

# PALLET TRUCKS

**TCM**  
Trusted Partner

  
**SAFETY**

  
**EFFICIENCY**

  
**COMFORT**



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# ADVANCED TECHNOLOGY AND ERGONOMICS FOR TODAY'S ENVIRONMENTS

Outstanding power, performance and reliability comes as standard in TCM warehouse trucks. With innovations like the ergonomic tiller head design to the efficiency of the AC motor, you can trust that daily operations will be completed with ease across the shop floor to heavy duty industrial environments. Intelligent modular design means fewer components, maximising uptime and contributes to low lifecycle costs.



## OPERATOR COMFORT IS KEY

Operators represent a large cost in operations. When it comes to the efficiency of the truck we invest in the operator comfort, and therefore improve efficiency.

20%

80%

TRUCK OPERATOR

### ERGONOMIC TILLER ARM

- Walk safely behind or beside the truck with full visibility over the fork and load.
- Patented ergonomic tiller arms for effortless control and with robust, weather-proof design.
- All controls are at the operator's fingertips.



### INDIVIDUAL PIN-CODE SETTINGS

- Personalised settings - for swift start up and operator matched skill levels.
- Additional security for fleet - preventing unauthorised use.

### ONBOARD TRUCK MANAGEMENT

- Control panel - for clear battery status, hour meter, date, clock and warning messages.
- Onboard computer - built-in service functions reduce downtime.
- Easy to change performance settings - to match the operator's skill and experience.



## INDUSTRY LEADING PERFORMANCE & EFFICIENCY

### DESIGN EXCELLENCE – PROTECTING UPTIME

- Modular design built on flexible technical platforms - fewer, more common components are used.
- 95% of all repairs on the first visit - reduced components needed by mobile service engineers.
- 98% uptime protected for operations - reduces life cycle costs.

### POWERFUL AC MOTOR

- Energy-efficient AC motor - responsive to the slightest command from the operator.
- Regenerative braking - saves energy and provides good braking capability.
- Total operator control of acceleration and braking, even on slopes.



## SAFETY IS INTEGRAL

Standardising industry leading safety features across our range of trucks has resulted in safer working environments and reduced risks.

### FRICTION FORCE TECHNOLOGY FOR GROUND CONTACT

- Patented linkage design - for all wheel and drive wheel constant ground contact.
- Impressive stability - even on uneven surfaces and ramps.
- Laterally firm and stable - even with a narrow chassis.



## Li-ION

LONGER LIFE	HIGHER EFFICIENCY	LONGER RUNTIME	CONSISTENT PERFORMANCE	FASTER CHARGING	NO MAINTENANCE	INBUILT PROTECTION

Lithium-ion batteries can offer real advantages over lead-acid batteries, particularly in high energy, multi-shift, and 24/7 applications. When it comes to Total Cost of Ownership (TCO), TCM can advise you on the most cost-effective energy solution you will need to meet all your operational requirements.



PAL

PTF

PTP

LLR

LLS

SHORTER TRAVEL DISTANCE

Choose TCM pallet trucks best suited to your applications to optimise operator efficiency and reduce TCO

LONGER TRAVEL DISTANCE

## Pallet Trucks

# PTF, PTP/S & PTP/R: THE NEW STANDARD IN PALLET TRUCKS

The PTF and PTP power pallet truck with foldable or driver protected platform, and load capacity 2.000 kg and 2.500 kg, are designed for highly efficient loading/unloading operation applications, short, medium and long internal transports and order picking.



### PTF

Flexible control - choose platform up and sidebars down for reduced speeds and increased manoeuvrability for pedestrian operation. Platform down, sidebars up for increased speed on longer travel runs.

### EFFICIENCY

- Heavy-duty chassis - manufactured for strength and durability in heavy cross docking operations, and all the benefits of the AC motor.
- Onboard computer - with efficient and clear display of essentials, battery levels and hour meter.

