

# Product presentation

## New **TRAIGO**

1.5 – 2.0 ton



## New **TRAIGO .i**

1.6 – 2.0 ton



**Date / Page / What**

- 04-04-'25 / [pg. 9](#) / value update: "length l2" and "front width" for 60-9FB20T model.
- 04-04-'25 / [pg.13](#) , [pg.16](#) / description update: "2/3 shifts".
- 04-04-'25 / [pg.14](#) , [pg.17](#) / description update: "2 shifts".
- 04-04-'25 / [pg.29](#) / value update: medium size batteries working hours now available.
- 04-04-'25 / [pg.30](#) , [pg. 31](#) / new slide: Traigo Li-ion batteries (standard and lite pack) working hours now available.
- 04-04-'25 / [pg.33](#) / new slide: Traigo\_i lite pack batteries working hours now available.
- 04-04-'25 / [pg.45](#) / description update: removed mention of memory function.
- 04-04-'25 / [pg.80](#) / description update: added standard and optional lift motor versions details.

# Product presentation

**TRAIGO** & **TRAIGO\_i**

..... are the sales and marketing name for the 1.5 to 2.0 ton 48V electric counterbalanced range from Toyota Material Handling

..... the new product line has been renewed and expanded with the addition of an innovative integrated lithium-ion battery version.

Now available: **Traigo** and **Traigo\_i**

..... internal model codes for each truck in the range:

**Traigo**

9FBE15T, 9FBE(K)16T, 9FBE(K)18T, 9FBE20T, 9FB(K)16T, 9FB18T, 9FB(K)20T

**Traigo\_i**

60-9FBEK16T, 60-9FBE20T, 60-9FB20T

Unmatched design  
cutting-edge performance

# Product presentation

## Content

- Product Range Overview
  - Main specifications & design principles
- Product Features & Benefits
  - Productivity
  - Driveability
  - Safety
  - Durability



Unmatched **design**  
cutting-edge **performance**

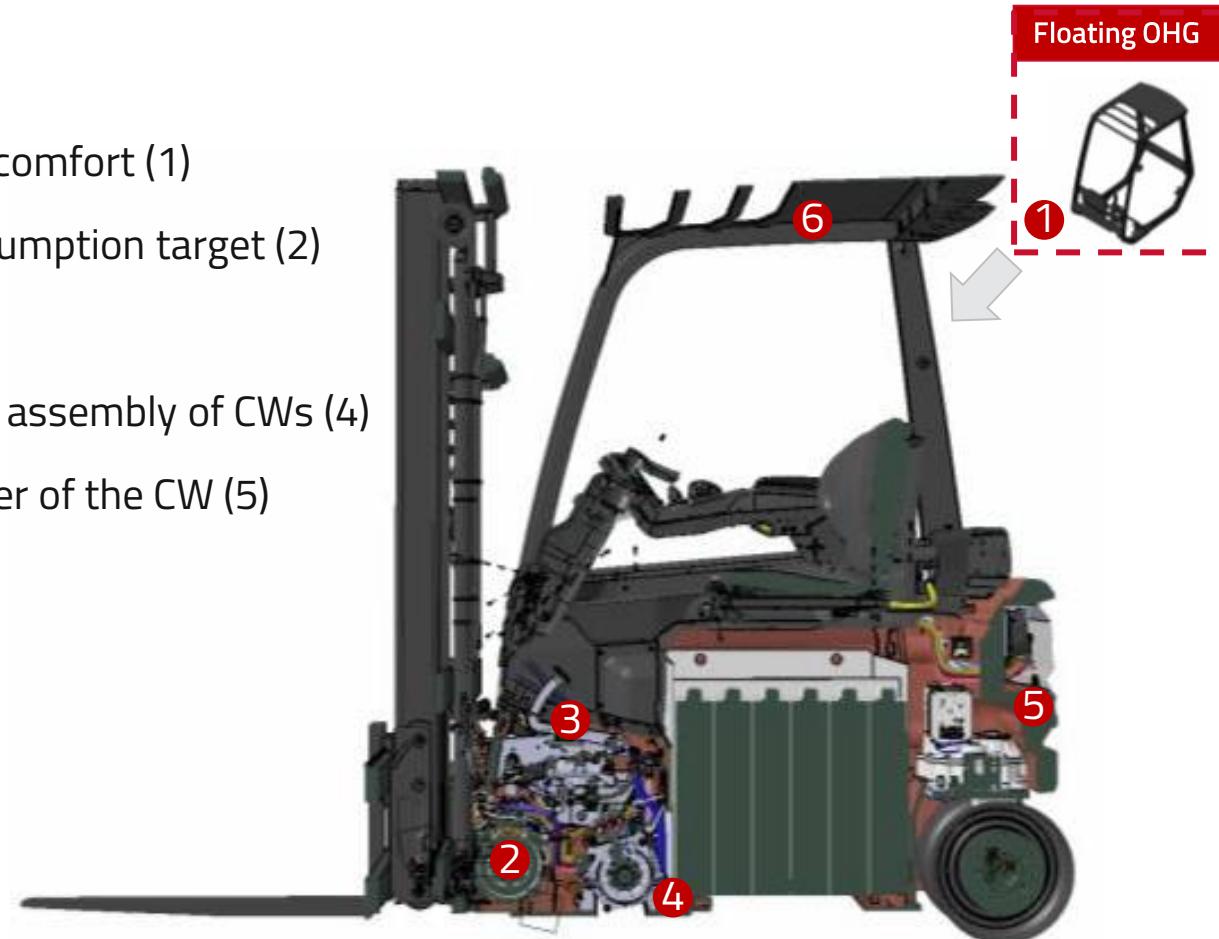
# Product range overview

- Electric 48V powered trucks
  - Traigo (conventional battery compartment)
  - Traigo\_i (integrated lithium-ion battery)
- Load capacity: 1.5t – 2.0t
- Manufactured in Europe (Italy)



**Main vehicle overview **

- Floating OHG standard on all versions providing improved driving comfort (1)
- New SyncoDrive from Toyota allowing to achieve the energy consumption target (2)
- New brake and accelerator pedal layout improvement (3)
- Standardization of the anterior part of the truck to allow a simpler assembly of CWs (4)
- Ease of accessibility of electric/control modules from the rear cover of the CW (5)
- New roof design for better visibility (6)



**Main vehicle overview *TRAIGO-i***

Floating OHG standard on all versions providing improved driving comfort (1)

New SyncoDrive from Toyota allowing to achieve the energy consumption target (2)

New brake and accelerator pedal layout improvement (3)

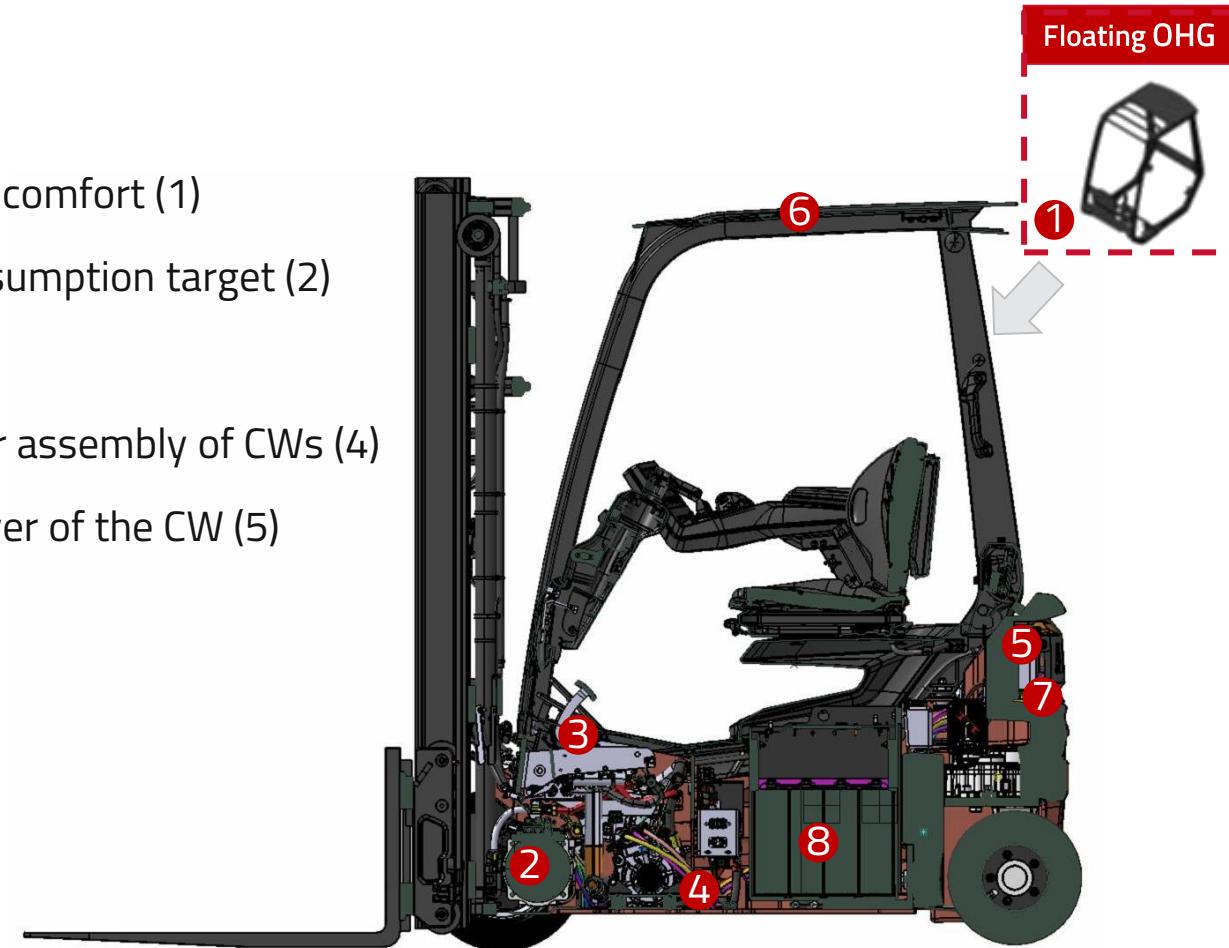
Standardization of the anterior part of the truck to allow a simpler assembly of CWs (4)

Ease of accessibility of electric/control modules from the rear cover of the CW (5)

New roof design for better visibility (6)

Dedicated LIB Kobra plug (7)

Integrated Li-ion battery within the closed frame of the truck (8)

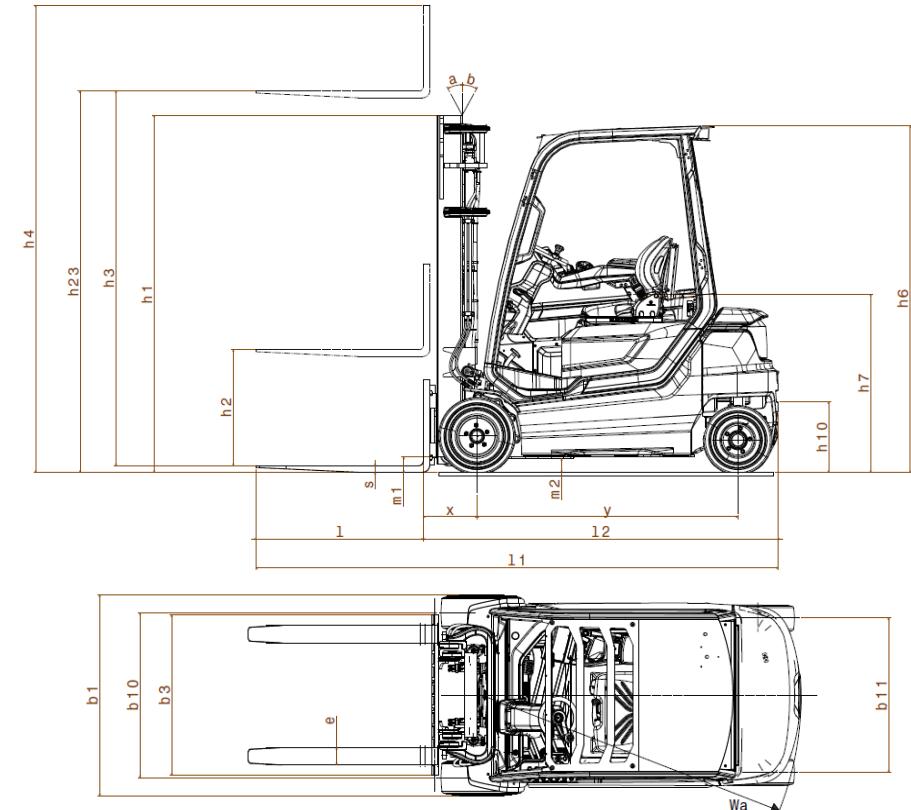


# Product range overview

## Chassis overview **Traigo**

- 11 different models based on 3 different chassis lengths & 10 different counterweights
  - The rear axle interface has been incorporated into the counterweights to maximise chassis standardization
  - Rear axle is assembled onto the counterweight

Traigo						
Type	Capacity (kg)	Load Centre (mm)	Wheelbase y	Length l2	Front Width	CW Type
			(mm)	(mm)	(mm)	
3 wheels						
<b>9FBE15T</b>	1500	500	1305	1772	1060	A
<b>9FBEK16T</b>	1600	500	1413	1880	1060	B
<b>9FBE16T</b>	1600	500	1521	1988	1060	C
<b>9FBEK18T</b>	1800	500	1413	1880	1060	D
<b>9FBE18T</b>	1800	500	1521	1988	1060	E
<b>9FBE20T</b>	2000	500	1521	1988	1152	F
4 wheels						
<b>9FBK16T</b>	1600	500	1453	2014	1060	G
<b>9FB16T</b>	1600	500	1561	2122	1060	H
<b>9FB18T</b>	1800	500	1561	2122	1060	H
<b>9FBK20T</b>	2000	500	1453	2044	1152	I
<b>9FB20T</b>	2000	500	1561	2122	1152	L

