

TOYOTA  
**TTRIGO<sup>48</sup>**



1.5 to 2.0 tons  
Electric Powered Forklifts 3-4 wheels



**TOYOTA**

MATERIAL HANDLING

stronger together

# Materials Handling for Europe

Over the years, Toyota has developed a strong European presence, establishing close geographic links with its customers in order to better respond to their needs. With operations in more than 30 countries, Toyota Material Handling Europe (TMHE) has European Office functions based in Ancenis (France), Bologna (Italy), Brussels (Belgium) and Mjölby/Linköping (Sweden) and production centres in Ancenis, Bologna and Mjölby.

## **Toyota Material Handling Group**

Toyota Material Handling Group is the materials handling division of Toyota Industries Corporation, with operations around the world and production facilities in Europe, Japan, China and the United States. By investing heavily in new engineering technologies and manufacturing techniques, Toyota aims to bring customers the best materials handling products and services on the market.

## **Toyota Production System**

The Toyota Production System (TPS) empowers team members to optimise 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.



# The new Toyota Traigo 48

## Safety – Productivity – Durability – Driveability

Toyota Traigo 48 is the latest range of electric counterbalanced forklift trucks from Toyota Material Handling Europe. The new trucks have been developed by talking with customers throughout Europe, and as a result we have identified the most important requirements from this type of truck. The Traigo 48 is based on 4 core values: safety, productivity, durability and driveability.

The new range offers a choice of load capacities from 1.5 up to 2.0 tons. You can choose your ideal chassis configuration, depending on your needs – 3 wheels for maximum manoeuvrability or 4 wheels for maximum high-level stability and for work on uneven surfaces. The new Traigo 48 also allows you to enhance your truck in several areas. By selecting the Traigo 48+ formula that suits the way your business is run, you can specify additional features to fulfil your specific business needs.

The new Toyota Traigo 48 is our most compact 48-volt forklift yet. Agile and versatile, the Toyota Traigo 48 delivers **intuitive** operation for safe, productive handling and driveability – providing optimum product **fit** even in compact spaces. We call this 'i-fit'.

# World Class Safety

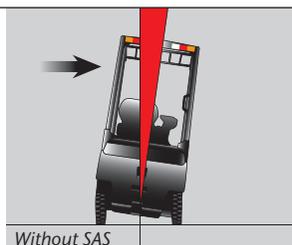
**The Traigo 48 is designed for high-level safety in the workplace. The forklift operator and goods are actively protected by the industry's most advanced safety features and technologies, including Toyota's unique System of Active Stability (SAS).**

## Stability of vehicle and loads

Toyota's SAS is an exclusive technology designed to actively enhance forklift safety. By protecting both the operator and load when the truck is driving, turning and lifting, SAS provides advanced technological support for safe operating practices.

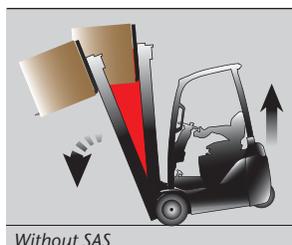
## Intuitive and safe driving

The standard pedal layout is the same as in a car, for intuitive driving, and a steering wheel indicator on the dashboard allows the driver to check the direction of travel. Even the floor mat of the Traigo 48 has been carefully designed to increase safety, with a non-slip surface. A programmable maximum drive speed setting also helps to enhance safety.



### More lateral stability

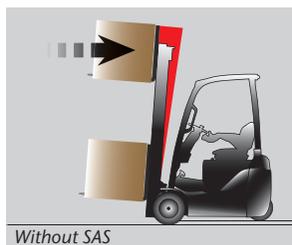
If the SAS Active Control Rear Stabiliser system senses instability when the vehicle is turning, it immediately reacts by locking the rear axle, helping to reduce the risk of lateral tip-overs. (4-wheel model only)



### Maximum mast control

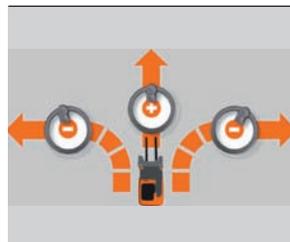
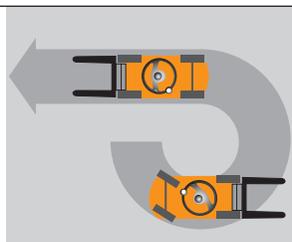
The SAS Active Mast Function helps prevent loads from slipping or falling, and the truck from tipping over due to longitudinal instability. It activates two vital functions:

- 1) **Active mast front tilt angle control** senses load weight and mast height, and then automatically overrides the operator's manual control to limit forward tilt, decreasing the chance of dropped loads or worse, tip-over accidents.
- 2) **Active Mast Front and Rear Tilt Speed Control** limits the mast tilting speed at height, helping to prevent loose loads from dropping onto the driver's cabin.



