TOYOTA TRACTO

BT movit

1 – 49 tonnes

Tailored Load Carriers and Towing Tractors



TOYOTA

MATERIAL HANDLING

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BT Movit



***W-series** – TWE100*



***N-series** – TSE100 / TSE100W*



***S-series** – TSE300*

Toyota Tracto



***S-series** – 4CBTY2 / 4CBTYk4*



***S-series** – CBTY4*



***R-series** – 4CBT2 / 4CBT3 / 4CBTk4*



***R-series** – CBT4 / CBT6*



***R-series** – 2TG20 / 2TG25 / 2TD20 / 2TD25*

BT Movit and **Toyota Tracto**
Tailored load carriers and towing tractors

The vast majority of goods are stored and moved using conventional unit load carriers such as pallets. However, in certain applications the use of load carriers that are more suited to the goods being handled can improve efficiency and drive down costs. This often involves the use of towing tractors which, by transporting a train of loads, can offer increased flexibility and efficiency compared to forklift trucks, which would require many trips to move the same amount, taking far more time in the process.

Tow tractors and more specialised load carriers can be found in a wide range of applications, from factories and warehouses to ports and airports. Multiple load handling using towing tractors is particularly efficient in manufacturing and logistics applications, cutting transportation time and costs significantly by requiring fewer trucks and operators to move a given amount in a given time. Fewer trucks and journeys also means greater safety.

Recognising all of these benefits, as would be expected from the world's leading supplier of materials handling equipment, Toyota Material Handling Europe offers a series of options to meet these requirements including electric and engine-powered towing tractors with stand-in or sit-in design, for indoor or outdoor use, with varying intensity or distances traveled, and differing load weights.

All of TMHE's towing tractors are designed to offer class-leading productivity, driveability, safety and durability.

BT Movit range
BT Movit tow tractors offer a choice of stand-in models, including the compact and highly manoeuvrable **N-series** and the larger **S-series**, for intensive use in more demanding operations. The BT Movit **W-series** is a pedestrian operated tractor specifically designed for towing roll cages.

The BT Movit range includes a choice of load carriers to suit different handling applications including order picking. They are designed to be the perfect fit with BT Movit warehouse tow tractors. The choice of load carrier is truly comprehensive, and even extends to custom-built models to suit the specific needs of any application.

Toyota Tracto range
Toyota Tracto range of industrial tow tractors includes **S-series** models that are compact stand-in electric trucks ideal for indoor use. The **R-series** of rider-seated models is a comprehensive range of electric and engine-powered models for applications demanding longer travel distances and greater towing capacities.

Strength and durability are common characteristics across both ranges. Whatever your horizontal transport needs, TMHE has the perfect combination.

BT Movit – load carriers

The starting point for most companies seeking the most efficient movement of goods is to identify the optimum type of load carrier. The BT Movit range offers a choice of standard carriers that satisfy a wide range of typical requirements. Having identified the most suitable load carrier it is then a matter of calculating quantities, load weights and number of load carriers in the 'train' to establish the overall towing capacity required from the tractor unit.

Load carriers from TMHE are generally designed to interface with both BT Movit warehouse tractors and Toyota Tracto industrial machines. Certain models, such as the Step Carrier are specifically designed to work with BT Movit N-series W models, as the carrier docks with the tractor for added stability.

Platform carrier
A simple platform-style carrier designed to handle all type of goods, but requiring inherent stability when stacking items. Allows fast, easy and flexible transportation of goods.

Shelf carrier
This design allows for sortation of items during the transportation process to allow organised distribution of goods.

Parcel carrier
For carriage of items of multiple size and shape, allowing secure and safe transportation.

Host carrier
This unit is designed to transport subsidiary load carriers such as dollies or other storage units. Particularly suited to production facilities they allow flexible load handling with the benefit of multi-load transportation.

Step carrier
This model is ideal for order picking from higher levels, with a step-up facility combined with shelving for sortation in the process. This type of unit is specifically designed to dock with BT Movit N-series tractor units.