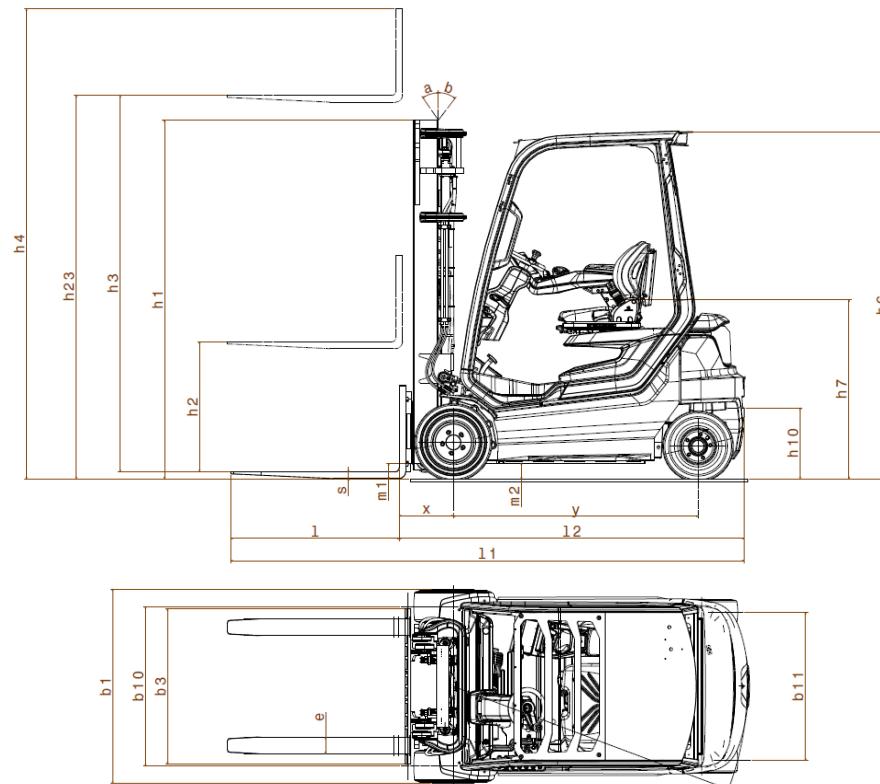


# Product range overview

## Chassis overview **TRAIGO\_i**

- 3 different models based on 1 different chassis lengths & 3 different counterweights
  - The rear axle interface has been incorporated into the counterweight to maximise chassis standardization
  - Rear axle is assembled onto the counterweight
  - The Traigo\_i version has dedicated counterweights to compensate the lighter battery, ensuring the same load capacity
  - The 16K model includes an additional ballast to reduce the counterweight size and improve compactness

Traigo_i						
Type	Capacity	Load Centre	Wheelbase y	Length l2	Front Width	CW Type
	(kg)	(mm)	(mm)	(mm)	(mm)	
3 wheels						
60-9FBEK16T	1600	500	1413	1880	1060	M+BALLAST
60-9FBE20T	2000	500	1478	1988	1152	N
4 wheels						
60-9FB20T	2000	500	1453	2044	1152	O



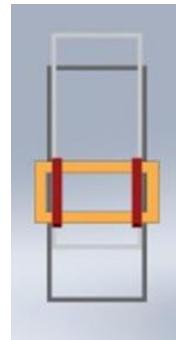
# Product range overview

## Mast overview

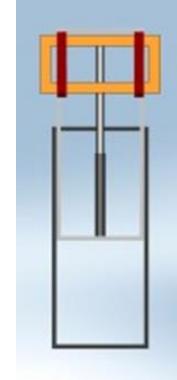
- 5 different mast layouts available
  - V mast (two stage, no free lift cylinder)
  - FV mast (two stage, central free lift cylinder)
  - FW mast (two stage, double free lift cylinders)
  - FSV mast (three stage, central free lift cylinder)
  - FSW mast (three stage, double free lift cylinder)

**TRAIGO** **TRAIGO\_i**

Traigo / Traigo_i				
Max Lift height (mm)				
V-mast	FV- mast	FW-mast	FSV-mast	FSW-mast
5000	3700	3700	6000	7500



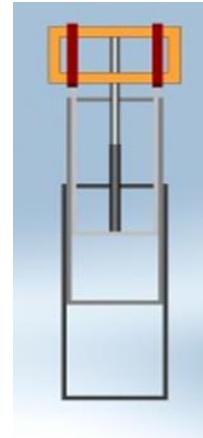
V mast



FV mast



FW mast



FSV mast



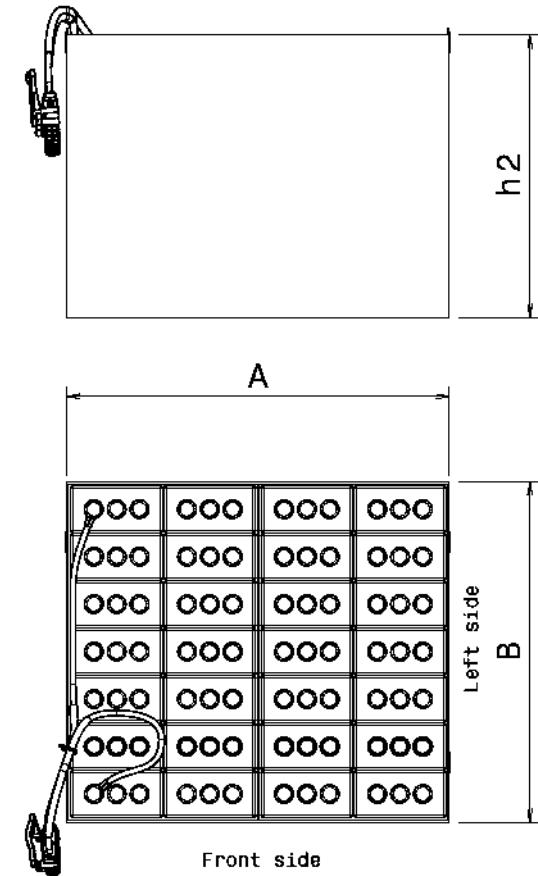
FSW mast

# Product range overview

## Battery overview **TRAIGO** (1/5)

- The following Lead-Acid Batteries are available by Hawker, Exide, Midac & Hoppecke
- Low maintenance LAB are available by Hawker & Exide
- Standard open chassis design allows easy lateral battery exchange for high energy demanding applications or 2 / 3 shifts operations

Traigo							
Model	Voltage	DIN type	Capacity AH/5HR	DIN battery case dimensions (mm)			DIN weight kg
				Length	Width	height	
9FBE15T	48	4PzS440L	420	522	830	627	672
			460				
			500				
9FBEK16T 9FBEK18T 9FBK16T 9FBK20T	48	5PzS550L	525	630	830	627	813
			575				
			625				
9FBE16T 9FBE18T 9FBE20T 9FB16T 9FB18T 9FB20T	48	6PzS660L	630	738	830	627	963
			690				
			750				

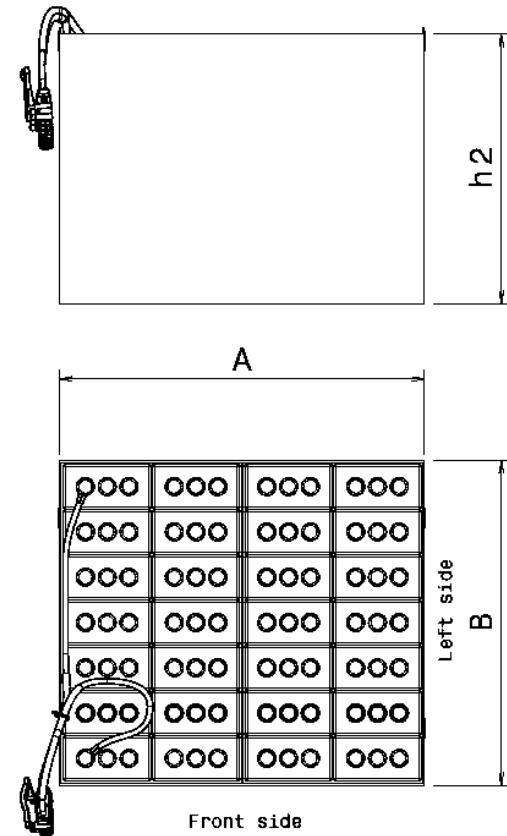


# Product range overview

## Battery overview **TRAIGO** (2/5)

- Nexys Core batteries are available by Enersys
- These batteries are maintenance free and can accept fast charging
- Suitable for high energy demanding applications or 2 shifts operations without battery exchange

Traigo							
Model	Voltage	type	Capacity AH/5HR	DIN battery case dimensions (mm)			Weight (kg)
				Length	Width	height	
9FBE15T	48	12XFC500	500	522	830	627	765
9FBEK16T 9FBEK18T 9FBMK16T 9FBMK20T	48	15XFC625	625	630	830	627	953
9FBE16T 9FBE18T 9FBE20T 9FBM16T 9FBM18T 9FBM20T	48	18XFC750	750	738	830	627	1103



# Product range overview

## Battery overview **Traigo** (3/5)

- In-house lithium-Ion batteries
  - Higher voltage ensure more powerful motion of the truck, recommended for heavier duty application and longer drives with 4-wheeler trucks
- These batteries are maintenance free and allow a very short charging time.
- Suitable for applications with high energy demanding applications or 2 / 3 shifts operations without battery exchange.

Traigo						
Model	Voltage	Capacity AH/HR	Capacity kWh	Battery case dimensions (mm)		
				Length	Width	Height
9FBE15T	51,8	300 420	15,5 21,7	522	830	627
9FBEK16T/18T 9FBK16T/20T	51,8	300 420	15,5 21,7	630	830	627
9FBE16T/18T/20T 9FB16T/18T/20T	51,8	300 420 630	15,5 21,7 32,6	738	830	627

- Full CAN communication between Li-Ion battery and truck
  - Energy gauge on Display



# Product range overview

## Battery overview **TRAIGO** (4/5)

- New in-house lithium-Ion Lite-Pack batteries
  - Lower voltage and 7% lower capacity together with an appealing price, makes it attractive for light and medium duty applications
  - 4-wheeler models limited to 16km/h travel speed (vs. 20km/h standard performance)
  - Both 3-wheeler and 4-wheeler models not available with Lift performance (IP54 included) - A34A.
- These batteries are maintenance free and allow a very short charging time.
- Suitable for less intensive applications with 2 shifts without battery exchange.

Traigo						
Model	Voltage	Capacity AH/HR	Capacity kWh	Battery case dimensions (mm)		
				Length	Width	Height
9FBE15T	48,1	300	14,4	522	830	627
9FBEK16T/18T 9FBK16T/20T	48,1	300	14,4	630	830	627
9FBE16T/18T/20T 9FB16T/18T/20T	48,1	300 420	14,4 20,2	738	830	627

- Full CAN communication between Li-Ion battery and truck
  - Energy gauge on Display

\*We recommend you to check the power socket of your customer due to the high intensity need of the Micropower chargers suitable for LIB



Information classification: Internal

# Product range overview

## Battery overview **TRAIGO** (5/5)

- In-house lithium-Ion batteries
- Connector easily accessible on the right side of the truck
  - Incl. blue protection cap attached to the truck
  - Li-ion charger plug with improved ergonomics
    - A safety operated button that allows the disconnection of the plug and enables the normal operations of the truck



# Product range overview

## Battery overview **Traigo\_i** (1/2)

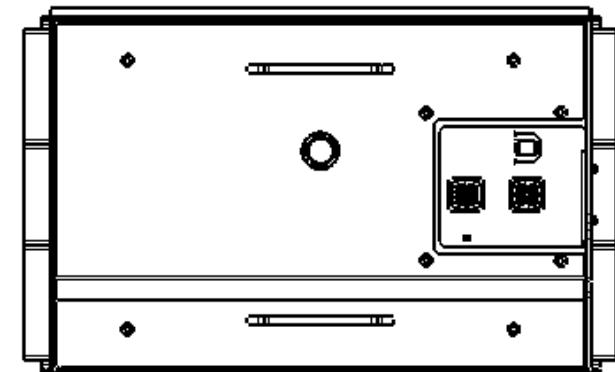
- In-house lithium-Ion batteries
- These batteries are maintenance free and allow a very short charging time.
- Suitable for high energy demanding applications or 2 / 3 shifts operations without battery exchange

Traigo_i			
Model	Voltage	Capacity AH/HR	Capacity kWh
60-9FBEK16T	51,8	300	15,5
60-9FBE20T		420	21,7
60-9FB20T			

- Full CAN communication between Li-Ion battery and truck
  - Energy gauge on Display



**LI-ION**



View from top

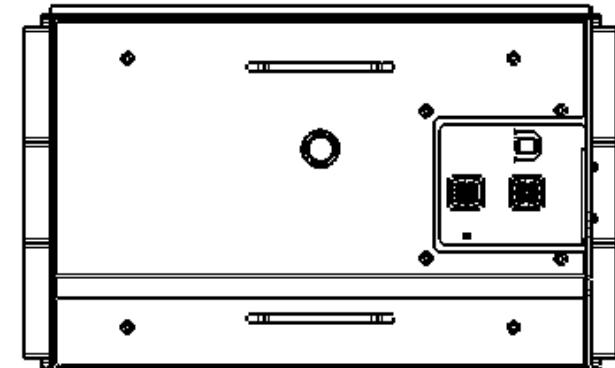
# Product range overview

## Battery overview **Traigo\_i** (2/3)

- New in-house lithium-Ion Lite-Pack batteries
  - Lower voltage and 7% lower capacity together with an appealing price, makes it attractive for light and medium duty applications
  - 4-wheeler models limited to 16km/h travel speed (vs. 20km/h standard performance)
  - Both 3-wheeler and 4-wheeler models not available with Lift performance (IP54 included) - A34A.
- These batteries are maintenance free and allow a very short charging time.
- Suitable for less intensive applications with 2 shifts without battery exchange.