Optional multi-functional display offers enhanced information on truck including battery condition, faults and actions, and enables PIN code access to avoid unauthorised truck use.

- Increased ground clearance under the machine house - for negotiating ramps and dock levers.
- Best in class mechanical steering - with low steering forces for ease of use.
- Faster speeds & greater lift heights - 10 km/h and 220 mm from floor to forks with fast lift and lowering for greater productivity.



Choice of Li-ION or traditional Lead-acid BS and DIN battery cells.



### COMFORT

- Ergonomically shaped tiller head - patented lift/lower rocker buttons and easy reach controls for comfort and less fatigue, in robust, weather-protected casing.
- Both foldable and fixed platforms have a rubber floor mat and are mechanically damped - for high levels of driver comfort.
- Quick and easily foldable side protection bars - standard for increased drive speed and safety.



### SAFETY

- The patented TDS system constantly provides maximum drive wheel traction regardless of load weight. Rear stability caster wheels are equipped with integrated shock absorption and variable damping that will automatically adjust depending on driving conditions, maximizing truck stability at all times. Optional ASR (active spin reduction) will further enhance drive wheel traction and truck stability in slippery and wet floor conditions.
- Rear entry platform sensor - truck slows if operator feet are not fully onboard for reduced injury risk.



### PTP/S

Faster speeds & longer distances or low level order picking - choose driver protected side entry with low step platform.



### PTP/R

Faster speeds & longer distances - choose driver protected back entry with foot protection.



### OPTIONS INCLUDE:

- Increased 12,5 km/h drive speed, with side bars
- ASR - Active Spin Reduction on drive wheel for increased safety
- Multi-functional display with Pin code access, PRO, ECO and EASY driver settings
- Cold store protection
- Battery rollers
- Power steering & pivot steering for effortless control
- Electrically adjusted damping of fixed platform models to suit all operators
- Equipment bar
- Pallet entry and exit sliding bars
- USB power socket
- LED working lights
- Load back rest



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## Pallet Trucks

# PAL - PALLET TRUCK WITH CENTRE TILLER ARM

Engineered for extreme manoeuvrability and non-stop performance in the most challenging environments, the high performance PAL offers a fully pedestrian pallet truck or with a ride-on foldable platform and is designed for lower energy consumption to be ultimately environmentally-friendly without compromising efficiency.

Its robust construction offers durability in all working conditions and is perfectly suited to loading/unloading, internal transport and general warehousing duties including low-level order picking.



### PAL16-20 (E)(F)-N3

Choose from 4 models and load capacities 1600-2000kg

### PAL20R-N3

With ride-on foldable platform for occasional longer travel runs, and 2000kg load capacity



## COMFORT

- Excellent stability especially when load transporting and handling - with linked castor wheels by the central drive wheel, and 2 additional load wheels.
- Different drive and load wheel options - to suit all applications and environments.
- Useful storage space above the battery cover.



## EFFICIENCY

- Ergonomically shaped tiller head - patented lift/lower rocker buttons, easy reach controls and broad window of speed control for comfort and less fatigue.
- Robust and weather-protected casing to withstand all weathers and the impact of falling goods.
- Compact for complete manoeuvrability in tight spaces.
- Energy-efficient AC drive motors with more torque and no carbon brushes provides high speed even with heavy loads for maximum productivity.
- Lifting forks (PAL20E-N3) enables the pallet to be raised to the correct height for comfortable and efficient order picking.
- Easy and cost effective maintenance with extended service intervals, swift access to all service components via removable cover and innovative access through the bumper to change the drive wheel.



## SAFETY

- Multi-purpose LCD display - with instant feedback on battery discharge, truck hours and service error codes.
- 2 driving modes from secure key switch: SOFT and PERFORMANCE to suit driver experience and encourage energy saving (SOFT).
- Emergency stop switch cuts power in an instant safeguarding personnel.
- Quick battery change system for two battery option.

