26-02-2025

BT levio
Product presentation P-series

Content

Product Range Overview

- Main specifications & design principles

Product Features & Benefits

- Productivity
- Driveability
- Safety
- Durability

BT levio
P-series

High performance trucks

Speed and acceleration in combination with safety

Electric 24V powered pallet trucks

Load capacity 2.0-2.5t

Manufactured in Europe (Sweden)

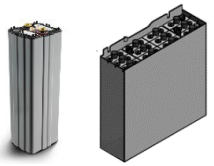
The Levio P is modular with a wide range of solutions to be customized around customer needs for optimal application fit

- All models share the same small size machine body
- Multiple fork length and width options

Load capacity
(2.0 – 2.5t)

Battery types and sizes

- Lithium-Ion
- Lead-Acid

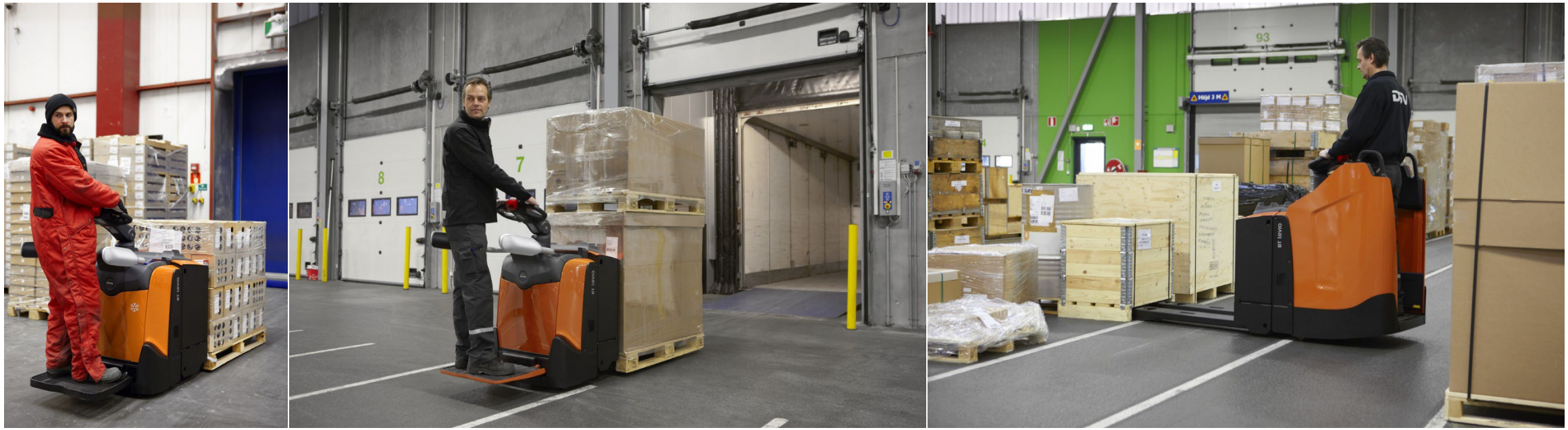


Driver environments

Wheels

Speed options
(6, 8, 10 or 12,5 km/h)

Application BT Levio P-series



- Suits a wide range of applications: Arrange in/outcoming goods, loading/unloading lorries, horizontal transportation, supplying production lines and order picking
- Used at many different customers: Warehouses, distribution centres, supermarkets, industries

BT levio P-series

Depending on the productivity, safety and capacity demand of the customer there is always a model meeting the customer need

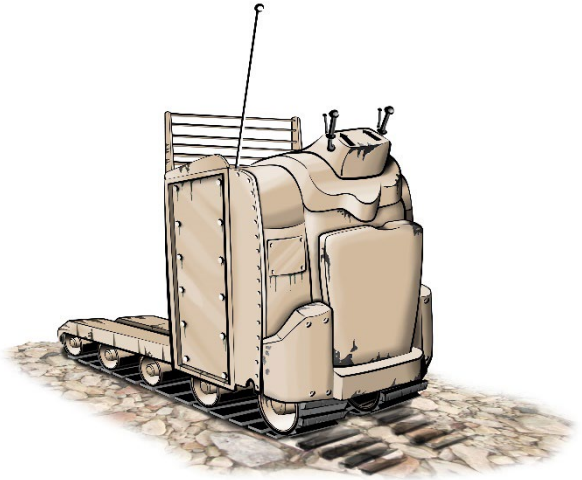
LPE200 LPE220 LPE250

Without gates

Foldable gates

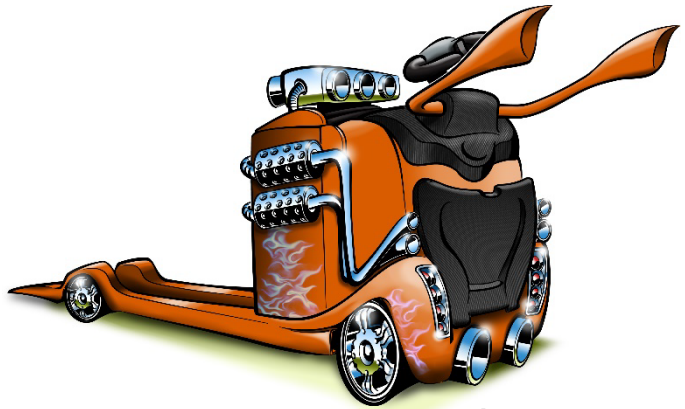
Fixed backrest

Fixed side protection



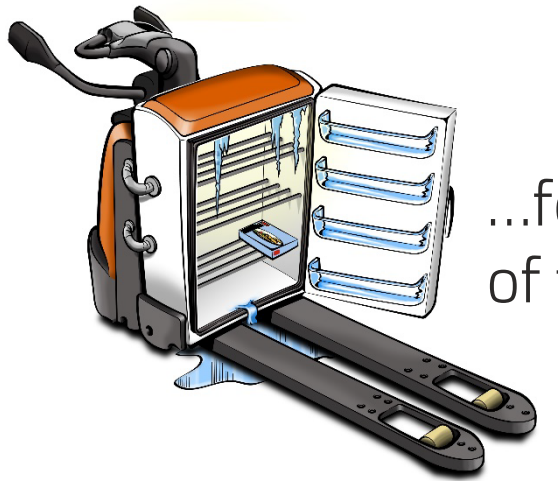
Durable

Fierce competitor

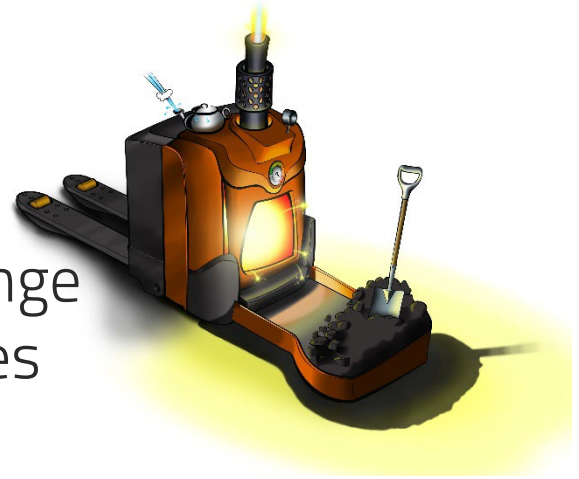


Agile and Fast

High customisation level



...for a wide range of temperatures



Product range

LPE200

Rated capacity	2000 kg
Speed variants	6 / 8 / 10 km/h
Driver interface	Without gates/Foldable gates
	Fixed backrest (8 & 10 km/h)
	Fixed side protection (10 km/h)
	Power steering/Mechanical steering
Battery	Lead Acid: 225-400 Ah
	Lithium Ion: 210 or 300 Ah

LPE200 is ideal for medium to high intensive loading unloading applications and horizontal transports.