## Safer manoeuvring

The SAS Active Steering Synchronizer aligns the position of the steering wheel with the position of the wheels so that the driving knob is always in the same position in relation to the wheels. The aim: a safe and comfortable driving position.



### Automatic speed reduction when cornering

This feature provides safety during travel for 3-wheel models. The speed of the truck is automatically reduced when cornering to enhance lateral stability and reduce the risk of tipping. (3-wheel model only)

## Easier stacking and loading

SAS Fork Levelling Control ensures quicker positioning of pallets and helps to prevent damage to goods. It enables drivers to place the forks in a perfectly horizontal position with the push of a button. This helps to simplify loading and unloading.



**Outstanding all-round visibility**

Safety is further reinforced by the Traigo 48's outstanding all-round visibility. The interior, roof and mast are designed to give the operator clear visibility right up to the tip of the forks, both when driving and when handling loads from the ground and at height.

**Upward visibility**

Tilted bars on the overhead guard provide clearer upward visibility when handling loads at height.



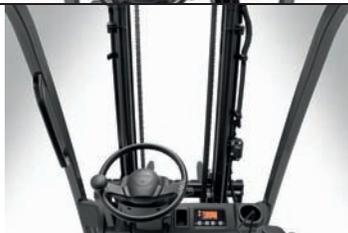
**Forward visibility**

Repositioning the mast tie-bar provides optimal visibility when driving, loading and unloading.



**Fork tip visibility**

The low dashboard, relocated display and redesigned mast give the operator clear visibility right to the tip of the forks when working at low levels.



**Rear visibility**

An optional swivel seat gives outstanding visibility when reversing.

**TRAIGO 48+ Safety**

If you still feel the need for additional features, the Traigo 48+ formula offers an advanced travel control safety system:

- Maximum driving speed limitation and controlled acceleration when carrying load at height
- Load weight indicator
- Mast tilt indicator
- Emergency push button in armrest
- Horn button in armrest

**Emergency push button**

This easy-to-reach push button disables the truck's electrical system in the event of an emergency. A simple twist release allows the truck to restart.



**Horn in armrest**

This allows fast and effortless activation of the horn by simply pressing a yellow button conveniently located within the armrest.



**Load weight indicator**

To help prevent over-loading which may lead to accidents and vehicle damage, the multi-functional display indicates the weight of the load.



# Performance for Productivity

**Toyota Traigo 48 is a truck that is intuitive to drive, and designed to fit perfectly in your operation with energy and performance for maximum productivity.**

## Compact and manoeuvrable

The design of the Traigo 48 allows easy use in the tightest situations, for maximum productivity. The 3-wheel chassis is particularly agile, with the tightest turning radius. This means that Traigo 48 is as effective working inside within pallet racking as it is working outside in the yard or in a loading bay.

## AC<sup>2</sup> Technology

The Toyota 48-volt motors and controllers have been developed for full compatibility, thus delivering maximum performance, and offering increased efficiency. The controller also optimises the performance of the motors, ensuring constant performance regardless of the load weight even when the battery energy is low. Every time the truck decelerates or the brakes are applied, energy is regenerated and reused to extend the working hours of the battery before recharging is required.

## Maximum horizontal performance

Traigo 48 delivers high performance when travelling, with smooth and rapid acceleration and a high top speed. A choice of three power settings as standard allows the operator to select the ideal mode of operation. For example, 'standard' mode ensures minimal energy consumption, whilst 'performance' mode gives maximum power. 'Accel-off' function is also available, meaning the Traigo 48 will brake smoothly by simply releasing the accelerator.

## Maximum vertical performance

Productivity is significantly linked to the vertical performance of the truck. Traigo 48 ensures fast work cycles by delivering high speed lift and lowering functions, and the option of height pre-selection increases efficiency for repetitive work patterns, with the ability to preset three different lift heights.

## Multiple choices for sideways battery extraction

For applications requiring multiple shift operation, the Traigo 48 offers two 'push/pull' sideways battery extraction options. Optional fork pockets under the battery allow fast battery removal and replacement using a forklift truck. The alternative system has the battery mounted on a built-in roller-bed for easy battery handling.