Traigo_i			
Model	Voltage	Capacity AH/HR	Capacity kWh
60-9FBEK16T			
60-9FBE20T	48,1	300	14,4
60-9FB20T			

- Full CAN communication between Li-Ion battery and truck
  - Energy gauge on Display



View from top

# Product range overview

## Battery overview **TRAIGO-i** (3/3)

- In-house lithium-Ion batteries
  - Connector easily accessible on the back side of the truck, integrated in the counterweight
    - Incl. protection flap attached to the truck with magnetic closure to avoid accidental opening
  - Li-ion connector with improved ergonomics
    - A safety operated button that allows the disconnection of the plug and enables the normal operations of the machine



# Product range overview

## Exterior styling of **TRIGO**

- Toyota next generation design
- New colour scheme
- Dynamic lines
- Compact with open cabin area
- High visibility colouring on impact areas, visible silver step, reflective stickers
- Moulded “katana shape” on the battery hood increase the perceived design quality
- Driver truck
- Generating first impressions:

Low centre of gravity... by keeping  
orange colour at lower end of the truck  
Active... due to wedge line design  
Compactness... due to rounded shapes



Unmatched **design**  
cutting-edge **performance**

# Product range overview

## Exterior styling of **TRAIGO-i**

- Toyota next generation design
- New colour scheme
- Dynamic lines
- Compact with open cabin area
- High visibility colouring on impact areas, visible silver step, reflective stickers
- Exclusive “katana shape” for superior driver’s comfort, emphasising robustness of battery hood with reflective stickers increasing visibility of the truck in gloomy environment
- Driver truck
- Generating first impressions:
  - Low centre of gravity... by keeping orange colour at lower end of the truck
  - Active... due to wedge line design
  - Compactness... due to rounded shapes
  - Unique wide open inviting space for the driver easy on/off



Unmatched **design**  
cutting-edge **performance**

# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Layout product presentation

Title

Main feature

## Features

Attributes that are part of the main feature

## Benefits

Benefits resulting from the main feature

Commercial benefits resulting from main feature

Pictures

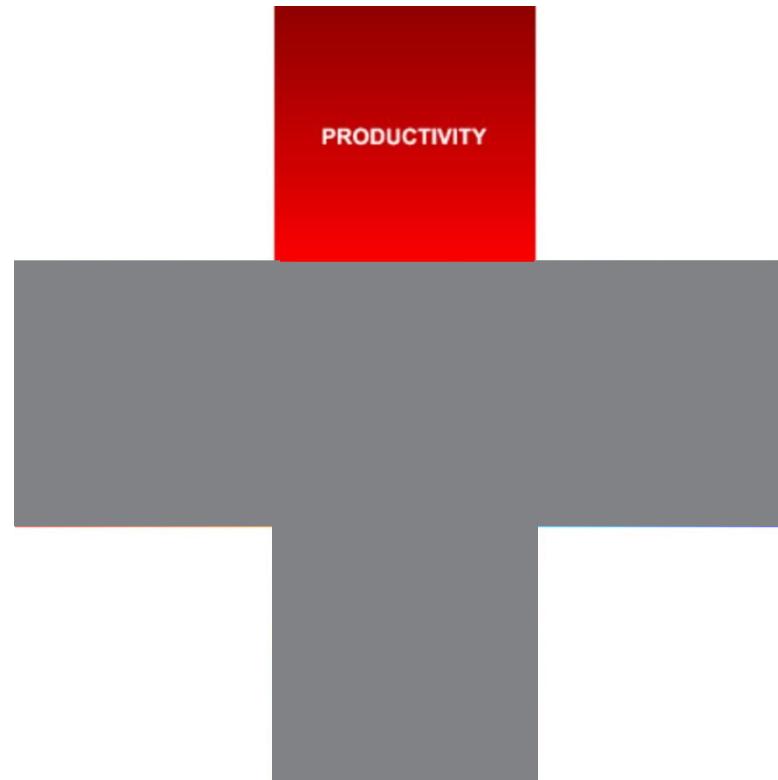
Main value & other applicable values



# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Product Features & Benefits

## Drive and lift power "SyncDrive from Toyota"

### Features

- The SyncDrive from Toyota enables energy consumption reduction and enhanced performance thanks to the combination of IPM (Interior Permanent Magnet) synchronous motor for traction and our advanced controllers. Additionally, the optional high-performance motor for lifting allows for extra productivity and extra energy efficiency.
  - Standard:
    - Toyota IPM drive twin motors for travel control: 2 x 6,6kW
    - AC Pump motor for lift and power steering control: 11kW (4-wheeler)
  - Performance (optional):
    - IPM Pump motor for lift and power steering control: 12,5kW (4-wheeler)
  - Toyota Controller:
    - Inverter MOSFET control
    - CAN communication

**TRAIGO** **TRAIGO-i**



### Benefits

- Compact, powerful, maintenance free motors with very low energy consumption and overheating free
- Optimum control of the motors, offering functions as power select, height selection (opt)...

**High performance = high productivity = more pallet movements per hour**  
**= less cost per pallet movement**



# Product Features & Benefits

## Regenerative braking (1/2)

### Features

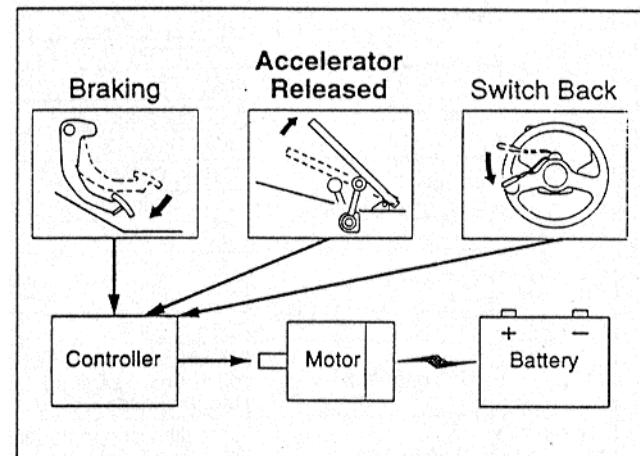
- 3 possible ways to apply regenerative braking:
  - Release of the accelerator pedal
  - Press the brake pedal
  - Switchback / i.e. change travel direction
- During the deceleration phase the motor will act as a generator, supplying power back to the battery
- When releasing the accel pedal the truck automatically brakes (Accel Off)

### Benefits

- Extends operating hours per battery charge
- Extended service life (less wear on brakes)

**TRAIGO TRAIGO-i**

### **Three Types of Regenerative Systems**



Increasing running time per battery charge = more pallet movements per battery charge  
= less cost per pallet movement



# Product Features & Benefits

## Regenerative braking (2/2)

**TRAIGO** **TRAIGO-i**

### Features

- The Regenerative braking system offers a more predictable driving
- The braking effect is fully adjustable through the multifunction display (from smooth to strong braking effect)

### Benefits

- Enhanced productivity due to intuitive truck behaviour
- Brake feeling suiting the driver's preference

Truck behaviour can be adjusted to drivers expectations = increasing productivity of the driver  
= reducing cost of driver per pallet movement



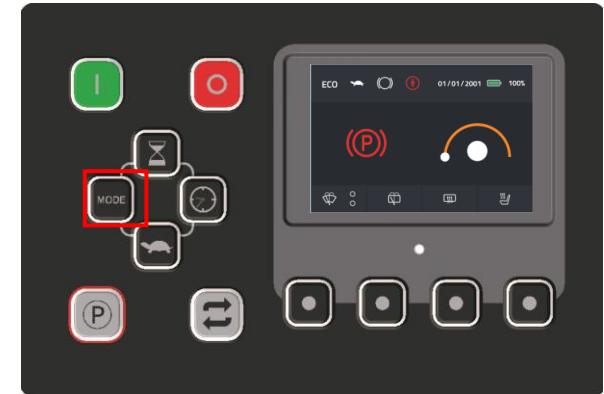
# Product Features & Benefits

## Power select function

### Features

- 4 pre-set travelling modes can be selected by the operator:
  - S = standard mode
  - P = power mode
  - H = high power mode
  - ECO = optimal balance between power and operating time

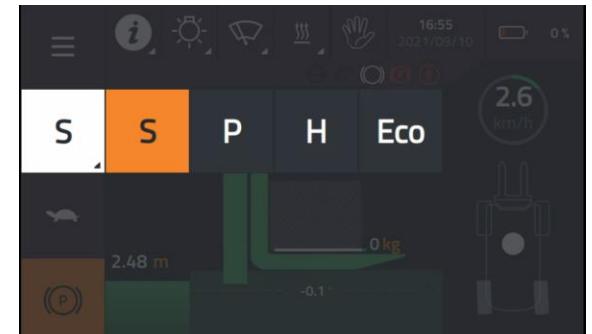
**TRAIGO TRAIGO-i**



Multifunction display: mode button

### Benefits

- Depending on the customer's application, the focus can be on operating hours (S), maximum performance (H) or a combination of working efficiency and operating hours (P/ECO)



Truck behaviour can be adjusted to application & drivers' expectations = optimising productivity level to minimise cost of pallet movement



# Product Features & Benefits

## Driving behaviour

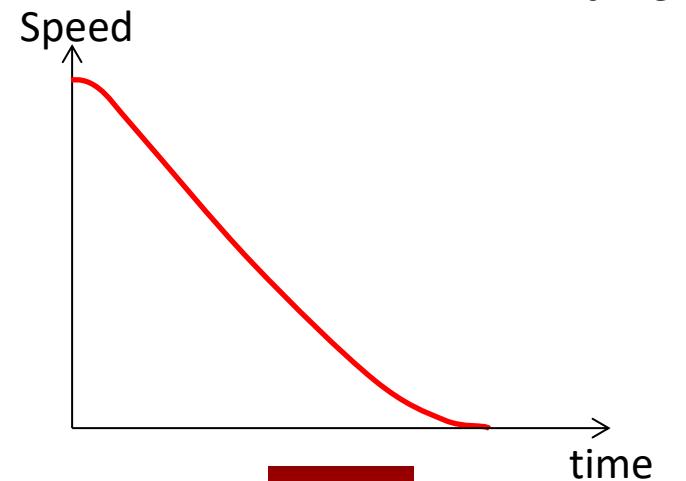
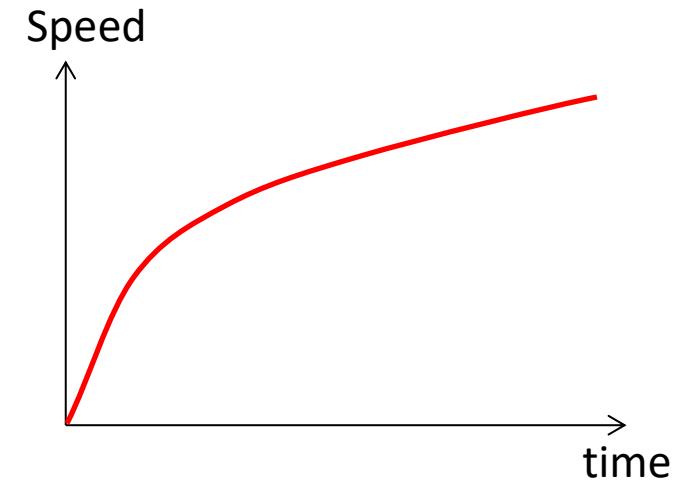
### Features

- Predictable acceleration & deceleration behaviour
- Optimized speed control
- Wide fine-tuning possibilities
  - From very smooth to strong acceleration & deceleration

### Benefits

- Better motion control
- Increased productivity
- Intuitive truck behaviour

**TRAIGO TRAIGO-i**



Intuitive truck behaviour that can be further adjusted to driver's expectations = increasing productivity of the driver = reducing cost of driver per pallet movement



# Product Features & Benefits

## Operating time **TRAIGO**

### Equipped with Lead Acid Battery

#### Features

- Unlock the power of extended performance with the SyncoDrive from Toyota:
  - New generation of IPM synchronous motor for traction and advanced controllers
  - New optimized electronic layout structure
  - New generation of controllers with high efficiency
  - Optimized acceleration / deceleration control (software)
- Further extension of operating time with IPM lift-motor and pump (optional)

#### Benefits

- Designed to meet your unique operational needs with precision and efficiency
- Less need to battery exchange for running one or two shifts
- Increased productivity
- Less energy consumption and less operating cost for the customer

**Increased running time per battery charge = more pallet movements per battery charge  
= less cost per pallet movement**

Traigo 1.5t-2.0t									
Model	Battery capacity Std. (Ah/5h)	Mode	Operating hours*	Battery capacity Med. (Ah/5h)	Mode	Operating hours*	Battery capacity High (Ah/5h)	Mode	Operating hours*
9FBE15T	420	S	5h 30'	460	S	6h 5'	500	S	6h 39'
		P	4h 8'		P	4h 46'		P	5h 24'
		H	3h 3'		H	3h 35'		H	4h 6'
9FBEK16T	525	S	7h 12'	575	S	7h 58'	625	S	8h 43'
		P	5h 42'		P	6h 21'		P	6h 59'
		H	4h 21'		H	4h 52'		H	5h 23'
9FBE16T	630	S	8h 30'	690	S	9h 25'	750	S	10h 20'
		P	6h 48'		P	7h 32'		P	8h 16'
		H	5h 31'		H	6h 7'		H	6h 43'
9FBEK18T	525	S	6h 50'	575	S	7h 35'	625	S	8h 20'
		P	5h 28'		P	6h 4'		P	6h 40'
		H	4h 26'		H	4h 56'		H	5h 25'
9FBE18T	630	S	8h 37'	690	S	9h 31'	750	S	10h 24'
		P	6h 52'		P	7h 37'		P	8h 21'
		H	5h 20'		H	5h 56'		H	6h 31'
9FBE20T	630	S	8h 3'	690	S	8h 53'	750	S	9h 43'
		P	6h 32'		P	7h 16'		P	7h 59'
		H	5h 10'		H	5h 45'		H	6h 19'
9FBK16T	525	S	5h 50'	575	S	6h 25'	625	S	7h 0'
		P	4h 40'		P	5h 8'		P	5h 36'
		H	3h 47'		H	4h 10'		H	4h 33'
9FB16T	630	S	7h 0'	690	S	7h 20'	750	S	7h 40'
		P	5h 36'		P	5h 52'		P	6h 8'
		H	4h 33'		H	4h 46'		H	4h 59'
9FB18T	630	S	7h 7'	690	S	7h 52'	750	S	8h 37'
		P	5h 32'		P	6h 9'		P	6h 46'
		H	4h 25'		H	4h 57'		H	5h 28'
9FBK20T	525	S	5h 5'	575	S	5h 39'	625	S	6h 13'
		P	3h 49'		P	4h 17'		P	4h 45'
		H	3h 8'		H	3h 34'		H	4h 0'
9FB20T	630	S	6h 17'	690	S	7h 0'	750	S	7h 42'
		P	4h 48'		P	5h 22'		P	5h 55'
		H	4h 2'		H	4h 31'		H	5h 0'

\*According to Toyota cycle.