Bespoke carriers
Toyota Material Handling Europe is also able to work with customers to design and build bespoke load carriers to suit the precise requirements of their applications.



A BT Movit N-series truck docked with a step carrier



A BT Movit TSE300 towing host carrier, loaded with a separate shelf carrier



Platform carrier



Shelf carrier



Parcel carrier



Host carrier



Step carrier



BT Movit S-series 3 tonne towing capacity

The BT Movit S-series is a high-performance towing tractor, developed and built with efficiency, safety and ergonomics as top priorities. BT Powerdrive and E-man steering offer smooth control, adjustable to suit either hand. Its stand-in configuration also makes it ideal for order picking.

The new BT Movit S-series (TSE300) is a high-performance truck suitable for a wide range of towing and order picking duties. Developed with the advanced BT Optio L-series low-level order picking range, BT Movit S-series is a state-of-the-art electric towing tractor, especially suitable for use in operations where goods are being moved in a continuous flow, such as just-in-time manufacturing.

Productivity

BT Powerdrive
The BT Movit S-series family features the BT Powerdrive motor control system with AC power. A central processor monitors and controls the performance of the truck resulting in super-smooth control at all speeds.

Every time the truck decelerates or the brakes are applied energy is passed directly back to the battery, allowing long working shifts on a single charge. For multiple shift operations the BT Movit S-series is designed for fast and easy battery change.

Driveability

***Smooth Operator* concept**
The BT Movit S-series has been designed around a *Smooth Operator* concept, in order to provide maximum effective support to the human operator undertaking the task of picking the goods. This means providing a comfortable and easy-to-use workplace, that is well organised and efficient:

The operator will be stepping on and off the truck hundreds of times every day so BT Movit S-series has a very low step-in height, reducing fatigue and enhancing productivity.

The backrest is designed to suit all operators, providing a comfortable driving position and reducing strain in demanding operations.

The E-man control system on BT Movit S-series models is based on an extremely flexible steering arm with touch-sensitive activation of the drive function and effortless electronic steering. The steering arm is designed to follow the operator's position. It can be moved left and right to allow pedestrian control, walking alongside.

Frequency-Adapted Suspension
Vibration during driving can be an issue in some applications. BT Movit S-series trucks have the option of Frequency-Adapted Suspension, to help eliminate vibration. It is based upon a special sprung suspension system that combats vibration at various frequencies. This means that the BT Movit S-series is geared to meet legislative requirements.

Efficient administration is essential in order picking and the BT Movit S-series provides a very effective mobile office, with several storage compartments to allow organised working. The truck is also prepared for a shrinkwrap holder and other accessories.

E-bar
Most order picking operations need onboard management devices such as computers and barcode scanners. The E-bar facility available on the BT Movit S-series incorporates a power supply and allows easy attachment.

Safety

Optimised Truck Performance
The optimised truck performance system on the BT Movit S-series automatically adapts speed when cornering to allow fast yet safe driving in all conditions.

Durability

The BT Powerdrive system combined with advanced AC motors means a truck with remarkably simplicity in design and fewer components, resulting in greater reliability and lower maintenance costs. On-board diagnostics ensure that in the event of a fault it can be quickly identified and resolved.

Reduced drive-wheel wear
One of the major wearing parts on most towing tractors is the drive-wheel, due to the stress of repeated starting and stopping. The smooth, controlled operation of the electronic braking system on BT Movit S-series trucks significantly reduces drive-wheel wear.



The TSE300's low step-in height reduces the strain of repeatedly stepping into and out of the truck. The floor is suspended to reduce vibration, enhancing driver comfort



The BT Movit S-series E-bar option allows the mounting and powering of ancilliary equipment such as computers and barcode scanners

BT Movit N-series / W-series 1 tonne towing capacity

The lightweight and versatile BT Movit N-series (TSE100) comprises both order picking and towing tractor models with very narrow chassis widths. These machines are small and light enough to be used on mezzanine floors and are ideal for offices, small stores and warehouses as well as other applications, such as hotels and hospitals. Different chassis widths are available.