Battery side extraction with fork pockets



Battery side extraction with roller bed

## TTAIGO<sup>48+</sup> Productivity

The Toyota Traigo 48 with AC<sup>2</sup> technology is designed for long working hours. But if your operation requires frequent reversing and driving on uneven surfaces, the Traigo 48+ Productivity formula can deliver more productivity with:

- Swivel seat: turns and locks for easier reversing
- Rear assist grip that relieves operator back strain when reversing
- Hydraulic cushioned forks for driving on uneven floors

### Hydraulic cushioned forks

The damper on the mast enables the Traigo 48 to increase productivity when carrying a load on uneven surfaces.



### Swivel Seat

Comfort increases productivity.

The operator can swivel the Traigo 48 seat to the right and lock it, for better visibility in reverse. The seat also swivels to the left, making it easier to get on and off the truck.



### Rear Assist Grip

Enhances reverse travel comfort and productivity by reducing operator back strain.







# Toyota durability means more uptime

Operators need trucks that simply keep working. It's all about maximising uptime by minimising down time.

## Strength through design

The Toyota Traigo 48 is built to move loads up to two tons, and to do so with confidence. The rugged exterior is designed to withstand the demands of tough applications. Toyota design principles ensure durable strength, reassured with the use of Toyota-manufactured components, and with rigorous quality-assurance checks throughout the manufacturing process.



Rugged steel exterior

## Extended service intervals

Traigo 48 has been designed to reduce service requirements. The Toyota motors and controllers require minimum maintenance with brush-free motors.

The braking system is regenerative, and wet disc brakes are oil-immersed, to deliver maintenance-free operation. An output limitation function means that if the driver attempts to drive with the parking brake on, motor output will be limited to reduce motor wear, and the driver is alerted.

When servicing is required, access to all components is fast and straightforward, and on-board diagnostics quickly pinpoint any faults or errors, informing the driver immediately, using indication codes.

The result? Maximum uptime.



Maintenance hour meter

## TRAIGO 48<sup>+</sup> Durability

For even greater protection of truck components, the Durability+ formula protects your investment with:

- Fully oil-charged lift cylinder
- Shockless landing lift  
(cushioned impact when forks are lowered to ground level)
- Shock sensor

### Shock sensor

A buzzer alarm and display indicator warn the driver that the shock sensor has detected and registered an intense shock impact on the forklift. This feature induces good driving behaviour and decreases unnecessary costs due to repair.



# Built for the driver

**Moving goods efficiently and safely depends not only on the performance of the trucks – but also on the performance of the driver. The Toyota Traigo 48 is designed and built for the driver, to ensure maximum productivity at all times.**

## More comfort – less fatigue

Comfort is not a ‘nice-to-have’ – it’s a ‘must-have’ in order to get peak performance. Traigo 48 takes driver ergonomics very seriously. It starts when you enter the driver compartment. The step is low and wide with a non-slip surface and this, combined with a large assist-grip, makes entering and exiting the truck easy and effortless.

Once inside the truck, the driver has the benefit of a fully adjustable Operator Restraint System (ORS) with side-wings and lumbar support, along with an adjustable steering column. The steering column itself is very slim, for maximum legroom, which is further improved with the design of the parking brake lever, which always returns to the upright position, well out of the way of the driver’s knees and offering a clear and open entrance space.

Another consideration is vibration, which has been reduced to improve driver comfort, and therefore better overall performance.

## Putting the driver in control

The Toyota Traigo 48 has been designed to put the driver in control. The truck’s compact design allows easy manoeuvring in the tightest spaces. The small steering wheel allows effortless, power-assisted hydraulic steering, and the steering synchroniser helps deliver the most comfortable driving position.

The Traigo 48 offers a choice of hydraulic controls. The standard mini-levers allow smooth, effortless and precise control of the lift, lower, tilt and side-shift functions. You can also choose easy-to-use multifunction levers for comfortable productive load handling.

## Clear, concise information

Driveability with the Toyota Traigo 48 is further enhanced by the multifunction display, built into the dashboard. Key information is available at a glance, with more detailed data available through simple push-button control.

Information shown includes:

- Battery discharge indicator
- Digital speedometer
- Steering wheel indicator
- Main drive direction indicator
- Power mode indicator
- Low speed setting (turtle) indicator
- Parking brake indicator
- ‘Operator presence’ indicator

The multifunction display is also used to set performance parameters, and to allow fault diagnosis.