# Product Features & Benefits

## Operating time **Traigo**

Equipped with Lithium-ion batteries

### Features

- Unlock the power of extended performance with the SyncoDrive from Toyota:
  - New generation of IPM synchronous motor for traction and advanced controllers
  - New optimized electronic layout structure
  - New generation of controllers with high efficiency
  - Optimized acceleration / deceleration control (software)
- Further extension of operating time with IPM lift-motor and pump (optional)

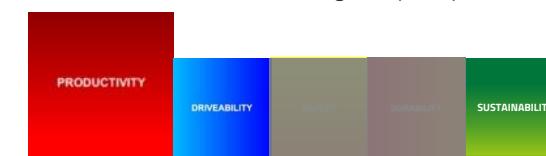
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Traigo 1.5t-2.0t										
Model	Battery capacity Std. (Ah/5h)	Mode	Operating hours*	Battery capacity Med. (Ah/5h)	Mode	Operating hours*	Battery capacity High (Ah/5h)	Mode	Operating hours*	
9FBE15T	300	S	4h 45'		S	6h 56'				
		P	2h 49'	420	P	5h 12'				
		H	1h 52'		H	3h 51'				
9FBEK16T	300	S	4h 46'		S	7h 4'				
		P	3h 33'	420	P	5h 29'				
		H	2h 33'		H	4h 7'				
9FBE16T	300	S	4h 21'		S	6h 40'	630	S	10h 43'	
		P	3h 29'	420	P	5h 20'		P	8h 34'	
		H	2h 48'		H	4h 18'		H	6h 57'	
9FBEK18T	300	S	4h 21'		S	6h 38'				
		P	3h 29'	420	P	5h 18'				
		H	2h 48'		H	4h 17'				
9FBE18T	300	S	4h 41'		S	6h 55'	630	S	10h 51'	
		P	3h 31'	420	P	5h 23'		P	8h 39'	
		H	2h 37'		H	4h 7'		H	6h 43'	
9FBE20T	300	S	4h 22'		S	6h 28'	630	S	10h 9'	
		P	3h 12'	420	P	5h 2'		P	8h 14'	
		H	2h 32'		H	3h 58'		H	6h 31'	
9FBK16T	300	S	4h 3'		S	5h 48'				
		P	3h 14'	420	P	4h 39'				
		H	2h 36'		H	3h 45'				
9FB16T	300	S	6h 31'		S	7h 21'		S	8h 49'	
		P	5h 12'	420	P	5h 53'	630	P	7h 3'	
		H	4h 14'		H	4h 47'		H	5h 44'	
9FB18T	300	S	3h 46'		S	5h 40'	630	S	8h 58'	
		P	2h 42'	420	P	4h 15'		P	6h 58'	
		H	1h 56'		H	3h 15'		H	5h 34'	
9FBK20T	300	S	3h 12'		S	4h 54'				
		P	2h 10'	420	P	3h 34'				
		H	1h 29'		H	2h 48'				
9FB20T	300	S	3h 0'		S	4h 48'	630	S	7h 55'	
		P	2h 11'	420	P	3h 35'		P	6h 3'	
		H	1h 44'		H	2h 57'		H	5h 5'	

\*According to Toyota cycle.



# Product Features & Benefits

## Operating time **TRAIGO**

Equipped with Lithium-ion batteries (Lite Pack)

### Features

- Unlock the power of extended performance with the SyncoDrive from Toyota:
  - New generation of IPM synchronous motor for traction and advanced controllers
  - New optimized electronic layout structure
  - New generation of controllers with high efficiency
  - Optimized acceleration / deceleration control (software)
- Further extension of operating time with IPM lift-motor and pump (optional)

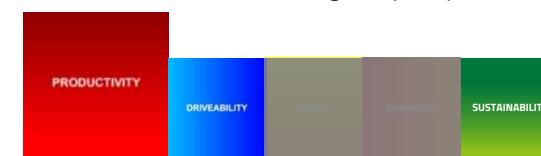
### Benefits

- Designed to meet your unique operational needs with precision and efficiency
- Less need to battery exchange for running one or two shifts
- Increased productivity
- Less energy consumption and less operating cost for the customer

**Increased running time per battery charge = more pallet movements per battery charge  
= less cost per pallet movement**

Traigo 1.5t-2.0t										
Model	Battery capacity Std. (Ah/5h)	Mode	Operating hours*	Battery capacity Med. (Ah/5h)	Mode	Operating hours*	Battery capacity High (Ah/5h)	Mode	Operating hours*	
9FBE15T	300	S	4h 32'	420	S	6h 36'	630	S P H	10h 12' 8h 10' 6h 37'	
		P	2h 41'		P	4h 58'				
		H	1h 46'		H	3h 40'				
9FBEK16T	300	S	4h 33'	420	S	6h 44'	630	S P H	10h 12' 8h 10' 6h 37'	
		P	3h 23'		P	5h 13'				
		H	2h 26'		H	3h 55'				
9FBE16T	300	S	4h 9'	420	S	6h 21'	630	S P H	10h 12' 8h 10' 6h 37'	
		P	3h 19'		P	5h 5'				
		H	2h 40'		H	4h 6'				
9FBEK18T	300	S	4h 9'	420	S	6h 19'	630	S P H	10h 20' 8h 14' 6h 24'	
		P	3h 19'		P	5h 3'				
		H	2h 40'		H	4h 5'				
9FBE18T	300	S	4h 27'	420	S	6h 36'	630	S P H	10h 20' 8h 14' 6h 24'	
		P	3h 21'		P	5h 8'				
		H	2h 30'		H	3h 55'				
9FBE20T	300	S	4h 10'	420	S	6h 10'	630	S P H	9h 40' 7h 50' 6h 12'	
		P	3h 3'		P	4h 48'				
		H	2h 24'		H	3h 47'				
9FBK16T	300	S	3h 51'	420	S	5h 32'	630	S P H	8h 24' 6h 43' 5h 28'	
		P	3h 5'		P	4h 25'				
		H	2h 28'		H	3h 34'				
9FB16T	300	S	6h 12'	420	S	7h 0'	630	S P H	8h 24' 6h 43' 5h 28'	
		P	4h 58'		P	5h 36'				
		H	4h 2'		H	4h 33'				
9FB18T	300	S	3h 35'	420	S	5h 23'	630	S P H	8h 32' 6h 38' 5h 18'	
		P	2h 34'		P	4h 3'				
		H	1h 50'		H	3h 6'				
9FBK20T	300	S	3h 2'	420	S	4h 40'	630	S P H	7h 32' 5h 46' 4h 50'	
		P	2h 4'		P	3h 24'				
		H	1h 25'		H	2h 40'				
9FB20T	300	S	2h 52'	420	S	4h 34'	630	S P H	7h 32' 5h 46' 4h 50'	
		P	2h 5'		P	3h 25'				
		H	1h 39'		H	2h 49'				

\*According to Toyota cycle.



# Product Features & Benefits

## Operating time **TRAIGO\_i**

### Features

- Longer operating time due to:
  - New SyncoDrive from Toyota - IPM synchronous motor for traction and advanced controllers
  - New optimized electronic layout structure
  - New generation of controllers with high efficiency
  - Optimized acceleration / deceleration control (software)
  - Less energy consumption compared to Traigo models
- Further extension of operating time with IPM lift-motor and pump (optional)

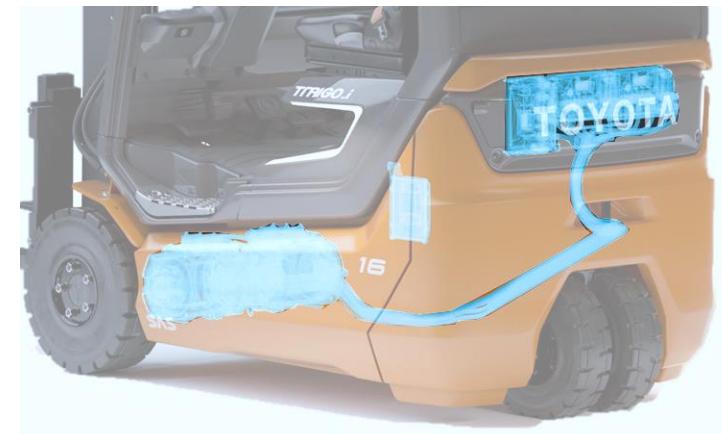
### Benefits

- No need to battery exchange for running one or two shifts
- Increased productivity
- Less energy consumption and less operating cost for the customer

Increased running time per battery charge = more pallet movements per battery charge  
= less cost per pallet movement

Traigo_i 1.6t-2.0t						
Model	Battery capacity Std. (Ah/5h)	Mode	Operating hours*	Battery capacity High (Ah/5h)	Mode	Operating hours*
60-9FBEK16T	300	S P H	4h 2' 3h 1' 2h 41'	420	S P H	6h 3' 4h 41' 4h 11'
60-9FBE20T	300	S P H	4h 10' 3h 20' 2h 42'	420	S P H	6h 20' 5h 4' 4h 7'
60-9FB20T	300	S P H	3h 2' 2h 21' 1h 49'	420	S P H	4h 42' 3h 40' 2h 49'

\*According to Toyota cycle.



# Product Features & Benefits

## Operating time **TRAIGO\_i**

### Equipped with Lite Pack

#### Features

- Longer operating time due to:
  - New SyncoDrive from Toyota - IPM synchronous motor for traction and advanced controllers
  - New optimized electronic layout structure
  - New generation of controllers with high efficiency
  - Optimized acceleration / deceleration control (software)
  - Less energy consumption compared to Traigo models
- Further extension of operating time with IPM lift-motor and pump (optional)

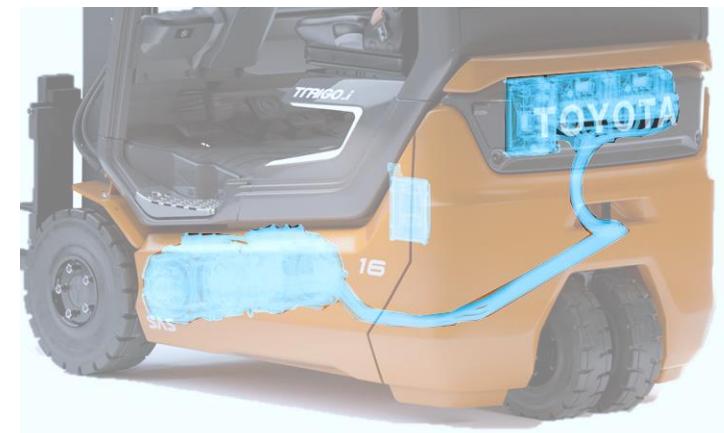
#### Benefits

- No need to battery exchange for running one or two shifts
- Increased productivity
- Less energy consumption and less operating cost for the customer

Increased running time per battery charge = more pallet movements per battery charge  
= less cost per pallet movement

Traigo_i 1.6t-2.0t							
Model	Battery capacity Std. (Ah/5h)	Mode	Operating hours*	Battery capacity High (Ah/5h)	Mode	Operating hours*	
60-9FBEK16T	300	S	3h 47'	420	S	5h 41'	
		P	2h 50'		P	4h 24'	
		H	2h 31'		H	3h 56'	
60-9FBE20T	300	S	3h 55'	420	S	5h 57'	
		P	3h 8'		P	4h 46'	
		H	2h 32'		H	3h 52'	
60-9FB20T	300	S	2h 51'	420	S	4h 25'	
		P	2h 13'		P	3h 27'	
		H	1h 42'		H	2h 39'	

\*According to Toyota cycle.