The BT Movit W-series (TWE100) is a pedestrian-operated tractor specifically designed for towing roll cages.

The BT Movit N-series towing truck range is designed to work with a wide choice of load carriers. Goods can be picked directly to the load carriers for efficient, ergonomic materials handling.

There are two models: the TSE100W is specifically designed to dock with selected individual load carriers for efficient order picking and step-up solutions, and provides the shortest turning radius. The TSE100 follows the conventional towing method of coupled tractor and (multiple) load carriers. There is a choice of chassis widths for both models.

Productivity

With simple and efficient AC-power, N-series is ideal for picking and transporting goods between production facilities and warehouses, particularly in just-in-time operations. Productivity gains of up to 50% compared to manual picking are possible, depending on warehouse layout.

The N-series can tow multiple trolleys with a total load weight of up to 1000 kg (up to 500 kg if trolleys without brakes are used). For multi-shift work, the battery is easily accessed using a built-in casette. A second battery cassette plus battery table make it easy to change batteries in only 20 seconds.

Driveability

The towing tractors are ergonomically designed – the step-in height is just 65 mm and the controls are simple and comfortable to use. 'Spinner wheel' steering means the truck can turn on its own axis, greatly aiding work in confined and busy areas. Truck performance can be programmed to suit the operator or application.

Safety

BT Movit N-series is a safe alternative to fully manual picking, significantly reducing operator strain. PIN-code access ensures that the trucks are only driven by qualified personnel. The truck is designed to protect the operator while driving, with the body fully within the profile of the truck.

Durability

Service accessibility is excellent and the electronic fault finding function, along with the maintenance-free AC drive motor, ensures the N-series keeps working.



BT Movit W-series TWE100 – 1 tonne towing capacity
With the TWE100, roll cages weighing up to 1000 kg can be transported with minimal effort, even on rough or uneven floors. By reducing the amount of manual effort involved in moving roll cages the TWE100 increases productivity and reduces the risk of strain or injury.



PIN-code access ensures that the trucks are only driven by qualified personnel


B32
B32
B31
A22


4
flora
holland
TOYOTA

Toyota Tracto S-series 2 / 4 tonne towing capacity

Toyota Tracto S-series electric towing tractors feature a stand-in design – ideal for applications that demand frequent mounting and dismounting, such as order picking.

The 4CBTY2 and 4CBTYk4 stand-in electric towing tractors are designed for horizontal transport and picking operations where operators must frequently step on and off their trucks. The two models offer towing load capacities of two and four tonnes. The CBTY4 model also has a four tonne towing capacity, a battery rollerbed as standard.

Productivity

The 48 V electric system with AC motors ensures ample power, delivered efficiently, yet with simple maintenance requirements.

Driveability

Easy operator access and T-bar steering provide an advanced ergonomic solution for shorter-distance travel with frequent stops.

Safety

The Operator Presence System (OPS) only allows operation of the tractor if the operator is standing in driving position, enhancing safety.

The 4CBTY models feature a rounded rear chassis design for optimal load visibility and are fitted with pneumatic tyres for a safe and comfortable ride, indoors and out.

Optional combination lights, turn signals and rear-view mirrors enhance operational safety further.

Durability

Designed and manufactured according to the rigorous Toyota Production System, Toyota Tracto S-series models are strong and reliable, year-after-year.

Easy servicing keeps downtime and cost to a minimum.



S-series' low step-in height makes getting on and off easy. The Operator Presence System (left-hand pedal) ensures that the tractor cannot be driven unless the operator is standing in the correct position



The backrest is height-adjustable to accommodate different operators in comfort

Toyota Tracto R-series

electric models – 2 / 3 / 4 / 6 tonne towing capacity
engine-powered models – 39 / 49 tonne towing capacity

R-series rider-seated towing tractors are ideal for applications involving longer travel distances. The seat and controls offer comfort to the operator and the trucks themselves are designed for intensive work such as supplying production lines and cross-docking. The R-series includes both electric and engine-powered models.

