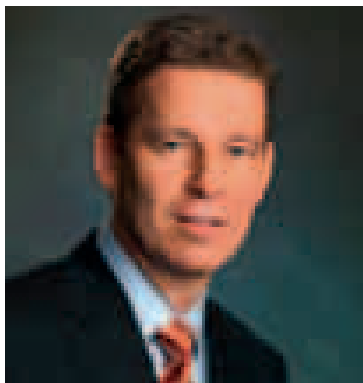


The Catalogue

Linde Material Handling

Linde





"We do everything for your success."

Dear Customers,

We would like to help you rationalise your stock turnover even more efficiently and assist you in finding the most economical solution to suit your requirements. This is the high aim and the clear objective on which we have set our sights.

Linde Material Handling produces economical forklift trucks and warehousing equipment, and provides fast and efficient after-sales and customer services which make sure that you enjoy decisive added benefits. Our contribution to your success is based on three main cornerstones: Innovative technology, exemplary ergonomics and outstanding economy.

As the leading vendor of efficient intralogistic product solutions, Linde Material Handling also focuses its technological expertise on easing the workload of personnel and lessening impact on the environment. New in-house developments not only lower energy consumption and cut environmental pollution by means of lowered emissions, they also lessen the work-related strain on your employees, thereby boosting their performance considerably. The pioneering Linde PureMotion programme concentrates all our competence in these fields.

Linde Material Handling offers you an unsurpassed variety of tailored product solutions. Take a look at the following pages and see for yourself. Each of our trucks satisfy all your high demands and requirements – today and also in the future.

A handwritten signature in blue ink, appearing to read 'Theodor Maurer'.

Theodor Maurer,
Member of the Management Board





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Always one step ahead, always the right solution

The secret of success – generating a decisive added value.

The history of Linde Material Handling is marked by innovations of benchmarking quality. 50 years ago Linde revolutionised the field of lift trucks with the pioneering invention of the hydrostatic drive system. For more than 20 years we have been developing technical concepts to lessen the workload of drivers and lower dust and particle emissions.

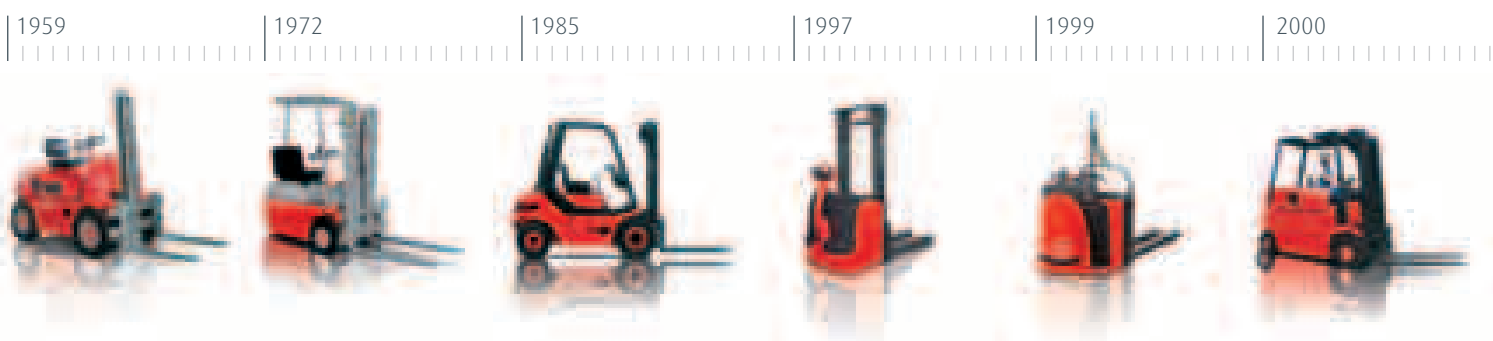
This innovative force has been maintained until today, and we constantly focus on our objective of achieving continuous innovation and staying one step ahead at all times. We also have many ideas for practical solutions which are geared to the future and are sure to provide maximised benefits for our customers.

The Linde Material Handling forklift trucks and warehousing equipment have proven their advantages all over the world in a range of demanding applications. We are never satisfied with only making machines which simply work.

When developing a new product, Linde Material Handling aims to be “top of the class”.

The value of our products therefore extends far beyond simple function and includes features such as unique driving and operating comfort and convenience, exemplary eco-friendliness and the highest economy. These are benefits which mean that our customers can always be sure of getting something more for their money.

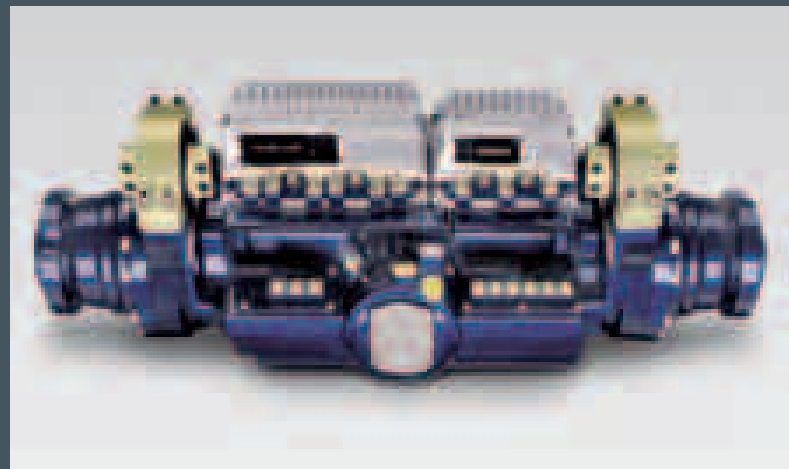
Linde – The path to the top in the intralogistics sector is marked by many technical milestones.





The strict orientation of our product range to meet customer requirements and market demands, the uniquely extensive product portfolio, our close-to-customer services and emphasis on customers' needs have ensured that Linde Material Handling is now one of the world's leading suppliers of intralogistic solutions.

We also listen closely to our customers and are inspired by their suggestions which we incorporate in our developments to continuously optimise our products. The result – customised trucks with a specialised design which is fully focused on practical requirements.



2000 2002 2005 2006 2008



Linde PureMotion: Value enhancement with a clear conscience

Efficiency for personnel, business and the environment.

"The Linde PureMotion programme includes all technical, design and service-related solutions to boost economy and at the same time reduce long-term environmental impact and the workload of personnel."

We believe that we only uphold our responsibility as a company if we succeed in concentrating our technological competence on achieving more economy as well as protecting the individual and the environment. The comprehensive measures required to achieve this aim have now been combined in the Linde PureMotion programme. As part of Linde PureMotion, all corporate divisions of Linde Material Handling are analysed. All our goods and services are examined to see whether and how they are geared to protecting the individual and the environment.

One example is the emission of diesel particles and brake dust, as this very fine dust is a health hazard even in very low concentrations. With high-efficiency diesel engines and no need for conventional brakes due to the hydrostatic drive design, the Linde Material Handling forklift trucks have unparalleled low particle emission values in comparison to other trucks on the market.

Driver protection is also very important to us. Forklift trucks from Linde offer design features that guarantee the safety of the driver from shocks resulting from uneven floors. All potential problem areas are consistently decoupled: the drive axle, steering axle and mast. This considerably decreases vibrations from the vehicle.

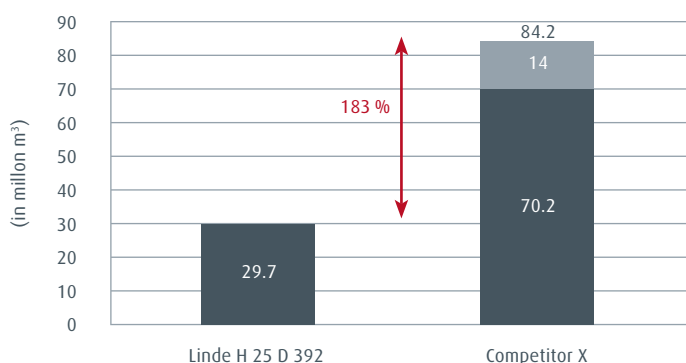
Economy and protection of the individual and the environment are compatible aims. With Linde PureMotion this demand is implemented in technological concepts.

In the Linde PureMotion concept, sustainability is at the top of the priority list. At the same time it paves the way for the development of more innovative and efficient features for Linde Material Handling products which are geared to the needs of the future.



Linde PureMotion
Ergonomics. Environment. Efficiency.

Comparison of environmental impact. Over 2 years (3000 running hours in a hard application)



■ Diesel particles
■ Brake dust

The EC limit for particulate matter is 50 µg/m³. If we add diesel particles and brake dust together, competitor "X" pollutes approx. 84.2 million cubic meters of air to the threshold value – 183 % more than the Linde H 25 D.



Always close to our customers all over the world

Local accessibility guarantees seamless availability.

In addition to the hardware in the form of outstanding products, it is also essential that the software, i.e. the service and especially fast availability of maintenance personnel and spare parts, is also right for transport and logistic operations.

Linde Material Handling offers its customers in the industrial, commercial, trade and public sectors all over the world a comprehensive range of products and services which satisfies the individual needs of customers in the best possible way. With its organisational structure Linde Material Handling makes sure it is always near its customers and on the spot wherever its products and services are required.

As a company with global intralogistics operations, Linde Material Handling has insider knowledge of international markets, is familiar with the individual needs of its customers and makes use of the experience of the various regions. The cornerstones of the success of Linde Material Handling are its innovative products, exemplary service and fast availability. A global network of dealers and production facilities on three continents guarantees a seamless supply of vehicles and spare parts, optimum maintenance quality and the shortest possible delivery times.

Customers of Linde Material Handling can depend on a reliable and accessible partner all over the world.





Innovative mast design. Slim mast profiles ensure a clear view of the load and surroundings. The results: enhanced safety and assured, highly productive handling.



Our innovations are geared to the future

Safeguarding the future by the force of innovation.

Innovative product ideas for improved processes and enhanced economy. These include detailed solutions through to ground-breaking developments which define a new performance class. With technical milestones such as the first hydrostatic drive system and the Linde Load Control electronic mast control system, Linde Material Handling impressively underlines its technological forerunner position in this sector with a constantly high level of innovative skill.

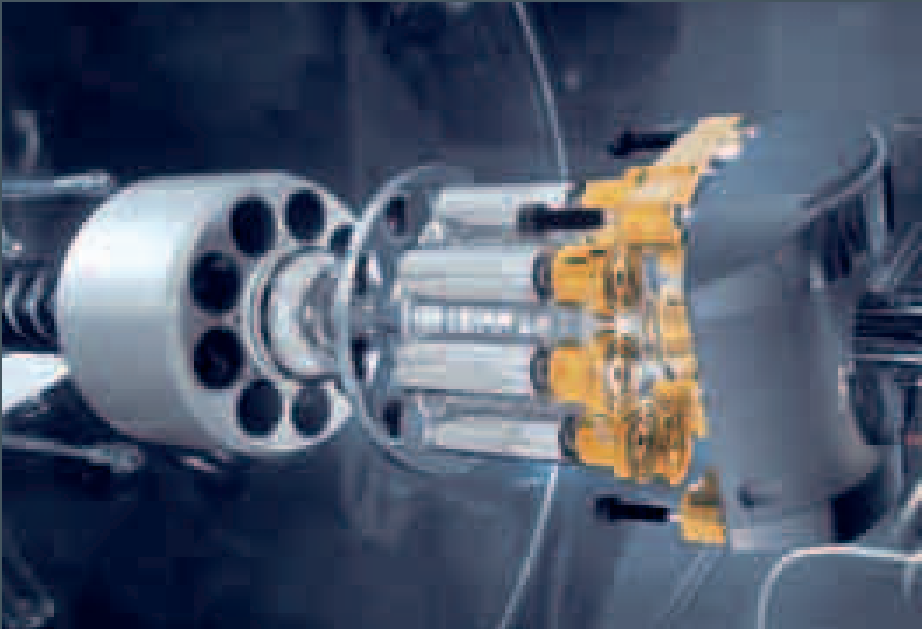
Our innovations help our customers to accelerate their processes and gain an important competitive edge as a result. The product developers at Linde Material Handling have always succeeded in coming up with the right ideas at the right time, and have set standards which have become benchmarks in the industry. Our uninhibited innovative drive and practical solutions are focused exclusively on one aim: Safeguarding our future and that of our customers.

Innovation and technical progress always add up. Our customers not only enjoy the benefits of our developments on a daily basis in terms of lower energy costs and emissions, but also in terms of personnel costs – the highest cost factor of forklift truck operations – which are lowered considerably when workers are protected and exposed to less strain at the workplace.

Linde forklift trucks have always set standards regarding performance and energy efficiency with a wide range of technical innovations. Linde Material Handling is working intensively on the development of machines with minimum environmental impact and low consumption, and is also promoting the development of alternative drive technology such as the world's first hydrogen-powered direct-injection combustion engine with compressor.



The new R&D centre at the Aschaffenburg facility is the hub of activity of all departments involved in the development process.



The hydrostatic drive system is the trademark of the engine-powered Linde Material Handling forklift trucks. The latest generation of Linde hydrostatic designs has pushed the limits of technical performance even further.



Linde Material Handling strengthens its long-term innovative skill and technological competence with projects such as the new R&D centre at the Aschaffenburg site. This centre enables spatial net-working of all R&D departments with the other corporate divisions involved in the development process such as production, customer service and sales. With this concept it is possible to test the marketability and feasibility of an idea at a very early stage in its development. As a result Linde Material Handling is extending its position as a vendor of cutting edge solutions for more economy and at the same time is paving the way for a more global orientation of the product range.

We regard leading technological competence as the key to safe-guarding our future.

Our customers can also rely on the innovative power of Linde Material Handling to provide them with high-quality equipment which is always in keeping with the state of the art and fully meets all demands of today and the future.



Still on the drawing board of other manufacturers, already in action at Linde Material Handling: utility vehicles with fuel-saving smooth hybrid drive or hydrogen engine with direct injection and compressor charging.