Product range

LPE220

Rated capacity	2200 kg
Speed variants	8 / 10 km/h
Driver interface	Foldable gates
	Fixed backrest
	Fixed side protection
	Power steering/Mechanical steering
Batteries	Lead Acid: 375-600 Ah
	Lithium Ion: 210 or 300 Ah

LPE220 is ideal for medium to high intensive loading unloading applications and horizontal transports with need for high battery capacity

.

Product range

LPE250

Rated capacity	2500 kg
Speed	12,5 km/h
Driver interface	Foldable gates
	Fixed backrest
	Fixed side protection
	Power steering/Mechanical steering
Batteries	Lead Acid: 375-600 Ah
	Lithium Ion: 210 or 300 Ah

LPE250 is ideal for very high intense operation with heavy loads and/or need of maximum speed.

BT levio

is designed around 4 core values that customers can benefit from:

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is designed around 4 core values that customers can benefit from:

Optimized machine body design

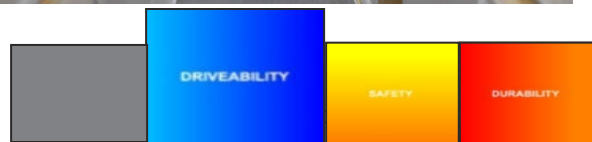
Features

- Small Dimensions
- Low machine body
- Excellent view of forks

Benefits

- Optimized design for enhanced productivity
- Small size machine body for excellent control
- Precise pallet handling
- Easy maneuvering in confined areas

Optimized design = increased driveability = high productive drivers = reduced handling costs / pallet



Comfortable and intuitive tiller arm control

Features

- Ergonomic and intuitive tiller and buttons
- All functions can be used with either hand

Benefits

- Comfortable driving ergonomics
- Easy to overview and to use with either hand
- Enables excellent control and enhance productivity
- Easy maneuvering in confined areas

Optimized ergonomics = increased driveability = high productive drivers = reduced handling costs / pallet

Tiller arm options

Power steering

E-Man steering

Manual steering

Features

- 3 different lengths depending on truck configuration
  - Manual Steering *(Foldable platform/Fixed backrest)*
  - Power Steering *(Foldable platform/ Fixed backrest)*
  - E-Man – Power Steering *(Fixed side protection)*

Benefits

- Flexible driver environment and steering options for optimal maneuverability

Increased driveability = high productive drivers = reduced handling costs / pallet.

Power Steering

Features

- Standard power steering and E-man power steering
- Steer-by-wire Power Steering
- +/- 60° tiller arm angle is equal to +/- 90° angle on drive wheel
- Short tiller arm with optimised manoeuvrability

Benefits

- Optimized operator ergonomics and driving characteristics
- Effortless steering

Standard steering

E-Man steering

Optimized ergonomics = increased driveability = high productive operators = reduced handling costs / pallet.

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Power Steering tiller arm variants

Features

- 2 types of Power Steering depending on the truck configuration
- Standard power steering on Foldable platform and Fixed backrest
- E-Man power steering on Fixed side protection
  - E-Man handle available in a standard size and a small size

Standard steering

E-Man steering

Standard handle

Small handle

Benefits

- Steering tiller arms designed for optimised performance
- High manoeuvrability
- Small E-man handle to create more room for the operator
- Standard E-man handle recommended when wearing big working gloves

Optimized ergonomics = increased driveability = high productive drivers = reduced handling costs / pallet

Height adjustable tiller arm

Features

- Always with power steering and E-man power steering
- Tiller arm can be adjusted in three different heights to match the operator's length

Benefits

- Optimized ergonomics and possible to adjust for the individual operator
- Adjustment of tiller easily done by just a push of a button

Optimized ergonomics = increased driveability = high productive operators
= reduced handling costs / pallet.

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Manual Steering

Features

- Manual steering available with foldable platform and fixed backrest
- Longer tiller arm for lower steering force

Benefits

- Optimized manual steering to reduce steering force and increase maneuverability

Optimized ergonomics = increased driveability = high productive operators
= reduced handling costs / pallet.

Click-2-Creep

Features

- Creep speed mode by double clicking the speed control
- Ability to drive the truck in creep speed with the tiller arm in upright position

Benefits

- Safe and smooth driving in confined areas
- Easy activation and possible to use either hand to maneuver the truck

Easy maneuvering in confined areas = easy to operate truck and decreased risk for impacts = high productivity and less risk of damaged goods = decrease in handling costs

Steering arm

Features

- Tiller arm within truck profile in upright position

Benefits

- Excellent maneuverability also in confined areas when used in Click-2-Creep mode

Safe handling of truck in confined areas = easy to operate truck and decreased risk for impacts = high productivity and less risk of damages = reduced handling costs / pallet

Platform

Features

- Available as Staying down or Folding up platform
- The Staying down platform stays down even when driver steps off
  - Manually folded up
- The Folding up platform folds up when driver steps of

Staying down platform

Folding up platform

Benefits

- Platform adjustable for best fit in application and customer environment
- Staying down suitable for applications with less space constraints
  - No need to fold down platform every time when jumping on and off
- Folding up suitable when platform often need to be raised
  - Efficient maneuverability also in confined areas

Optimized platform = increased maneuverability and easy to operate truck = high productivity = reduced handling costs / pallet

The max weight of the driver is 130 kg to maintain the vibration levels and the lifetime of the platform suspension.

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Optimized Truck Performance (OTP)

Features

- Electronic steering system designed to assist drivers for optimum safety and productivity.

Benefits

- The driver is able to maximize productivity in operation while maintaining safety in use.

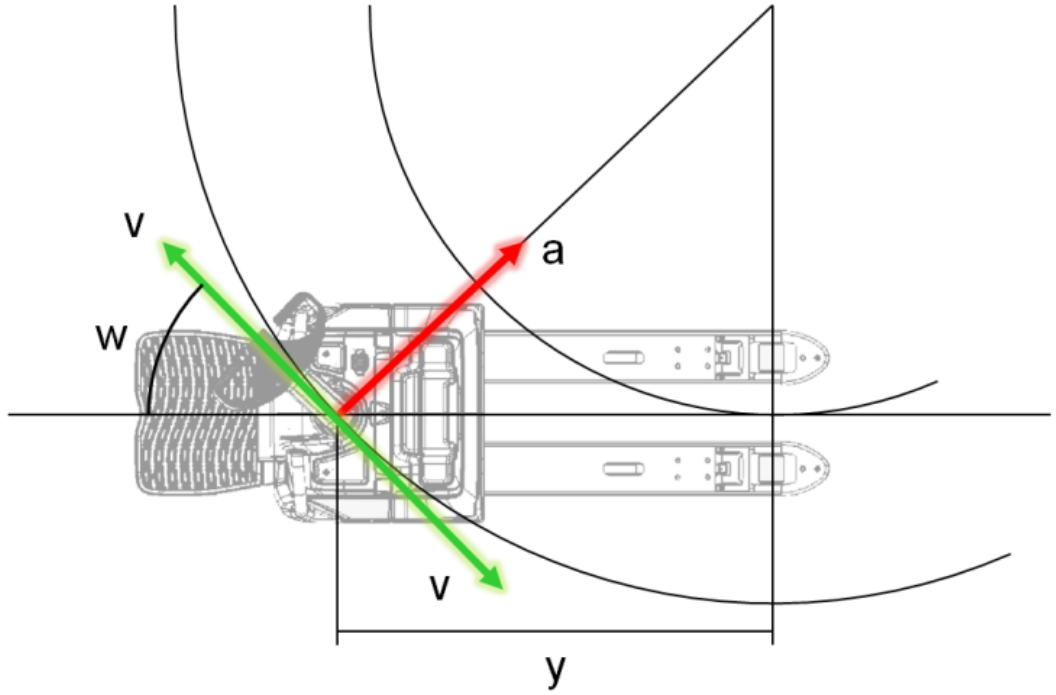
Optimised truck performance		LPE200		LPE220		LPE250	
		Power steering	Manual steering	Power steering	Manual steering	Power steering	Manual steering
Controlled Maximum speed when turning	Steering angle	●	●	●	●	●	
	Fork length/Wheel base	●	●	●	●	●	
Controlled steering angle/drive wheel angle relationship	Speed	●		●		●	
	Fork length/Wheel base	●		●		●	
Controlled steering force	Driving speed	●		●		●	
	Driving direction (drive wheel or fork wheel direction)	●		●		●	
	Change in steering angle	●		●		●	
Controlled Starting acceleration	Soft initial ramp	●	●	●	●	●	●
Controlled Braking deceleration	Stop ramp	●	●	●	●	●	●
Soft behavior in pedestrian mode	Lower acceleration	●	●	●	●	●	●
	Acceleration dependent on the driving direction	●	●	●	●	●	●