Low step height



Floor space



Small diameter steering wheel



Multifunction levers





# Our Commitment to the Environment

**Getting the job done with minimum impact on our environment is a challenge Toyota takes very seriously. The new Traigo 48 forklift demonstrates this commitment. It raises the bar for performance and environmental responsibility in the materials handling industry.**

Toyota Material Handling Europe (TMHE) believes that environmental responsibility is a cornerstone of good business practice. We design-in environmental improvements in our equipment and processes to limit environmental impact throughout the four product life cycle stages: development, manufacturing, operation and recycling.

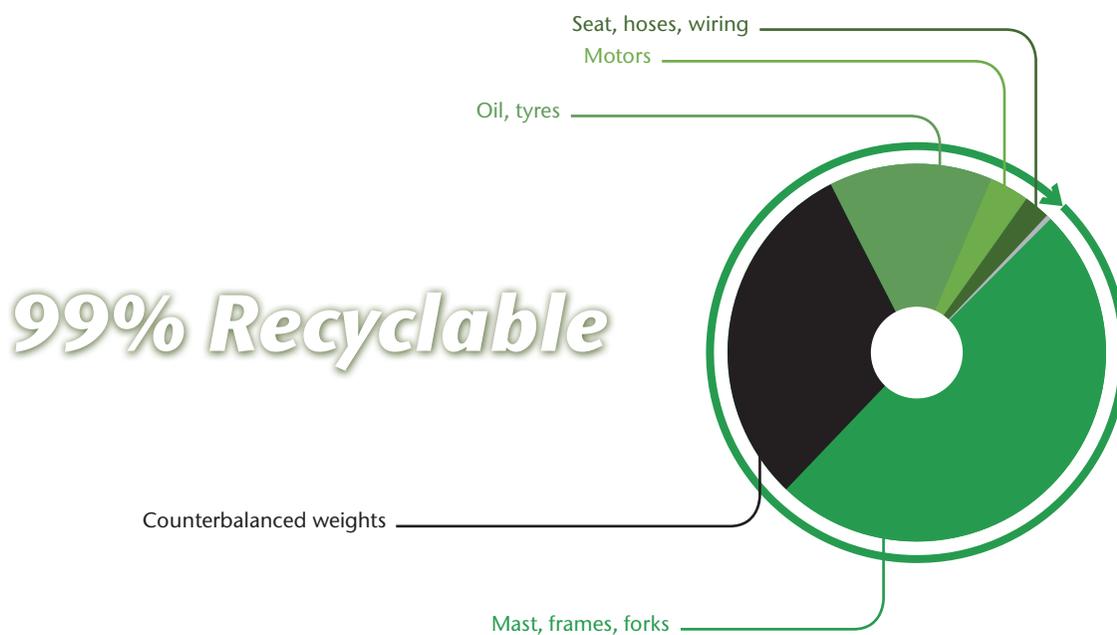
### **Demanding manufacturing standards**

From the start, our forklift trucks are produced in ISO 14001-certified factory, ensuring minimum impact on the environment.

### **99% recyclable**

That's right, Toyota engineers have designed a truck that is 99% recyclable, reducing end of life disposal impact to an absolute minimum. Asbestos, mercury and cadmium have been totally eliminated, while the quantities of lead and hexavalent chromium have been dramatically reduced.

These achievements are Toyota's commitment to you that the Traigo 48 will get the job done, while reducing as much as possible its impact on the environment. The Traigo 48 is truly the perfect fit for your business.



*99% of components are recyclable.*



# 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.**



*Toyota Service Contracts*



*Toyota Rental Solutions*



*Toyota I\_Site*

## **A stronger network**

Toyota Material Handling Europe (TMHE) aims to be close to every one of its customers and accomplishes this by working with local teams to implement the organisational model that best serves local customer needs.

Each of our marketing and sales companies is strategically located to offer optimal market coverage and service convenience to keep customers' businesses running smoothly. Wherever customers are located in our vast coverage area, they can be sure of receiving consistent and high-quality products and services.

By integrating the existing Toyota and BT operations in many countries and developing new organisations in emerging markets, TMHE has developed a network of 400 sales and service centres and nearly 5,000 highly trained service engineers, covering more than 30 countries across Europe. This is an on-going programme and TMHE will continue to develop organisations to meet customers' needs throughout an expanding European market.