Transporting

→ Pallet Trucks:



M 25
SERIES 032

16



T 20 SF
SERIES 144

24



T 16, T 18, T 20
SERIES 360

18



T 20 S
SERIES 144

26



T 30
SERIES 131

20



T 20 R
SERIES 140

28



T 20 AP – T 24 SP
SERIES 131

22

→ Tow Tractors:



P 30
SERIES 132

30



P 60 Z
SERIES 126

36



P 30 C, P 50 C
SERIES 1190

32



P 250
SERIES 127-02

38



P 50
SERIES 131

34



W 20
SERIES 127-02

40

Storage

→ Pallett Stackers:



L 10 B, L 10, L 12
SERIES 379

42



L 14 – L 16i
SERIES 372

44

Storage

→ Pallet Stackers:

	L 14 AP – L 16 APi SERIES 372	46		L 10 AS, L 12 AS SERIES 379	54
	L 12 AP – L 12 L HP SP SERIES 133	48		L 14 AS – L 16 AS SP SERIES 131	56
	L 12 LS SERIES 144	52		L 12 R – L 16 Ri SERIES 139	58

→ Reach Trucks:

	R 10 C, R 12 C, R 14 C SERIES 115-03	60		R 14 G – R 20 G SERIES 115-03	68
	R 14 S – R 20 S SERIES 115-03	62		 R 14 X – R 17 X SERIES 116-02	70
	R 25 S SERIES 115-03	66		R 25 F SERIES 8922	72

→ Turret Trucks:

	A 10 SERIES 040	74
	A 13 SERIES 005	76

→ Combination Order Pickers and Turret Trucks:

	 K SERIES 011	78
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Order Picking

→ Order Picker:



N 20, N 20 HP, N 24 HP
SERIES 132

80



V 11
SERIES 015

86



N 20 L, N 20 Li
SERIES 132

82



V 12
SERIES 015

88



V 10
SERIES 015

84

Stacking

→ Electric Counterbalanced Trucks:



E 10
SERIES 334

90



E 20 – E 30/600
SERIES 336-02

98



E 12 – E 20
SERIES 386

92



E 25 S – E 30/600 S
SERIES 336-03

100



E 16, E 18, E 20
SERIES 386

96



E 35, E 40, E 48
SERIES 337

102

→ Diesel and LPG Counterbalanced Trucks:



H 14, H 16, H 18, H 20
SERIES 391

104



H 20, H 25
SERIES 392

108

Stacking

→ Diesel and LPG Counterbalanced Trucks:



H 25, H 30, H 35
SERIES 393

110



H 50 - H 80/1100
SERIES 396

114



H 40, H 45, H 50
SERIES 394

112

→ Diesel Counterbalanced Trucks:



H 100 - H 180
SERIES 359

116



H 420 - H 460
SERIES 356

120

→ Reach Stacker:



C 4230 TL - C 4531 CH
SERIES 357

122

→ Container Handler:



C 90
SERIES 318

126



C 360, C 400
SERIES 356

128

→ Side Loaders:



S 30, S 40, S 50, S 60
SERIES 316

130

Explosion-Protected Trucks



Forklift trucks for explosion-
hazardous areas
Full Protection

134



Forklift trucks for explosion-
hazardous areas with
Gas Safety System

136

Hand Pallet Truck Capacity 2500 kg **M 25**

SERIES 032

Representing exceptional value for a minimal investment, the Linde M 25 hand pallet truck has to be first on the list in the procurement plans of discerning businesses.

The rugged and exceptionally low-maintenance Linde M 25 hand pallet truck features a fast-lift facility and a 220 degree steering for excellent manoeuvrability in trailers and other confined working areas.

The tough, torsion resistant construction enables the Linde M 25 to safely handle above average loads of up to 2500 kg for added versatility.



Safety

At Linde, safety receives the closest attention in material handling trucks of every size. The wide handle of the Linde control tiller provides the operator with the necessary sense of safety, effectively protecting the hands throughout every manoeuvre, while the low-slung chassis prevents risk of foot injury.

Performance

Air- and dust-tight enclosure of the hydraulic circuit ensures troublefree operation over long periods of time, no matter how harsh conditions may be on site. With the fast-lift feature, loads weighing up to 150 kg can be lifted to maximum height in half the time. The M 25 is a hand pallet truck for peak performance.

Comfort

The Linde M 25 hand pallet truck lives up to its purpose of a high-convenience all-around helper. Functional design devoid of all sharp corners and edges plus a large steering pivot angle of 110° to either side make it excep-

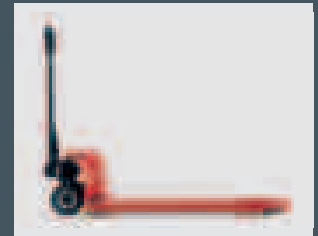
tionally manageable and manoeuvrable inside a trailer or in other tight spaces.

Reliability

Torsion-resistant construction of the strong chassis permits safe handling of loads up to 2500 kg, raising capacity 25 % above that of the customary standard 2000 kg truck. Long life is a built-in feature of the sturdy hydraulic lift unit housing, made as single-piece casting. The hard-wearing powder coat finish provides excellent protection from corrosion.

Productivity

Effective and cost-efficient at work. Steer and load wheels are of very high quality, quiet running and low in rolling resistance. Bush bearings are fitted on all joints, making it an exceptionally low-maintenance hand pallet truck.



Linde control tiller

- Wide handle for effortless steering
- Optimum hand protection
- Convenient manoeuvring due to 220° steering pivot angle
- Tactile handle covering affords pleasant and secure grip at all ambient temperatures

Model designation

M 25

Capacity	kg	2500
Load center	c (mm)	600
Lift	h3 (mm)	120
Lowered height	h13 (mm)	85
Fork length	l (mm)	800, 900, 1000, 1150
Overall length	l1 (mm)	1560
Overall width	b1 (mm)	530, 685
Fork spread	b5 (mm)	530, 685
Fork width	e (mm)	150
Turning radius	Wa (mm)	1361
Working aisle width	Ast (mm)	1811
Steer wheel	ø (mm)	200 x 50
Fork rollers	ø (mm)	80 x 60 (tandem)
Truck weight	kg	79



Smooth-running steer and load wheels

- Entry/exit rollers under the fork tips simplify pallet pick-up
- Tapered and ramped fork tips make pallet entry much easier, especially with shrink-wrapped loads
- Low rolling resistance

Minimal servicing requirements

- All joints fitted with bush bearings as standard
- Exceptionally low maintenance requirements

Pedestrian Pallet Truck

Capacity 1600, 1800 & 2000 kg

T 16, T 18, T 20

SERIES 360

With its compact slim line, low profile chassis this versatile truck is ideal for working in the confined areas of lorries for example as well as for efficient pallet transfers and marshalling duties.

The low pivoting tiller arm places the operator a safe and comfortable distance from the truck while working and the intuitive dual controls grouped on the tiller head are designed for ease of use by either hand.

Operator safety features include a rugged profiled hand guard and low steel chassis surround to protect the feet. The pivoting castor wheels always remain safely within the contours of the chassis.

This superb compact range represents outstanding value for extremely economical and reliable load handling.



Safety

The highly functional design of the Linde T 16 – T 20 pallet truck is not just good to look at it also provides optimum protection for the operator. The low chassis surround ensures the wheels rotate safely within the truck contours. The smooth rounded, profiles of the chassis and tiller head, also enhance the safety of the operator.

Performance

Linde pallet trucks show their true value in efficiency on the job. Linde digital control technology translates the powerful output of the traction and lift motors into seamless productivity. The pallet trucks performance parameters can be adjusted to match the requirements of individual applications for impressive versatility and adaptability.

Operator comfort

A perfect interface between operator and truck is assured with the low pivoting tiller arm and the tactile controls, which and the tactile controls, which are ergonomically

grouped on the profiled tiller head for simple thumb actuation with either hand.

Reliability

The Linde T 16 – T 20 pallet truck range is constructed for consistent reliability and long life. Its compact, robot-welded chassis ensures rugged durability. The virtually indestructible Rimflex cover provides optimum protection to the components. The fork tips are made from heavy duty castings and each fork tip is able to withstand a 2000 kg load without deformation.

Service

Linde pallet trucks are designed to reduce maintenance costs, and maintain a very high level of productivity over many years. Swift access to all components, the electronics under sealed aluminium housing preserves from shock, dust, and humidity. Features which play an additional part in keeping the Linde Pallet Truck's uptime up.



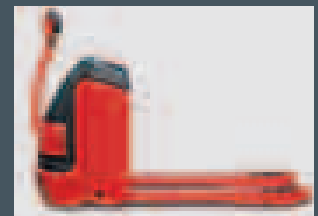
Tiller

- Hand guard provides assured protection for operator's hands
- Low tiller mounting point places operator a safe distance from the truck chassis when travelling and manoeuvring
- Tiller design and mounting provides effortless truck manoeuvrability



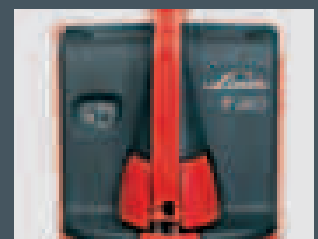
Rimflex hood

- Rimflex cover is extremely strong and lasts the lifetime of the truck
- Generous storage space (on T 18 and T 20) for shrink wrapping, writing utensils, etc.



Chassis/Forks

- Rounded contours, no sharp edges
- Robust pressed steel construction
- Low chassis skirt for operator safety
- Sturdy forks, each tip can support a load of 2000 kg without deformation



DC Motor

- Powerful, smooth-running motor, 1.2 kW maximum output
- Gradeability 10 % fully laden
- No rollback on gradient starts
- Top speed 6 km/h, laden and unladen

Model designation		T 16	T 18	T 20
Load capacity	Q (kg)	1600	1800	2000
Load distance	x (mm)	880/962	880/962	880/962
Wheelbase	y (mm)	1335	1390	1390
Service weight	kg	415	495	505
Wheels, number operator/load side (x = driven)		1x + 2/2 (1x + 2/4) ¹⁾	1x + 2/2 (1x + 2/4) ¹⁾	1x + 2/2 (1x + 2/4) ¹⁾
Tiller height, travel position, min/max	h14 (mm)	775/1100	775/1100	775/1100
Overall length	l1 (mm)	1695	1750	1750
Length to fork face	l2 (mm)	545	600	600
Overall width	b1/b2 (mm)	700	700	700
Fork dimensions	s/e/l (mm)	55 x 165 x 1150	55 x 165 x 1150	55 x 165 x 1150
Aisle width, 1000 x 1200 mm pallet crosswise	Ast (mm)	1816 ²⁾	1868 ²⁾	1868 ²⁾
Aisle width, 800 x 1200 mm pallet lengthwise	Ast (mm)	2016	2068	2068
Turning radius	Wa (mm)	1578	1630	1630
Travel speed, with/without load	km/h	5.0/6.0	6.0/6.0	6.0/6.0
Drive motor output (S 2, 60 minutes rating)	kW	0.9	1.2	1.2
Battery class		British Standard	DIN 43535 B	DIN 43535 B
Battery voltage/rated capacity (5 h)	V/Ah	24/150	24/240	24/240
Battery weight	kg	155	234	234
Sound level at operator's ear	dB (A)	< 69	< 69	< 69

1) Figures in parentheses for tandem load wheels (optional equipment)
2) With 950 mm fork length

Pedestrian Pallet Truck

Capacity 3000 kg

T 30

SERIES 131

Materials handling operations place heavy demands on both truck and operator and the impressive Linde T 30 pedestrian pallet truck is designed to meet the challenge of these demands with its rugged construction, high performance and refined operator work station.

Incorporating powerful, high torque AC traction and pump technology the T 30 negotiates gradients and loading ramps with ease. The compact tiller with all the controls grouped for ease of use by either hand presents the operator with the perfect fatigue-free working interface.

Designed to handle the heavier loads encountered in some applications, the T 30 provides a highly efficient solution for pallet transfers and lorry loading/unloading duties as well as occasional order picking.



Safety

The highly functional design of the Linde T 30 electric pedestrian pallet truck is not just appealing to look at it also provides optimum protection for the operator. The low steel chassis surround ensures the wheels always rotate safely within the truck contours. The smooth, rounded profiles of the chassis and tiller head, enhances operator safety and eliminates snagging in confined areas.

Performance

With its 3000 kg capacity, the T 30 is ideal for the efficient handling of heavier loads. The advanced Linde drive control technology translates the powerful, high-torque output of the maintenance-free AC traction and lift motors into seamless productivity.

Operator comfort

A perfect interface between operator and truck is assured with the pivoting twin-grip tiller arm and the tactile controls, which are ergonomically grouped on the profiled

and protected tiller head for simple thumb actuation with either hand.

Reliability

The Linde T 30 is constructed for consistent reliability and long life. Its compact, robot welded chassis ensures rugged durability. Each cast steel fork tip is able to withstand a 2000 kg load without deformation. The narrow (165 mm) forks with arrow head profiles and ski shaped undersides, ensure smooth entry into closed base pallets.

Service

Efficiency at work, efficiency in servicing. With up to 1000 operating hours between services, an integrated diagnostic system and easy service access, maintenance intervals are minimal and operating costs are reduced. The T 30 performance parameters can easily be configured to match the requirements of individual applications.



Power steering convenience and safety

- Effortless proportional power-assisted steering
- Positive steering feedback enhances stability and comfort while travelling
- Automatic speed reduction on turns as a function of steering angle



Workstation

- Comprehensive multi-function digital instrument display including maintenance indicator, battery state of charge, and elapsed time meter.
- Truck activated by PIN code or by ignition key



Chassis/Forks

- Rounded contours with no sharp edges
- Robust pressed steel construction
- Low steel chassis surround protects operator's feet
- Each fork tip can support a load of 2000 kg without deformation



CAN bus system

- Electronic management of all components permitting quick and easy diagnosis
- All truck parameters can be configured by the service technician to achieve best performance in every application

Model Designation

T 30

Load capacity	Q (kg)	3000
Axle centre to fork face (fork raised/lowered)	x (mm)	895/962
Wheelbase (fork raised/lowered)	y (mm)	1359/1425
Service weight (with battery item 6.5)	kg	745
Wheels number, drive side/load side (x = driven)		1x + 2/2
Height of the tiller arm in operating position, min./max.	h14 (mm)	1140/1350
Overall length	l (mm)	1810
Length to fork face	2 (mm)	660
Overall width	b1 (mm)	790
Forks dimensions	s/e/l (mm)	60 x 165 x 1150
Aisle width with pallet 1000 x 1200 across forks	Ast (mm)	1950
Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2150
Turning radius (fork raised)	Wa (mm)	1645
Travel speed, with/without load	km/h	6.0/6.0
Drive motor, 60 minutes rating	kW	1.5
Battery according to DIN 43 531/35/36 A, B, C, no		DIN 43535 B
Battery voltage/rated capacity (5 h)	V/Ah	24/240
Battery weight	kg	200
Sound level at operator's ear	dB (A)	< 70

Platform Pallet Truck

Capacity 2000 & 2400 kg

T 20 SP/AP, T 24 SP/AP

SERIES 131

Innovation is the driving force of progress and the development of the new Linde range of stand-on electric pallet trucks is an outstanding example of this philosophy.

Designed for optimum versatility there are two versions: The AP model, which has a folding stand-on platform and side guards enabling operation in both pedestrian and stand-on mode.

The SP version has a fixed stand-on platform and is fitted with the innovative Linde e-driver controller, which enables the operator to adopt the ideal 45 degrees driving posture when travelling in either direction.

Rapid pallet transfers, marshalling and lorry loading/unloading duties are a key link in busy supply chains and the new Linde range is designed to carry out these tasks more efficiently and cost-effectively than had ever previously been possible, combined with unsurpassed operator comfort and safety.



Safety

High performance combined with safety. The wraparound steel chassis keeps the operator safe from impacts while working (SP). A low, steel skirt surrounding the stand-on platform protects the operator's feet and legs. (SP) The operator's body remains safely within the chassis contours at all times while operating the truck (SP).

Performance

Highly efficient productivity is the Linde pallet truck's true strength. Their performance derives from a powerful 3 kW AC maintenance-free drive motor and active stabilizing castor wheels. Rapid acceleration and impressive travel speeds combined with efficient braking in all conditions.

Comfort

The ergonomic 45° driving posture of the SP version, enables effortless, stress-free multi-directional working with excellent all-round visibility. A padded backrest and cushioned stand-on platform provide added comfort. A comfortable operator remains motivated

and maintains high efficiency levels throughout the working shift.