Increased driveability = high productive drivers = reduced handling costs / pallet.

OTP - Turning

Features

- Controlled maximum speed when turning dependent on:
  - Steering angle (w)
  - Fork length/Wheels base (y)
- Controlled steering angle/drive wheel angle relationship dependent on:
  - Speed (v)
  - Fork length/Wheel base (y)



Benefits

- The driver is able to maximize productivity in operation while maintaining safe in use also when cornering
- Ensures stable and safe driving characteristics

Increased driveability = high productive drivers = reduced handling costs / pallet.

OTP – Steering force

Features

- Controlled steering force dependent on:
  - Driving speed
  - The change in steering angle

Benefits

- Dynamic control of the steering force ensures smooth behavior.
- Ensures stable driving characteristics for high productivity and safety.

Increased driveability = high productive drivers = reduced handling costs / pallet.

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OTP – Acceleration/Deceleration

Features

- Controlled Starting acceleration
  - Optimised, with a soft initial ramp, for high performance, but without the erratic/kick start.
- Controlled Braking deceleration
  - Optimised, with a stop ramp, for high performance/safety, but without the erratic/sudden stop.

Benefits

- No erratic stop/start behavior with precise speed control.
- Ensures stable driving characteristics for high productivity and safety.

Increased driveability = high productive drivers = reduced handling costs / pallet.

OTP – Soft pedestrian mode

Features

- Soft behavior in pedestrian mode
  - Lower acceleration
  - Lower acceleration in drive wheel direction, than in fork wheel direction
  - 4 km/h max speed

Benefits

- Ensures stable driving characteristics
- Ensures smooth and safe driving in pedestrian mode
- Reduced risk of accidents where operator drive over their feet

Increased driveability = high productive drivers = reduced handling costs / pallet.

Programmable drivers parameters

Features

- Easy programming of driver parameters
- Parameters are linked to individual driver profiles
- 10 different driver profiles and 100 different PIN codes possible

Benefits

- Operational adaptable
  - The truck can be fitted to the driver's skill level and/or the application

Programmable driver parameters = better driveability due to control of the truck supporting the driver = high productive and safe drivers = reduced handling costs / pallet

Programmable drivers parameters

No.	Parameter type	Unit	Min./ Max.	Std. value	Notes
1	Speed Forks direction	%	30-100 Steps of 5	100	30: Lowest top speed setting 100: Highest top speed When gates folded up and operator on platform
2	Speed Platform direction	%	30-100 Steps of 5	100	30: Lowest top speed setting 100: Highest top speed When gates folded up and operator on platform
3	Acceleration	%	10-100 Steps of 5	80	10: Lowest acceleration setting 100: Highest acceleration setting
4	Automatic speed reduction	%	40-100 Steps of 5	80	Defines plug braking force when the operating control returns to the neutral position. The lower the value of parameter, the longer it takes to reduce speed.
5	Speed Gates down	%	30-100 Steps of 5	100	Adjusts the maximum speed of the truck with gates down and operator on the platform (Max 6 km/h)
6	Speed Pedestrian mode	%	30-100 Steps of 5	100	Adjusts the maximum speed of the truck in pedestrian mode (Max 4 km/h)

Programmability

Features

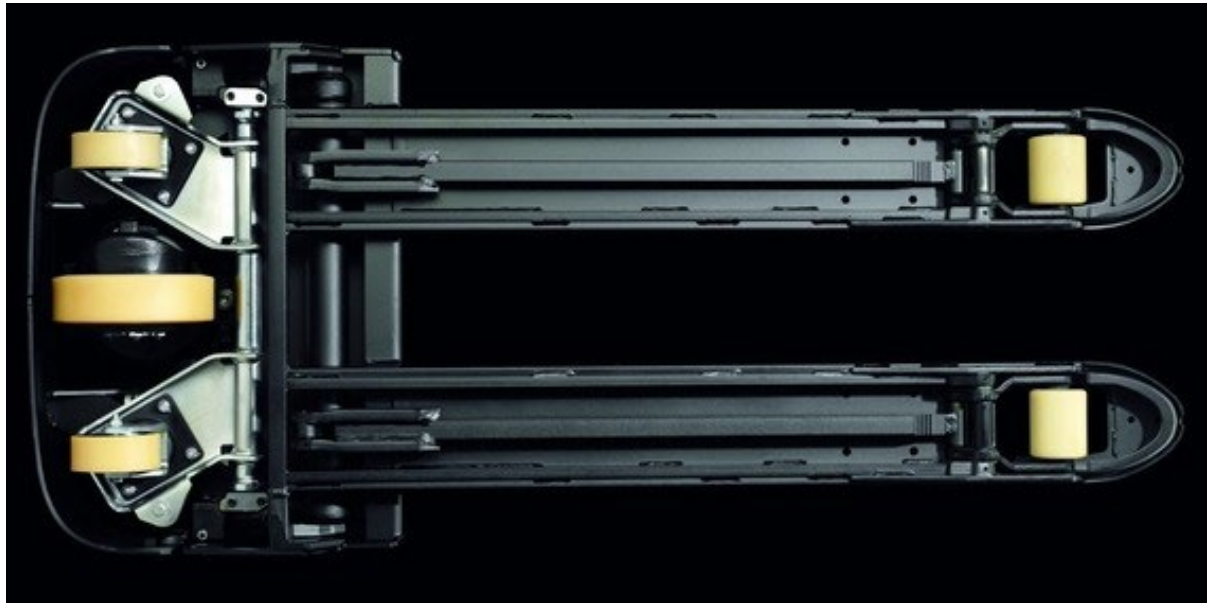
- Several parameters that are possible for a service engineer to set, ex:
  - Automatic shut off time
  - Battery type and size
  - Time for service intervals
  - Steering resistance
  - Support arm lift/lowering speed
  - etc…

Benefits

- Operational adaptable
  - The truck can be optimized to the application

Programmable driver parameters = better driveability due to control of the truck supporting the driver = high productive and safe drivers = reduced handling costs / pallet

5 Wheel configuration



Features

- 5-wheel configuration – steering wheel centrally placed
- Centre drive wheel – symmetric steering
- Drive wheel close to the frame

Benefits

- No sideways movement after slipping
- Easy ramp handling
- Increased durability

5-wheel configuration = support the drivers application = less accidents and productivity = reduced handling costs / pallet

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is designed around 4 core values that customers can benefit from:

Emergency stop switch

Features

- Easy to reach emergency stop switch
  - Press the button to cut off the motor
  - The truck stops immediately

Benefits

- Fast shut off at emergencies
- Easy to reach, easy to use - safe

Emergency switch = increased safety = less injuries = reduced handling costs / pallet

Tiller arm safety button

Features

- Changes drive direction when pushed if driving in steering arm direction

Benefits

- Reduces the risk for driver getting stuck between obstacle and truck

Safety button at truck = increased safety = high productive drivers = reduced handling costs / pallet

Slope control

Features

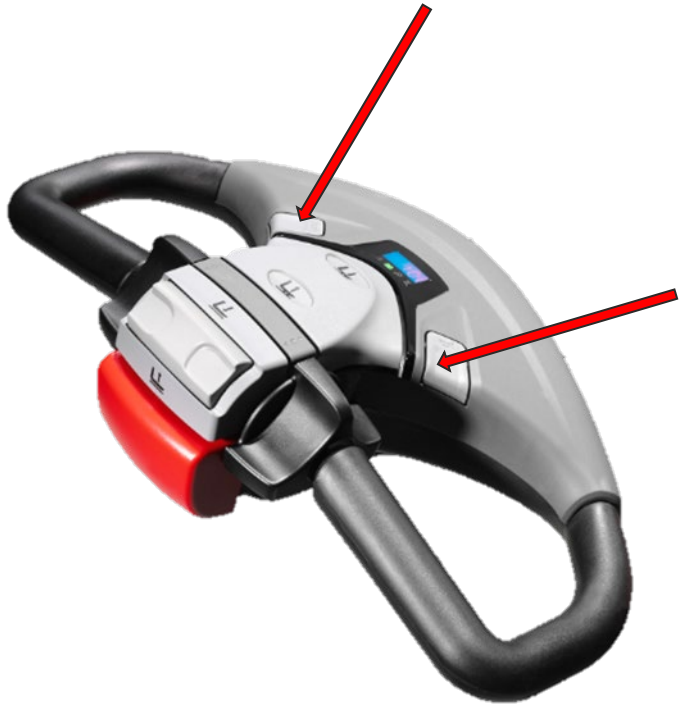
- When starting uphill or in an inclination, the forward travel mode can be selected without any risk of the truck rolling backwards when the brakes are released. The motor controller ensures the truck is kept stationary.

Benefits

- It is always safe to start the trucks in inclinations. The operator does not risk having the truck roll over his feet.

Safe drivers = high productive drivers = reduced handling costs / pallet

Horn



Features

- Double buttons for easy reach with one hand to use the horn

Benefits

- The driver can warn the environment to avoid accidents

Horn = increased safety = high productive drivers = reduced handling costs / pallet

Operator access control

Features

- PIN code or Card/Fob Smart Access to start up the truck

Benefits

- Prevents unauthorized use
- Enables easy access and safety

Easy access = increased productivity = reduced handling costs / pallet

Turtle mode speed reduction

Features

- Turtle button to reduce speed

Benefits

- Enables safe and precise handling
- Valuable for situation with less space or maneuvering in confined areas
- Safety option in busy environments or for less experienced operators

Reduced speed and acceleration = increased safety = less accidents = reduced handling costs / pallet

Reduced speed and acceleration in pedestrian mode

Features

- Optimized drive speed and acceleration in walkie mode in both drive and fork wheel direction.
- Max speed 4 km/h

Benefits

- Less risk of accidents with optimized settings
- Less risk for operators to drive over their feet

Reduced speed and acceleration = increased safety = less accidents = reduced handling costs / pallet

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Safety chassis design

Features

- Chassis designed for operator safety

Benefits

- Castor wheels turns inside truck profile to prevent damage and increase foot safety
- Distance to floor is short for good feet protection

Safety chassis design = increased safety = less accidents = reduced handling costs / pallet

Safety cover design

Features

- Battery cover stop

Benefits

- Reduced risk of cover falling down and cause an injury
- Protection of hands and finger

Safety cover design = increased safety = less accidents = reduced handling costs / pallet

Automatic shut off

Features

- If the truck is left unattended, it will automatically shut off
  - The time can be set to between 1-20 minutes or 4 hours

Benefits

- Automatic shut off prevents unauthorized use of the truck
  - In environments where there's a lot of people moving around the truck, it is possible to have a very short shut off time for safety reasons

Automatic shut off = prevents unauthorized drivers = increased safety = less accidents = reduced handling costs / pallet

Driver Protection - Gates

Features

- Gates are foldable to switch to pedestrian mode when needed
- Driver well protected within gates when gates are up

Benefits

- Gates easy to temporarily fold down for safe maneuvering
- Gates enables stability when driving and external protection

Gates = increased safety = less accidents = reduced handling costs / pallet

Driver Protection - Backrest

Features

- Driver protection with fixed backrest

Benefits

- Excellent protection of feet and back of the operator
- Easy to enter and exit truck from the sides
- Extra storage in driver compartment

Backrest = increased safety = less accidents = reduced handling costs / pallet

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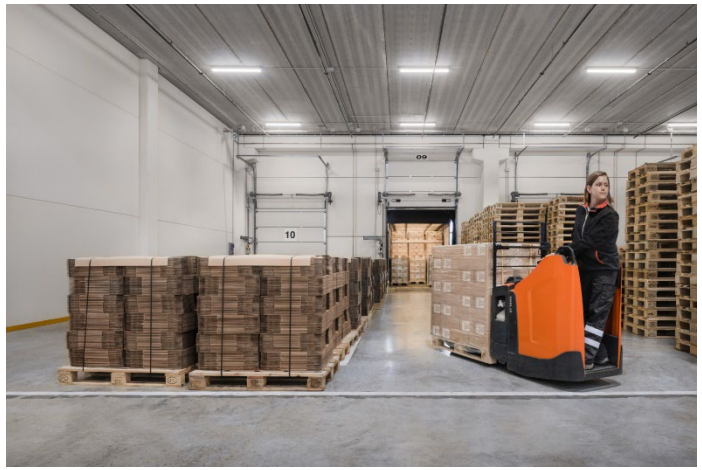
Driver Protection – Side protection



Features

- Driver protection with fixed side protection

Benefits

- Optimum protection for the operator within the truck profile
- Easy to enter and exit from back of the truck
- Creates stability when driving
- Extra storage in driver compartment

Side protection = increased safety = less accidents = reduced handling costs / pallet

Driver Protection – Foot sensor with fixed side protection

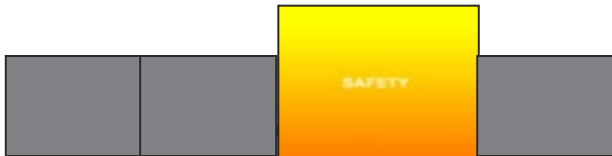
Features

- Foot sensor protection activated when operator foot is outside of truck profile
- When activated the truck will slow down and the message “Foot” is displayed in the driver interface

Benefits

- Minimized risk of foot injuries

Foot sensor = increased safety = less accidents = reduced handling costs / pallet



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Ergonomic compartment design with fixed side protection

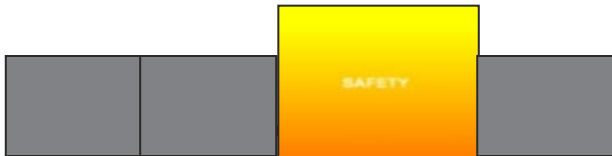
Features

- Ergonomic compartment design with handles on fixed side protection

Benefits

- Ergonomic and safe driving position in both fork and drive wheel c
- Less strain on driver preventing long term operator injuries

Increased ergonomics and safety = less strain on driver = less injuries = reduced handling costs / pallet



Low vibration level

Features

- Low operator vibration levels
  - LPE200: 0,6 m/s^2
  - LPE250: 0,7 m/s^2

Benefits

- Reduces the risk of injuries and driver fatigue due to vibration.
- Enhanced driving experience

Optimized ergonomics = increased driveability = high productive drivers = reduced handling costs / pallet.

