

# Toyota Very Narrow Aisle Trucks

The BT Vector Range



# BT Vector

the complete range of very narrow aisle trucks from Toyota Material Handling

## BT Vector R-series

Man-down VNA truck



Man-down VNA truck suitable for pallet handling in medium-intensity operations. Turret head forks or high speed slide-through fork versions

1.25 – 1.5 tonnes load capacities

Lift height up to 11.3 m

## BT Vector C-series

Man-up VNA truck



Man-up combi truck performing best in medium to high-intensity pallet handling or order picking applications

1.0 – 1.35 tonnes load capacities

Lift height up to 15 m

## BT Vector A-series

Man-up VNA truck with articulated chassis



Trucks with articulated chassis providing high-level order picking and full-pallet handling and the space-saving benefits of advanced VNA operation. Turret head forks or high speed slide-through fork versions

1.25 – 1.5 tonnes load capacities

Lift height up to 15.7 m





### Navigation solutions

The BT Vector R-series is available with Toyota's navigation systems using RFID technology. These include:

- Positioning, where the truck travels at maximum optimised speed to the required storage location, for the driver to simply pick or retrieve the load. Positioning function can also be integrated in a warehouse management system
- Zoning functionality can take care of travel within the aisle identifying, for example, any overhead hazards as well as controlling the truck at end-of-aisle

Uniquely, Toyota's navigation solutions are designed to be integrated with most existing third-party warehouse management systems and can be retrofitted to existing Toyota VNA trucks (BT Vector R/A-series models).

● standard ○ option

	Safety	Durability	Productivity	Driveability	BT Vector VRE125	BT Vector VRE125SF	BT Vector VRE150
<b>Truck features</b>							
Adjustable fork width					●	●	●
Automatic parking brake	●				●	●	●
BT Optipace System					●	●	●
Choice of chassis widths					●	●	●
Clear-view mast					●	●	●
Clear-view overhead guard					●	●	●
Electronic braking system					●	●	●
Electronic regenerative brakes (motor)					●	●	●
Electronic speed control					●	●	●
Electronic support arm brakes					●	●	●
Enclosed cab					○	○	○
Fork spreader					○	○	○
Shuttle forks					○	○	○
Warning beacon					○	○	○
Wire/rail guidance					○	○	○
Working lights					○	○	○
<b>Controls and instruments</b>							
360° progressive steering					●	●	●
Access Control (PIN codes)					●	●	●
Adjustable BT Control console					●	●	●
Automatic deceleration					●	●	●
Auto-rotation of forks					○	○	○
Camera/monitor system					○	○	○
Drive motor temperature warning					○	○	○
E-bar					●	●	●
Electronic controller temperature warning					○	○	○
Electronic fingertip controls					●	●	●
Electronic height indicator					●	●	●
Emergency cut-off					●	●	●
Height pre-selector					○	○	○
Hour meter					●	●	●
Load information display					○	○	○
Mini-joystick electronic controls					●	●	●
Multifunction control					○	○	○
On-board data terminal mount					○	○	○
Parking brake					●	●	●
Pedals as in a car					●	●	●
Power/Electronic steering					●	●	●
Programmable gate security					○	○	○
Split control panel					●	●	●
Steering direction indicator					○	○	○
Weight indicator					●	●	●
<b>Operator features</b>							
Adjustable seat					○	○	○
Adjustable seat with safety belt					○	○	○
Adjustable steering wheel					○	○	○
Driver detection system					○	○	○
Driver-adapted programmable performance					○	○	○
Heated seat					○	○	○
Low step-in					○	○	○
Storage compartments					○	○	○
Writing table					○	○	○
<b>Maintenance features</b>							
Easy access for maintenance					○	○	○
Fault diagnosis facility					○	○	○
Historic fault log					○	○	○
<b>Battery management features</b>							
Battery change facility					○	○	○
Battery discharge prevention system					○	○	○
Battery status indicator					○	○	○
Heavy-duty battery compartments					○	○	○
Regenerative lowering					○	○	○
Sideways battery change					○	○	○
<b>Special applications</b>							
Coldstore version					○	○	○
EEx version (ATEX)					○	○	○

## BT Vector R-series

### Man-down VNA truck

For man-down work, the BT Vector R-series is based on the class-leading BT Reflex reach truck. It is available with turret-head fork design or shuttle forks (VRE125SF), which require less aisle-width and allow high-speed lateral pallet handling.

### Compact design

The truck has a very small footprint which means less space is needed for aisle transfer allowing better use of storage space.