# Product Features & Benefits

## Battery management **TRAIGO**

### Equipped with Lead Acid Battery

#### Features

- Standard open chassis design allows easy lateral battery exchange:
  - Allows taking out the battery from the side with a powered pallet truck or other forklift truck
- Easy and quick battery side panel opening with locking system:
  - No tools required to open battery side panel
  - A sensor integrated into the locking system will notify you in the display to secure the door if it is not properly locked and will enable truck functionalities

#### Benefits

- Quick access to battery for charging and swapping



Increased efficiency for battery exchange = reduced down time of truck = more pallet movements  
= less cost per pallet movement



# Product Features & Benefits

## Battery management **TRIGO**

Equipped with Lithium-Ion battery

### Features

- An opening in the lateral battery door, allows an easy battery charging:
  - Easy access to the battery plug on the side of the truck
- Easy and quick battery side panel opening with locking system:
  - No tools required to open battery side panel
  - A sensor integrated into the locking system will notify you in the display to secure the door if it is not properly locked and will enable truck functionalities

### Benefits

- Easy access to battery plug and opportunity charges



Increased efficiency for battery exchange = reduced down time of truck = more pallet movements  
= less cost per pallet movement



# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Product Features & Benefits

## Full floating suspension

### Features

- Driver compartment decoupled from the rest of the chassis of the truck
  - Mounted on 4 full suspension dampers, improving driver comfort mostly during outdoor application
  - Limiting noise transfer towards the driver

### Benefits

- Transfer of truck bounce to the driver is dampened
- Noise generated by the truck towards the driver is minimized

**TRAIGO TRAIGO-i**



Reducing stress on the driver by minimising noise and vibration increase comfort and productivity of the driver, as well as lead to safer operations = avoiding unintended costs related to physical strain



# Product Features & Benefits

## Access to the truck: Step and handgrip

### Features

- Large and comfortable assist grip
- Low step-in height: 500mm
- Large and deep steps:
  - 320mm width
  - 155mm depth
- Metal grid plate on step silver-painted
  - Enhances visibility at a glance, also in case of gloomy environment

### Benefits

- Drivers of different sizes can access the truck easily
- Easy on and off for frequent on/off activities
- Easy on/off in wet slippery applications with grid step

**TRAIGO** **TRAIGO-i**



Reducing stress on the driver to regularly get in and out of the truck will increase comfort and productivity of the driver, as well as lead to safer operations = avoiding unintended costs related to physical strain



# Product Features & Benefits

## Access to the truck: Leg room for drivers

### Features

- Driver compartment is the same for the entire Traigo range:
  - 450mm depth foot space from accelerator pedal to hood
  - 680mm width toe-board
  - Thick rubber moulded floor mat
  - Slim steering column
  - Adjustable seating position to meet all drivers size, with rounded battery hood shape emphasising ergonomics and comfort for feet, legs and calves

### Benefits

- Drivers of differing sizes can be comfortably seated
- Thick floor mat is comfortable for driver's feet to rest on
- No banging of knees on the steering column
- Legs are not interrupted by battery hood



Reducing stress on the driver in operating position will increase comfort and productivity of the driver = avoiding unintended costs related to physical strain

# Product Features & Benefits

## Access to the truck: Leg room for drivers

### Features

- Driver compartment is the same for all the Traigo\_i models:
  - 600mm depth (+150mm vs. Traigo models) foot space from accelerator pedal to hood
  - 840mm width (+160mm vs. Traigo models) for impressive wide-space for legs thanks to the all-opened driver compartment
  - Thick rubber moulded floor mat
  - Slim steering column
  - Adjustable seating position to meet all drivers size, with rounded and shorter (+100mm calves space vs. Traigo models) battery hood shape further improving ergonomics and comfort for feet, legs and calves.
  - Trucks designed around the driver

### Benefits

- Drivers of differing sizes can be comfortably seated
- Thick floor mat is comfortable for driver's feet to rest on
- No banging of knees on the steering column
- Legs are not interrupted by battery hood

Reducing stress on the driver in operating position will increase comfort and productivity of the driver = avoiding unintended costs related to physical strain

**TRAIGO\_i**



# Product Features & Benefits

## Driving position: Pedal layout

### Features

- Standard: Car pedal layout
  - Optimized accelerator pedal helps to keep foot in natural position while travelling at any speed
  - Narrow brake pedal with optimised stroke: improving quick switch of foot from pedal to pedal
- Different optional pedal layouts available
  - D2 pedal - E43A
  - Double accel pedal – E43C
- Improved accel-off function and more easily settable deceleration

### Benefits

- Car pedal layout offers intuitive drive for operators of all types
- Driver can choose different pedal layouts depending on preference or experience
- No need to use footbrake: when releasing accel pedal, the truck will brake smoothly (deceleration is programmable)

Intuitive pedal lay-out results in more efficient drivers = increasing productivity  
= decreasing cost per pallet movement

**TRAIGO** **TRAIGO-i**



# Product Features & Benefits

## Driving position: Automatic parking brake

### Features

- Parking brake applies automatically when standing still:
  - First stop managed by motor torque during a couple of seconds
  - Then parking brake automatically applies
- Parking brake disengage automatically during operation when selecting driving direction and pressing the accelerator
- Button integrated into the display for operator action
  - Required at start of the truck (Key-on)
  - On touch screen display, to activate or deactivate the parking brake, maintain pressure on the button. This ensures a smooth and efficient operation.

### Benefits

- Easy to reach, no accidental release
- Ensuring the truck is parked safely

**TRAIGO TRAIGO-i**



Increased control over the truck = reduced risk of accidents = reduced risk of damage costs  
Increasing driver comfort by automatic application of parking brake = increasing productivity  
= more pallet movements = less cost per pallet movement



# Product Features & Benefits

## Full stop on ramp

### Features

- When releasing the accelerator pedal when driving on a gradient:
  - The truck will stop
  - No roll back
  - No backlash when re-accelerating

### Benefits

- Maximise driver control on ramps
- Safe operations on slopes and ramps

**TRAIGO** **TRAIGO-i**



Increased control over the truck = reduced risk of accidents = reduced risk of damage costs



# Product Features & Benefits

## Driving position:

### Features

- Toyota "ORS" seat (*Operator Restraint System*)
- Fully adjustable:
  - 150mm FWD/BWD, weight, backrest inclination (-5° to 15°)
- Full suspension on seat cushion
- Lumbar support & Lateral support wings
- Orange seatbelt with lock recognition
- Long seatbelt latch

### Benefits

- Adjustability to ensure comfortable seating position
- When cornering - lateral support wings keep driver in position for comfortable drive
- Seatbelt prevents the driver from getting thrown out of the seat in case of an accident
- Orange color allow easy monitoring of operator compliance
- Increased safety as truck won't operate if seatbelt is not fastened

Reducing stress on the driver in operating position will increase comfort and productivity of the driver = avoiding unintended costs related to physical strain

**TRAIGO** **TRAIGO-i**



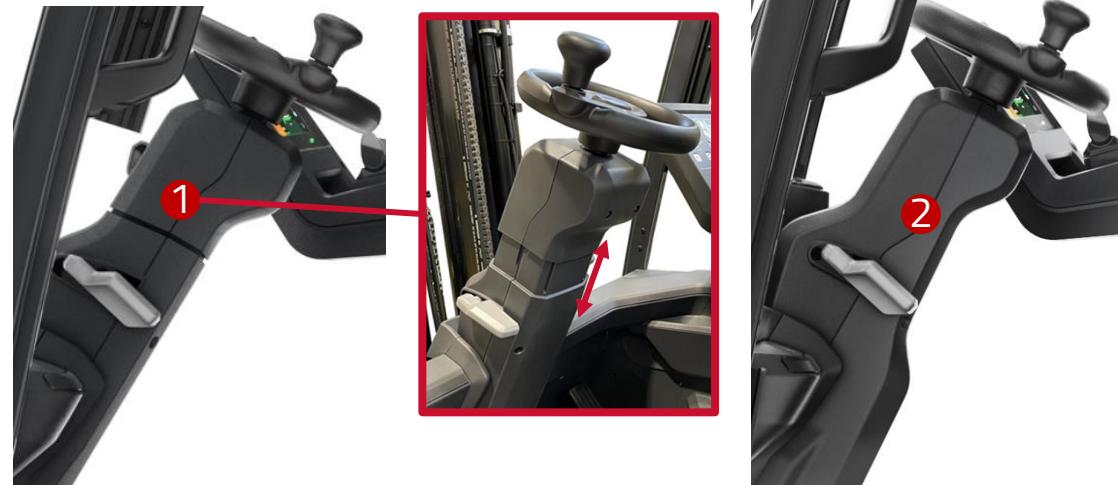
# Product Features & Benefits

## Driving position: Steering (1/2)

### Features

- Small steering wheel diameter to reduce encumbrance and improve visibility, keeping optimal distance from knob to center lowering physical strain
  - Steering wheel diameter: 246mm
  - Knob-center: 120mm
- New tilttable steering column
  - Telescopic column standard for 3-wheeler models (1) and optional for 4-wheeler models (2) – stroke: 57mm
  - Adjustment levers in silver grey easier to reach at a glance
  - Slimmer shape to optimise space for knees of driver
- Steering knob with improved shape easier to handle

**TRAIGO TRAIGO-i**



### Benefits

- Reduce shoulder movements for easier steering
- To optimise preferred driving position
- To return to preferred driving position after tilting away
- More comfortable grip of steering wheel

Reducing stress on the driver in operating position will increase comfort and productivity of the driver = avoiding unintended costs related to physical strain



# Product Features & Benefits

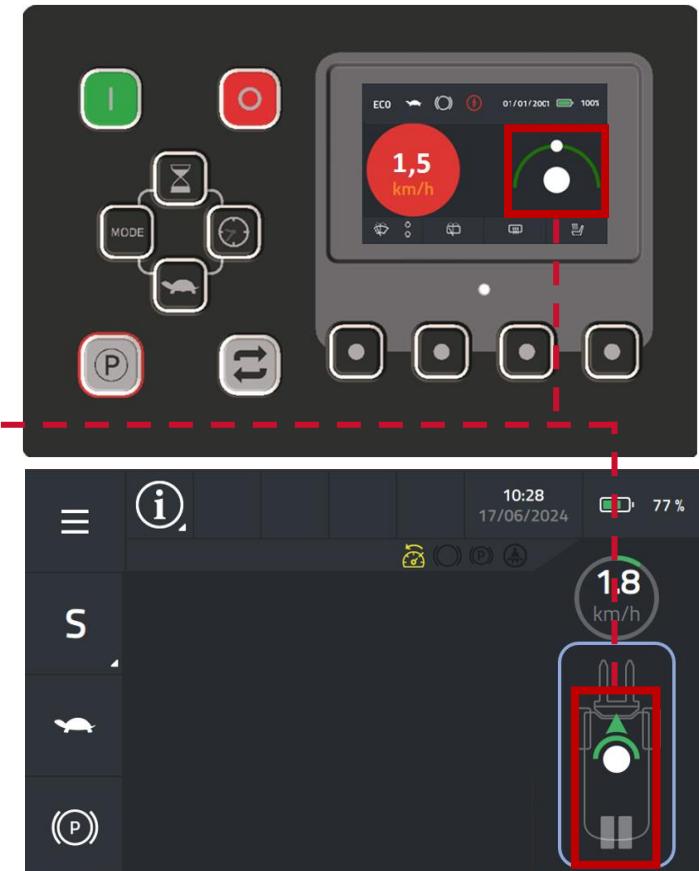
## Driving position: Steering (2/2)

### Features

- Full hydraulic power steering (priority valve on pump) on 4-wheeler models
- Electric power steering (EPS) on 3-wheeler models
- Steering synchronizer: steering knob always in same position when wheels are straight



**TRAIGO TRAIGO-i**



### Benefits

- Less force needed when steering
- Assure most comfortable driving position when driving straight lines

Reducing stress on the driver in operating position will increase comfort and productivity  
= avoiding unintended costs related to physical strain



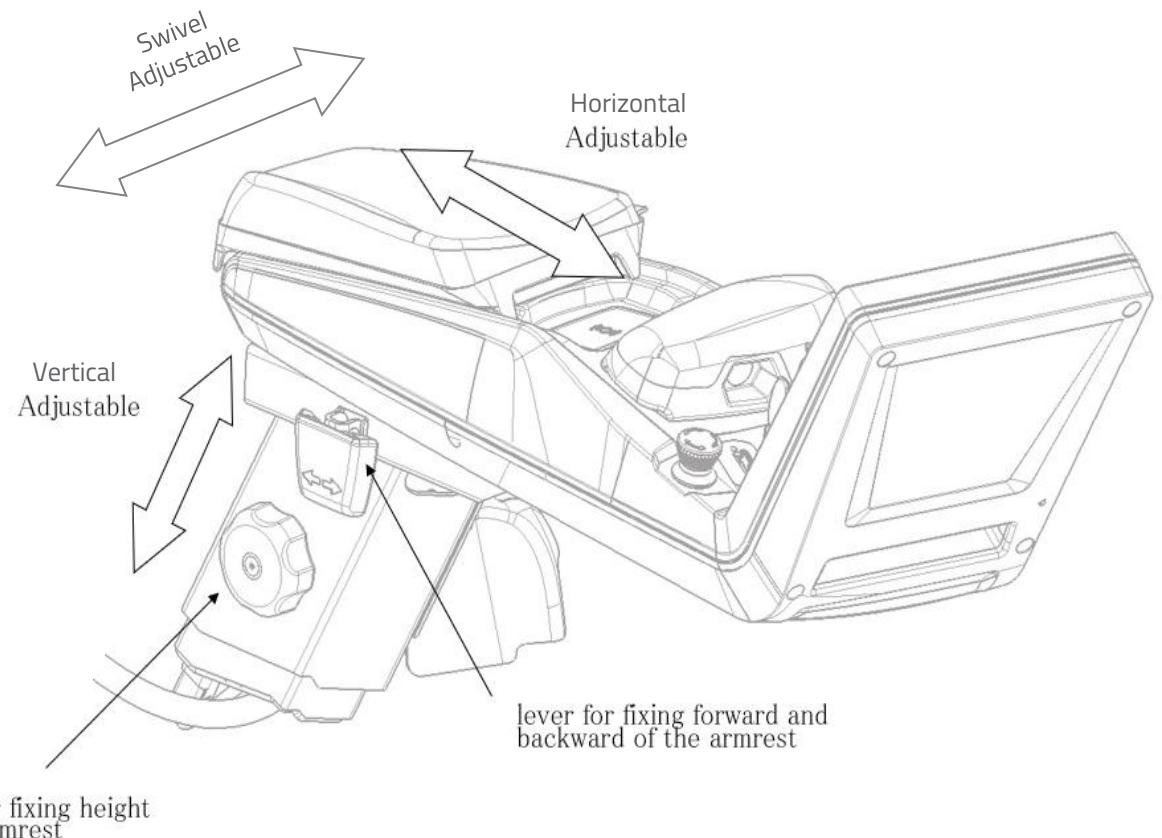
# Product Features & Benefits

## Material handling: Ergonomic armrest

### Features

- Fully adjustable armrest
  - Horizontal adjustment: 57mm range
  - Vertical adjustment: 60mm range
  - Swivel adjustment: 4 degrees range
- Display integrated into the armrest
- Different lever set-ups can be installed
- Elbow support including storage compartment

**TRAIGO TRAIGO-i**



### Benefits

- Offer to any driver the most comfortable driving position
- Easy and optimal truck control
- Portables can be stored