Reliability

The highly durable, robot welded construction of the SP and AP ensures consistent reliability and long life in demanding applications. Each heavy cast fork tip can support a load of 2000 kg without deformation. Smooth entry into bottom boarded pallets is assisted by the ski contours of the underside of the fork tips. The arrow shaped fork tips also facilitate easy entry into every type of pallet and through shrink wrapping for fast, efficient and safe load handling.

Service

Efficiency at work and efficiency in servicing with cost effective maintenance routines. Easy access to all components and maintenance-free technology also play their part. CAN bus connectivity provides a computerised diagnostic system for rapid analysis to ensure maintenance intervals are minimised and uptime is optimised



Total drive system

- Electronically controlled, hydraulically suspended castor wheels automatically select optimum ratio between stability and traction
- Automatic electric braking when traction lever is released to neutral
- Smooth counter current braking and no roll back on gradient starts



Power steering for comfort and safety

- Self-centring, power assisted steering keeps truck on track in a straight line (SP)
- Steering effort adjusts automatically to speed
- Speed is automatically reduced in relation to the steering angle



Linde e-driver

- Unique Linde e-driver controller, the perfect interface between truck and operator (SP)
- Asymmetrical design leaves more room for first-level access
- Enables effortless one-handed operation
- All controls grouped on the controller



Batteries and chargers

- Vertical battery change as standard
- Optional battery on rollers for side changing to left or right
- Battery locking device secures battery within the chassis
- Choice of batteries from 250 Ah
- 2 PzS to 620 Ah (5 PzS) to suit every type of application

Model designation		T 20 SP	T 24 SP	T 20 AP	T 24 AP
Load capacity	Q (kg)	2000	2400	2000	2400
Load distance (forks raised/lowered)	x (mm)	895/962	895/962	895/962	895/962
Wheelbase (forks raised/lowered)	y (mm)	1359/1425 ³⁾	1359/1425 ³⁾	1359/1425 ³⁾	1359/1425 ³⁾
Service weight (including battery as Line 6.5)	kg	800	800	770	770
Wheels, number drive side/load side (x = driven)		1x + 2/2	1x + 2/2	1x + 2/2	1x + 2/2
Platform height (stand-on position)	h7 (mm)	160	160	160	160
Overall length	l1 (mm)	2274 ³⁾	2274 ³⁾	2216 ³⁾	2216 ³⁾
Head length	l2 (mm)	1124 ³⁾	1124 ³⁾	697 ¹⁾ /1066 ^{2) 3)}	697 ¹⁾ /1066 ^{2) 3)}
Overall width	b1 (mm)	790	790	790	790
Fork dimensions	s/e/l (mm)	55 x 165 x 1150	55 x 165 x 1150	55 x 165 x 1150	55 x 165 x 1150
Aisle width, 1000 x 1200 pallet crosswise	Ast (mm)	2324 ³⁾	2324 ³⁾	1927 ¹⁾ /2264 ^{2) 3)}	1927 ¹⁾ /2264 ^{2) 3)}
Aisle width, 800 x 1200 pallet lengthwise	Ast (mm)	2524 ³⁾	2524 ³⁾	2127 ¹⁾ /2464 ^{2) 3)}	2127 ¹⁾ /2464 ^{2) 3)}
Turning radius (forks raised)	Wa (mm)	2019	2019	1622 ¹⁾ /1959 ²⁾	1622 ¹⁾ /1959 ²⁾
Travel speed, with/without load	km/h	10.0/10.0	10.0/10.0	10.0/10.0	10.0/10.0
Traction motor (60 minutes rating)	kW	3.0	3.0	3.0	3.0
Battery to DIN 43531/35/36 A, B, C, No		DIN 43535 B	DIN 43535 B	DIN 43535 B	DIN 43535 B
Battery voltage, nominal capacity 5 h rating	V/Ah	24/240	24/240	24/240	24/240
Battery weight	kg	200	200	200	200
Noise level at operator's ear	dB (A)	≤ 70	≤ 70	≤ 70	≤ 70

1) Platform folded up

2) Platform folded down

3) With a 2 PzS vertical battery change or 3 PzS lateral (+ 100 mm for a 3 PzS vertical or 4 PzS lateral; + 150 mm for the 4 PzS vertical and + 225 mm for the 5 PzS vertical batterie change)

Stand-on Pallet Truck

Capacity 2000 kg

T 20 SF

SERIES 144

The Linde T 20 SF stand-on pallet truck provides the optimum solution for applications requiring rapid internal pallet transfers, marshalling duties and lorry loading/unloading.

Its four point configuration ensures exceptional stability when travelling, manoeuvring and cornering, while the low service weight and slim 790 mm wide chassis makes it ideal for use on approved mezzanine floors, service elevators, road trailers and containers as well as easy access to block stacks.

The innovative Linde twin-grip, self centring steering control and electric power steering make light work of travelling and manoeuvring and the unique twin-grip design also enables the operator to adopt the optimum strain-free ergonomic driving posture for travelling, reversing and load handling.



Safety

The Linde stand-on pallet truck T 20 SF is equipped with 3 independent braking systems. The advanced Linde Digital Controller prevents roll back when starting on gradients. Travel speed automatically reduces when cornering. The fork tips and load are clearly visible from the operator's position for safe, precise handling.

Performance

The 790 mm wide chassis of the T 20 SF is ideal for block stacking layouts. The unique, Linde twin-grip steering control provides an intuitive interface between operator and truck. With a capacity of 2000 kg, and a powerful 2 kW drive motor providing a maximum speed of 10 km/h, the Linde T 20 SF stand-on pallet truck is also ideally suited to intensive lorry loading and unloading and rapid pallet transfer applications.

Comfort

Efficient operation is assured by the innovative Linde twin-grip, steering control. All controls are ergonomically grouped for

use by either hand, enabling the operator to choose the most comfortable posture for load handling tasks and forward/reverse travel. Electric, self centring power steering for effortless manoeuvring.

Reliability

The forks are formed from heavy gauge steel with cast fork tips, each of which can withstand a 2000 kg load without deformation. Smooth fork entry into open and closed base pallets and through shrink wrapping is assured by the arrow shape and ski profiled underside of the fork tips. These features contribute to a longer operating life combined with fast, safe and highly productive load handling.

Service

Linde pallet trucks are designed to deliver high levels of productivity over many years combined with lower maintenance costs. The Linde multifunction back-lit instrument display provides the operator with a continuous update of the truck status.

Model designation

T 20 SF

Load capacity	Q (kg)	2000
Axle centre to fork face	x (mm)	880/960 ¹⁾
Wheelbase	y (mm)	1564
Service weight	kg	860 ²⁾
Wheels, number front/rear (x = driven)		1x + 2/2 (1x + 2/4) ³⁾
Fork height, lowered	h13 (mm)	85
Overall length	l1 (mm)	1925
Length to fork face	l2 (mm)	775
Overall width	b1/b2 (mm)	790
Fork dimensions	s/e/l (mm)	55/165/1150
Aisle width with pallets 1000 x 1200 across forks	Ast (mm)	1975
Aisle width with pallets 800 x 1200 along forks	Ast (mm)	2175
Turning radius	Wa (mm)	1657/1735 ¹⁾
Travel speed, with/without load	km/h	8.0/10.0
Drive motor, 60 minute rating	kW	2.0
Battery according to IEC		254-2; A
Battery voltage/rated capacity (5 h)	V/Ah	24/330L
Battery weight (± 5 %)	kg	307
Mean noise level at driver's ear	dB (A)	68

1) Forks raised/lowered

2) Incl. battery acc. to 6.5

3) Figures in brackets: optional



Linde twin-grip steering control

- Unique Linde twin-grip self-centring steering control with electric power steering
- Minimal steering effort for easy, precise manoeuvring
- The angle of the twin grip control handles indicates the drive wheel position



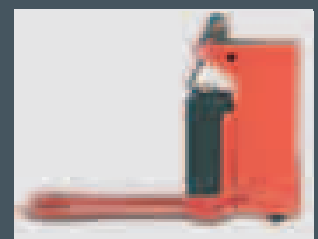
Operator compartment

- Linde twin-grip steering control: main control functions integrated into a single handle for operation by either or both hands
- Operator can choose between forward facing or side-on operation
- 3 platform height adjustments



Workstation

- Linde multi-function instrument display provides a continuous update of the truck status
- All operating controls ergonomically grouped for ease of use by either hand
- Storage compartments and deep document holder
- Adjustable platform height



Chassis & Forks

- Rounded contours, no sharp edges
- Chassis constructed from formed steel pressings results in outstanding rigidity and durability
- Sturdy forks: each fork tip can support a 2000 kg load without deformation

Stand-on Pallet Truck

Capacity 2000 kg

T 20 S

SERIES 144

The highly popular Linde T 20 S stand-on pallet truck is designed for intensive industrial applications where maximum throughput per shift is demanded for duties such as loading/unloading, marshalling and rapid pallet transfers.

The ergonomic controls combine with a compact steering wheel and electric steering for fatigue-free operator comfort and effortless manoeuvring and load handling.

With automatic equalising linkage for excellent stability and 125 mm initial lift to easily negotiate loading ramps and bridge plates, this versatile, multi-purpose truck will adapt to a wide variety of applications.

The impressive performance and comfort of this compact, easy to operate truck enables the operator to work safely and continuously during each shift with maximum efficiency.



Safety

The T 20 S stand-on pallet truck has a well protected operator's compartment within the chassis contours and three independent braking systems, including a deadman foot switch which actuates electromagnetic braking proportionate to the load carried on the forks. A hill start feature prevents rollback on gradients. The narrow, compact chassis allows a clear view of the fork tips to facilitate safe load handling.

Performance

One of the truck's great strengths is its productivity. The compact drive unit permits precise manoeuvring allowing the operator to make the most of the truck's high performance. With a capacity of 2000 kg, and a powerful 2 kW drive motor providing a maximum speed of 12 km/h, the Linde T 20 S stand-on pallet truck is ideally suited to intensive lorry loading and unloading and rapid pallet transfer applications.

Comfort

Electric power steering with positive feedback makes the truck very easy to control

and manoeuvre. A spinner knob on the steering wheel takes the hard work out of tight turns. The 3 position platform height adjustment ensures every operator is able to find the optimum driving position for both comfort and visibility.

Reliability

The forks are formed from heavy gauge steel with cast fork tips, each of which can withstand a 2000 kg load without deformation. Smooth fork entry into open and closed base pallets and through shrink wrapping is assured by the arrow shape and ski profiled underside of the fork tips. These features contribute to a longer operating life combined with fast, safe and highly productive load handling.

Service

Linde pallet trucks are designed to deliver high levels of productivity over many years combined with lower maintenance costs. The Linde multifunction back-lit instrument display provides the operator with a continuous update of the truck status.

Model designation

T 20 S

Load capacity	Q (kg)	2000
Axle centre to fork face	x (mm)	880/960 ¹⁾
Wheelbase	y (mm)	1564
Service weight	kg	860 ²⁾
Wheels, number drive side/load side (x = driven)		1x + 2/2 (1x + 2/4) ³⁾
Fork height, lowered	h13 (mm)	85
Overall length	l1 (mm)	1925
Length to fork face	l2 (mm)	775
Overall width	b1/b2 (mm)	790
Fork dimensions	s/e/l (mm)	55/165/1150
Aisle width with pallets 1000 x 1200 crosswise	Ast (mm)	1975
Aisle width with pallets 800 x 1200 lengthwise	Ast (mm)	2175
Turning radius	Wa (mm)	1657/1735 ¹⁾
Travel speed, with/without load	km/h	9.0/12.0
Drive motor, 60 minute rating	kW	2.0
Battery according to IEC		254-2; A
Battery voltage/rated capacity (5 h)	V/Ah	24/330
Battery weight (± 5 %)	kg	307
Noise level at operator's ear	dB (A)	68

1) Forks raised/lowered

2) With battery in line 6.5

3) Figures in brackets with tandem load wheels (option)



Electric power steering

- Constant and direct relationship between steering wheel position and drive wheel angle
- Electric power steering with positive feedback
- The compact drive unit is mounted off-centred on the right of the truck and can rotate through 180°



Operator's compartment

- Sideways standing position ensures all-round visibility when travelling in either direction
- Choice of operator backrest: seat type or curved support
- All controls are within easy reach



Workstation

- Linde multi-function instrument display provides a continuous update of the trucks status
- All operating controls ergonomically grouped for ease of use by either hand
- Storage compartments
- Steered wheel position indicator included in display



Chassis & Forks

- Rounded contours, no sharp edges
- Chassis constructed from formed steel pressings results in outstanding rigidity and durability
- Sturdy forks: each fork tip can support a 2000 kg load without deformation

Rider Seated Pallet Truck

Capacity 2000 kg

T 20 R

SERIES 140

The Linde T 20 R rider pallet truck offers an efficient and cost-effective solution for the rapid internal transfer of loads over long distances as well as lorry loading/unloading duties for faster turnarounds.

With its 125 mm of lift loading ramps and bridging plates are negotiated with ease and the Linde digital control provides seamless traction control with no roll back on gradient starts.

Inherent stability is essential in intensive applications and the four point configuration of this model together with automatic equalising linkage ensures all wheels remain in constant contact with the ground.

The sideways seating position in the ergonomic and highly functional operator's compartment enables strain-free travelling in either direction and the fully adjustable comfort-class suspension seat ensures a comfortable and motivated operator.



Safety

The Linde rider seated pallet truck T 20 R is specially designed for rapid load transfers and lorry loading/unloading duties. In addition to three independent braking systems, its low centre of gravity and four point configuration provides assured control of the truck and impressive stability. Safety is further enhanced by automatic equalising linkage, which ensures constant ground contact of all wheels. All the wheels pivot safely within the contours of the chassis.

Performance

The Linde Digital Controller enables starting on gradients without rollback. The powerful 2 kW drive motor provides a maximum speed of 12 km/h to fulfil long distance internal pallet transfer duties and combines with electric steering for effortless manoeuvrability. 125 mm of lift ensures ease of operation on loading ramps and bridging plates for totally versatile performance.

Comfort

Ergonomically designed operator's compartment features a sideways seating position

combines with Linde twin accelerator control for seamless, strain-free travelling and manoeuvring in either direction. A comfort-class suspension seat provides full lateral, lumbar, weight and height adjustments to suit every operator. All operating controls are conveniently positioned for ease of use and a multi-function instrument display keeps the operator informed of the trucks status.

Reliability

Each reinforced fork tip is able to withstand a 2000 kg load without deformation. The motors, sub components and electronics are all protected within the robust chassis structure. Consistent reliability and long life is assured with this highly durable range.

Service

Linde pallet trucks are designed to deliver high levels of productivity over many years with lower operating costs. The Linde multi-function back-lit display provides the operator with all necessary information about the truck.

