

Linde

#### Linde Material Handling



Thattie in

Maximum tractive force. Linde electric tow tractors 132,1190,131,126 and 127-02 Series

Linde



Innovative operational solutions, ergonomic excellence and economical performance resulting in more uptime and greater cost savings: these are the cornerstones of Linde's design and manufacturing philosophy. Linde electric tow tractors and platform tractors, therefore, set the standards for the industry and are the perfect match for a wide variety of applications.



These include airports, hospitals, railway stations, post office depots, automotive and manufacturing plants, warehouses, military applications, fruit and vegetable markets and many more diverse applications. Linde's distinctive design, advanced technology and quality of manufacture underpin our comprehensive commitment to all our customers.





The hydraulically damped cab on P 250 and W 20 tractors contributes significantly to driver comfort and reduces whole body vibrations.

#### **Impressive powerful performance.** Maximum return on investment.

With a strong style and impressive performance, the AC powered P 250, 25 tonne electric tow tractor and W 20, 2 tonne platform tractor from Linde have been designed using the latest ergonomic concepts to produce a product which provides a superb working environment for the driver. A comfortable driver is likely to be more motivated and happily deliver high levels of efficiency and, therefore, productivity.

Apart from the spacious and user-friendly cab layout, a full suspension seat, comprehensive instrumentation and adjustable steering column, the tractors have all-wheel suspension and the cab is mounted on hydraulic dampers.

This attention to detail results in exceptionally smooth ride characteristics which significantly reduce whole body vibrations. This not only gives the driver a fatiguefree driving experience but also prolongs the life of the tractor and optimises utilisation for a rapid return on investment.

The rugged chassis has been designed using finite element stress analysis techniques to produce a strong, durable structure to withstand continuous heavy-duty working environments, delivering maximum uptime at minimum cost. The powerful, maintenance-free AC powered twin drive motor axle with integrated suspension provides impressive performance even in slippery conditions. The drive motors are independently controlled and require no differential, which improves both reliability and efficiency by reducing power losses. Slowing the inner wheel during cornering enhances tyre adhesion and traction performance, preventing skidding and stabilising ride characteristics.

AC controllers produce seamless acceleration and top speed combined with smooth, precise manoeuvring in all situations. The driver is always in control with the intelligent and perfectly matched AC power system allowing safe and productive operation.





The flatbed W 20 is the ideal carrier with many adaptations available for customised applications.

### **Versatility.** Whatever and wherever the need.

Versatility is the key and Linde tow tractors are designed to meet the needs of a wide range of industries and commercial operations in all ambient conditions.

Whether towing up to 25 tonnes or carrying up to 2 tonnes, on level surfaces or on gradients, in rain, snow or sunshine, these superb tractors will keep on working consistently and reliably, delivering high productivity for your business.



Linde P 250 in Eurostar livery in operation at St Pancras International, London.





#### **A winning formula.** Performance with stopping power.

For the driver, a perfect driving posture with all controls ergonomically located for ease of use and fatigue-free working.

A powerful driving performance is coupled with three independent braking systems to cope with every eventuality.

The regenerative braking delivered by the AC controller automatically retards the speed of descent on gradients ensuring that the operator is always in control and is able to select a rate of travel to suit the circumstances and operational requirements. Regenerative braking is extremely effective and ideal for normal operational conditions, which means that use of the service brakes is minimal, leading to lower energy demand and reduced maintenance. Should the need arise, the powerful hydraulic disc brakes on the front wheels and external disc brakes on the rear wheels provide impressive stopping power.

A spring operated parking brake with push button release is automatically applied when the driver leaves the seat.





# Attention to detail. Optimises your investment.





It's the attention to detail which makes Linde different.

Whether travelling forward or in reverse, the driver is able to complete the tasks efficiently and safely with excellent all-round visibility, precision control and outstanding manoeuvrability.

A cutaway in the P 250 tractor platform enables easy connection with trailers without the driver leaving the cab.

The remote inching control, fitted as standard to the tractor version, enables simple coupling with non-standard trailers.

Battery changing for multi-shift working is simple and a choice of battery capacities to match demand is available. Whether it is the electronics, controls, drive unit, suspension, chassis, seating or braking, nothing has been left to chance. The Linde design philosophy is quality, comfort, safety, durability, reliability and the lowest possible operating costs, coupled with high performance.

The flatbed W 20 is the ideal carrier with many adaptations available for customised applications.





#### **Compact pulling power**. Value for money.

The superb and well proven six tonne towing capacity P 60 Z with advanced SEM (shunt) drive technology and Linde digital control is tremendously popular and can be found operating in a wide range of industries throughout the world.

The compact three-wheeled design has won a reputation for stability, strength and reliability, delivering high levels of work throughput.

Highly manoeuvrable, this compact tractor has impressive pulling power and provides the driver with the best possible standards of comfort and ease of use.

The chassis is of heavy steel profile designed to operate in demanding applications and can be supplied with or without a driver's cab. The cab provides complete weather protection and tilts to enable easy access for servicing or battery changing. The P 60 Z is available in either 24 volt or 48 volt versions to integrate with existing fleets.

Regenerative braking, trailing arm and hollow rubber spring suspension, plus comprehensive instrumentation, again emphasises the Linde attention to detail to ensure real value for money in every way.