### High performance with TLC

Travel speeds up to 14 km/h and high-speed lifting/lowering ensure maximum productivity. The patented and unique Transitional Lift Control (TLC) system ensures completely smooth, shock-free lifting and lowering, even at maximum speed.

### Totalview Concept

The design of the overhead guard is also patented and unique to BT Vector R-series trucks. It provides a clear upward view to the forks when working at height.

### BT Optipace

BT Optipace controls the speed of the truck when operating in narrow aisles, providing the highest safe drive speed taking into account the load weight and operating height.

### TPS-based reliability

Like all Toyota trucks, BT Vector trucks are built according to the Toyota Production System, assuring the highest levels of quality, durability and reliability.



- Load camera option
- Aisle camera option
- Auto-rotation option
- Easy servicing

Load capacity: 1.25, 1.5 t  
@ 600 mm load centre  
Maximum lift height: 11.0 m (11.3 m for VRE125SF)  
Maximum battery capacity: 930 Ah







# BT Vector C-series

## Man-up VNA truck

BT Vector C-series models bring full VNA functionality in an extremely compact footprint. A choice of chassis and cab widths mean it is suited to most existing VNA operations, offering class-leading performance and energy efficiency.

### Easy delivery and installation

Most VNA trucks require on-site assembly with requirements for heavy lifting to build the mast assembly. The BT Vector C-series has a swing-down mast design, which means it can be shipped on a standard road vehicle and towed into position, with mast repositioning and final commissioning taking less than half a day.

### BT Optipace

BT Optipace controls the speed of the truck when operating in narrow aisles, providing the highest safe drive speed taking into account the load weight and operating height.

### Totalview Concept

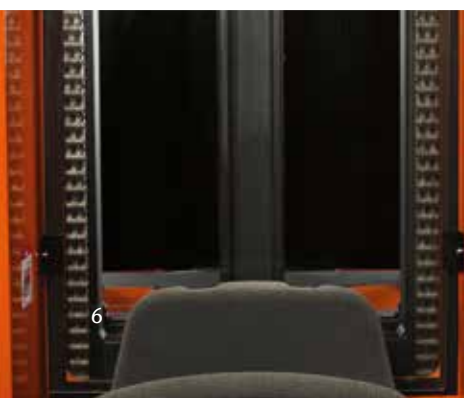
The BT Vector C-series provides a clear view for driving and load handling based on Toyota's Totalview concept.

### TPS-based reliability

Like all Toyota trucks, BT Vector trucks are built according to the Toyota Production System, assuring the highest levels of quality, durability and reliability.

● standard ○ option

	Safety	Durability	Productivity	Driveability	BT Vector VCE100	BT Vector VCE120	BT Vector VCE135
<b>Truck features</b>							
Adjustable fork width					●	●	●
Automatic parking brake					●	●	●
BT Optipace System					●	●	●
Choice of cab widths					●	●	●
Choice of chassis widths					●	●	●
Clear-view mast					●	●	●
Clear-view overhead guard					●	●	●
Electronic braking system					●	●	●
Electronic regenerative brakes (motor)					●	●	●
Electronic speed control					●	●	●
Electronic support arm brakes					○	○	●
Elevating platform					○	○	○
Fork spreader					○	○	○
Shuttle forks					○	○	○
Sideshift					○	○	○
Warning beacon					●	●	●
Wire/rail guidance					○	○	○
Working lights					○	○	○
<b>Controls and instruments</b>							
Adjustable BT Control console					●	●	●
Automatic deceleration					●	●	●
Auto-rotation of forks					○	○	○
Electronic fingertip controls					●	●	●
Electronic height indicator					●	●	●
Emergency cut-off					●	●	●
Height pre-selector					○	○	○
Hour meter					●	●	●
Parking brake					●	●	●
Power/Electronic steering					●	●	●
Split control panel					●	●	●
Steering direction indicator					●	●	●
Weight indicator					○	○	○
<b>Operator features</b>							
Adjustable seat					●	●	●
Adjustable steering wheel					●	●	●
Driver detection system					●	●	●
Driver-adapted programmable performance					●	●	●
Folding seat					●	●	●
Low step-in					●	●	●
Writing table					○	○	○
<b>Maintenance features</b>							
Easy access for maintenance					●	●	●
Fault diagnosis facility					●	●	●
Lubrication points					●	●	●
<b>Battery management features</b>							
Battery change facility					●	●	●
Battery discharge prevention system					●	●	●
Battery status indicator					●	●	●
Regenerative lowering					●	●	●
Sideways battery change					●	●	●