Productivity

These sit-in electric towing tractors (4CBT and CBT) are designed for horizontal transport over longer distances. The ergonomic design maximises comfort and productivity.

Driveability

These compact models offer easy entry and exit, a comfortable seat, and car-like control configurations with levers positioned at the operator's fingertips. CBT4 and CBT6 models have utility space for tools and small parcels at the rear of the vehicle.

Safety

Pneumatic tyres provide a safe and comfortable ride, indoors and outdoors, and the rounded rear chassis profile on 4CBT models allows the operator an excellent view of the load. The Operator Presence System (OPS) only allows operation of the tractor if the operator is seated.

Durability

Toyota Tracto R-series electric models feature a 48 V electrical system with AC motors, for responsive, enegry efficient power delivery and simple maintenance.

Toyota Tracto R-series engine-powered trucks meet the most demanding requirements – higher speeds, heavier loads, frequent outside work, and travel on steeper and longer gradients. Outstanding power and manoeuvrability are combined with a high level of operator comfort. Toyota expertise has been fully utilised to produce an ergonomic driver compartment designed to minimise operator fatigue over longer periods of work activity.

Productivity

With the 2TD and 2TG TMHE offers a heavy-duty engine-powered towing tractor capable of towing loads up to 49 tonnes. Designed especially to transport loads from distant points outside of a factory, the engine's high torque output allows the truck to easily cope with steep gradients. The 2TD is diesel powered. The 2TG version provides a petrol/LPG-powered alternative, matching the performance of the diesel-powered machine. Maximum speed is 30 km/h.

Driveability

An ergonomic driver compartment offers high levels of comfort. Controls are car-like, making the 2TD and 2TG easy to operate for long periods. The tow hook is easily visible and accessible. An optional automatic transmission makes operation even easier.

Safety

2TD and 2TG models are extremely solidly built and offer the highest levels of operator safety. Options include rear-view mirrors, combination lights, rear bumpers, and a fully enclosed steel cab with windscreen wiper, which allows 2TD/2TG to work in all weathers.

Durability

Toyota durability is built-in to every part of these models, including the Toyota-designed and built engines and transmissions. These achieve low exhaust emissions compliant with latest diesel emissions regulations.



Toyota Tracto R-series electric models feature a 48 V electrical system with AC motors, for responsive, enegry efficient power delivery and simple maintenance



R-series models' car-like control configurations, with levers positioned at the operator's fingertips, make them easy to operate for long periods



4CBT2 (left), 4CBTY2 (right)



CBT6



2TD20



Materials handling for Europe

Toyota Material Handling Europe (TMHE) has a strong European presence with its Toyota and BT brands, establishing close geographic links with its customers in order to better respond to their needs. TMHE has operations in more than 30 countries, and production centres in Ancenis (France), Bologna (Italy) and Mjölby (Sweden).

Toyota Production System

The Toyota Production System (TPS) empowers team members to optimize quality by constantly improving processes and eliminating unnecessary waste of resources. TPS includes a common set of knowledge, values and procedures, entrusts employees with well-defined responsibilities in each production step, and encourages each staff member to strive for overall improvement. Today, TPS is the acknowledged reference among automotive manufacturers and related industries. Our methods enable businesses to achieve sustained gains in productivity while satisfying customer expectations for quality and reliability.

Research & Development

Toyota Material Handling Europe benefits from Toyota's vast experience in the automotive industry, especially in engine development. By taking full advantage of the group's massive R&D facilities and engineering expertise, Toyota has developed a number of world-class technologies. Intelligent use of electronic and computer controlled devices has also made a significant contribution to creating more ergonomic and user-friendly operator environments, contributing to safety in the workplace.

Empowering your business

Our services and solutions are designed to provide different levels and types of support in response to individual customer's needs. This approach gives our customers the power to focus on their core business.