Increasing driver comfort = increasing productivity = more pallet movements  
= less cost per pallet movement

# Product Features & Benefits

**Material handling:** Minilevers and direction change

## Features

- Levers integrated in an ergonomic armrest.
- Adjustable palm rest pillow including:
  - Direction switch, Fork tilting switch & Horn
  - Other functionalities depending truck configuration
  - Adjustable in 3 different pre-sets positions ( $\pm 10\text{mm}$ )
- Other lever set-ups available as option

## Benefits

- Offer to any driver the most comfortable driving position
- Easy and low effort change of travel direction
- Exact load control, effortless horizontal position
- Driver's choice of lever type

Increasing driver comfort by easier controllable material handling functions = increasing productivity  
= more pallet movements = less cost per pallet movement

More accurate material handling control allows for increased safety in the working environment =  
reduced cost for unintended damage

**TRAIGO** **TRAIGO-i**



# Product Features & Benefits

## Starting truck: Key switch

### Features

- Key switch on dashboard
- Other switching-on methods available as options

### Benefits

- Easy to switch on the truck
- Avoid non authorized people to use the truck

**TRAIGO** **TRAIGO-i**



Removable control to drive the truck = lower risk of unauthorized driving = reduced risk of accidents = reduced risk of damage cost



# Product Features & Benefits

## Multifunction Display (1/3)

### Features

- Colour display and push-buttons
- Integrated into the armrest

### Benefits

- Key information at a glance
- Easy to reach
- High visibility
- Easy activation of core functions

**TRAIGO** **TRAIGO-i**



Intuitive display enabling to understand the state of the truck at a glance = maximise efficient use of the truck = minimising cost related to non-productive / non-efficient use



# Product Features & Benefits

## Multifunction display (2/3)

Functions	Standard
Calendar and clock	○
Battery discharge indicator	○
Digital speedometer	○
Low speed setting (turtle) indicator	○
Parking brake indicator	○
Power select (SPH) indicator	○
OPS indicator	○
Spanner indicator	○
Overheat warning indicator	○
Direction indicator	○
Wheel indicator	○
Load weight indicator (accuracy +/- 7% of weight applied on forks)	○
Key switch on hour meter	○
Travel motor service hour meter	○
Pump motor service hour meter	○
Work hour meter	○
Lap time meter	○
Overload alarm	○

**TRAIGO** **TRAIGO-i**



# Product Features & Benefits

## Multifunction display (3/3)

Functions	Standard
Odometer	○
Trip meter	○
Planned maintenance hour meter	○
Battery over-discharge warning	○
Low battery capacity warning	○
Low temperature warning	○
Parking brake ON/OFF warning	○
Return to neutral warning for travel OPS	○
Return to neutral warning for MH OPS	○
Diagnostic code display	○
Over speed alarm	○
Power select (SPH) function (Operator Available)	○
Over speed alarm setting (Operator Available)	○
Low speed setting (Operator Available)	○
Maximum speed limitation setting (Administrator Only)	○
Planned maintenance hour setting (Administrator Only)	○
Menu lock setting (Administrator Only)	○
2nd password registration for admin (Administrator Only)	○

**TRAIGO** **TRAIGO-i**



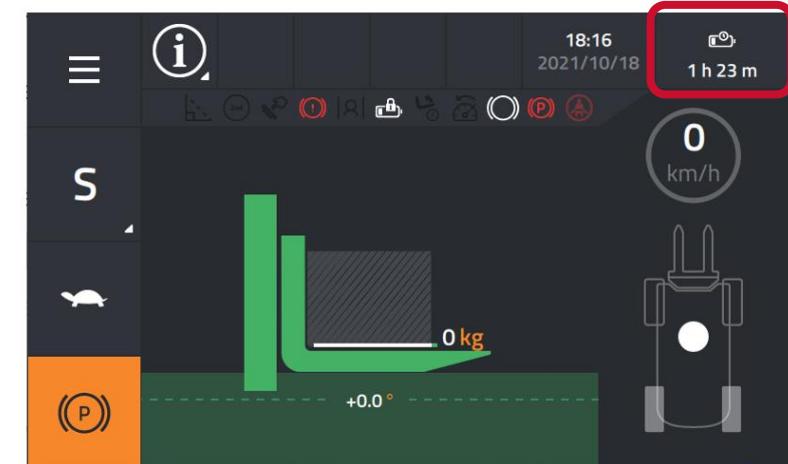
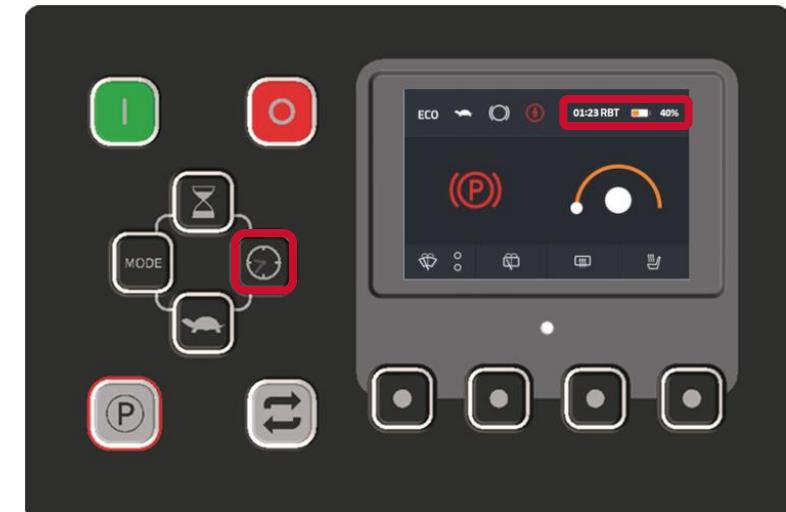
# Product Features & Benefits

## Multifunction display: Operating time indicator

### Features

- Remaining operating time displayed on the upper right corner of the display (h:min)
  - With the basic display, and it can be selected by just short clicking on a dedicated button repeatedly (see circled picture)
- Operating time indication in function of selected power mode (S/P/H/ECO), customised settings and driving behaviour.

**TRAIGO TRAIGO-i**



### Benefits

- Clear information on truck remaining operating time allows more optimized fleet management.
- Allows customers to balance performance and operating time, leading to more efficient handling operations.

Increased level of awareness on operating time enables more efficient handling operations  
= increased productivity = more pallet movements = less cost per pallet movement



# Product Features & Benefits

## Multifunction touchscreen display (option)

### Features

- Wide colour touchscreen display
- Integrated into the armrest

### Benefits

- Key information at a glance
- Easy to reach
- Great visibility
- Touchscreen for enhanced operability

**TRAIGO** **TRAIGO-i**



Intuitive display enabling to understand the state of the truck at a glance = maximise efficient use of the truck = minimising cost related to non-productive / non-efficient use



# Product Features & Benefits

## Driver convenience: Storage

TRAIGO

### Features

- On front dashboard, right side:
  - Small storage box (1)
- On right dashboard panel:
  - Cup holder (2)
- Armrest integrated storage compartment, seat pocket:
  - Medium storage / phone compartment, elbow support (3)
  - Big storage compartment behind seat (4)



### Benefits

- Cans, pens, badges, portables can be stored
- Driver can easily carry papers with him

Having small tools nearby and not disturbing operating the truck = increased driver comfort = increased productivity = more pallet movements = less cost per pallet movement

# Product Features & Benefits

## Driver convenience: Storage

**TRAIGO-i**

### Features

- Armrest integrated storage compartment, seat pocket:
  - Medium storage / phone compartment, elbow support (1)
  - Big storage compartment behind seat (2)

### Benefits

- Pens, badges, portables can be stored
- Driver can easily carry papers with him



Having small tools nearby and not disturbing operating the truck = increased driver comfort = increased productivity = more pallet movements = less cost per pallet movement

PRODUCTIVITY

DRIVEABILITY

SAFETY

DURABILITY

SUSTAINABILITY

# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Product Features & Benefits

## Passive and Active Safety

Safety can be divided into two categories:

Passive safety: features that help minimising the effects of an accident:

Chassis and frame

Seat with seat belt

Active safety: features that help to avoid accidents.

Visibility

Parking brake

Floor mat

Lights

SAS – System of Active Stability

During the **TRAIGO** and **TRAIGO-i** design process, both safety categories were taken into account.

# Product Features & Benefits

**Passive safety:** Chassis and frame

## Features

- Frame:
  - Strong OverHead Guard with curved shape
  - New bar type roof and wide visibility reinforced glass roof (optional)
  - Strong frame with robust hinged battery door (not available for Traigo\_i)

## Benefits

- Operator fully enclosed inside a safe driver compartment

**TRAIGO TRAIGO\_i**



Built-in drivers' safety and protection = reducing risk of damage cost on truck or operator in case an accident occurs



# Product Features & Benefits

**Active safety:** Visibility at forktips

## Features

- New lower dashboard
- New smaller steering wheel
- New slimmer steering column

## Benefits

- Clear view on fork tips through all masts
- Better forward visibility
- Better visibility to the ground for more accurate load handling operations and less damage to products

**TRAIGO TRAIGO-i**



Clear visibility enables safe and efficient handling operations = increased productivity  
= more pallet movements = less cost per pallet movement



# Product Features & Benefits

**Active safety:** Visibility at 1.5 m

**TRAIGO TRAIGO-i**

## Features

- Lift cylinders are placed behind the mast beams
- Large choice of masts for each application / driver preferences

## Benefits

- Clear view on fork tips for loading/unloading lorries, stacking...
- Better visibility forward when handling loads at lorrybed height

Pending  
picture

1. Clear visibility enables efficient handling operations = increased productivity = more pallet movements = less cost per pallet movement
2. Clear visibility enables safer handling operations = reduced risk of damage to load and lorry / dock = reduced risk of damage cost



# Product Features & Benefits

**Active safety:** Visibility at max lift height

**TRAIGO TRAIGO-i**

## Features

- New bar-type roof in line with new design of the truck, providing excellent visibility and as optional full visibility transparent glass roof

## Benefits

- Good upward visibility when lifting loads at high height
- Good visibility on fork tips whatever the lifting height

Pending  
picture

1. Clear visibility enables efficient handling operations = increased productivity = more pallet movements = less cost per pallet movement
2. Clear visibility enables safer handling operations = reduced risk of damage to load and racking = reduced risk of damage cost



# Product Features & Benefits

**Active safety:** Emergency stop button in armrest

**TRAIGO TRAIGO-i**

## Features

- Stop any truck function in case of emergency
- Integrated into the armrest

## Benefits

- Switch easy to reach and see



Safer operation = reduced risk for accidents = less risk of medical/ damage costs



# Product Features & Benefits

## Active safety: Toyota System of Active Stability

The world's first active safety system for forklifts since 1999.

Dynamically protecting driver and load to increase productivity and safety.

Simple principles, easy to use and really efficient on daily operations.

Development involved a dedicated team of over 30 engineers.  
The system has 126 Patents.

SAS system is still unique in the marketplace today.

Competition also discovered the values and trying to find alternative ways to have the similar advantage.

This underlines the strength of this Toyota feature.

... given the system's long-standing reliability, it remains a unique selling point.

The market is still asking to continue promoting it, as it is a distinctive feature among Toyota trucks customers worldwide.

**TRAIGO** **TRAIGO-i**



# Product Features & Benefits

## Active safety: Toyota System of Active Stability

SAS on **TRAIGO** and **TRAIGO-i** includes:

- Active Mast Function Controller
  - Active mast front tilt angle control
  - Active mast front and rear tilt speed control
  - Automatic fork levelling control FWD/BWD
  - Key-lift interlock
- Active Steering Synchronizer
- Active Control Rear Stabilizer (4W models)
- Speed Reduction when Cornering

**TRAIGO** **TRAIGO-i**

**SAS**



# Product Features & Benefits

**Active safety:** Active mast front tilt angle control

**TRAIGO TRAIGO-i**

## Features

- Restricts forward tilt angle depending on load and lift height



## Benefits

- More stability when tilting forward
- Better load control, reduces risk of loads slipping from forks
- Less risk of injury
- Less stress when working at height

Reduced risk of losing load and racking damage = reduced risk of damage cost

Enables efficient material handling operations = increased productivity = more pallet movements = less cost per pallet movement



# Product Features & Benefits

**Active safety:** Active mast front and rear tilt speed control

**TRAIGO TRAIGO-i**

## Features

- Reduces forward and backward tilting speed depending on lift height



## Benefits

- Better load control, reduces risk of loads slipping from forks
- Less risk of injury
- Less stress when working at height

Reduced risk of losing and damaging loads = reduced risk of damage cost

Enables efficient material handling operations = increased productivity = more pallet movements = less cost per pallet movement



# Product Features & Benefits

## Active safety: Automatic Fork Levelling Control

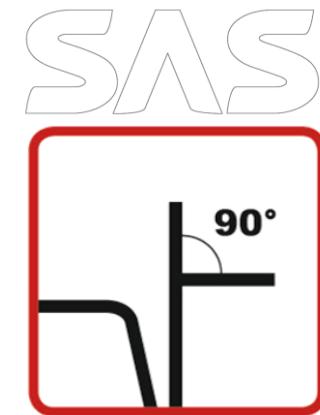
### Features

- Button on tilt lever to level the forks (mast vertical)
- The function is activated for tilting both FWD and BWD

### Benefits

- Easy and more safe operation
- Easy pallet picking, increased productivity
- Less driver stress
- Load protection

**TRAIGO** **TRAIGO-i**



Less time needed to position pallet correctly = increased productivity = more pallet movements = less cost per pallet movement

Less risk of load and racking impacts = reduced risk of damage cost



# Product Features & Benefits

**Active safety:** Active steering synchronizer

**TRAIGO TRAIGO-i**

## Features

- Automatic steering wheel adjustment: Steering knob always in same position when the wheels are straight



## Benefits

- No more misalignment, more safety in the workplace
- More natural driving experience, most natural driving position → less strain on driver

Increased driver comfort = less risk for physical strains on the driver = less risk of medical costs / driver out