- BT Totalview allows optimum visibility
- Split control panel lets the operator reach the pallet easily for order picking
- LED working lights are powerful and efficient
- Battery access is convenient for charging

Load capacity: 1.0, 1.2, 1.35 t  
 @ 600 mm load centre  
 Maximum lift height: 15 m  
 Maximum battery capacity: 930 Ah







### Navigation solutions

The BT Vector A-series is available with Toyota's navigation systems using RFID technology. These include:

- Positioning, where the truck travels at maximum optimised speed to the required storage location, for the driver to simply pick or retrieve the load. Positioning function can also be integrated in a warehouse management system
- Zoning functionality can take care of travel within the aisle identifying, for example, any overhead hazards as well as controlling the truck at end-of-aisle

Uniquely, Toyota's navigation solutions are designed to be integrated with most existing third-party warehouse management systems and can be retrofitted to existing Toyota VNA trucks (BT Vector R/A-series models).

● standard ○ option

	Safety	Durability	Productivity	Driveability	BT Vector VCE125ASF	BT Vector VCE150A
<b>Truck features</b>						
Adjustable fork width					●	●
Articulated chassis					●	●
Automatic parking brake					●	●
BT Advanced Lifting System (ALS)					●	●
BT Optipace System					●	●
Choice of cab widths					●	●
Choice of chassis widths					●	●
Clear-view mast					●	●
Clear-view overhead guard					●	●
Electronic braking system					●	●
Electronic regenerative brakes (motor)					●	●
Electronic speed control					●	●
Electronic support arm brakes					○	○
Elevating platform					●	○
Enclosed cab					○	○
Fork spreader					○	○
Shuttle forks					●	○
Sideshift					○	○
Warning beacon					●	●
Wire/rail guidance					○	○
Working lights					○	○
<b>Controls and instruments</b>						
Adjustable BT Control console					●	●
Automatic deceleration					●	●
Auto-rotation of forks					○	○
Camera/monitor system					○	○
Drive motor temperature warning					●	●
Electronic controller temperature warning					●	●
Electronic fingertip controls					●	●
Electronic height indicator					●	●
Emergency cut-off					●	●
Height pre-selector					○	○
Hour meter					●	●
Parking brake					●	●
Power/Electronic steering					●	●
Programmable gate security					●	●
Steering direction indicator					●	●
Weight indicator					●	●
<b>Operator features</b>						
Adjustable seat					●	●
Adjustable steering wheel					●	●
Driver detection system					●	●
Driver-adapted programmable performance					●	●
Folding seat					●	●
Heated seat					○	○
Low step-in					○	○
Writing table					○	○
<b>Maintenance features</b>						
Easy access for maintenance					●	●
Fault diagnosis facility					●	●
Historic fault log					●	●
Lubrication points					●	●
<b>Battery management features</b>						
Battery change facility					●	●
Battery discharge prevention system					●	●
Battery status indicator					●	●
Regenerative lowering					●	●
Sideways battery change					●	●
<b>Special applications</b>						
Coldstore version					○	○

## BT Vector A-series

### Man-up VNA truck with articulated chassis

Toyota's Advanced VNA concept is based on the BT Vector A-series, which has unique space saving and productivity enhancing features. Its articulated chassis provides excellent stability and minimises the space required for aisle-to-aisle transfer, allowing more warehouse space to be used for storage. Productivity levels are exceptional, with outstanding work-rates.

### Unique articulated chassis design

The BT Vector A-series' unique articulated chassis allows it to drive between aisles using a transfer aisle up to one metre narrower than that required by a non-articulated truck. This means that typically an extra four pallet positions can be provided on each level within an aisle, and with lift heights to well over 14 metres it can result in up to 60 extra pallet positions per aisle. This gives substantial cost savings in terms of space, but not at the cost of productivity – aisle transfer typically takes less than 10 seconds.

### Advanced Lifting System

The energy required to lift the cab and load is significantly reduced by Toyota's Advanced Lifting System. It is a fully integrated combination of hydraulic and gas-pressure lifting, using precise electronic control for seamless and smooth operation. Inert nitrogen is compressed in a sealed system as the cab is lowered. The stored energy is then used to aid the next lifting movement. As a result the lift motor is working to lift little more than the weight of load itself, saving energy. Two-shift operation is possible on a single charge.

### BT Optipace

BT Optipace controls the speed of the truck when operating in narrow aisles, providing the highest safe drive speed taking into account the load weight and operating height.