Model designation

T 20 R

Load capacity	Q (kg)	2000
Axle center to fork face	x (mm)	880/960 ¹⁾
Wheelbase	y (mm)	1614
Service weight	kg	1015 ²⁾
Wheels, number drive side/load side (x = driven)		1x + 2/2 (1x +2/4) ²⁾
Fork height, lowered	h13 (mm)	85
Overall length	1 (mm)	1975
Length to fork face	2 (mm)	819
Overall width	b1/b2 (mm)	950
Fork dimensions	s/e/l (mm)	55 x165 x1150
Aisle width with pallet 1000 x1200 crosswise	Ast (mm)	2020
Aisle width with pallet 800 x1200 lengthwise	Ast (mm)	2220
Turning radius	Wa (mm)	1700/1780 ¹⁾
Travel speed, with/without load	km/h	9.0/12.0
Drive motor, 60 minute rating	kW	2.0
Battery according to IEC		254-2
Battery voltage/rated capacity (5 h)	V/Ah	24/440
Battery weight (± 5 %)	kg	381
Noise level at operator's ear	dB (A)	68

1) Forks raised/lowered

2) In brackets optional equipment



Operator's compartment

- Sideways standing position ensures all-round visibility when traveling in either direction
- Comfortable cushion arm rest linked to all controls within easy reach
- Ergonomic design suits every operator and makes for easy and safe operation



Braking

- Electromagnetic braking on release of dead man pedal with hydraulic braking assistance proportional to the load on the forks
- Emergency isolator interrupts all power to the truck and actuates electro-mechanical brake



Workstation

- Linde multifunction back-lit display provides all important truck information to guarantee safe, trouble free operation
- Steered wheel position indicator included in display
- Ergonomic steer wheel with a knob to ease manoeuvrability



Chassis & Forks

- Rounded contours, no sharp edges
- Chassis constructed from formed steel pressing results in superior rigidity and durability
- Sturdy forks: each fork tip can support a 2000 kg load without deformation

Electric Tow Tractor with Platform Capacity 3000 kg

P 30

SERIES 132

The working environment of a tow tractor is often in confined areas such as those encountered around assembly lines, so the superb driving characteristics incorporated in the highly versatile Linde P 30 tow tractor deliver perfect steering control, powerful traction performance and panoramic all-round visibility, making it the ideal choice.

The P 30 stand-on electric tow tractor with a nominal towing capacity of 3000 kg excels in internal load transfer duties due to its outstanding comfort, performance and safety. The operator always feels at ease while working.

The unique Linde twin-grip steering control and compact design results in a high throughput rates when having to negotiate confined spaces, narrow passageways, dock levellers, bridging plates and service elevators.



Safety

Compact design of the Linde control handlebars ensures that the operator remains well within the truck contours while driving. Ergonomic design of the twin grips enclosed by a hand guard and a 4 mm thick steel front shield assure excellent safety for the operator.

Performance

Powered by a 3 kW AC motor, the P 30, accelerates fast to each a 10 km/h full speed. Its 3000 kg capacity and efficient brakes enable a productive work for heavy duties.

Comfort

The adjustable back rest and the full-suspension platform surfaced with a cushioning non-skid mat provide superior comfort and stability on long transport runs and over uneven floor.

Reliability

The robustness of the handlebar, the strong hooking systems and the high quality steel frame is always something that you can rely on. In addition, the P 30 technology contributes to increase the truck life time.

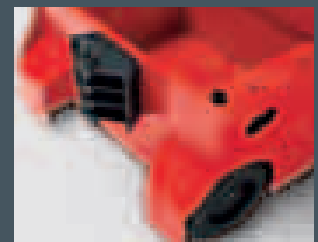
Service

Efficiency at work, efficiency at the cost level. CAN bus connection enables all truck data to be read out for inspection when servicing becomes due at intervals of 1000 operating hours. Easy accessibility of all components and the maintenance free AC technology employed play an additional part in keeping truck uptime up.



AC motor

- Powerful and smooth 3 kW at 100 % performance
- Moisture and dust-proof motor, maintenance-free
- No rollback on uphill starting
- Maximum speed of 10 km/h, whenever the truck is loaded or unloaded



Hook system

- Hook control (inching) on both sides enable a soft and safe hanging
- Different hooks available: Single position, 3 positions and an automatic bolt enabling the control of the hook from the working station



Power steering

- Proportional power-assisted steering, self centering and effortless to operate
- Adjustable steering feedback (drive wheel) resulting in efficient stability
- Automatic speed reduction when cornering
- Manoeuvring effort vary depending on the turning angle



Work station

- Digital and multifunction display
- Truck activated by PIN code or by ignition key
- Wide and deep storage compartments in front and centre for wrapping paper, work gloves, writing utensils, etc.

Model designation		P 30	
Load capacity		Q (kg)	3000
Rated drawbar pull		F (N)	1800
Wheelbase	(± 5 mm)	y (mm)	910 ²⁾
Dead weight	(± 10 %)	kg	1005 ¹⁾
Wheels, number front/rear (x = driven)			1x + 2/2
Height of backrest, min/max		h7 (mm)	766/866
Tow coupling height: Single position, 3 positions		h10 (mm)	300, 290/345/400
Overall length	(± 5 mm)	l1 (mm)	1900 ²⁾
Overall width	(± 5 mm)	b1/b2 (mm)	790/736
Turning radius	(min)	Wa (mm)	1740 ²⁾
Travel speed, with/without load	(± 5 %)	km/h	10/10
Drawbar pull with/without load (60 minutes rating)		N	1800
Maximum drawbar pull with/without load (5 minutes rating)		N	4200
Drive motor output (S 2, 60 minutes rating)		kW	3
Battery according to IEC			DIN 43535 B
Battery voltage/rated capacity (5 h)		V/Ah	24/500
Battery weight (± 5 %)	(± 10 %)	kg	381 ¹⁾
Sound level at operator's ear		dB (A)	< 70

1) With battery

2) With a 4 PzS Lateral or 3 PzS Vertical battery (–100 mm for 3 PzS Lateral)

Electric Stand-on Tow Tractor

Capacity 3000 kg & 5000 kg

P 30 C, P 50 C

SERIES 1190

The superb new series of compact Linde electric stand-on tow tractors P 30 C and P 50 C offer a driving experience and performance previously unknown in industrial tractors.

Designed to undertake multiple load transfer duties in a wide variety of applications where space is at a premium and also as an integral link in busy manufacturing and distribution supply chains.

Unique Linde twin-grip self centring electric steering for effortless travelling and manoeuvring and a cushioned operators platform with a scoop seat provides superb operator comfort for efficient, fatigue-free working.

With nominal towing capacities of 3000 kg and 5000 kg respectively and incorporating powerful high-torque, maintenance-free drive motors these versatile and rugged tow tractors will undertake the most demanding of tasks with ease.



Safety

The design of the tractor ensures that the operator remains well within the truck contours while driving. The ergonomic twin grip steering control incorporates a wrap-around hand guard and the front steel bumper ensure excellent safety for both operator and machine.

Performance

The P 30 C & P 50 C are compact tow tractors particularly suited to towing applications in narrow aisles. Due to their compact nature the operator has direct access to the towing attachment located at the rear. They share common components and are both powered by a 3 kW AC motor.

Comfort

The unique design of the operator's compartment offers a level of comfort previously unknown in the market. In addition to an adjustable back rest and console/steering control, these tow tractor provides a unique suspended and cushioned "U" shape plat-

form. This links the 3 main point of contact between operator and machine: scoop seat, platform and console and provides a superbly comfortable driving experience over long travel distances or uneven floors.

Reliability

The robustness of the steering control, the strong towing mounting and the high quality steel chassis ensure consistent reliability during the lifetime of the product. Highly durable electronic components also contribute to extended truck life.

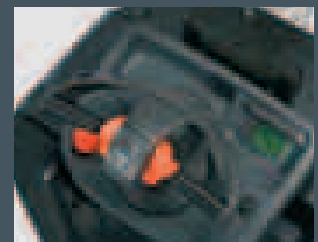
Service

Efficient in operation and highly cost-effective. CAN bus connections enable all truck data to be accessed for service inspection. 1000 operating hours between service intervals ensure maximum uptime. Easy accessibility to all components and the use of maintenance free AC motors contribute to fast service times.



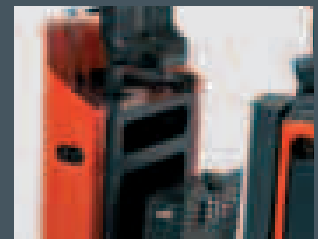
Ultimate driving feeling

- The unique "U" shaped operator's compartment links: console – platform – scoop seat. It is fully suspended leading to an exceptional driving feel.
- Adjustable seat, console and steering control



Power steering

- Proportional, self centring, power-assisted steering for effortless, precise operation
- Adjustable steering resistance and positive steering feedback ensures the truck is always on track
- Automatic speed reduction when cornering



Storage/Equipments

- Standard removable compartment/bin under scoop seat with front and top access (Locker as an option)
- Wide storage compartment to store gloves, documents ...
- Storage compartment on the console to store pencils, adhesive tape ...
- Wide compartments under the console for wrapping paper ...



CAN bus connectivity

- Intelligent electronic management of all components for rapid and easy diagnosis
- All performance parameters can be accurately adjusted by the service technician to suit each individual application

Manufacturer's type designation			P 30 C	P 50 C
Load capacity	Q (kg)		3000	5000
Rated drawbar pull	F (N)		1800	1800
Wheelbase	(± 5 mm) y (mm)		1049.5 ²⁾	1049.5 ²⁾
Dead weight	(± 10 %) kg		940 ¹⁾	940 ¹⁾
Wheels, number front/rear (x = driven)			1x + 2/2	1x + 2/2
Height of backrest, min/max	h7 (mm)		710/910 ⁴⁾	710/910 ⁴⁾
Tiller height, travel position, min/max	h14 (mm)		1020/1120	1020/1120
Tow coupling height: Single position, 3 positions	h10 (mm)		300, 290/345/400	300, 290/345/400
Overall length	(± 5 mm) l1 (mm)		1500 ³⁾	1500 ³⁾
Overall width	(± 5 mm) b1/b2 (mm)		790/-	790/-
Turning radius	(mini) Wa (mm)		1230	1230
Travel speed, with/without load	(± 5 %) km/h		10/10	8/8
Drawbar pull with/without load (60 minutes rating)	N		1800	1800
Maximum drawbar pull with/without load (5 minutes rating)	N		4000	4000
Drive motor rating S2 60 min	kW		3	3
Battery according to IEC			Spécial case ⁵⁾	Spécial case ⁵⁾
Battery voltage/rated capacity (5 h)	V/Ah		24/375	24/375
Battery weight	(± 10 %) kg		295 ¹⁾	295 ¹⁾
Sound level at the driver's ear according to DIN 12053	dB (A)		< 70	< 70

1) With battery

2) With battery compartment 3 PzS side removal (+100 mm for 3 PzS vertical and 4 PzS side removal; +150 mm for 4 PzS vertical removal; +225 mm for 5 PzS vertical removal)

3) +10 mm with hook

4) 100 mm clearance (through a height adjustment handle) +100 mm (through a fixed adjustment behind the seat)

5) Special case for side battery change – DIN 43535 B for all vertical battery change

Pedestrian Tow Tractor

Capacity 5000 kg

P 50

SERIES 131

The versatile P 50 electric tractor with a nominal towing capacity of 5000 kg is designed for applications requiring the efficient internal transport of single or multiple trailer loads in a wide variety of applications.

Its smooth performance, compactness and handling ability enables the operator to work through the shift with high efficiency and without fatigue.

The P 50 pedestrian electric tow tractor excels in rapid load transfer duties due to its assured handling, impressive performance and safety. Outstanding manoeuvrability in confined spaces, narrow passageways and service elevators results in high throughput rates.

The 3 point contact configuration provides optimum stability and traction to cope with dock levellers or ramps in intensive applications.



Safety

The low chassis skirt ensures that the wheels remain safely within the truck contours. Together with the rounded, smooth shape of the chassis and tiller head, this reduces all risk of pinching or snagging.

Performance

Powered by an 1.5 kW AC motor, the P 50 accelerates fast to reach a 6 m/h full speed. Its 5000 kg capacity and efficient brakes enable a productive work for heavy duties.

Comfort

The electric steering gives a smooth and efficient control of the tractor. The operator manoeuvres comfortably and his tasks are eased thanks to dedicated compartments to store his working tools. All controls can be operated with either hand without ever having to let go of the tiller.

Reliability

The robustness of the tiller head, the strong hooking system and the high quality pressed steel frame is always something that you can rely on.

Service

Efficiency at work, efficiency at the cost level. CAN bus connection enables all truck data to be read out for inspection when servicing becomes due at intervals of 1000 operating hours. Easy accessibility of all components and the maintenance free AC technology employed play an additional part in keeping truck uptime up.

Model designation

P 50

Load capacity		Q (kg)	5000
Rated drawbar pull		F (N)	850
Wheelbase	(± 5 mm)	y (mm)	810 ²⁾
Service weight	(± 10 %)	kg	810 ¹⁾
Wheels, number drive side/load side (x = driven)			1x + 2/2
Height of tiller arm in operating position, min/max		h14 (mm)	1140/1350
Towing coupling height		h10 (mm)	300, 290/345/400
Overall length	(± 5 mm)	l1 (mm)	1165 ²⁾
Overall width	(± 5 mm)	b1/b2 (mm)	790/736
Turning radius	(min)	Wa (mm)	1045 ²⁾
Travel speed, with/without load	(± 5 %)	km/h	6/6
Drawbar pull (60 minutes rating)		N	850
Maximum drawbar pull		N	3100
Drive motor (60 minutes rating)		kW	1.5
Battery according to IEC			DIN 43535 B
Battery voltage/rated capacity (5 h)	(± 10 %)	V/Ah	24/375
Battery weight		kg	295 ¹⁾
Sound level at operator position		dB (A)	< 70

1) With battery

2) With a 3 PzS Lateral (+100 mm for 3 PzS Vertical and 4 PzS Lateral; +150 mm for 4 PzS Vertical)



AC motor

- Powerful and smooth 1.5 kW at 100 % performance
- Moisture and dust-proof motor, maintenance-free
- No rollback on uphill starting
- Maximum speed of 6 km/h, whenever the truck is loaded or unloaded
- A maximum drawbar pull of 305 daN



Equipments & Hook system

- Support for data terminal or barcode reader (centre)
- Roomy compartment in the back (50 litres)
- Hook control (inching) on both sides enable a soft and safe hanging
- Different hooks available: Single position and 3 positions



Power steering

- Proportional power-assisted steering, effortless to operate
- Adjustable steering feedback (drive wheel) resulting in efficient stability
- Automatic speed reduction when cornering
- Manoeuvring effort vary depending on the turning angle



Work station

- Digital and multifunction display
- Truck activated by PIN code or by ignition key
- Wide and deep storage compartments in front and centre for wrapping paper, work gloves, writing utensils, etc.

Electric Tow Tractor 6.0 t P 60 Z

SERIES 126

With its three wheel configuration and 6 tonne nominal towing capacity the compact Linde P 60 Z electric tow tractor is superbly versatile and manoeuvrable making it the ideal choice for applications requiring the rapid and efficient transfer of multiple trailer loads in various industrial and commercial applications as well as specialised repair workshop duties.

Whether in an automotive plant or at an airport the P 60 Z can be found negotiating the ramps and loading docks with ease.

Its rugged construction ensures durability and consistent reliability, while the operator's compartment provides a safe and comfortable working environment.