Weight indication*)

Feature

- Indication of the load weight on the forks in steps of 100 kg (i.e. 0, 100, 200, 300 … up to the max. rated load capacity) in the display
- Activated via service parameter #311

Benefit

- The weight indicator supports the driver in the daily use to work safe and effective when handling load. By a quick glance at the display the driver gets an indication of the load weight and helps to avoid lifting heavy loads beyond the permitted lift height. This also contributes to preventing overload in racks, elevators, on lorries, on loading docks and similar areas where there is a max. weight limit to consider

Procedure:

1. Lift the load you want to have load weight indication on.
2. Press gently on the lowering button. (Shorter than ½ a second)
3. The load weight is indicated on the tiller head display in steps of 100 kg. (During four seconds while the parameter check indicator is flashing)

Service:

Recommendation to calibrate this function and to make sure no harshness has occured in the lifting mechanism on every service.

*) not on LPE200, 6 or 8 km/h as standard. Pressure sensor is needed – can be retro-fitted.

Weight indicator = support the driver to work correctly with loads = less accident and less wear on truck = reduced handling costs / pallet

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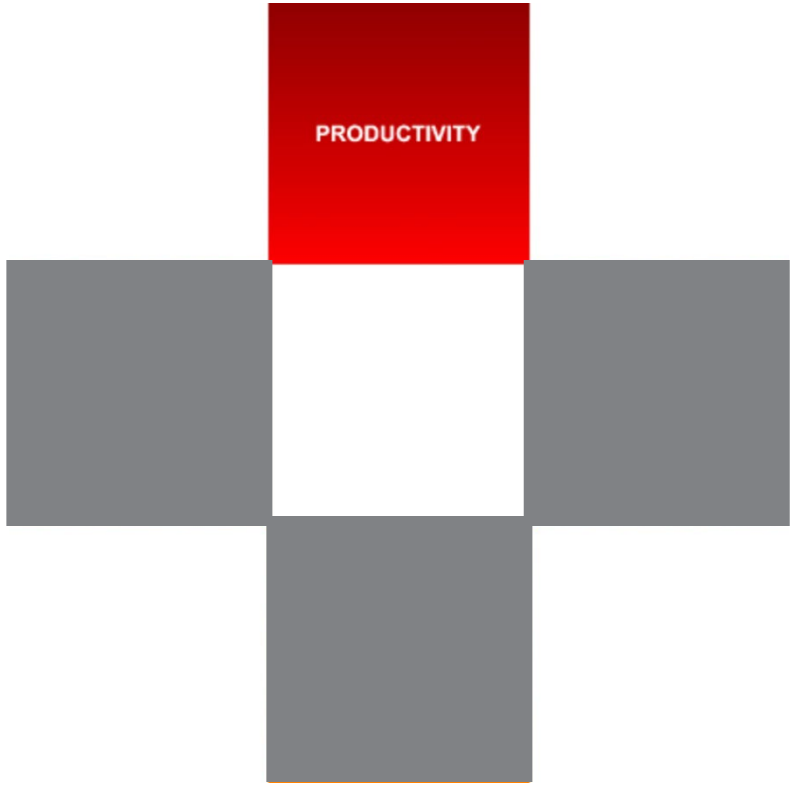

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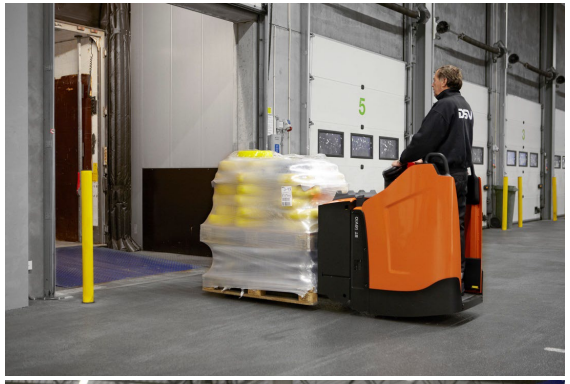
High productivity design

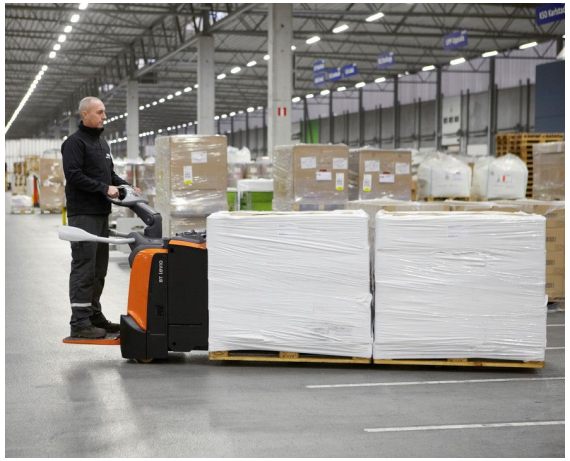
Features

- Complete range of performance trucks
  Speed, Capacity and Energy option for every need
- Dimensioned for long usage/operation time and heavy loads

Benefits

- Increased productivity.
- More efficiency in operations.





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

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Drive speed

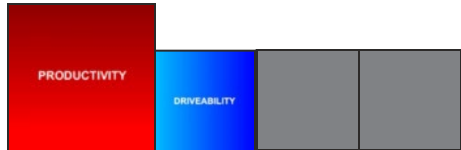
Features

- 6 km/h, 8 km/h 10 km/h and 12,5 km/h versions
  - For 8 km/h, 10 km/h and 12,5 km/h driver protection is mandatory