Increased manoeuvring efficiency = Increased productivity = more pallet movements = less cost per pallet movement



# Product Features & Benefits

**Active safety:** Active control rear stabilizer (*4-wheel model*)

**TRAIGO** **TRAIGO-i**

## Features

- Swing lock cylinder on the rear steer axle

## Benefits

- Superior lateral stability when turning and driving
- Increased safety with/without load
- Increased productivity



Reduced risk of tipping accidents = reduced risk of medical and damage costs

Increase productivity = more pallet movements = less cost per pallet movement



# Product Features & Benefits

**Active safety:** Speed reduction when cornering

## Features

- Limitation of the drive speed depending on the angle of the steering wheels – level of speed reduction can be programmed
- Both 3-wheeler and 4-wheeler as standard

**TRAIGO TRAIGO-i**



## Benefits

- More lateral stability when turning
- Safer operation
- Less driver stress

Reduced risk of tipping accidents = reduced risk of medical and damage costs

Increased control over the truck = increased productivity = more pallet movements = less cost per pallet movement

Increased control over the truck = less energy consumption = longer operating hours per battery  
more pallet movements = less cost per pallet movement



# Product Features & Benefits

**Active safety:** Key-lift interlock

**TRAIGO TRAIGO-i**

## Features

- When the key switch is turned off all hydraulic functions are disabled

**SAS**

## Benefits

- No operation possible if truck deactivated
- Less risk of injuries (and damage to goods)

Avoid improper use of the truck = reduced risk of accidents = less risk for medical/ damage costs



# Product Features & Benefits

**Active safety:** OPS (Operator Presence Sensing)

**TRAIGO TRAIGO-i**

## Features

- Seat switch under Toyota seat
- Indicator on display



## Benefits

- No hydraulic or drive functions possible when driver is not seated

Avoid improper use of the truck = reduced risk of accidents = less risk for medical/ damage costs

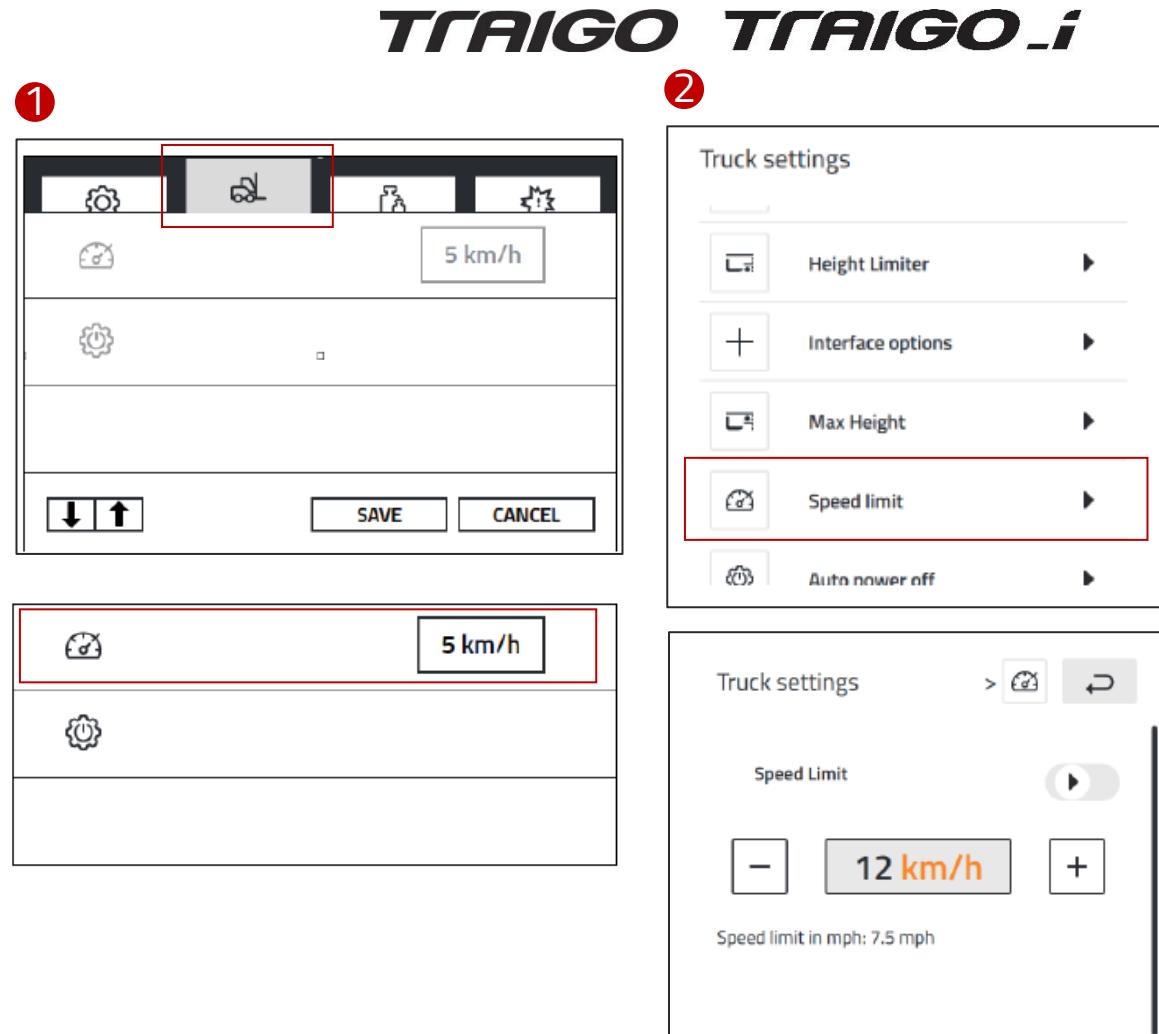


# Product Features & Benefits

## Active safety: Max drive speed setting

### Features

- Truck speed is limited to a preset speed
- Administrator can set the maximum allowed driving speed in all modes (SPH)
  - In multifunction display (1)
  - In multifunction touchscreen display (2)
- Operators have no access to the setting of this function



### Benefits

- Ensures company site driving speeds are enforced

Increase safety by controlling performance of truck = reduced risk of stress in the entire working environment = reduced risk of accidents = less risk of damage cost

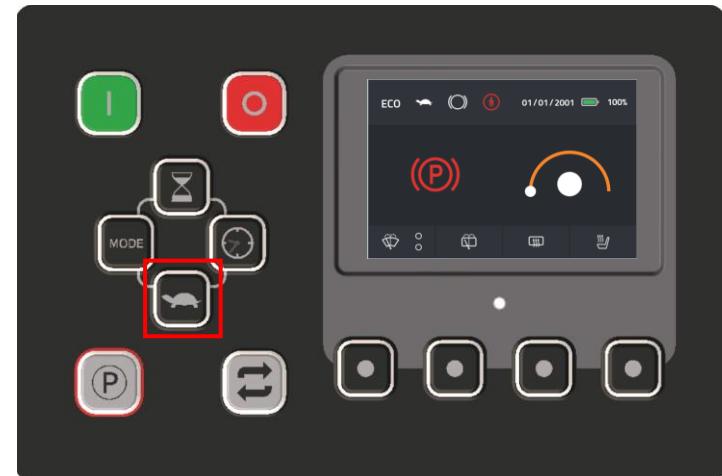
# Product Features & Benefits

## Active safety: Low speed setting (turtle button)

### Features

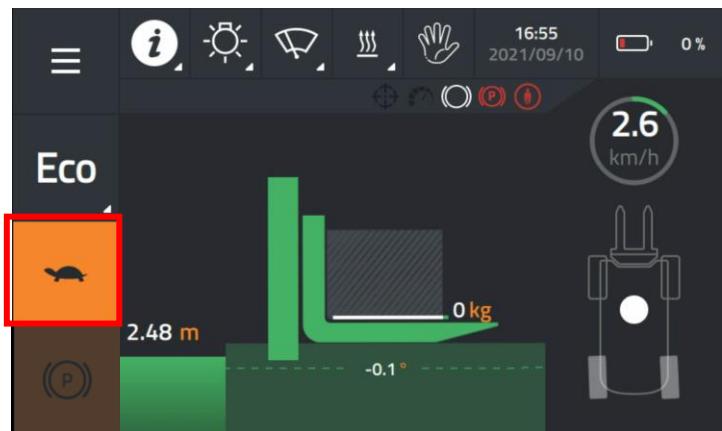
- Intermediate low speed can be set by the administrator in all modes (SPH)
- When pressing the low speed setting button (turtle button) on the display, the truck speed is limited to the preset speed

**TRAIGO TRAIGO-i**



### Benefits

- Increasing safety at worksites where different maximum speeds are valid (for example indoors and outdoors)



Increase safety by controlling performance of truck = reduced risk of stress in the entire working environment = Reduced risk of accidents = less risk of damage cost



# Product Features & Benefits

## Active safety: Overspeed alarm

### Features

- Driving speed at which a warning buzzer will go off can be set through the display for all modes (SPH)
- When exceeding the pre-set speed, the speed indicator on the display will blink and the truck will beep
- This function can be programmed or disabled by the administrator

### Benefits

- Warns the driver when he is exceeding the pre-set speed without actual restriction of the travel speed

**TRAIGO TRAIGO-i**



Increase safety by controlling performance of truck = reduced risk of stress in the entire working environment = Reduced risk of accidents = less risk of damage cost



# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Product Features & Benefits

## Toyota Quality – TPS and components selection

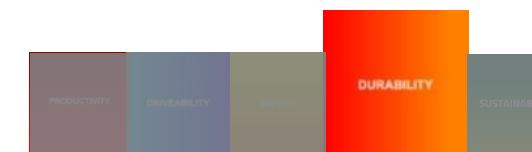
### Features

- All input collected from Service Market addressed on design, ensure good quality on new products
- Premium quality components selections, from well-known European suppliers
  - Components selection and extensive testing and actively work with them in improving quality
  - Strict quality process and workflow: know-how, design, testing
  - Production is involved in assembly quality and manufacturing
- Toyota in-house checks:
  - At delivery of parts
  - At assembly of parts
  - Final check before delivery
- Manufacturing according Toyota Production System (TPS)
- Factory complies with ISO 9001

### Benefits

- Quality from design stage to manufacturing stage for long term reliability and durability

Guarantee of high quality components and final product = increased life time of components  
 = fewer replacements = reduced overall service cost



# Product Features & Benefits

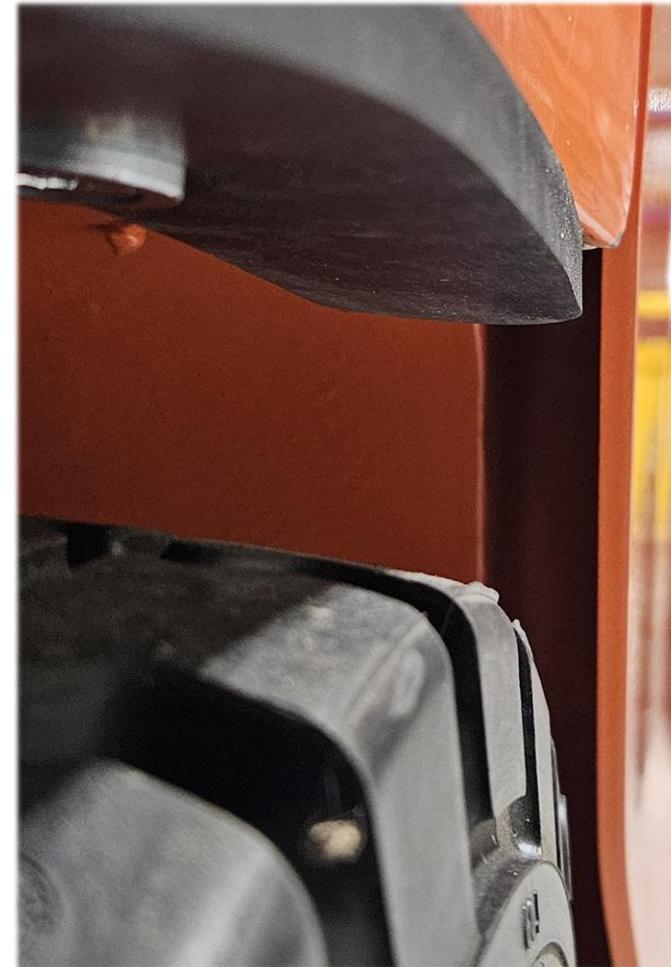
## Chassis and frame

### Features

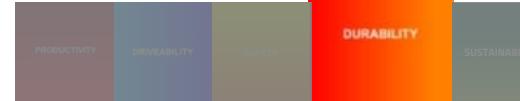
- Metal rugged exterior\*
- Thickness of frame plate: 8 mm

### Benefits

- Design less prone to damage
- Long lasting design



Increased protection of the truck to potential external impact and damage  
= reducing overall service cost



# Product Features & Benefits

## Motors

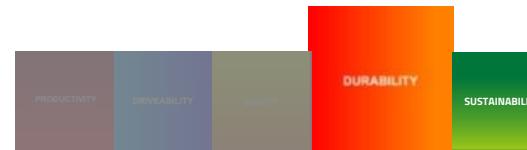
### Features

- TICO IPM (Interior Permanent Magnet) synchronous drive motors, standard protection IP20
  - The new drive motors ensure longer performance thanks to reduced heat dissipation and improved thermal efficiency
  - Reduced energy consumption
  - Optional sealed drive motors achieve IP54 protection  
Motor IP54 (drive) - C03A
- TICO Standard AC lift motor protected inside the chassis, with protection IP20
  - Optional sealed IPM lift motor (Schabmüller / ZAPI), achieving IP54 protection available with  
Lift high-performance - A34A

### Benefits

- Offers protection against foreign objects, dirt, dust and water infiltration ensuring good performances in all types of conditions.