Safety

The specially profiled heavy duty, lower steel chassis provides assured protection for the operator and components and the low centre of gravity ensures exceptional stability. Three independent braking systems deliver effective stopping power for every operational and emergency situation.

Performance

With a nominal towing capacity of 6.0 tonne and unladen traction speed of 17 km/h the P 60 Z offers flexible high performance which is optimised by the Linde digital control system that provides precise, energy saving control of acceleration and speed for safe operation and high productivity.

Comfort

A low step facilitates access to spacious operator's compartment where the automotive layout of the pedals, direction lever, steering wheel and controls, together with a fully adjustable comfort-class seat provides a comfortable and fatigue-free working envi-

ronment. Integral chassis suspension ensures excellent ride characteristics.

Reliability

The heavy gauge pressed steel lower chassis section is constructed for maximum strength and durability and protects all key components. Robust top chassis section comprises exceptionally strong double-skinned, impact resistant polyethylene mouldings. The rugged drive axle and differential are designed for operation in tough and demanding applications.

Productivity

The powerful 3.2 kW drive motor provides impressive pulling power for a variety of intensive applications including the automotive industry, and airports. The energy saving Linde digital controller combined with compact manoeuvrability and an excellent interface between the operator and tractor, translates that power into versatile, seamless performance and high productivity.



Chassis

- Integral full chassis suspension
- Exceptionally strong steel lower chassis
- High impact resistant polyethylene top section
- Powerful 3.2 kW drive motor
- Three independent braking systems



Operator's compartment

- Low step access and exit
- Spacious leg room
- Fully adjustable comfort-class seat
- Ergonomic automotive pedal and control layout
- Excellent all-round visibility



Serviceability

- Tilting top section for easy maintenance and battery access
- Multi-function instrument display assists scheduled maintenance planning
- Low maintenance design for maximum uptime



Controller

- Precise control of speed and acceleration
- Highly efficient energy saving system
- Increased number of work cycles from battery
- Programmable performance parameters

Model designation		P 60 Z (48 V)	P 60 Z (24 V)
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery
Operation: manual, pedestrian, stand-on, seated, order picker		Seated	Seated
Towed load capacity	Q (t)	6.0 ¹⁾	6.0 ¹⁾
Rated drawbar pull	F (N)	1200	1200
Wheelbase	y (mm)	1040	1040
Service weight	kg	1070	1020
Axle load without load, front/rear	kg	470/600	420/600
Tyres, front/rear (SE = CS supere-lastic, P = pneumatic)		P/P	P/P
Height of overheard guard (cabin)	h6 (mm)	1960	1960
Height of seat	h7 (mm)	890	890
Overall length	l1 (mm)	1730	1730
Overall width	b1 (mm)	996	996
Ground clearance, centre of wheelbase	m2 (mm)	115	115
Turning radius	Wa (mm)	1650	1650
Travel speed, with/without rated drawbar pull	km/h	7/17	7/17
Drive motor, 60 minute rating	kW	3.2	3.2
Battery according to Euro norm		IEC 254-2	IEC 254-2
Battery voltage/rated capacity (5h)	V/Ah	48/330	24/550

1) Based on level, dry surface with rolling resistance of 200 N/t

Electric Tow Tractor 25.0 t P 250

SERIES 127-02

The superbly stylish yet highly functional Linde P 250, four wheel electric tow tractor provides the ideal multiple load transfer solution for a wide variety of applications including airports, automotive plants, and the military for example.

Incorporating an advanced digital control system and powerful high-torque, twin drive AC technology the P 250 completes intensive medium and long distance transfer duties rapidly and with safe efficiency.

The spacious, all-weather cabin provides the operator with automotive levels of comfort and safety for fatigue-free working and consistently high productivity.

With three independent braking systems and automatic speed control on gradients this rugged and versatile tractor will undertake the toughest of towing tasks with ease.



Safety

The heavy duty chassis and cab module provide assured protection for the operator while three independent braking systems deliver responsive stopping power for all situations including automatic speed control descending gradients. A low centre of gravity ensures outstanding stability.

Performance

With a nominal towing capacity of 25.0 tonne and unladen traction speed of 25 km/h the P 250 offers flexible high performance which is optimised by the Linde digital AC control system that provides precise, energy saving control of acceleration and speed for high productivity. The curved front screen and profiled chassis ensures excellent manoeuvrability.

Comfort

A low step facilitates access to spacious operator's cabin where the automotive layout of the pedals, direction lever, steering wheel and controls, together with a fully adjustable suspension seat provides a comfortable

and fatigue-free working environment. Cab suspension dampers and a spring damped suspension system front and rear ensures superb levels of driving comfort.

Reliability

Designed for intensive heavy duty applications the rugged, robot-welded chassis is constructed from heavy section steel plate for optimum torsional stiffness and rounded corners for high resistance to impacts. All key components are protected within the chassis while electronic components are housed in sealed aluminium enclosures for assured reliability and long life.

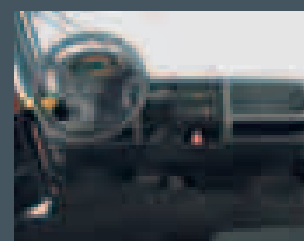
Productivity

Two powerful, high torque 10 kW AC drive motors provide impressive pulling power for a variety of intensive applications. The energy saving Linde AC digital controller combined with excellent manoeuvrability and an intuitive interface between the operator and tractor, translates that power into versatile, seamless performance and high productivity.



Chassis

- Maximum torsional resistance and rigidity
- High impact protection for operator and components
- Low step access to spacious cabin
- Rear tow hitch visible from cab
- Long and short wheelbase versions



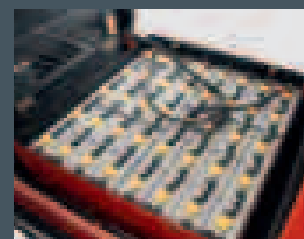
Operator's compartment

- Cabin isolated from chassis by hydraulic dampers
- Ergonomic automotive pedal and control layout
- Fully adjustable comfort-class operator's seat
- Sliding or hinged cabin doors



Serviceability

- Multi-function instrument display
- Maintenance-free AC drive technology
- Easy access for maintenance and battery
- CAN bus diagnostic facility for reduced service intervals



Tow coupling

- Automatic rear towing coupling as standard
- Optional remote automatic and multi-position couplings
- Front and rear towing coupling options
- Stand-off inching control as standard

Model designation		P 250 SWB	P 250 LWB
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery
Operation: manual, pedestrian, stand-on, seated, order picker		Seated	Seated
Towed load capacity	Q (t)	25.0 ¹⁾	25.0 ¹⁾
Rated drawbar pull	F (N)	5000	5000
Wheelbase	y (mm)	1465	1900
Service weight	kg	3800	4500
Axle load without load, front/rear	kg	1900/1900	2400/2100
Tyres, front/rear (SE = CS supere-lastic, P = pneumatic)		P/P	P/P
Height of overheard guard (cabin)	h6 (mm)	1820	1820
Height of seat	h7 (mm)	745	745
Overall length	l1 (mm)	3040	3475
Overall width	b1 (mm)	1300	1300
Ground clearance, centre of wheelbase	m2 (mm)	150	150
Turning radius	Wa (mm)	2825	3275
Travel speed, with/without rated drawbar pull	km/h	11/25	11/25
Drive motor, 60 minute rating	kW	2x10	2x10
Battery according to Euro norm		IEC 254-2	IEC 254-2
Battery voltage/rated capacity (5h)	V/Ah	80/560	80/840

¹⁾ Based on level, dry surface with rolling resistance of 200 N/t

Electric platform tractor 2.0 t W 20

SERIES 127-02

The highly adaptable Linde four wheel electric platform tractor series W 20 has the dual capability of carrying a 2 tonne load on the platform and towing a nominal 4.5 tonne trailer load.

The automotive layout of the cushioned operator's cabin provides an excellent working environment and energy saving on-demand hydrostatic power steering enables impressive manoeuvrability in confined areas.

Developed to provide a versatile solution in a wide variety of applications such as distribution, manufacturing, postal services and fruit markets the W 20 is ideal for an almost infinite range of specialised adaptations in the global markets.



Safety

The heavy duty chassis and cab module provide assured protection for the operator while three independent braking systems deliver responsive stopping power for all situations including automatic speed control descending gradients. A low centre of gravity ensures outstanding stability.

Performance

With the dual capability carrying 2 tonne on the platform and towing nominal loads of 4.5 tonne, the W 20 offers flexible high performance which is optimised by the Linde digital AC control system that provides precise, energy saving control of acceleration and speed for high productivity.

Comfort

A low step facilitates access to spacious operator's cabin where the automotive layout of the pedals, direction lever, steering wheel and controls, together with a fully adjustable suspension seat provides a comfortable and fatigue-free working environment. Cab suspension dampers and a spring damped

suspension system front and rear ensures superb levels of driving comfort.

Reliability

Designed for intensive heavy duty applications the rugged, robot-welded chassis is constructed from heavy section steel plate for optimum torsional stiffness and rounded corners for high resistance to impacts. All key components are protected within the chassis while electronic components are housed in sealed aluminium enclosures for assured reliability and long life.

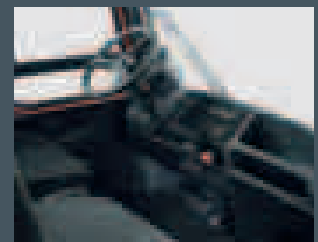
Productivity

Two powerful, high torque 2.5 kW AC drive motors provide impressive pulling and carrying power for a variety of applications. The energy saving Linde AC digital controller combined with excellent manoeuvrability and an intuitive interface between the operator and tractor, translates that power into versatile, seamless performance and high productivity.



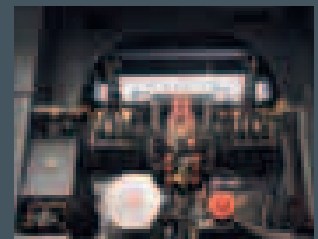
Chassis

- Maximum torsional resistance and rigidity
- High impact protection for operator and components
- Low step access to spacious cabin
- Long and short platform versions



Operator's compartment

- Cabin isolated from chassis by hydraulic dampers
- Ergonomic automotive pedal and control layout
- Fully adjustable comfort-class operator's seat
- Hinged cabin doors



Serviceability

- Multi-function instrument display
- Maintenance-free AC drive technology
- Easy access for maintenance and battery
- CAN bus diagnostic facility for reduced service intervals



Platform

- Generously proportioned platform
- 2200 mm or 2600 mm platform length
- Easily adapted to suit specific applications
- Optional side panels and rigid covers

Model designation		W 20 (2200)	W 20 (2600)
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery
Operation: manual, pedestrian, stand-on, seated, order picker		Seated	Seated
Towed load capacity	Q (t)	2.0 ¹⁾	2.0 ¹⁾
Rated drawbar pull	F (N)	900/1200	900/1200
Wheelbase	y (mm)	1900	1900
Service weight	kg	3100	3200
Axle load without load, front/rear	kg	1900/1900	1900/1900
Tyres, front/rear (SE = CS supere- lastic, P = pneumatic)		P/P	P/P
Height of overheard guard (cabin)	h6 (mm)	1820	1820
Height of seat	h7 (mm)	745	745
Overall length	l1 (mm)	3530	3930
Overall width	b1 (mm)	1300	1300
Ground clearance, centre of wheelbase	m2 (mm)	150	150
Turning radius	Wa (mm)	3280	3280
Travel speed, with/without rated drawbar pull	km/h	15/20 20/25	15/20 20/26
Drive motor, 60 minute rating	kW	5 2 x 10	5 2 x 10
Battery according to Euro norm		IEC 254-2	IEC 254-2
Battery voltage/rated capacity (5h)	V/Ah	80/320	80/320

1) Based on level, dry surface with rolling resistance of 200 N/t

Electric Pallet Stackers

Capacity 1000 & 1200 kg

L 10 B, L 10, L 12

SERIES 379

Pedestrian pallet stackers perform an essential role in providing exceptionally cost-effective handling solutions for a huge variety of businesses around the globe where space is at a premium and versatility and adaptability is required.

The Linde L 10 and L 12 range of electric pedestrian pallet stackers are highly manoeuvrable, versatile trucks ideal for handling open base pallets and stillages carrying out a variety of tasks such as medium lift storage/retrieval, in narrow aisles, block stacking and pallet transfer duties.

The low pivoting tiller arm keeps the operator at a safe distance from the truck when working and with all the controls ergonomically grouped on the tiller head for ease of use by either hand.

The L 10, L 12 pallet stackers boast a rugged yet slim rounded profile chassis and clearview mast options, which combine with superbly functional and intuitive operating controls to enable highly efficient, fatigue-free load handling, coupled with very low operating costs.



Safety

The Linde pallet stacker's appealing yet highly functional design ensures the highest level of operator protection. All castor wheels pivot within the chassis and the low chassis bumper surround protects the operator's feet. The smooth, rounded chassis profiles also enhance the protection of the operator.

Performance

The Linde digital control system translates the 1.2 kW output of the traction motor into impressive productivity. EasyLift® control* of lift and lowering for proportional lifting and lowering. The EasyLift® slider lever is located on the tiller head for use by either hand and a 60° actuation range ensures seamless load handling.

Comfort

A perfect interface between operator and truck is provided by the low pivoting tiller arm and tactile controls intuitively grouped on the profiled tiller head for simple thumb actuation with either hand. The tiller design

positions the operator for optimum visibility through the clearview mast for safe and highly efficient load handling.

Reliability

The Linde pallet stacker range is constructed for consistent reliability and long life. Its compact, robot-welded chassis ensures maximum structural integrity and durability and the virtually indestructible Rimflex motor cover, provides optimum protection of components.

Service

Efficiency at work, efficiency in servicing. With uptime ratios of up to 1000 hours between services and a computerised diagnostic system. There is easy access to all components and the electronics are housed in a dust and moisture proof enclosure. Maintenance intervals are minimal and operating costs are reduced. Equipment utilisation is optimised for maximum productivity.