Benefits

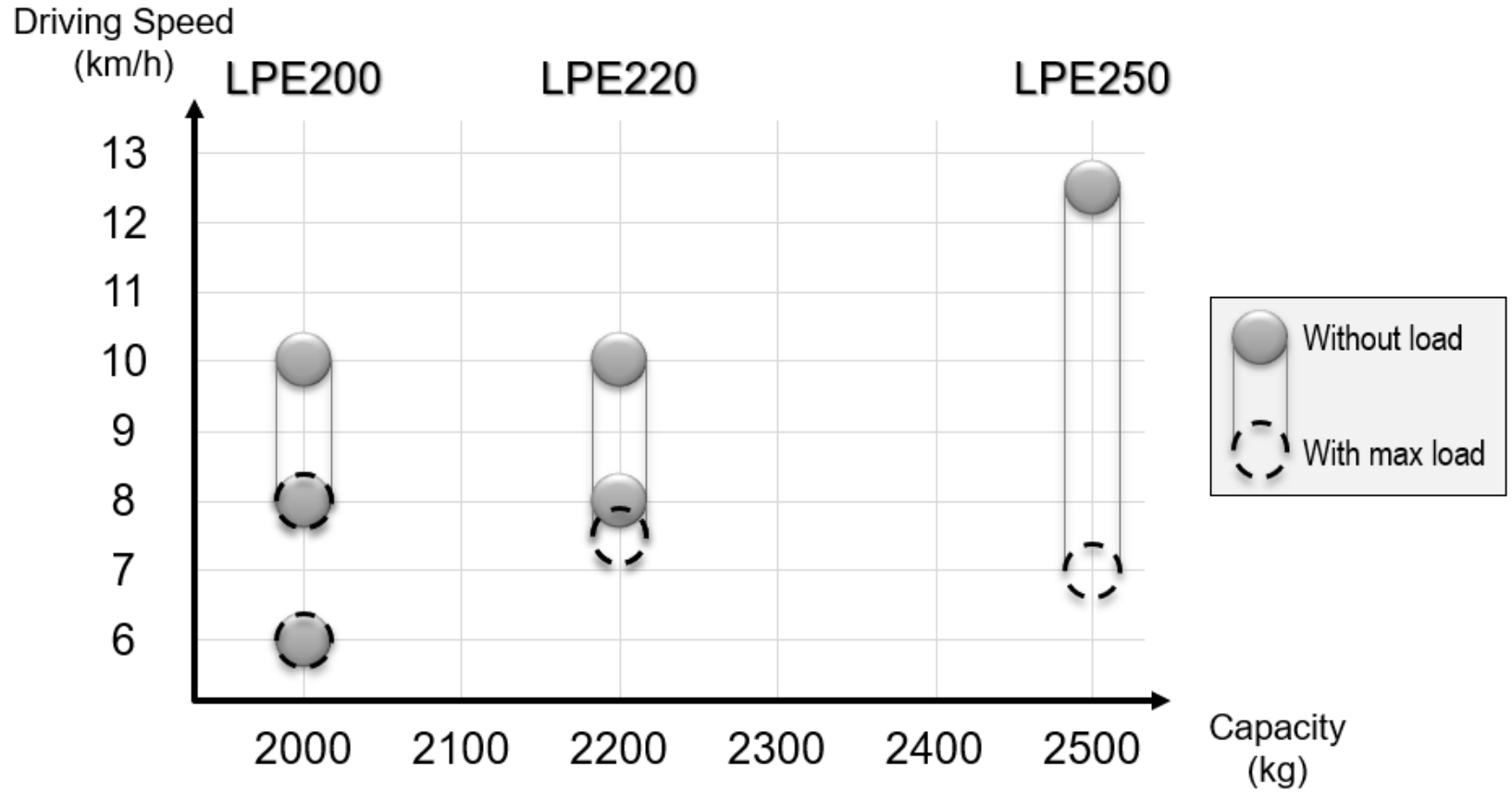
- Speed options customized for customer's application
- Higher speeds enables increased productivity

Increased performance = increased productivity = increase in pallets per hour = decrease in handling costs per pallet



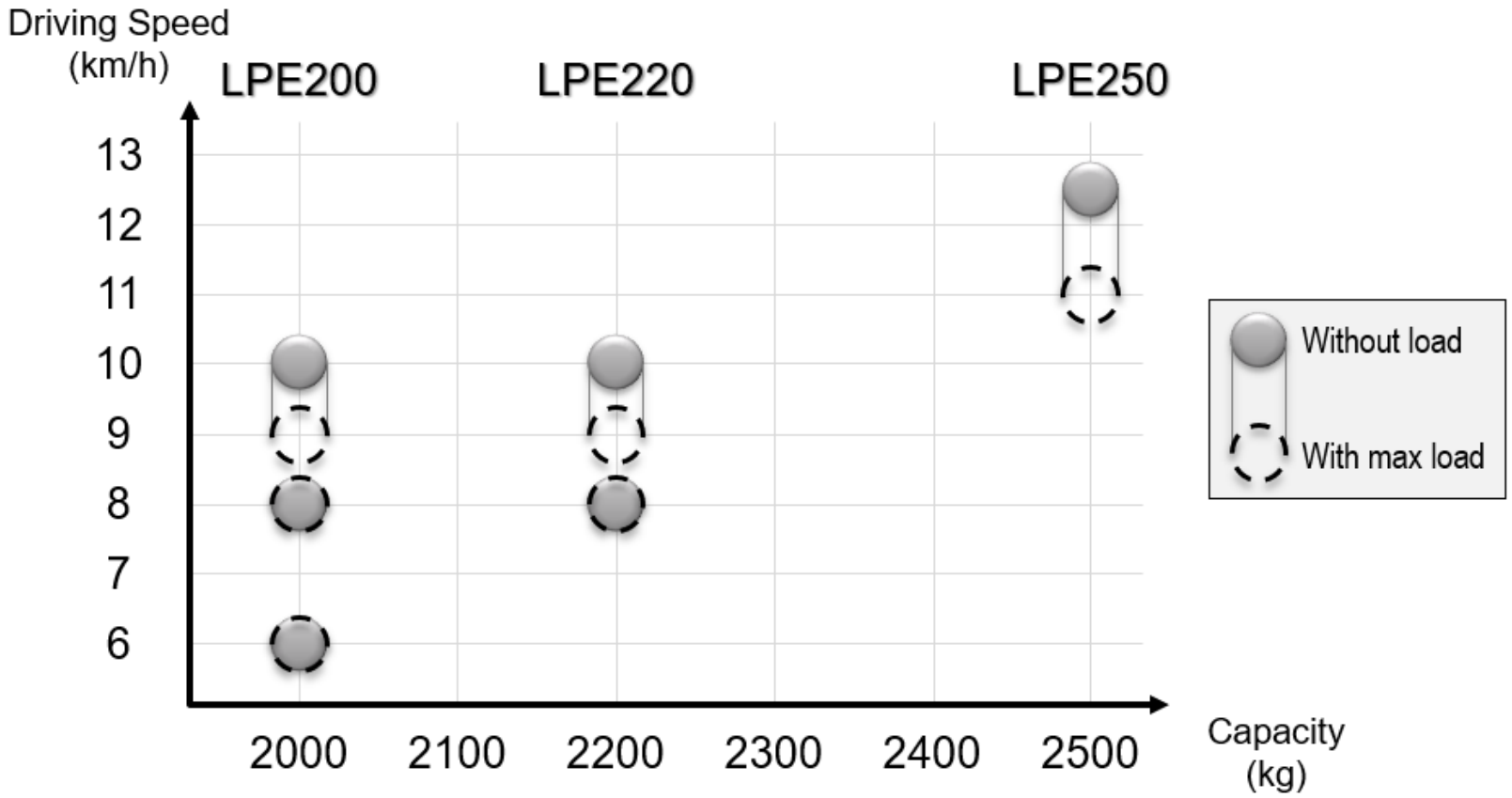
Steering - drive speed - capacity

Manual Steering



Steering - drive speed - capacity

Power steering



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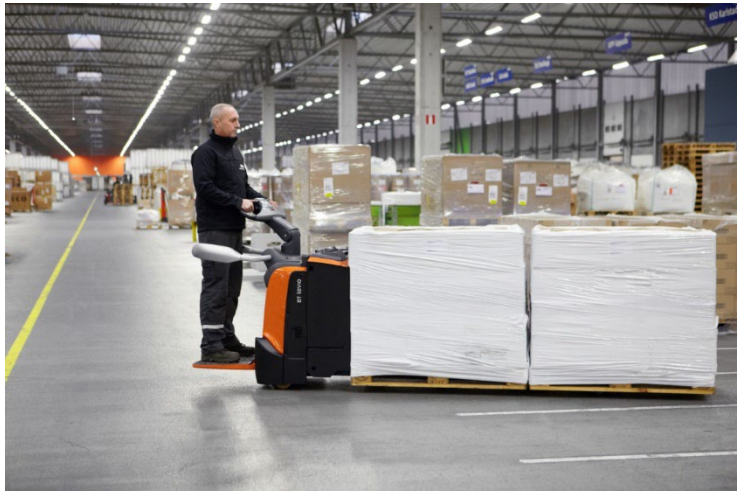
Flexible load handling

Features

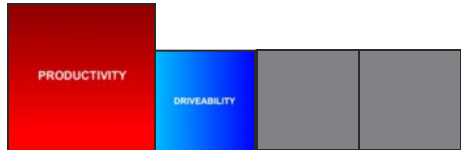
- Complete capacity range.
- Possible to handle multiple loads.

