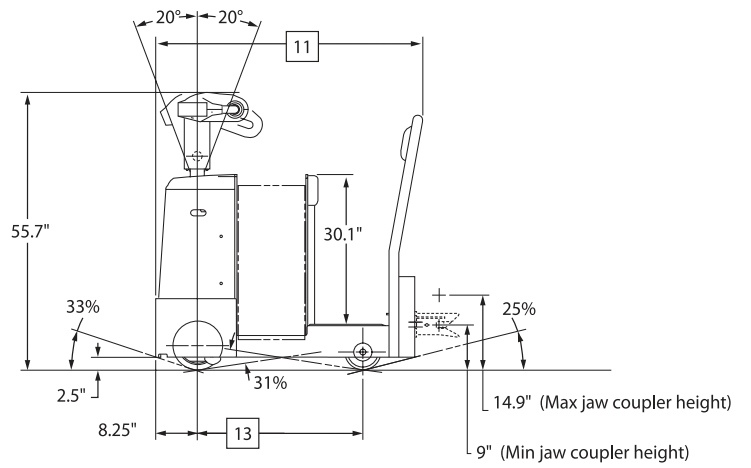
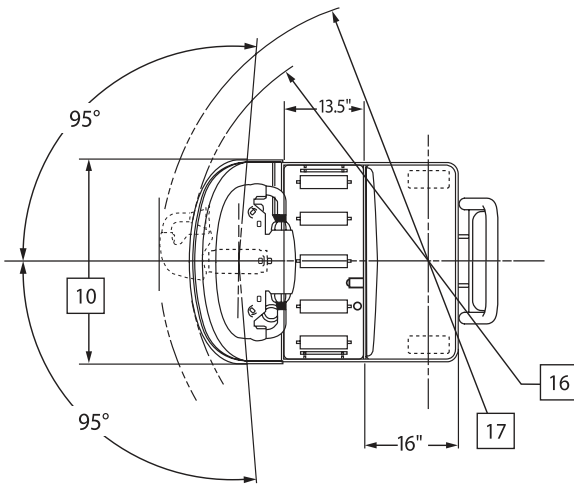
\*Available at no charge.

**DIMENSIONS**

**TGXE20B**



**TGX20B**



### ERGONOMICS & COMFORT

The adjustable steer head combined with a cushioned platform and padded compartment provide an impressive workplace to achieve maximum operator comfort and reduced fatigue resulting in sustained productivity. The steer head is adjustable up and down to four set positions to accommodate a variety of user heights and allow for easy battery removal. The steer head's wide, 190° steering arc for TGX, 180° steering arc for TGXE allows for precise maneuvering in tight spaces with minimal effort.

Ergonomic layout of the truck's control head includes rotary-thumb travel speed controls, which can be operated from either side. Ergonomic placement of travel and horn buttons provides intuitive fingertip control.

Standard coast control allows operator to let the truck coast for more efficient order picking. Hood mounted pick switches are also available as a factory option. The UCA Tow Tractors are both designed with a low profile compartment (8.8" platform height), permitting easy entry/exit and walk-through. Its cushioned platform mat provides added comfort.

The TGXE includes a Tiller Style, 4 position adjustable steer head combined with a cushioned platform and padded compartment provide an impressive workplace to achieve maximum operator comfort and reduced fatigue resulting in sustained productivity. The steer head is adjustable up and down to four set positions to accommodate a variety of user heights and allow for easy battery removal. Operator controls remain within the envelope of the TGXE at all times. *(TGXE only)*

The TGX includes a T-style handle that can be adjusted 20° forward or backward, or alternatively can be assembled to be fixed in place at the factory. *(TGX only)*

### EFFICIENCY & CONTROL

Advanced motor controller/AC inverter electronically distributes power as needed to the AC drive motor. System offers programmable regenerative neutral braking and proportional plugging. Its AC design eliminates forward and reverse contactors, with electronic travel speed control for precise, efficient performance.

An optional multi-function LCD includes two hour meters and Personal Identification Number (PIN) codes to restrict truck access for greater fleet control. It provides access to customized performance settings and displays a battery discharge indicator with graphic representation of the remaining battery charge. The optional feature also offers on-board diagnostics and troubleshooting without the need for a separate hand tool.

### EFFICIENT PERFORMANCE & GREATER UPTIME

Heavy-duty 5.2 Hp, brushless, three phase AC drive motor, provides high power and torque to handle tough applications. Motor delivers peak performance throughout the battery range. Longer run times per battery charge are achieved by using less energy per cycle.

TGX(E) includes an IP65 rated sealed controller. Sealed switches and logic boards allow operation in multiple environments including coolers, wet rooms and freezers down to -20°F (-28.9°C).

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Digital CAN communication between the controller and steer head uses just four wires in the control handle harness to send multiple signals. Hall Effect speed and acceleration control sensor simplifies maintenance and limits downtime due to its non-contact design with fewer moving parts, and no mechanical wiping action, potentiometers, or heaters. Elimination of directional contactors with enhanced thermal capabilities mean optimum performance and minimal downtime.

Electrical braking system uses regenerative motor torque prior to disc brake actuation, for less component wear and longer life. The spring-applied/electronically released disc brake system eliminates the need for adjustments. The service/parking brake can be activated by pressing either brake button on the steer head.

### AUTOMATIC JAW COUPLER

The standard heavy-duty automatic jaw coupler is equipped with a foot operated release pedal, located inside the operator compartment. Optional couplers are also available.

### DURABLE DESIGNS

The TGX(E) Series is manufactured with a rugged frame for tough applications. Its wide drive and trail wheels offer increased floor surface contact and string guards help prevent debris from getting into axles and bearings. Powder coat paint, inside and out, delivers a durable, high gloss, scratch resistant finish. A quiet, spiral beveled gear drive system with sealed ball bearings provides solid performance with low steer effort.

### LOWER OPERATING COSTS

Brushless AC drive motor uses fewer components and requires less maintenance for lower operating costs. Easily accessible, rotation sensing encoder is externally mounted on the drive motor for simplified replacement. Motor and controller feature thermal protection system to slow or shut down truck in response to high temperatures.

Unique steer race and enclosed frame design help keep major components free from debris kicked up by the drive tire for less maintenance and longer life.

Belt driven electrical power steering requires less maintenance cost over a chain driven system. By using a belt drive, this enables less frequent service intervals compared to a chain driven system. The belt is checked and adjusted with a simple, single bolt tensioning mechanism, requiring no lubrication or additional cleaning. *(TGXE only)*

One-piece cover with two-bolt removal makes access to the drive unit, and major components quick and easy. Five nut removal of the drive tire simplifies replacement when needed. All lubrication fittings are easily accessible with the truck upright and the battery in place.

Electrical braking system uses regenerative motor torque prior to disc brake actuation, for less component wear and longer life. The spring-applied/electronically released disc brake system eliminates the need for adjustments.



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