Model designation		L 10 B	L 10	L 12
Load capacity	Q (kg)	1000	1000	1200
Load distance	x (mm)	700	700	700
Wheelbase	y (mm)	1170	1170	1170
Service weight	kg	840	855	865
Wheels, number front/rear (x = driven)		1x + 1/2 (1x + 1/4) ¹⁾	1x + 1/2 (1x + 1/4) ¹⁾	1x + 1/2 (1x + 1/4) ¹⁾
Lift	h3 (mm)	1462	2924	2924
Overall length	l1 (mm)	1800	1800 (1600) ²⁾	1800 (1600) ²⁾
Head length	l2 (mm)	650	650	650
Overall width	b1/b2 (mm)	800	800	800
Fork dimensions	s/e/l (mm)	50 x 180 x 1150	50 x 180 x 1150	50 x 180 x 1150
Aisle width, 800 x 1200 pallet lengthwise	Ast (mm)	2205	2205	2205
Turning radius	Wa (mm)	1365	1365	1365
Travel speed, with/without load	km/h	6.0/6.0	6.0/6.0	6.0/6.0
Lift speed, with/without load	m/s	-	0.10/0.13	0.11/0.20
Lower speed, with/without load	m/s	0.36/0.16	0.35/0.20	0.35/0.20
Traction motor (60 minutes rating)	kW	0.9	1.2	1.2
Lift motor (S3, 15 % rating)	kW	1.5	1.5	1.55
Battery weight	kg	190	190	190

1) Figures in parentheses for tandem load wheels (optional)

2) Figures in parentheses for 950 mm fork length

* Not available on the L 10 B



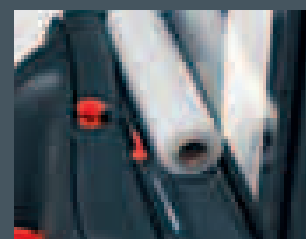
Tiller

- Superb protection for operator's hands
- Offset tiller arm aligns operating position for optimum safety and excellent visibility through the mast
- Low pivoting tiller arm provides ample safety clearance between operator and truck chassis



Compact for manoeuvrability

- Compact slimline chassis, profiled for optimum manoeuvrability
- Low pivoting tiller arm enhances manoeuvrability characteristics
- Four-point surface contact for excellent stability when turning
- Chassis no wider than Euro pallet



Rimflex hood

- Extremely strong, lasts through the lifetime of the truck
- Wide and deep storage space for wrapping paper, writing utensils, etc.
- Virtually indestructible Rimflex cover lasts the lifetime of the truck
- Provides assured protection for motor and components
- Easily removed for service access



Batteries and chargers

- Batteries from 180 Ah to 200 Ah capacity
- Built-in 20 A high-frequency charger (optional)
- Wide range of standard and wall-mount chargers

Electric Pallet Stackers

Capacity 1400 & 1600 kg

L 14, L 16/L 14i, L 16i

SERIES 372

Benefiting from smooth, Linde Digital Control of traction and the unique proportional Optilift control of lift and lower functions, plus responsive electric steering, seamless manoeuvring and precision load handling come naturally to this excellent pallet stacker range.

The initial lift versions have 125 mm lift to easily negotiate over ramps and bridging plates as well as the ability to transport a 2000 kg load.

With an ergonomic tiller arm and intuitive controls grouped for ease of use with either hand, the operator is equally at home whether working in narrow aisles, on loading docks, approved mezzanine floors or in service elevators.

These superb 1400 kg and 1600 kg capacity pallet stackers have proven themselves time after time in demanding applications around the globe.



Safety

The Linde pedestrian electric pallet stacker is equipped with three independent braking systems. A booster circuit prevents the truck rolling back when starting on a gradient. Automatic speed reduction when cornering ensures stability in operation. The rounded contours of the chassis enhance operator safety and provides excellent visibility to the fork tips. The low pivot point of the tiller arm places the operator a comfortable distance from the chassis while working.

Performance

A chassis width of only 800 mm allows the truck to work easily in narrow aisles. Advanced chassis design and mast construction results in market leading residual capacities. Proportional, Linde OptiLift® control maximises lifting and lowering performance. Rated capacities of 1400 kg and 1600 kg and a powerful 3 kW lift motor deliver impressive performance and productivity.

Comfort

Electric power steering and the ergonomic Linde tiller make the truck very easy to ma-

oeuvre. All controls can be operated with either hand without having to release the tiller. The low pivoting tiller arm places the operator an optimum distance from the mast for an excellent and continuous view of the load, all the way to maximum lift.

Reliability

These rugged trucks incorporate tried and tested technology and components to ensure consistent reliability. They have already proved their ability to deliver faster, safer load handling over an extended working life in the toughest industrial environments. For heavy duty applications, twin castor wheels are available as an option.

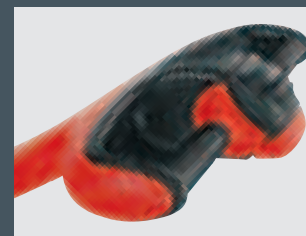
Service

Linde Pallet Stackers are designed to reduce maintenance costs and deliver the highest levels of productivity over many years. Fast, easy access to all components and electronics sealed in aluminium housings isolating them from road shocks, dust and humidity all play a part in ensuring maximum operational uptime ratios.

Model designation		L 14	L 16	L 14i	L 16i
Load capacity	Q (kg)	1400	1600	1400 (2000)	1600 (2000)
Load distance	x (mm)	727	727	649/727	649/727
Wheelbase	y (mm)	1304	1304	1226/1304	1226/1304
Service weight	kg	1050 ²⁾	1050 ²⁾	1050 ²⁾	1050 ²⁾
Wheels, number operator/load side (x = driven)		1 x + 1/2	1 x + 1/2	1 x + 1/4	1 x + 1/4
Lift	h3 (mm)	2924	2844	2924	2844
Initial lift	h5 (mm)	–	–	125	125
Overall length	l1 (mm)	1950	1950	1950	1950
Length to fork face	l2 (mm)	800	800	800	800
Overall width	b1/b2 (mm)	800	800	800	800
Fork dimensions	s/e/l (mm)	71/180/1150	71/180/1150	71/180/1150	71/180/1150
Aisle width, 800 x 1200 mm pallet lengthwise	Ast (mm)	2346	2346	2346	2346
Turning radius	Wa (mm)	1527	1527	1527	1527
Travel speed, with/without load	km/h	5.6/6.0	5.5/6.0	5.6/6.0	5.5/6.0
Lift speed, with/without load	m/s	0.16/0.25 (0.40) ¹⁾	0.14/0.22 (0.37) ¹⁾	0.16/0.25 (0.40) ¹⁾	0.14/0.22 (0.37) ¹⁾
Lower speed, with/without load	m/s	0.45/0.45	0.40/0.35	0.45/0.45	0.40/0.35
Drive motor output (60 min rating)	kW	1.2	1.2	1.2	1.2
Lift motor output (15 % rating)	kW	3.0	3.0	3.0/0.8	3.0/0.8
Battery weight	kg	200	200	200	200
Sound level at driver's ear	dB (A)	< 65	< 65	< 65	< 65

1) Figures in parentheses for optional ultra fast lifting.

2) Including battery weight



OptiLift® controls

- OptiLift® fully proportional lift control provides smooth, precise, quiet mast operation
- Control slide mounted centrally on tiller head
- High performance, energy efficient lift unit
- Soft landing of forks protects loads



Power steering

- Effortless, electric power steering for fatigue-free working
- Precise and easy manoeuvring with low pivoting, ergonomic tiller
- Automatic speed reduction when cornering guarantees stability



Initial lift version: L 14i, L 16i

- 125 mm of initial lift of forks, increases ground clearance (increases ground clearance)
- When operating on ramps, dock levellers or bridge plates
- The equalising linkage provides enhanced stability when turning on uneven surfaces
- A 2000 kg load can be transported using the initial lift function



Batteries & Chargers

- 24 V batteries from 250 Ah (2 PzS) to 375 Ah (3 PzS)
- Vertical battery change as standard (2 & 3 PzS), side change as option
- Wide range of battery chargers: standard wall-mounted type or high frequency chargers
- Optional built-in charger for batteries with max. 240 Ah capacity

Electric Pallet Stackers

Capacity 1400 & 1600 kg

L 14 AP, L 16 AP/ L 14 APi, L 16 APi

For medium lift narrow aisle storage facilities where rapid pallet transfers to and from marshalling or production areas is essential the Linde pedestrian pallet stacker with stand-on platform offers a very cost-effective solution.

With a maximum travel speed of 9 km/h in the stand-on mode pallets can be transferred quickly and efficiently. The operator is protected on the cushioned platform with fold out side guards and the compact twin-grip tiller head combines with electric power steering for effortless manoeuvrability.

Series 372

Automatic electric braking on releasing the traction control lever combines with automatic speed reduction when cornering provides the operator with total control and safety at all times.

All operating controls are intuitively grouped on the tiller head for ease of use with either hand and the Linde Optilift control ensures impressive lifting and lowering performance for highly efficient storage/retrieval duties.



Safety

The Linde Electric Pallet Stacker is equipped with three independent braking systems. A special booster circuit prevents the truck rolling back when starting on a gradient. Automatic speed reduction when cornering ensures stability in operation. The suspended stand-on platform has integral side guards which can be folded down to protect the operator. While operating with the platform raised, the operator's feet are well protected by a rubber bumper at the base of the chassis.

Performance

A chassis width of only 800 mm allows the truck to work easily in narrow aisles. Advanced chassis design and mast construction results in market leading residual capacities. Linde OptiLift® control maximises lifting and lowering performance. A 1.5 kW drive motor with a top speed of 9 km/h in the rider mode enables high productivity levels to be achieved.

Comfort

Electric power steering and the ergonomic Linde tiller arm facilitate easy of use. All

controls can be operated with either hand without having to release the tiller. Road shocks from uneven ground are cushioned by the soft rubber mat on the platform. Positioned well back from the mast, the operator has excellent visibility of the load right up to maximum lift height.

Reliability

These rugged trucks incorporate tried and tested technology and components to ensure consistent reliability. They have already proved their ability to deliver faster, safer load handling over an extended working life in the toughest industrial environments.

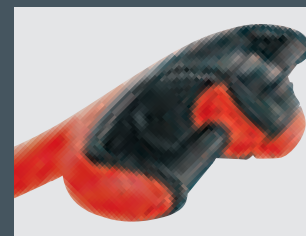
Service

Linde pallet stackers are designed to minimise maintenance costs and deliver high productivity levels over many years. Fast, easy access to components, and electronics sealed in aluminium housings, isolating them from road shocks, dust and humidity, all play a part in guaranteeing maximum operational uptime.

Model designation		L 14 AP	L 16 AP	L 14 APi	L 16 APi
Load capacity	Q (kg)	1400	1600	1400 (2000) ¹⁾	1600 (2000) ¹⁾
Load distance	x (mm)	726	726	648/726 ²⁾	648/726 ²⁾
Wheelbase	y (mm)	1303	1303	1225/1203	1225/1203
Service weight	kg	1240	1240	1230	1230
Wheels, number operator/load side (x = driven)		1 x + 1/2	1 x + 1/2	1 x + 1/4	1 x + 1/4
Lift	h3 (mm)	2924	2844	2924	2844
Initial lift	h5 (mm)	–	–	125	125
Overall length	l1 (mm)	2030/2420	2030/2420	2030/2420	2030/2420
Length to fork face	l2 (mm)	880/1270	880/1270	880/1270	880/1270
Overall width	b1/b2 (mm)	800	800	800	800
Fork dimensions	s/e/l (mm)	71/180/1150	71/180/1150	71/180/1150	71/180/1150
Aisle width, 800 x 1200 mm pallet lengthwise	Ast (mm)	2455/2830	2455/2830	2455/2830	2455/2830
Turning radius	Wa (mm)	1640/2010	1640/2010	1560/1930	1560/1930
Travel speed, with/without load	km/h	7.0/9.0	6.5/9.0	7.0/9.0	6.5/9.0
Lift speed, with/without load	m/s	0.16/0.25 (0.40) ²⁾	0.14/0.22 (0.37) ²⁾	0.16/0.25 (0.40) ²⁾	0.14/0.22 (0.37) ²⁾
Lower speed, with/without load	m/s	0.45/0.45	0.40/0.35	0.45/0.45	0.40/0.35
Drive motor output (60 min rating)	kW	1.5	1.5	1.5	1.5
Lift motor output (15 % rating)	kW	3.0	3.0	3.0/0.8	3.0/0.8
Battery weight	kg	200	200	200	200
Sound level at driver's ear	dB (A)	< 65	< 65	< 65	< 65

1) Capacity for load leg initial lift.

2) Figures in parentheses for optional ultra fast lifting.



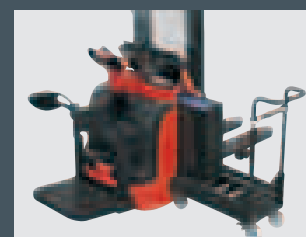
OptiLift® control

- OptiLift® fully proportional lift and lower control provides smooth, precise, quiet mast operation
- Slide lever control mounted centrally on tiller head
- High-performance, energy-efficient lift unit
- Soft lowering of forks protects loads



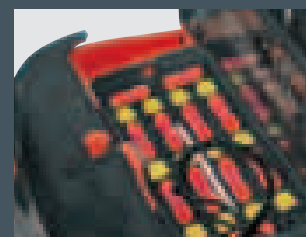
Power steering

- Effortless, electric power steering for ease of operation
- Precise and easy manoeuvring with tiller designed to suit both pedestrian and ride-on operation
- Automatic speed reduction when cornering guarantees stability



Initial Lift Versions: L 14 APi, L 16 APi

- Initial lift of forks increases ground clearance when operating on ramps, dock levellers or bridge plates
- The equalising linkage provides enhanced stability when turning on uneven surfaces
- A 2000 kg load can be transported using the initial lift function



Batteries & chargers

- 24V batteries from 250 Ah (2 PzS) to 375 Ah (3 PzS)
- Vertical battery change as standard (2 & 3 PzS), side change as option
- Wide range of battery chargers: standard wall-mounted type or high frequency chargers
- Optional built-in charger for batteries with max. 240 Ah capacity

Stand-on Stacker &
Double Stacker Range
Capacity 1200 & 1400 kg

L 12, L 14 – AP/SP

L 12 L, L 14 L – AP/SP

L 12 L HP – AP/SP

SERIES 133



Whether it is just for medium lift storage/retrieval and rapid pallet transfers, double stacking in the marshalling, receiving and despatch areas or lorry loading/unloading using the double-stacker facility or a combination of all these tasks, there is a model available within this superbly innovative Linde pallet stacker range.

Incorporating maintenance-free AC traction technology together with the highly functional Linde e-driver self-centring steering control and electric power steering, seamless precision performance is assured.

The workstation provides the perfect interface between operator and truck to create a highly efficient and productive partnership.

If the application requires a double-stacker truck, this outstanding Linde range offers the ultimate handling solution in every respect.



Platform versions

SP concept

- Operator is protected by wrap-around steel profiles
- Perfect driving position at 45° angle with panoramic visibility, a secure and stable position
- Linde e-Driver®: Self-centring steering, ergonomic design matched to the 45° operator stance

AP versions

- Foldable cushioned rider platform
- Integral side guards, platform folds up and down effortlessly

Different drive systems

L 12 LHP: Five wheel configuration

- High performance (HP) version
- Superb traction and stability
- Electronically controlled hydraulic-suspension active castor wheels

L 12 L, L 14 L, L 12, L 14:

Four wheel configuration

- Excellent stability
- Vertical battery change as standard, optional side battery change



Workstation

- Digital, multifunction, backlit instrument display informs the operator of key truck information
- Truck access by key switch or by PIN code (no-cost option)
- Generous storage compartments are conveniently located for shrink-wrap, work gloves, writing utensils, etc.

AC motor & Energy

- Powerful, high torque drive motor, 3 kW at 100 % performance
- Moisture and dust-proof, maintenance-free motor
- No rollback on gradient starts
- Top speed of 10 km/h with or without a load; 6 km/h in pedestrian operation (AP)
- Wide range of batteries from 75 Ah (3 PzS) to 500 Ah (4 PzS)
- Battery locking system for side change option secures battery in compartment and simplifies battery changing

Stand-on Stacker & Double Stacker Range

Capacity 1200 & 1400 kg

L 12, L 14 – AP/SP

L 12 L, L 14 L – AP/SP

L 12 L HP – AP/SP

SERIES 133



Safety

Both the AP and SP platform versions are perfectly designed to protect the operator during the working shift. Automatic speed reduction when cornering, automatic braking on releasing the traction control and excellent visibility through the wide mast, all provide assured safety. Electro-hydraulic braking is actuated by the dead man platform or by the emergency stop button and is proportional to the load carried.