# Choose the features that suit your needs

<b>Safety</b>	Standard	<b>TRAIGO<sup>48</sup></b>	Option
Low dashboard and relocated display	x		
ORS seat with sidewings and seatbelt	x		
SAS swing lock cylinder (4-wheel only)	x		
SAS speed reduction when cornering (3-wheel only)	x		
SAS mast front tilt angle control	x		
SAS mast front and rear tilt speed control	x		
SAS fork levelling	x		
SAS active steering synchroniser	x		
SAS key lift interlock	x		
Operator Presence Sensing (OPS)	x		
Maximum drive speed setting	x		
Maximum drive speed reduction with lifted load		x	
Acceleration reduction with lifted load		x	
Mast tilt indicator		x	
Load weight indicator		x	
Horn in armrest		x	
Emergency push button in armrest		x	
Pin code entry system			x
Body guard			x
Wide brake pedal			x
Flashing beacon			x
Back-up buzzer			x
Panoramic mirror			x

<b>Productivity</b>	Standard	<b>TRAIGO<sup>48</sup></b>	Option
AC <sup>2</sup> technology	x		
Car pedal layout	x		
Rear assist grip		x	
Swivel seat		x	
Hydraulic cushioned forks		x	
Automatic height selector			x
Different types of side out extraction			x
Different types of pedal layout			x
12V or 24V power supply			x

<b>Durability</b>	Standard	<b>TRAIGO<sup>48</sup></b>	Option
Wet disc brakes	x		
Rugged exterior body	x		
Maintenance hour meter	x		
Shockless landing lift		x	
Shock sensor		x	
Fully oil-charged lift cylinder		x	
Rustproof model			x
Cold store model			x

<b>Driveability</b>	Standard	<b>TRAIGO<sup>48</sup></b>	Option
Mini-levers	x		
Low and wide step	x		
Large driver assist grip	x		
Slimline steering column	x		
Small steering wheel diameter	x		
Adjustable steering column angle	x		
Digital displays for easy reading of operational parameters	x		
Operator Restraint System seat (ORS)	x		
Fabric seat			x
Multifunction levers			x
Fully enclosed cabins for comfort in outdoor elements			x
Higher overhead guard			x

<b>Environment</b>	Standard
No use of asbestos, cadmium or mercury in truck	x
Traigo 48 is 99% recyclable	x
ISO 14001 certification of Toyota factory	x



8FBET15



8FBMT16



8FBET20



8FBMT20

## Specifications

### 3-Wheel 48V

Model		8FBET15	8FBET16	8FBET16	8FBET18	8FBET18	8FBET20
Load capacity	Q (kg)	1500	1600	1600	1800	1800	2000
Load center	c (mm)	500	500	500	500	500	500
Maximum lift height	h3 (mm)	7500	7500	7500	7500	7500	7500
Travel speed, with/without load	(km/h)	16/16	16/16	16/16	16/16	16/16	16/16
Lifting speed, with/without load	(m/s)	0.44/0.61	0.43/0.61	0.43/0.61	0.42/0.61	0.42/0.61	0.38/0.54
Turning radius	Wa (mm)	1434	1542	1650	1542	1650	1650
Length to fork face	l2 (mm)	1782	1897	2005	1897	2005	2005
Height of overhead guard	h6 (mm)	2055	2055	2055	2055	2055	2055
Wheel-base	y (mm)	1264	1372	1480	1372	1480	1480
Overall width	b1\b2 (mm)	1050	1050	1050	1050	1050	1122

### 4-Wheel 48V

Model		8FBMT15	8FBMT16	8FBMT18	8FBMT20
Load capacity	Q (kg)	1500	1600	1800	2000
Load centre	c (mm)	500	500	500	500
Maximum lift height	h3 (mm)	7500	7500	7500	7500
Travel speed, with/without load	(km/h)	20/20	20/20	20/20	20/20
Lifting speed, with/without load	(m/s)	0.44/0.61	0.43/0.61	0.42/0.61	0.38/0.54
Turning radius	Wa (mm)	1639	1845	1845	1845
Length to fork face	l2 (mm)	1969	2185	2185	2185
Height of overhead guard	h6 (mm)	2055	2055	2055	2055
Wheel-base	y (mm)	1314	1530	1530	1530
Overall width	b1\b2 (mm)	1050	1050	1050	1122.2



The data in this brochure was determined based on our standard testing conditions. Operating performance may vary depending on the actual specification and condition of the truck as well as the condition of the operating area. Availability and specifications are determined regionally and are subject to change without notice. Please consult your authorised Toyota distributor for details. Due to photography and printing, colour of actual forklift may vary from this brochure. Some pictures have been computer enhanced. Dentsu Brussels Group – September 2008 - n° 1720/010/0532L. Printed on recycled paper with natural ink and without the use of Optical Bleaching Agent.



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