Our commitment to the environment

TMHE believes that getting the job done should never be at the expense of our environment. Our long-term commitment is to develop and deliver environmentally friendly and economically viable materials handling solutions that respect present and future energy needs. TMHE strives to reduce environmental impact throughout the product life cycle, from design, manufacturing and operation through to recycling at end-of-life. TMHE's production centres are all ISO 14001 certified. A declaration of the emissions and waste during the manufacturing process and typical life cycle is available on request.

With its emphasis on eliminating waste, TPS also helps to reduce the environmental impact of our manufacturing activities. CO_2 emissions, water consumption, waste-water generation and landfill quantities have all been reduced, while recycling levels for packaging, water and scrap have been raised. Hazardous substances and air pollutants have also been reduced. Moving towards the creation of a recycling-oriented society, TMHE seeks to continuously improve the recyclability levels of its products.

Choose the features that suit your needs

● standard ○ option	**BT Movit** TWE100	**BT Movit** TSE100	**BT Movit** TSE100W	**BT Movit** TSE300	**Toyota Tracto** 4CBT2.3, 4CBTk4	**Toyota Tracto** 4CBTY2, 4CBTYk4	**Toyota Tracto** CBT4.6	**Toyota Tracto** CBTY4	**Toyota Tracto** 2TG20.25, 2TD20.25
Truck features									
BT Powerdrive				●					
Choice of chassis widths	●	●	●						
High performance models	●	●	●	●	●	●	●	●	●
Choice of connections and hooks	●	●	●	●					
Pin-type single-stage drawbar					●	●	●	●	●
Pin-type double-stage drawbar									○
Headlights					●	●	●	●	●
Rear combination lights					○	○	○	○	●
Pneumatic tyres					●	●	●	●	●
7" cyclone air cleaner									●
Steel cabin					○				○
Driving features									
180°+ steering		●	●						
200°+ steering				●					
Automatic deceleration	●	●	●	●	●	●			
Electronic braking system		●	●	●					
Electronic regenerative brakes (motor)				●	●	●			
Electronic speed control	●	●	●	●					
Controls and instruments									
Adjustable E-man control console				○					
Choice of permanent or foldable steering arm	●								
Hour meter	○	●	●	●	●	●	●	●	●
Information display	○	●	●	●					●
Power/Electronic steering				●					●
Travel AC control		●	●	●	●	●	●	●	
Tilt steering column					○		○		●
Safety features									
Automatic parking brake	●	●	●	●					
BT Access Control (PIN codes)		●	●	●					
Smart Access (electronic card/fob)				○					
Key switch start	●				●	●	●	●	●
Driver detection system		●	●	●	●*	●*	●*	●*	●*
Emergency switch / lever	●	●	●	●	●	●			
Programmable performance	●	●	●	●					
Maximum-speed limit switch					●	●			
Protective bumpers		○	○	○			○		○
Electric horn	●	●	●	●	●	●	●	●	●
Floor parking pedal								●	
Dual-action parking brake					●	●	●		●
Operator features									
E-bar				○					
Folding seat				○					
Choice of standing or sitting		●							
Low step-in		●	●	●		●		●	
Adjustable operator backrest						●		●	
On-board data terminal mount		○	○	○					
Shrinkwrap holder				●					
Storage compartments		○	○	●	●	●	●	●	
Writing table/surface		○	○	○					
Maintenance features									
Easy access for maintenance	●	●	●	●	●	●	●	●	●
Fault diagnosis		●	●	●	●	●			
Historic fault log				●					
Battery status indicator	●	●	●	●	●	●	●	●	
Battery discharge prevention system		●	●	●	●	●	●	●	
Battery change system	○	○	○	○	○	○	○	○	
Load carriers									
Choice of load carriers		○	○	○					
Choice of load carrier options		○	○	○					

* Toyota OPS on Toyota Tracto models (on 2TG20.25, 2TD20.25, OPS only present on automatic transmission models)



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TOYOTA INDUSTRIAL EQUIPMENT BT

TOYOTA MATERIAL HANDLING EUROPE, MANAGING THE TOYOTA AND BT MATERIALS HANDLING BRANDS IN EUROPE