Performance

A key strength of the range is productivity. Linde OptiLift® control for a genuine proportional lifting/lowering, load capacities up to 1400 kg and a powerful 3 kW AC motor with a top speed of 10 km/h laden or unladen, all add up to high performance for a wide range of customer applications.

Manufacturer's type designation		L 12 SP	L 12 AP	L 14 SP	L 14 AP
Load capacity (on load arms)	Q (kg)	1200	1200	1400	1400
Load distance, centre of drive axle to fork	x (mm)	760	760	760	760
Wheelbase, with initial lift lowered/lifted	y (mm)	1401 ²⁾	1401 ²⁾	1401 ²⁾	1401 ²⁾
Service weight (with battery item 6.5)	kg	1480	1360	1480	1360
Wheels, number drive side/load side (x = driven wheels)		1x + 1/2	1x + 1/2	1x + 1/2	1x + 1/2
Lift	h3 (mm)	1924	1924	1924	1924
Height, lowered	h13 (mm)	90	90	90	90
Overall length (± 5 mm)	l1 (mm)	2489 ²⁾	2430/2061 ^{1) 2)}	2489 ²⁾	2430/2061 ^{1) 2)}
Length to face to forks (± 5 mm)	l2 (mm)	1339 ²⁾	1280/911 ^{1) 2)}	1339 ²⁾	1280/911 ^{1) 2)}
Overall width (± 5 mm)	b1 (mm)	790	790	790	790
Fork dimensions	s/e/l (mm)	55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150
Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	2887 ²⁾	2828/2471 ^{1) 2)}	2887 ²⁾	2828/2471 ^{1) 2)}
Turning radius (mini)	wa (mm)	2099	2040/1671 ¹⁾	2099	2040/1671 ¹⁾
Travel speed, laden/unladen (± 5 %)	Km/h	10/10	10/10 (6/6) ¹⁾	10/10	10/10 (6/6) ¹⁾
Lift speed, laden/unladen (± 10 mm)	m/s	0.11/0.22	0.11/0.22	0.12/0.23	0.12/0.23
Lowering speed, laden/unladen (± 10 mm)	m/s	0.3/0.3	0.3/0.3	0.35/0.385	0.35/0.385
Drive motor rating S2 60 min	kW	3	3	3	3
Lift motor rating at S3 15 %	kW	1.7	1.7	2	2
Battery weight (± 10 %)	kg	295	295	295	295
Level of vibrations transmitted to driver (EN 13059)	m/s ²	0.8	0.8	0.8	0.8

1) Platform folded down

2) Chassis with a 3 PzS side battery change (+100 mm for a

3 PzS vertical or 4 PzS lateral; +150 mm for a 4 PzS vertical battery change)

Comfort

Electric power steering with adjustable steering torque provides effortless manoeuvrability and efficiency. Positive steering feedback results in safe, assured control. Travel speed and steering effort are automatically and progressively adjusted according to the steering angle. Tasks are made easier thanks to generous storage compartments for working tools. The comfortable driving posture of the SP platform ensures a pleasurable working environment.

Reliability

In order to meet the needs of its customers, Linde has developed three different stacker versions, which are designed to provide the optimum solution for individual applications. These ruggedly constructed trucks incorporating tried and tested technology (lifting function etc.) and components, deliver consistent reliability in a unique combination that has already proven its worth with faster, safer load handling, as well as an extended working life in the toughest industrial environments.

Service

The digital multifunction instrument display ensures the operator is always well informed. CAN bus connectivity enables all truck data to be transmitted to a laptop by the service technician. Easy accessibility of all components and maintenance-free AC technology also play an important role in maximising truck uptime.



OptiLift® control

- Intuitive controllability of the tiller (e-Driver®), as well as all lifting functions
- The proportional OptiLift® control brings quiet smoothness and precision
- Compact, energy efficient, high performance lift unit with no waste of energy

Power steering

- Effortless, electric power steering
- Positive steering feedback for assured manoeuvring.
- Automatic speed reduction when cornering
- Steering effort varies according to the turning angle

L 12 L SP	L 12 L AP	L 14 L SP	L 14 L AP	L 12 L HP SP	L 12 L HP AP
1200 (2000)	1200 (2000)	1400 (2000)	1400 (2000)	1200 (2000)	1200 (2000)
948/833	948/833	948/833	948/833	948/833	948/833
1625/1510 ²⁾	1625/1510 ²⁾	1625/1510 ²⁾	1625/1510 ²⁾	1625/1510 ²⁾	1625/1510 ²⁾
1700	1583	1700	1583	1310	1190
1x + 1/2	1x + 1/2	1x + 1/2	1x + 1/2	1x + 2/2	1x + 2/2
1924	1924	1924	1924	1574	1574
90	90	90	90	90	90
2489 ²⁾	2430/2061 ^{1) 2)}	2489 ²⁾	2430/2061 ^{1) 2)}	2489 ²⁾	2430/2061 ^{1) 2)}
1339 ²⁾	1280/911 ^{1) 2)}	1339 ²⁾	1280/911 ^{1) 2)}	1339 ²⁾	1280/911 ^{1) 2)}
790	790	790	790	790	790
55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150	55 x 180 x 1150
2887 ²⁾	2828/2471 ^{1) 2)}	2887 ²⁾	2828/2471 ^{1) 2)}	2960 ²⁾	2901/2471 ^{1) 2)}
2287	2228/1671 ¹⁾	2287	2228/1671 ¹⁾	2287	2228/1671 ¹⁾
10/10	10/10 (6/6) ¹⁾	10/10	10/10 (6/6) ¹⁾	10/10	10/10 (6/6) ¹⁾
0.11/0.22	0.11/0.22	0.12/0.23	0.12/0.237	0.11/0.22	0.11/0.22
0.3/0.3	0.3/0.3	0.35/0.385	0.35/0.385	0.3/0.3	0.3/0.3
3	3	3	3	3	3
1.7	1.7	2	2	1.7	1.7
295	295	295	295	243	243
0.8	0.8	0.8	0.8	0.8	0.80



CAN bus connectivity

- Intelligent electronic management of all components for rapid and easy diagnosis
- All truck parameters can be configured by the service technician to match performance to individual applications

Brakes

Automatic braking

- On releasing the traction butterfly, with no energy consumption
- By selecting opposite direction of travel

Emergency brake

- Electro-hydraulic
- On pressing the emergency button or by stepping off the dead-man platform
- Hydraulic-assisted system, proportional to the load carried

Stand-on Double Stacker

Capacity 1200 kg

L 12 LS

SERIES 144

The rapid turnaround of road freight vehicles is one of the key objectives for efficient supply chains and the Linde L 12 S stand-on double pallet stacker is specifically designed to address this requirement.

Able to load/unload and transfer two double-stacked pallets simultaneously with a combined weight of 2000 kg, a high volume throughput is achieved as well as fast turnarounds.

The L 12 S is also ideal for normal narrow aisle storage/retrieval duties lifting 1200 kg loads as well as pallet transfer tasks.

Electric power steering and a compact steering wheel mean manoeuvring in confined spaces is accomplished with ease.

This highly adaptable model offers a very cost-effective handling solution for many applications.



Safety

The operator is always well protected within the chassis contours. A deadman foot switch ensures instant braking response when necessary. The L 12 LS comes rapidly to a smooth stop thanks to an electromagnetic brake which acts proportionally to the load on the forks. Due to its compact chassis, the fork tips are easily visible ensuring safe load handling.

Performance

Very compact, the L 12 LS stand-on double pallet stacker is designed to load/unload and transfer two double-stacked pallets simultaneously with a total weight of 2000 kg. This feature optimises the volume, as well as the speed of loading and unloading lorries. It can also be used as a normal stacker to store and retrieve 1200 kg loads in narrow aisles and for rapid pallet transfer duties over medium to long distances.

Comfort

Electric power steering with positive feedback makes the truck very easy to control

and manoeuvre. A spinner knob on the steering wheel takes the hard work out of tight turns. The 3 position platform height adjustment ensures every operator is able to find the optimum driving position for both comfort and visibility.

Reliability

Rugged construction and the use of tried and tested components and masts make this a truck that can be relied on. The masts are perfectly suited for performing stacking operations in low headroom environments such as lorry trailers. Smooth fork entry into close pallets is assured by the profiled shape of the fork tips and the entry skid.

Service

A multi-function back-lit instrument display provides the operator with a continuous update of the trucks status. Features such as rapid and easy access to all components and the electronics sealed in aluminium housings protecting them from vibration, dust and moisture all play their part in increasing truck uptime and availability.

Model designation		L 12 LS
Load capacity	Q (kg)	1200/2000
Axle centre to fork face	x (mm)	945
Wheelbase	y (mm)	1856
Service weight	kg	1538
Wheels, number drive side/load side (x = driven)		1x + 1/4
Lift	h3 (mm)	1524
Overall length	l1 (mm)	2236
Length to forks face	l2 (mm)	1086
Fork dimensions	s/e/l (mm)	55/180/1150
Aisle width with 800 x 1200 pallet lengthwise	Ast (mm)	2700
Turning radius	Wa (mm)	2030
Travel speed, with/without load	km/h	9.0/10.0
Lifting speed, with/without load	cm/s	0.10/0.13
Lowering speed, with/without load	cm/s	0.35/0.20
Initial lift/Main lift motors, 15 % rating	kW	1.0/2.2



Electric power steering

- Constant and direct relationship between steering wheel position and drive wheel angle
- Electric power steering with positive feedback
- The compact drive unit is mounted off-centred on the right of the truck and can rotate through 180°



OptiLift® control

- The proportional OptiLift® control brings quiet smoothness and precision
- Controls are close to the handle within easy reach
- High performance, energy efficient lift unit
- Soft lowering of forks protects loads



Operator's compartment

- Sideways standing position ensures all-round visibility when travelling in either direction
- Choice of operator backrest: seat type or curved support
- Ergonomic design suits every operator and makes for easy and safe operation
- 3 platform height adjustments



Braking

- Electromagnetic braking on release of dead man pedal with hydraulic braking assistance proportional to the load on the forks
- Emergency circuit isolator: interrupts power to the truck and initiates electromagnetic braking
- Automatic electric braking on release of the traction control

Pedestrian Straddle Stacker

Capacity 1000 & 1200 kg

L 10 AS, L 12 AS

SERIES 379

The highly functional design of the Linde pedestrian electric straddle stacker provides a versatile and cost-effective solution for applications involving medium lift storage and retrieval and middle distance pallet transfer duties.

The straddle leg configuration combined with an ISO fork carriage enables the versatile straddle stacker to handle both open and closed based pallets, gitter boxes, and stillages.

The low pivoting tiller arm enables effortless manoeuvrability in narrow aisles and confined areas. The profiled twin-grip tiller head provides total hand protection and all the operating controls are grouped on the tiller head for ease of use with either hand.

A wide range of clearview masts up to 4265 mm lift together with a choice of three different widths over the straddle legs means that the specification can be precisely matched to individual application requirements.



Safety

The Linde L 10 AS and L 12 AS electric straddle stackers highly functional design ensures the highest level of protection for the operator. All castor wheels pivot safely within the chassis contours and the low steel chassis surround protects the operator's feet. The smooth rounded profiles of the chassis and tiller head further enhance the safety of the operator.

Performance

The 1.2 kW drive motor combines with the Linde Digital Control for a comfortable walking pace of 6 km/h. The unique EasyLift® control provides authentic proportional lifting and lowering for efficient and productive load handling. The EasyLift® slider-lever mounted on the tiller head for ease of use with either hand has a 60° range of actuation to ensure millimetre pallet handling accuracy. There are three straddle leg widths available to suit individual application requirements.

Comfort

Everything the Linde straddle stacker is required to do it does easily and efficiently. The low pivoting ergonomic tiller centres the operator in the best working position for optimum visibility through the mast. All controls can be operated effortlessly with either hand without ever having to release the tiller.

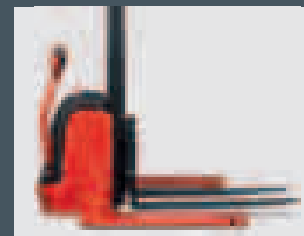
Reliability

Rugged construction makes this a truck to rely on. The Rimflex motor cover is virtually indestructible and provides excellent protection for key components. The sturdy mast and the frame of high-grade pressed steel also contribute to the trucks extended working life as well as safe, fatigue-free, and efficient materials handling.

Service

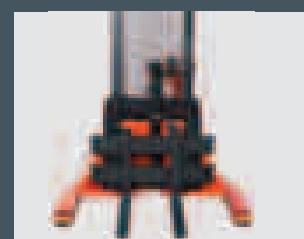
Easy access is provided to all components for faster servicing. The electronics are enclosed in a sealed aluminium housing protected from shock, dust, and moisture. Features, which contribute to maximising uptime ratios.

Model designation		L 10 AS and L 12 AS		
Wheel base	y (mm)	1175	1175	1175
Number driven/load wheels (x = driven)		1x + 1/ 2	1x + 1/ 2	1x + 1/4
Lift height	h3 (mm)	2924	2924	2924
Overall length	l1 (mm)	1629	1629	1629
Length to forks face	l2 (mm)	750	750	750
Overall width	b1/b2 (mm)	800/1160	800/1460	800/1610
Fork dimensions	s/e/l (mm)	40/80/1200	40/80/1200	40/80/1200
Aisle width with 800 x 1200 pallet lengthwise	Ast (mm)	2265	2265	2265
Turning radius	Wa (mm)	1365	1365	1365



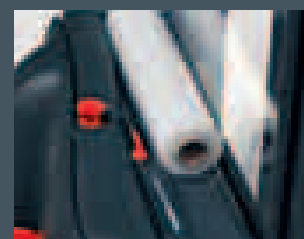
Chassis & manoeuvrability

- Rounded contours clear of sharp edges
- Robust pressed steel construction
- Operator safety ensured by low chassis skirt and design of the asymmetrical tiller head
- All controls on tiller can be operated with either hand



Brakes

- Efficient mechanical braking by moving tiller to fully up or down position
- Automatic braking on releasing butterfly switch or reversing direction
- Truck slows before coming to a stop, remaining under total control at all times



Rimflex hood

- Extremely strong, lasts through the lifetime of the truck
- Wide and deep storage space for wrapping paper, writing utensils, etc.
- Easy access to components by simply removing the Rimflex hood
- Dedicated support for A4 clipboard



Tiller

- Superb protection for operator's hands
- Tiller head aligned with truck center, giving an operator position that ensures greater safety and better visibility
- Long tiller provides ample safety clearance between operator and truck chassis

Electric Straddle Stacker Capacity 1400 & 1600 kg L 14/16 AS – AS AP & AS SP

SERIES 131

Linde straddle stackers are highly manoeuvrable, versatile trucks combining the benefits of conventional pallet stackers with the ability to handle both open and closed base pallets as well as stillages.

They offer the versatile solution in medium lift narrow aisle and block stacking applications where the pallets have a closed base or there is a mix of open and closed based pallets.