Benefits

- Increased productivity.
- Enable optimization of load handling.



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



Low energy consumption

Features

- Low energy consumption

Benefits

- Improved usage time
- Decreased CO2 emissions

Energy savings = Decreased cost for electricity

One-touch foldable gates

Features

- One-touch foldable gates

Benefits

- Easy to fold gates up and down with one single hand movement
- Increased productivity when ever there is a need to fold the gates

Easy gate handling = high productivity = less cost per pallet movement

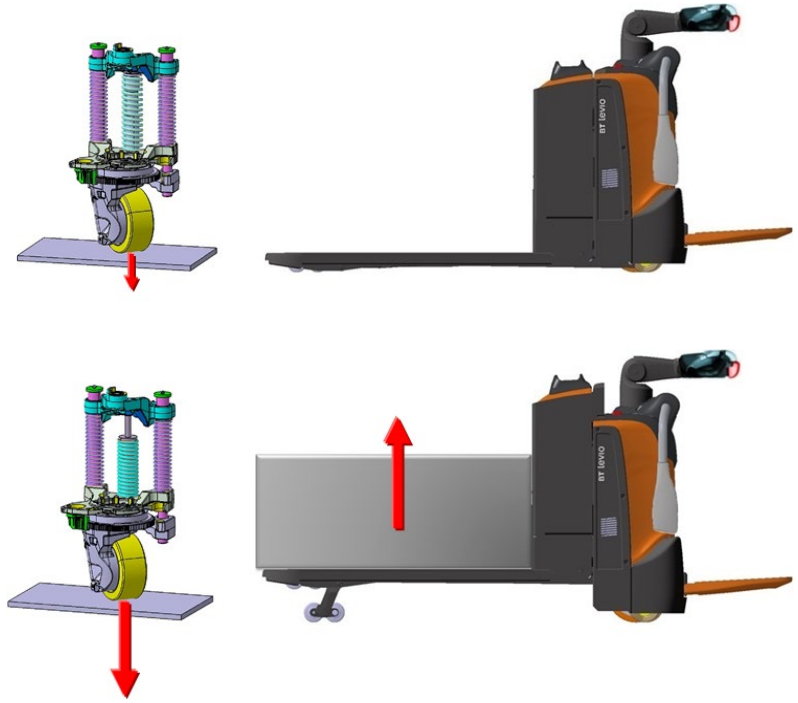
BT Powertrak

Features

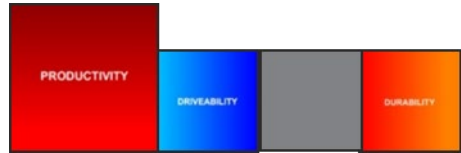
- BT Powertrak is used to maintain optimum drive wheel pressure against the floor irrespective of the load.

Benefits

- Optimized traction and reduced wear on drive wheel.
- Excellent stability with both light as well as heavy loads.



Optimized traction = increase in productivity = reduced handling costs / pallet.



TOYOTA
MATERIAL HANDLING

Storage compartments

Features

- General storage
- Integrated shrink film holder
- Extra compartments with safety protection option
  - fixed side protection
  - fixed backrest

Benefits

- Enables optimization and personalization of tools and equipment for intended use
- Easy to bring and fast access to carry-on items when needed

Easy storage on truck = increased productivity = reduced handling costs / pallet

Display

Features

- Up front information and truck status to the driver
  (Hour meter/Error codes/Battery status/Warnings etc)

Benefits

- Immediate driver alert
- Easy error identification
- Easy battery monitoring

Information at a glance = useable information for planning work with truck = high productive drivers = reduced handling costs / pallet.

BT levio

is designed around 4 core values that customers can benefit from:

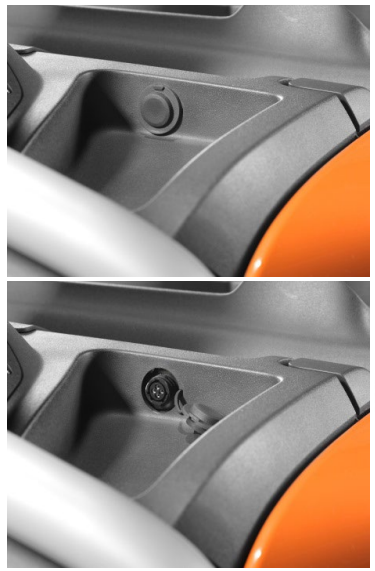
Maintenance with easy access

Features

- Only two screws to remove cover.
- Side covers also removable.
- Can access

Benefits

- Fast access to internal components means low down times.
- Easy to access for fast and easy service.



Fast access an easy service = increased uptime = increased productivity = reduced handling costs / pallet

TOYOTA
MATERIAL HANDLING

Motor cover

Features

- High-tech XENOY™ covers
- High impact resistance

Benefits

- Withstands rough environment
- No cracks or dents
- Excellent protection of internal components

Durable design = low risk for down time & increased life = increased productivity & reduced life time cost

TOYOTA
MATERIAL HANDLING

Battery cover

Features

- Strong steel battery cover
- Robust design of battery cover hinges prevents play and reduces wear
- Battery cover stop

Benefits

- High durability of battery cover
- Reduces the risk for battery hood falling down on operators fingers during battery inspection and battery change

Durable battery cover = less service = increased productivity = reduced handling costs / pallet

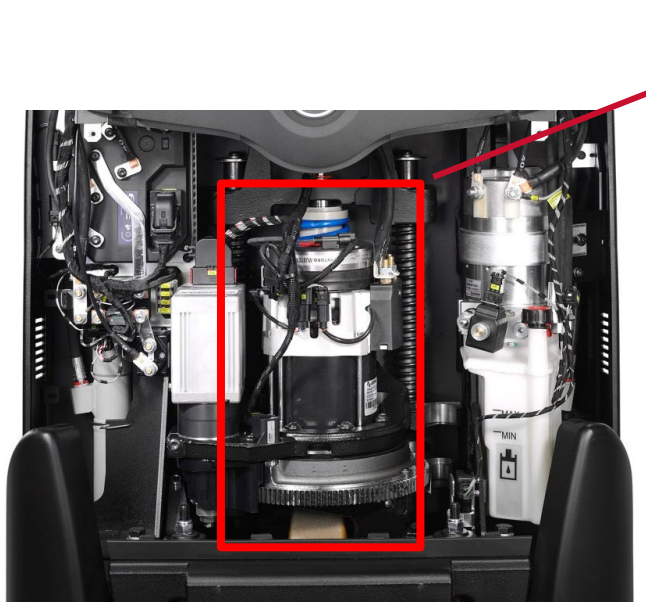
AC drive motor

Features

- Permanently mounted 3-phase maintenance-free AC drive motor

Benefits

- No carbon brushes, no wear
- Easy and quick maintenance
- Less components and extended lifetime
- Reduces wear on cables and allows a compact truck design



Less service = increased uptime = increased productivity = reduced handling costs / pallet