### OPTIONS INCLUDE:

- PIN code login
- Li-ION or traditional Lead-acid battery
- Cold store design
- Hot environment specification +30°C
- Tiller-up drive
- Different drive wheel options
- Load backrest

- Pallet entry and exit rollers
- Inbuilt charger, 30A
- Sideways battery change, 250Ah and 375Ah battery only (PAL18-20F-N3, PAL20R-N3)
- Battery changing device (PAL18-20F-N3, PAL20R-N3)
- Accessory rack
- Working light



# LLR STAND-IN & LLS SIT-ON PALLETT TRUCKS

Probably the best developed stand-in and sit-on pallet transporters available, the LLR and LLS are engineered for medium to long distance travel and for medium to high intensity work patterns. The LLR boasts a 10% smaller footprint\* than other pallet trucks in its class. The LLS has an AST of only 2.5 m. Both models offer a choice of 2 and 3 tonnes capacity.

\*Turning circle of 2.3 metres represents space saving on average warehouse.



## SAFETY

- On board computer with standard display or multi-function display options
- Energy-efficient, low maintenance AC motor with more torque and no carbon brushes, responsive to the slightest command from the operator.
- Electric power steering - for pinpoint accuracy and control.
- Double bogie load wheels on angled fork tip - for easy pallet entry.
- Small turning circle with the driver safe and secure in the body of the truck and excellent visibility over the forks.



## EFFICIENCY

- Maintenance-free, fully integrated Li-ION Battery option with 15 minutes opportunity-charging for a 25% top up on intense 24h operations and battery lock for confident changes.
- Sealed electrical connectors and proven parts – rapidly available replacement parts for fast service with minimum downtime.
- Heavy duty, robust chassis with integrated bumper.
- Extreme manoeuvrability - with four-wheel configuration and excellent ground clearance.
- Smooth, quiet and effortlessly controlled lifting and lowering - for even greater operational efficiency.
- Hinged, removable machine house cover - for excellent access for servicing and maintenance and daily checks.