Increased protection of the truck components to potential external threats  
= reducing overall service cost



# Product Features & Benefits

## Braking system

### Features

- Wet disc brakes
- Regenerative braking automatically stop the truck when the accel pedal is released.
- Automatic parking brake as standard

### Benefits

- Low maintenance brake
- Ensuring good braking performance is kept at all time and over time
- No motion until the parking brake is released

Maintenance free braking system = reducing overall service cost



# Product Features & Benefits

## Shockless landing lift

(always included in all masts)

### Features

- Braking valve that reduces the lowering speed at approx. 10 centimeters from the ground.
- Located at bottom of the lift / free lift cylinders.
- Smoother lowering and avoiding noise of the forks when reaching the ground.

### Benefits

- Less stress and more comfortable operation for the driver.
- More durability due to reduced shocks on forks and mast.

**TRAIGO** **TRAIGO-i**



No shocks when lowering = less damage to goods and less stress for drivers  
= lower cost per pallet movement



# Product Features & Benefits

## Access to components

### Features

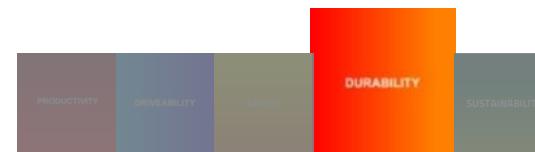
- Easy sideway battery door opening
  - After battery removing, full access to components for inspection
- Removal of 2-piece toe-board without tools
- Counterweight opening providing access to motor controllers
- Contactor panel easily accessible from the side of the truck



### Benefits

- Easy access to electric, hydraulic & other key components

Optimized periodical maintenance and daily check = reduced down time of truck  
= reduced overall service cost



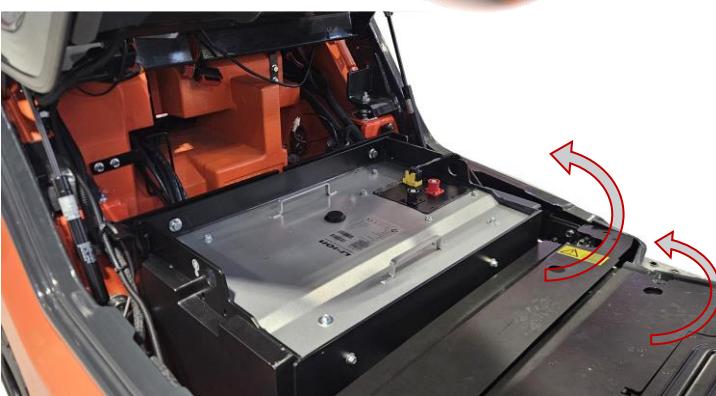
# Product Features & Benefits

## Access to components

**TRAIGO-i**

### Features

- Easy battery hood opening
- Removal of 2-piece toe-board without tools
- Counterweight opening providing access to motor controllers
- Contactor panel easily accessible from the side of the truck



### Benefits

- Easy access to electric, hydraulic & other key components

Optimized periodical maintenance and daily check = reduced down time of truck  
= reduced overall service cost



# Product Features & Benefits

## Service indicators

### Features

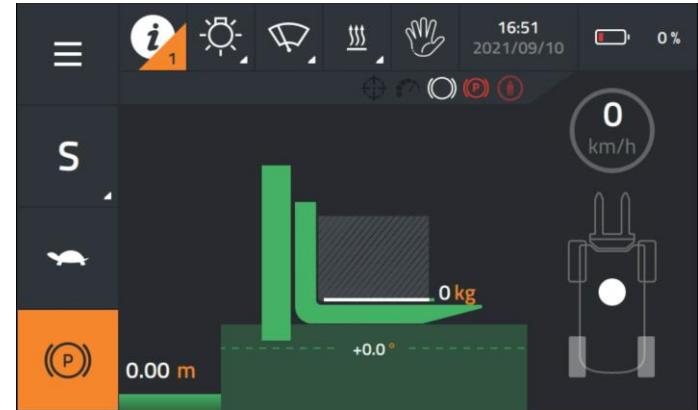
- Maintenance hour meter 
- Thermal protection: overheat warning 
- Battery discharge warning: When the battery charge reaches 20%, the battery icon blinks and a beep will sound to warn the operator

### Benefits

- Ensuring maintenance is carried out as foreseen
- Avoiding damage due to overheating of motors and controller
- Avoiding premature damage to battery

Increased level of awareness of the state of the truck = quicker notice of potential failures and potential damages = reducing the potential down time = reducing the overall service cost

**TRAIGO TRAIGO-i**



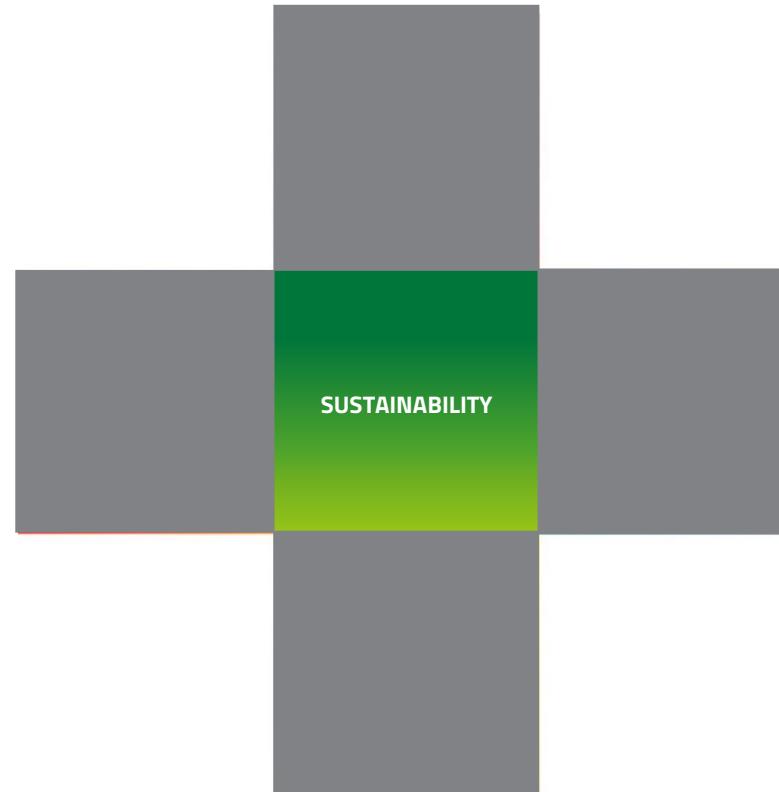
State of charge icon	Corresponding percentage
	100%
	80%
	60%
	40%
	20%



# Product Features & Benefits

**TRAIGO** & **TRAIGO*.i***

are designed around 5 core values that customers can benefit from:



# Product Features & Benefits

## Environmental Certification for Production Site

**TRAIGO TRAIGO-i**

### Features

- The trucks are assembled at the Toyota Material Handling Manufacturing Italy plant in Bologna
  - TMHMI has worked to reduce the emissions generated by its own operations: a photovoltaic system has been installed on the factory roof and usage of heating pumps instead of boilers
  - Usage of green electricity and to compensate the full amount of natural gas used



### Benefits

- Production facilities are certified according to:
  - ISO 14001:2015 – Environmental management systems
  - ISO 50001:2018 – Energy management systems
- Proving to adhere to the highest standards of environment

Production site turned to a full sustainable energy option = contributes to a more sustainable product and production = significantly lowered carbon footprint



# Product Features & Benefits

## Eco-friendly paint (water-based)

### Features

- Over the years, the production processes have become more sustainable:
  - Currently are used hydro-soluble paint instead of solvent-based paints
- Washing process have been scrapped into the production line

### Benefits

- Water-based paints use water as the primary solvent instead of volatile organic compounds which are harmful pollutants found in traditional solvent-based paints
- Reduction of water and gas consumption, without detracting from the quality of the product

Water-based paints don't contain harmful pollutants = contributes to a more sustainable product and production = improve significantly human health

**TRAIGO** **TRAIGO-i**



# Product Features & Benefits

## Truck materials

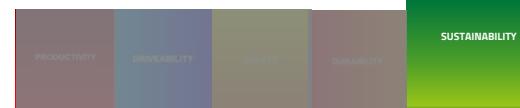
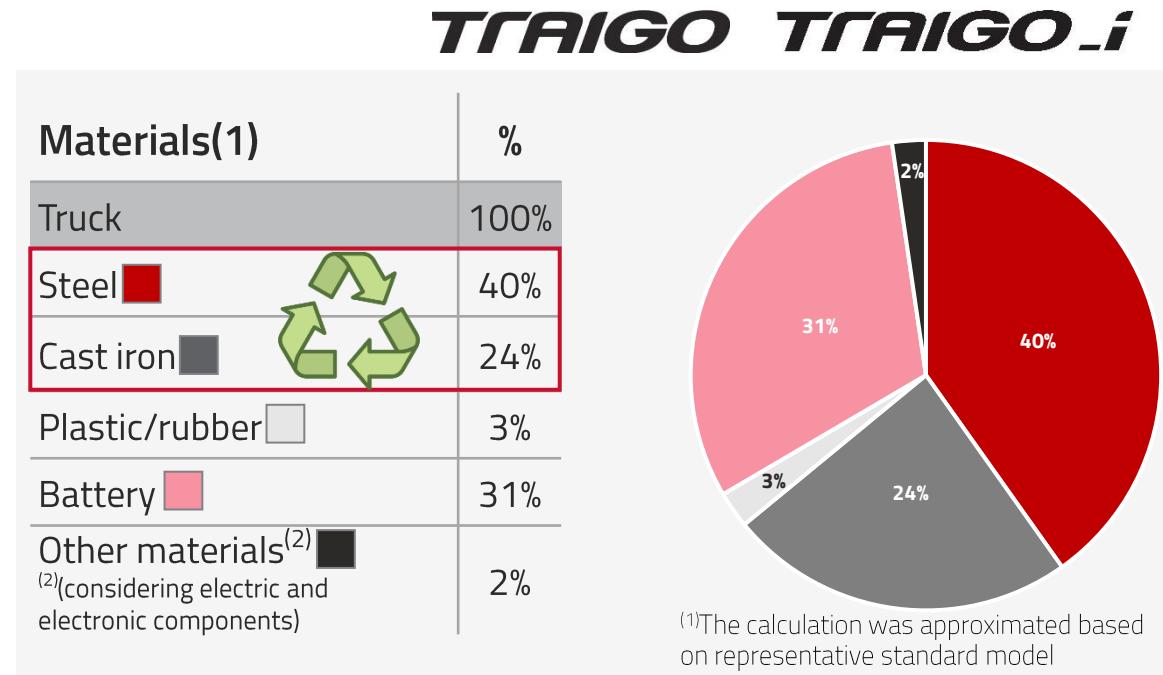
### Features

- Materials of construction have been classified into 5 main categories:
  - battery,
  - plastic/rubber,
  - steel,
  - cast iron,
  - other materials
- Steel and cast iron, the biggest portion of truck's composition, are 100% recyclable materials

### Benefits

- Utilizing recyclable materials prevents waste going to landfill
- Reduction of dependence on raw material imports
- Energy savings in processing recycled materials

High recyclability of truck's components = contributes to a more sustainable product and production = significantly lowered carbon footprint



# Product Features & Benefits

**Low energy consumption means efficiency and reduced CO2 equivalent emissions**

## Features

- The energy consumption during operation is calculated in accordance with EN 16796-2:2016 - Energy efficiency of industrial trucks
  - The  $E_{truck}$  values consider a one-hour work cycle
  - The resulting mass of CO2 equivalent is obtained by multiplying the energy consumption by the standardised CO2 equivalent emission for electrical grid energy (CDEe)
  - The calculation does not include the energy lost while charging and discharging the battery

## Benefits

- The CO2 equivalent emissions resulting from the operation of the product are calculated in accordance with current standards
- A limited CO2 equivalent value means emissions of pollutants into the environment are significantly reduced

**Low energy consumption = low CO2eq emissions = contributes to a more sustainable product and production = lower carbon footprint**

**TRAIGO TRAIGO-i**

Models	$E_{truck}$ [kWh/h]	CDE <sub>e</sub> * [kg/kWh]	$m_{CO2e}$ [kg <sub>CDEe</sub> ]
<b>9FBE15T</b>	3,5	0,54038	1,9
<b>9FBEK16T</b>	3,7		2,0
<b>9FBE16T</b>	3,6		1,9
<b>9FBEK18T</b>	3,8		2,1
<b>9FBE18T</b>	3,8		2,1
<b>9FBE20T</b>	3,9		2,1
<b>9FBK16T</b>	4,3		2,3
<b>9FB16T</b>	4,3		2,3
<b>9FB18T</b>	4,6		2,5
<b>9FBK20T</b>	4,8		2,6
<b>9FB20T</b>	4,7		2,5
<b>60-9FBEK16T</b>	3,6		1,9
<b>60-9FBE20T</b>	3,8		2,1
<b>60-9FB20T</b>	4,4		2,4

\*The CDE<sub>e</sub> value comes from standard EN 16796-1:2016 concerning energy efficiency of industrial trucks. Specifically, the value is based on the European context.



# Product Features & Benefits

**Low energy consumption means effective sustainable investment**

**TRAIGO TRAIGO-i**

## Features

- The SyncoDrive from Toyota enables a significant energy consumption reduction
- The energy consumption during operation is calculated in accordance with EN 16796-2:2016, the energy efficiency of industrial trucks standard

## Benefits

- The return on investment, thanks to the reduced energy consumption, is quicker and more effective than a conventional power unit.
- This puts Toyota in a leading position on energy consumption.

**Low energy consumption = contributes to a more sustainable investment  
= quick and effective payback**

Models	$E_{truck}$ [kWh/h]
9FBE15T	3,5
9FBEK16T	3,7
9FBE16T	3,6
9FBEK18T	3,8
9FBE18T	3,8
9FBE20T	3,9
9FBK16T	4,3
9FB16T	4,3
9FB18T	4,6
9FBK20T	4,8
9FB20T	4,7
60-9FBEK16T	3,6
60-9FBE20T	3,8
60-9FB20T	4,4

$E_{truck}$  = energy consumption values come from standard VDI 2198



# END OF MODULE