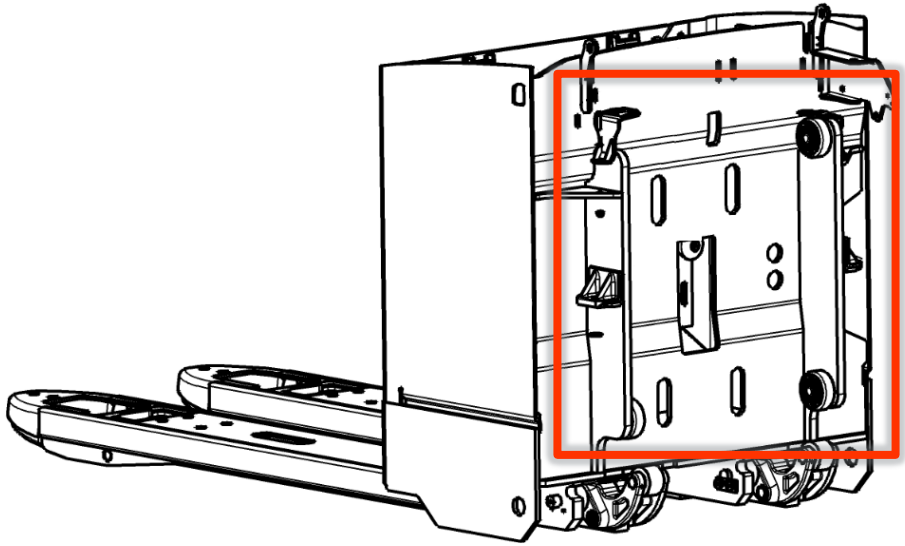
Linear support arm lifting

Features

- Fork carriage with linear lifting. Rollers in beam.

Benefits

- Stable design for high durability.



Durable design = lower risk for down time & increased life time = increased productivity & reduced life time cost

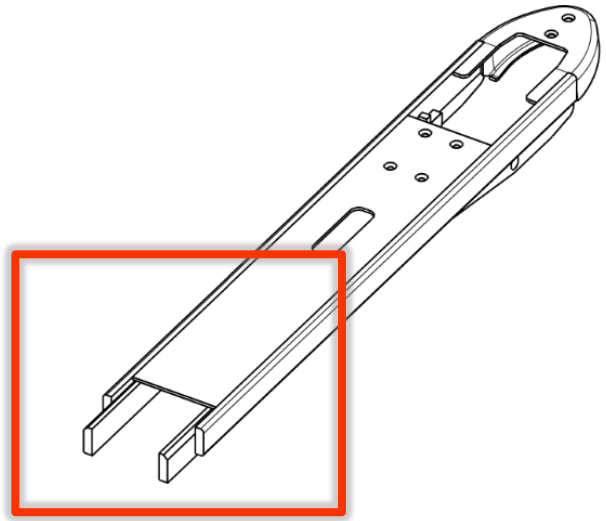
Fork design

Features

- Welded heavy duty forks as standard
  - LPE200
  - LPE220

Benefits

- Strong forks for intense application
- Stable design for high durability.



Durable design = lower risk for down time & increased life time = increased productivity & reduced life time cost

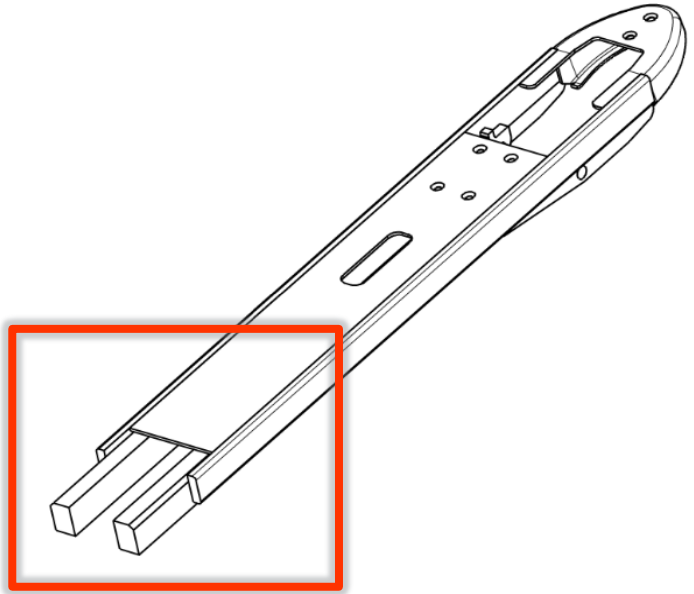
Fork design

Features

- Reinforced heavy duty forks
  - LPE250

Benefits

- Extra strong forks for intense application
- Stable design for high durability and heavy loads



Durable design = lower risk for down time & increased life time = increased productivity & reduced life time cost

Fork structure protection

Features

- Wear roller (standard on LPE220 and LPE250)
  - Roller in the wheel fork attachment axle

Benefits

- Prevents damage and reduce wear on fork structure
- Less repairs due to less damage

Less service = increased uptime = increased productivity = reduced handling costs / pallet

Intelligent component protection

Features

- Active monitoring of main component temperatures. Performance is slightly decreased if temperatures reach critical levels.
- Top mechanical and electrical connectivity with MQS connectors

Benefits

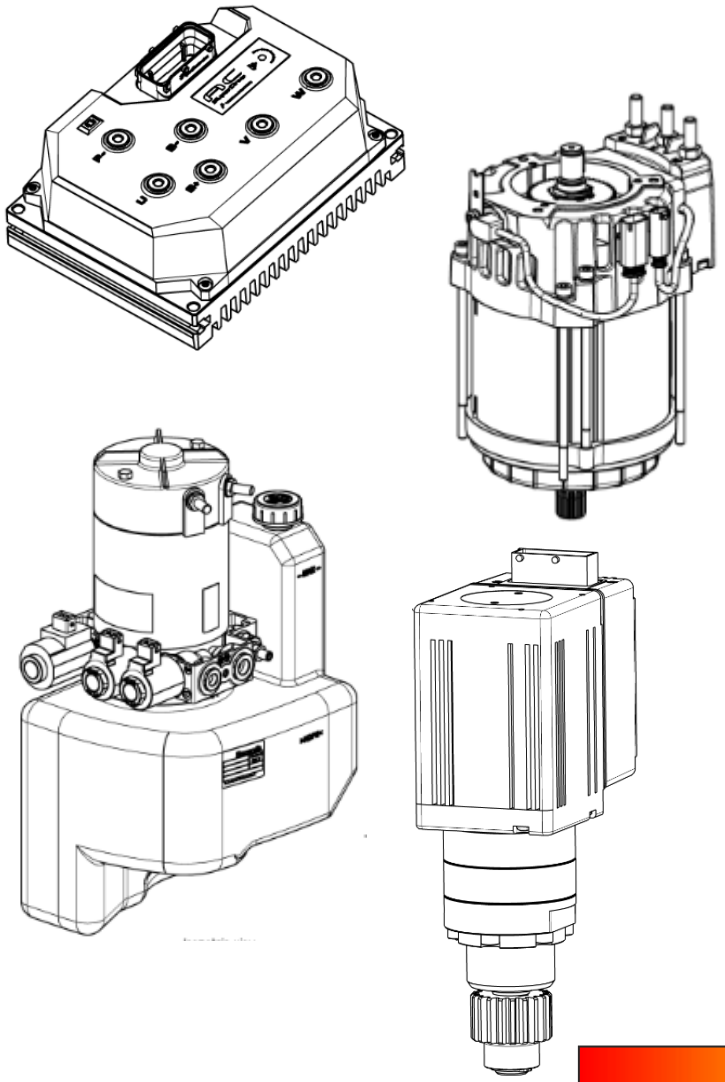
- Increased life-time of internal components.
- Reduce down time for the customer.
- Minimized risk of malfunction

Durable design = low risk for down time & increased life = increased productivity & reduced life time cost

TOYOTA
MATERIAL HANDLING

Transmission and drive motor

Component	Unit	IP class
Motors		
	Drive motor	IP20
	Pump motor	IP54
Electronic cards		
	Main card in tiller arm	IP54
	Motor controller	IP65



Less service = increased uptime = increased productivity = reduced handling costs / pallet