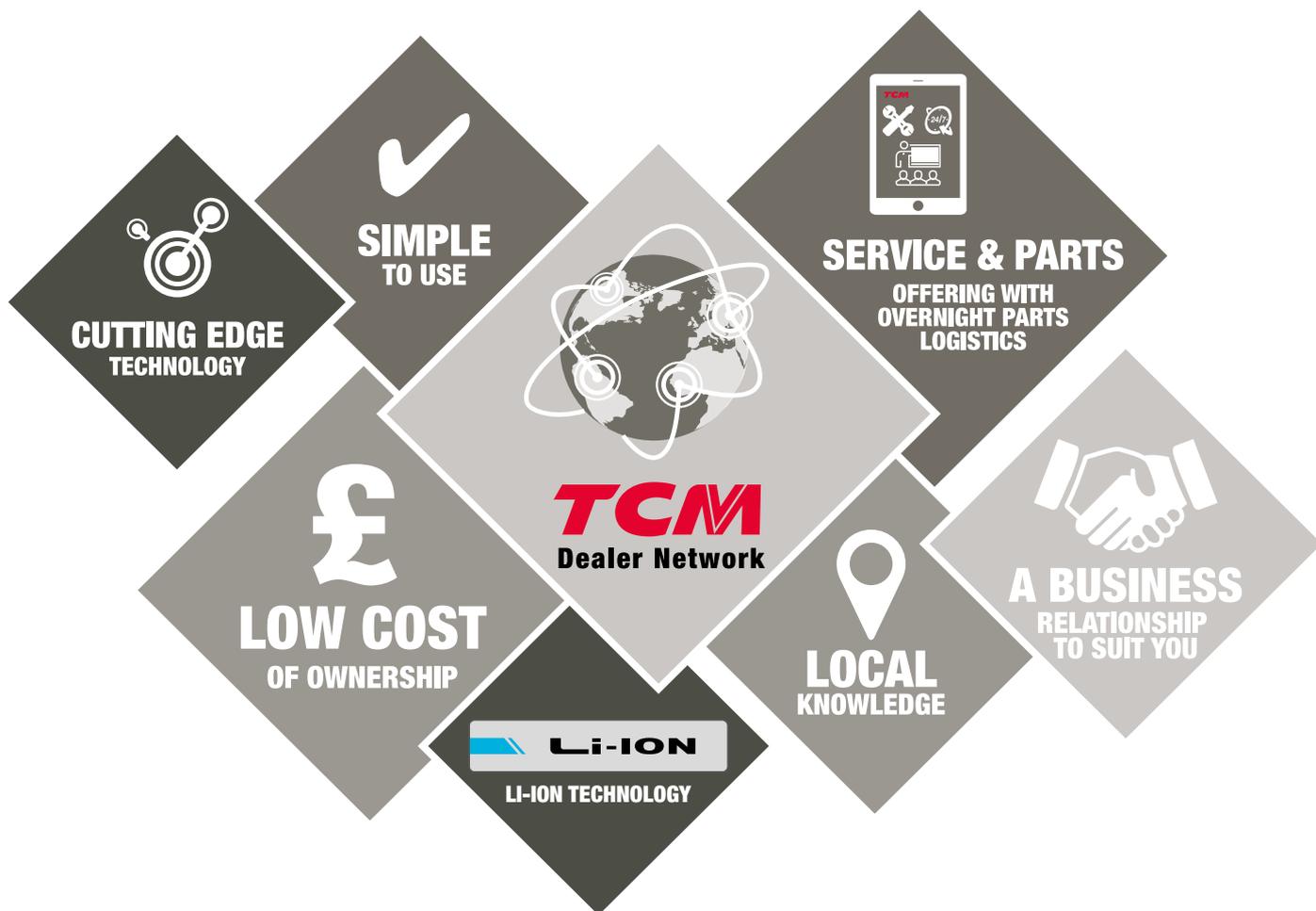
## COMFORT

- Adjustable seating and floor height (LLS) - for a safe and supported working environment to suit all operators.
- Fully adjustable ergonomic steering controls and armrest for greater operator comfort and efficiency.
- Ergonomic positioning of operator buttons and controls – for effortless, intuitive control.
- Optical presence sensor (LLR) – allowing variable foot positions and natural movements, reducing strains.
- Excellent storage – large seat-side compartment (LLS) and under-armrest storage (LLR) and multiple spaces for operator's essentials.
- Low entry step - for swift and easy on-off access.



### OPTIONS INCLUDE:

- Multi-function display with PIN Code access, 3 driver settings: PRO; ECO; EASY
- Cold store design (-30°C)
- Dashboard protection
- Different drive wheel options
- Load backrest
- LED working and safety light packages
- Equipment bar
- Writing desk
- Overhead guard choices
- 5V (USB) and 12V (DC) power socket
- Li-ION or traditional Lead-acid including opportunity charging
- Increased drive speed
- 360° steering
- Midi steering wheel
- Weight indicator
- Service and drive alarms
- Foldable seat (LLR)
- Automatic log off



#### PALLET TRUCKS

MODEL	LIFT CAPACITY KG	LOAD CENTRE MM	TRUCK WIDTH MM
PAL16F-N3	1600	600	720
PAL18F-N3	1800	600	720
PAL20F-N3	2000	600	720
PAL20E-N3	2000	600	720
PAL20R-N3	2000	600	720
PTF200	2000	600	740
PTF250	2500	600	740
PTP/R200	2000	600	740
PTP/R250	2500	600	740
PTP/S200	2000	600	740
PTP/S250	2500	600	740
LLR20-N2	2000	600	940
LLR30-N2	3000	600	940
LLS20-N2	2000	600	1010
LLS30-N2	3000	600	1010



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