Linde P 60 Z in Eurostar livery at St Pancras.





#### Linde matrix system. Flexible design.

Linde's versatile P 30 and P 50 series, with three and five tonne towing capacities, are available in stand-on or pedestrian versions depending on model selected. This series is based on the highly successful matrix modular design concept, which uses identical assemblies in a wide range of materials handling equipment to meet the varying needs of the marketplace.

Compact design of the Linde P 30 control handles ensures that the operator remains well within the tractor contours while driving. Ergonomic design of the twin-grip steering with enclosed hand guard provides excellent protection for the operator. With a powerful AC motor, the P 30 accelerates rapidly to 10 km/h maximum speed. Its 3000 kg towing capacity and efficient brakes enable high productivity in heavy-duty applications

The low chassis skirt of the P 50 ensures that the wheels remain safely within the tractor profile. Together with the rounded, smooth contours of the chassis and tiller head, this allows precise manouevring in confined spaces with reduced risk of pinching or snagging. The electric steering provides smooth and efficient control of the tractor.

Operational efficiency results in cost-reduced performance. Easy access to all components and maintenance-free AC technology play an important part in maintaining high levels of uptime.







Vibrations affecting the power unit and load handler are effectively isolated from the operating compartment.

## Unique design. Comfort assured.

The compact P 30 C and P 50 C tow tractors are particularly suited to towing applications in narrow aisles.

The unique design of the operator's compartment offers a level of comfort previously unknown in the market. In addition to an adjustable backrest and console/steering control, these tow tractors have a unique suspended and damped 'U' shape platform which significantly reduces whole body vibrations.

The suspension links the three main points of contact between the operator and machine, namely the scoop seat, platform and console. This provides a greater degree of comfort when driving over long distances or on uneven floors. The design of the tractor ensures that the operator remains well within the tractor contours while driving. The ergonomic twin-grip steering control incorporates a wraparound hand guard and the front steel bumper ensures excellent safety for both operator and machine. The robustness of the steering control, the heavy-duty towing coupling and the high quality steel chassis ensure reliable operation over sustained periods.





# The range. The choice is yours.



Model P 30

Series 132

Towing capacity 3 tonne

This compact stand-on tow tractor Is designed to undertake versatile and highly efficient load transfer duties in a wide variety of applications where space is at a premium. Twin-grip self-centring steering requires minimum effort and contributes to maximum manoeuvrability. The powerful AC drive motor gives seamless acceleration to 10 km/h, laden or unladen.



Model P 30 C, P 50 C Series 1190 Towing capacity 3 tonne, 5 tonne

The unique design of the operator's compartment offers a level of comfort previously unknown in the market using a unique suspended and damped 'U' shaped platform. This provides a superior driving experience over long travel distances or on uneven floors. Particularly suited to towing applications in narrow aisles, the compact design allows the operator direct access to the towing coupling. The P 30 C has a travel speed of up to 10 km/h and the P 50 C up to 8 km/h, both laden and unladen.



Model P 50 Series 131 Towing capacity 5 tonne

Pedestrian operated, these compact tow tractors offer smooth handling performance allowing the operator to work through the shift efficiently and with minimum fatigue. They feature twin-grip tiller arm control, seamless acceleration to 6 km/h, effortless power steering, automatic electric braking and ample storage compartments.

Whether you require a small pedestrian tow tractor, a stand-on unit or something larger, Linde offers a range ready to meet the challenge. All are backed up by a worldwide network of customer support centres taking care of your business interests for a rapid return on your investment in our equipment.



Model P 60 Z

Series 126

Towing capacity 6 tonne

Modern styling, compact design and low centre of gravity provide excellent stability and manoeuvrability. High efficiency microprocessor-based digital controller permits precise control of speed and acceleration. Tilting seat cover allows easy access to battery (24 or 48 volt). Optional driver's cab or canopy are also available.



Model P 250

Series 127-02

Towing capacity 25 tonne

Powerful tow tractor with low profile chassis and fully equipped hydraulically damped driver's cab with sliding or hinged doors. Available in short or long wheelbase versions with twin maintenance-free AC drive motors, all-wheel suspension and braking, travel speeds up to 25 km/h, hydrostatic power steering and inching control.



Model W 20

Series 127-02

Towing capacity 4.5 tonne (2 tonne on platform)

Platform tractor with platform lengths of 2200 mm or 2600 mm, which can be adapted to include aluminium side panels and/or flexible canopy. Low profile chassis and fully equipped driver's cab with sliding or hinged doors. Twin maintenance-free AC drive motors, all-wheel suspension and braking, travel speeds up to 25 km/h (with optional uprated motors), hydrostatic power steering, optional inching control.



From single or triple pin tow hitches to automatic couplings, front or rear mounting, Linde has an option to match your needs.



Linde ranks among the world's leading material handling equipment manufacturers. This position has been justly earned. Linde trucks excel not only with their recognized innovative technology, but especially for their low energy and operating costs.

High quality in production is matched by the standard of the service we provide. With our ten manufacturing plants and a comprehensive network of local sales partners, we are at your call around the clock and around the world.

Your local Linde dealer offers you a complete single-source package including qualified pre-sales consulting, after-sales service and flexible finance options—whether leasing, renting, or purchasing.



#### For more information on Linde material handling equipment, please contact:

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