### TPS-based reliability

Like all Toyota trucks, BT Vector trucks are built according to the Toyota Production System, assuring the highest levels of quality, durability and reliability.



- The A-series' BT Advanced Lifting System significantly reduces the amount of battery energy required to lift the cab and load, allowing two-shift operation on a single charge
- Staggered front wheel arrangement increases stability while reducing floor loading
- Integrated control panel
- Shuttle-fork version offers maximal productivity

Load capacity: 1.25, 1.5 t  
 @ 600 mm load centre  
 Maximum lift height: 15.7 m  
 Maximum battery capacity: 1240 Ah





## How we plan your operation

Toyota Material Handling has a clear approach to create effective and profitable relationships:

- Your local sales contact aims to be your trusted business advisor for all handling and logistics operations, to support your activities at both the planning and operational phases
- Our challenge is to analyse and understand your requirements and find efficient handling solutions – in short to fulfil our commitment to ‘Kaizen’ – which means continuous improvement
- A complete range of Toyota products – counterbalance trucks, warehouse trucks, tow tractors and automated solutions

## Financial options

A choice of financial options to suit your exact needs, including finance lease and fully-inclusive long term rental programmes

Quality approved used trucks are also available giving Toyota build-quality at a very competitive cost level

Forward planning with short-term rental options to handle peak periods of activity

## How we build quality trucks

The Toyota Production System has a world-wide reputation for manufacturing quality products:

- Having identified the right equipment for your operations, you have the confidence that it will be manufactured to the highest quality standards – that means reliability
- TPS is built around a process of continuous improvement (Kaizen) which is achieved by following a clear set of values
- All trucks are produced to ISO 14001 quality standards, ensuring minimum environmental impact
- Furthermore, one of the driving values within TPS is the elimination of waste at every stage of the process
- Over 90% of trucks sold by Toyota Material Handling in Europe are built within our European factories in Sweden, France and Italy

Toyota Production System – the strong foundation for quality in manufacturing

## Taking care of you and your trucks

The Toyota Service Concept has been developed on TPS principle and is unique in the industry:

- Service means total lifetime support – maintenance, repairs, back-up with extra trucks, driver training and management information
- Real-time information is one of the core values that makes Toyota’s service concept unique. It means everyone in the process has instant on-line access to updated, integrated information – technical support, truck history, parts, truck availability and for data for effective time and route planning
- TSC also means exact-fit in terms of parts and people, with structured training and accreditation processes
- Smart truck telemetry with GPRS/3G communication is also unique to Toyota, and available on almost every truck we produce. This allows better safety standards including driver management and, with Toyota I\_Site, complete fleet control for improved safety, efficiency and cost reduction

Toyota Service Concept – for unique, forward-thinking lifetime support

RELIABILITY  
CONFIDENCE  
AVAILABILITY  
PRODUCTIVITY  
QUALITY  
SAFETY

These are the expectations of our customers, alongside cost efficiency, sustainability and respect for the environment.

We check these expectations by regularly talking to truck users through surveys, sales discussions and over 3.5 million service visits every year.

We work with customers from one-off users up to the largest fleet operations.

Because our network extends across Europe we are always local.

Understanding customer needs is at the heart of our operations.

We call it CUSTOMER FIRST.

This page describes the unique processes that we follow, from working with you to plan your handling requirements, through building high quality reliable products, then delivering the best possible lifetime support.



For more information about:

- Toyota Production System (TPS)
- Toyota Service Concept (TSC)
- Finance and rental plans
- Service and parts programmes
- Smart truck technology
- Toyota I\_Site fleet management
- Environment & sustainability policies

please ask your Toyota representative, or visit [www.toyota-forklifts.eu](http://www.toyota-forklifts.eu)



# Toyota Material Handling in Europe

## Total coverage

The Toyota Material Handling network extends to over 30 countries in Europe with more than 4500 mobile technicians.

## Always local – with global support

Wherever you are located in Europe, we are always local, due to our extensive coverage, but with the stability and back-up of a worldwide organisation.

## Made in Europe

Over 90% of trucks we sell are built in our own European factories, in Sweden, France and Italy – all to TPS quality standards. We employ over 3000 production staff in Europe and work with over 300 European suppliers.

Approximately 15% of our European production is exported to other parts of the world.

Pictures used are for illustration purposes only. Availability and specifications are determined regionally, and are subject to change without notice. Please consult your Toyota Material Handling representative for details.