The Linde straddle stacker range incorporates all the innovative benefits of the Linde design philosophy such as advanced control technology, intuitive controls, high performance, low maintenance requirements and the highest standards of operator comfort and safety.

Whether the requirement is for a pedestrian, stand-on platform or rider version there is sure to be a suitable match.



Safety

The Linde L 14/L 16 AS straddle stacker's appealing yet highly functional design ensures the highest level of protection for the operator. All wheels pivot within the chassis profile and the low chassis bumper surround protects the operators feet. The smooth, rounded profiles of the chassis and tiller head further enhance the protection and safety of the operator.

Performance

The trucks show their true strength in efficiency on the job. Powerful 3 kW AC motor, Linde OptiLift® control for authentic proportional lifting and lowering, load capacity up to 1600 kg and efficient brakes add up to productivity in service at any duty level.

Comfort

Everything the Linde L 14/L 16 AS is required to do it does easily and efficiently. All controls can be operated with either hand without having to release the tiller. The Line tiller arm and control system ensures effortless travelling and manoeuvring.

Reliability

Constructed for consistent reliability in demanding applications. Its compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged construction and components provide a low centre of gravity for excellent stability.

Service

Speed and economy continue over into truck diagnosis and preventive maintenance. CAN bus connectivity enables all truck data to be read out on a laptop computer by the service technician. Swift access to all components and maintenance-free AC-technology play an additional part in maximising uptime ratios.



Platform versions

SP concept

→ Operator protected by surrounding shields

AP versions

→ Folding cushioned rider platform guards

Linde e-Driver®

→ Ergonomic 45° driving posture



Versatile options

→ Choice of three straddle legs widths: 900, 1200, 1350 mm

→ Wide range of panorama-view masts, standard to triplex



Workstation

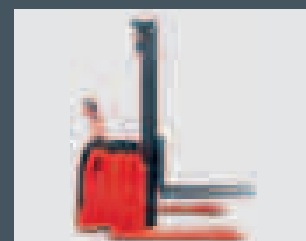
→ Designed for effortless, stress-free working

→ Ergonomic and intuitive operating controls

→ Generous storage compartments

→ Digital, multifunction, backlit instrument display informs the operator of key truck information

→ Cushioned platform isolates operator from surface vibrations (SP/AP)



Pedestrian version

→ Robust construction, rounded contours with no sharp edges

→ Operator safety ensured by low skirt and design of tiller head

→ All controls on tiller can be operated with either hand

→ Electric power steering, effortless and exact

Model designation		L 14 AS/L 16 AS	L 14 AS/L 16 AS-SP	L 14 AS/L 16 AS-AP
Load capacity	Q (kg)	1400/1600	1400/1600	1400/1600
Wheelbase	y (mm)	1449 ⁴⁾	1449 ⁴⁾	1449 ⁴⁾
Service weight (with battery item 6,5)	(± 10 %) kg	1470 ³⁾	1525 ³⁾	1495 ³⁾
Wheels number, drive side/load side (x = driven)		1x + 2/2	1x + 2/2	1x + 2/2
Lift height	h3 (mm)	2924/2844 ^{1) 2)}	2924/2844 ^{1) 2)}	2924/2844 ^{1) 2)}
Fork height, lowered	h13 (mm)	46	46	46
Overall length	l1 (mm)	2153 ⁴⁾	2618 ⁴⁾	2560 ⁴⁾
Length to fork face	l2 (mm)	773 ⁴⁾	1238 ⁴⁾	1180 ⁴⁾
Overall width	b1/b2 (mm)	790/1160 – 1460 – 1610	790/1160 – 1460 – 1610	790/1160 – 1460 – 1610
Fork dimensions	s/e/l (mm)	40/80/1150	40/80/1150	40/80/1150
Straddle legs spread (from inside), min/max	b4 (mm)	900/1200/1350	900/1200/1350	900/1200/1350
Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2555 ⁴⁾	3060 ⁴⁾	2940 ⁴⁾
Turning radius (fork raised)	Wa (mm)	1669	2174	2054
Travel speed, with/without load	(± 5 %) km/h	6/6	10/10	10/10
Lifting speed, with/without load	m/s	0.11/0.21	–	–
Lowering speed, with/without load	m/s	0.40/0.45	0.40/0.45	0.40/0.45
Drive motor (60 minutes rating)	kW	1.5	3	3
Lift motor rating 15 %	kW	3	3	3
Battery weight	(± 10 %) kg	200	200	200
Vibrations on the platform (EN 13059)	m/s ²	–	1.1	1.1

1) Mast 2844 S for L 16 AS/Other mast: cf. table

2) Mast 2924 S for L 14 AS/Other mast: cf. table

3) Value for L 16 AS

4) With a 3 PzS vertical battery change (+ 50 mm for the 4 PzS vertical and + 75 mm for the 5 PzS vertical batterie change)

Rider Stackers & Double Pallet Stackers

Capacity 1200 & 1600 kg

L 12 R, L 16 R/ L 12 Ri, L 16 Ri

The Linde seated rider pallet stacker range offers exceptional versatility to customers requiring the efficient and rapid internal transfer of pallets over long distances and for the fast turnaround of goods vehicles in the receiving and despatch bays, as well as narrow aisle storage and retrieval duties.

The initial lift versions provide the extra ground clearance to travel over ramps and bridging plates as well as offering the ability to handle two double stacked pallets for extremely rapid lorry loading/unloading cycles.

SERIES 139

Impressive stability in intensive applications is assured by the four point configuration and automatic equalising linkage, which ensures constant all wheel ground contact.

The operator's compartment incorporates a comfort-class suspension seat with all controls located for effortless use. The lift/lower functions are controlled by the proportional OptiLift® system for seamless and precise lifting/lowering.



Safety

The 4 point configuration of this renowned seated rider pallet stacker and double stacker series provides excellent stability in all operating conditions. All wheels pivot within the chassis contours and are protected by the low, steel chassis surround. Three independent braking systems further enhance the impressive safety levels of the rider pallet stacker.

Performance

Stacking pallets up to 4724 mm in narrow aisles becomes a highly efficient operation. The compact dimensions of the rider stackers make them very manoeuvrable in confined environments or for block storage. The L 12 Ri and L 16 Ri initial lift versions, provide a double stacker facility and allow the handling of closed base pallets for transfer purposes or lorry loading/unloading over ramps and bridging plates.

Comfort

Designed around the operator, these fine stackers are equipped with a comfort-class

adjustable suspended seat with all controls located for effortless, intuitive use. The lift/lower functions are controlled by the unique proportional OptiLift® system using a mini-lever, which provides exceptionally smooth and precise pallet handling. Load transfer cycles are optimised thanks to a comfortable lateral driving posture and a rapid travel speed.

Reliability

Rugged construction makes this a truck to rely on. The chassis is made from high grade pressed steel for optimum rigidity and structural integrity. A wide selection of torsion resistant clearview masts is available to match the application: Simplex, Duplex or Triplex with lift heights up to 5300 mm.

Service

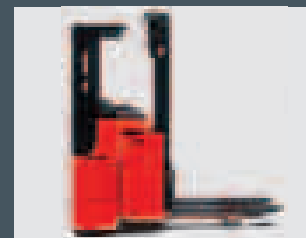
A back-lit multi-function instrument display integrated in the console provides the operator with a continuous update of truck status. The service engineer has direct easy access to all components for reduced service intervals and lower operating costs.

Model designation		L 12 R	L 16 R
Load capacity	Q (kg)	1200	1600
Axle centre to fork face	x (mm)	703 (717) ²⁾	666 (680) ²⁾
Wheelbase	y (mm)	1420	1420
Service weight	kg	1560 ¹⁾	1560 ¹⁾
Wheels, number front/rear (x = driven)		1 x + 2/4	1 x + 2/4
Lift	h3 (mm)	2424	2424
Initial lift height	h5 (mm)	(130) ²⁾	(130) ²⁾
Overall length	l1 (mm)	2116 (2130) ²⁾	2153 (2167) ²⁾
Length to fork face	l2 (mm)	966 (980) ²⁾	1003 (1017) ²⁾
Overall width	b1/b2 (mm)	950	950
Fork dimensions	s/e/l (mm)	55/180/1150	55/180/1150
Aisle width with pallets 800 x 1200 along forks	Ast (mm)	2510 (2520) ^{2) 3)}	2530 (2540) ^{2) 3)}
Turning radius	Wa (mm)	1670 (1695) ²⁾	1670 (1695) ²⁾
Travel speed, with/without load	km/h	8.2/9.2	8.2/9.2
Lifting speed, with/without load	m/s	0.138/0.200	0.138/0.200
Lowering speed, with/without load	m/s	0.4/0.172	0.4/0.172
Drive motor, 60 minute rating	kW	2.0	2.0
Lift motor, 10 % rating	kW	3.0	3.0
Battery weight (± 5 %)	kg	377	377
Mean noise level at driver's ear	dB (A)	78.6	78.6

1) With battery as per line 6.4

2) In brackets for initial lift option. (L 12 Ri/16 Ri models)

3) With previous calculation method, L 12 R = 2365 mm; L 16 R = 2405 mm



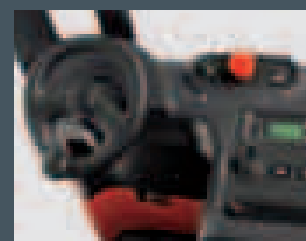
Initial lift and double stacker versions

- Initial lift of forks increases ground clearance to negotiate ramps, dock levellers and bridging plates
- The equalising linkage provides assured stability when turning across uneven surfaces
- A 2000 kg load can be transferred using the initial lift function



Braking

- Three independent braking systems:
- Automatic counter-current braking operating when accelerator pedal is released
- Electromagnetic braking on the drive motor controlled by the brake pedal



Workstation

- Linde multi-function back-lit instrument display provides all key truck information to ensure safe, trouble-free operation
- Fully adjustable seat – 4 different settings (height, depth, firmness, angle)
- Ergonomic steer wheel with a spinner knob for efficient manoeuvring



Motor

- Self-ventilating 2.0 kW DC drive motor designed for maximum performance
- Adjustable digital controller: all operating parameters can be customized to suit the application
- Hill start without rollback
- Automatic booster effect for fast acceleration when needed

Electric Reach Trucks

Capacity 1000 kg – 1400 kg

R 10 C, R 12 C, R 14 C *Active*

SERIES 115-03

The comprehensive and versatile range of Linde reach trucks is already the first choice for customers whose business depends on having the competitive edge by maintaining a highly efficient supply chain to meet the stringent demands of our consumer led society.

The short wheelbase, compact chassis and effortless electric power steering ensure easy manoeuvring in narrow aisles.

Linde twin accelerator pedals combine with a powerful high torque AC drive motor to deliver impressive performance and precision handling in busy narrow aisle storage applications.

The operator's compartment is designed to create an intuitive partnership between operator and truck so that man and machine work in harmony for maximum efficiency and throughput.

With up to 1000 operating hours between services, high utilisation and lower handling costs makes this compact range the ideal handling solution for many businesses.



Safety

The Linde ACTIVE 'C' range offers compact manoeuvrability in narrow aisle storage and retrieval applications. The ergonomic operator's compartment provides a comfortable and safe working environment for consistently high levels of efficiency and productivity.

Performance

The Linde ACTIVE drive concept employing advanced Linde control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of batteries ensures that each truck is precisely matched to the demands of individual applications.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept, including spacious cab, comfort-class seat with lumbar support and intuitive layout of all controls. The operator's working environment ensures optimum performance.

Reliability

The Linde ACTIVE range is constructed for heavy, sustained duty. Its compact robot-welded chassis is designed for maximum strength and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.

Model designation		R 10 C <i>ACTIVE</i>	R 12 C <i>ACTIVE</i>	R 14 C <i>ACTIVE</i>
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery
Load capacity	Q (kg)	1000 ²⁾	1200 ²⁾	1400 ²⁾
Load centre	c (mm)	600/500	600/500	600/500
Mast/fork carriage tilt, forward/backward	α/β (°)	2/2	2/2	2/2
Height of mast, lowered	h1 (mm)	2230	2230	2230
Free lift	h2 (mm)	150	150	150
Lift	h3 (mm)	3250	3250	3250
Height of mast, extended	h4 (mm)	3873	3873	3873
Height of overhead guard (cab)	h6 (mm)	2110	2110	2110
Overall length	l1 (mm)	2307	2307	2307
Length to fork face	l2 (mm)	1157	1157	1157
Overall width	b1/b2 (mm)	1234/1250	1234/1250	1234/1250
Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2614	2614	2633
Aisle width, pallet 800 x 1200 along forks	Ast (mm)	2687	2687	2690
Travel speed, with/without load	km/h	13.5/13.5 ^{3) 4)}	13.5/13.5 ^{3) 4)}	13.5/13.5 ^{3) 4)}
Lifting speed, with/without load	m/s	0.48/0.65 ³⁾	0.44/0.65 ³⁾	0.40/0.65 ³⁾
Battery to DIN/IEC		43531C/254-2	43531C/254-2	43531C/254-2
Battery voltage/rated capacity (5 h)	V/Ah	48/420 ¹⁾	48/420 ¹⁾	48/420 ¹⁾

1) Alternative batteries and/or optional integral sideload increase length to fork face and 90° stacking aisle widths

2) Capacity may be reduced for high lifts

3) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights

4) Reduced speed and acceleration on request



Superb working environment

- Linde Load Control: precise, effortless fingertip control of all mast movements
- Ergonomic, full suspension comfort-class seat fully adjustable to the operator's personal preferences
- Adjustable steering console



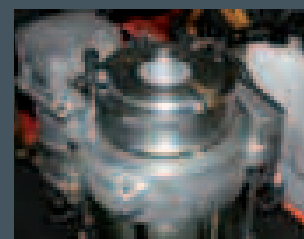
Precision

- Assured manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive, progressive and adjustable electric steering with essential 'road feel'



Batteries

- Capacity to suit every type of application: 48 V, 360 Ah to 560 Ah
- Quick and easy battery change



Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours between services

Electric Reach Trucks
Capacity 1400 kg – 2000 kg
R 14 S, R 16 S,
R 20 S *ACtive*

SERIES 115-03



The Linde "Active" range of reach trucks was designed to provide cost-effective high performance with low maintenance requirements, which is why they incorporate so many features which optimise throughput in busy narrow aisle applications.

Superb functionality is the common theme of all the operational elements, starting with spacious operator's compartment where comfort-class seating is accompanied by fingertip joystick controls, electric power steering and unique twin accelerator pedals.

Together with the excellent visibility through the clearview mast the operator is able to use these intuitive controls to fully utilise the seamless high torque power of the AC drive motor.

This series includes standard 1250 mm wide and narrow 1080 mm wide chassis as well as HD heavy duty versions to provide the widest possible range of narrow aisle handling solutions.



Superb working environment

- Linde Load Control: Precise, effortless fingertip control of all mast movements
- Ergonomic, full suspension comfort-class seat fully adjustable to the operator's personal preferences
- Adjustable steering console



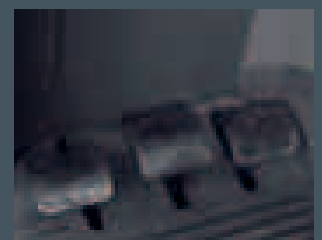
Stability

- Chassis designed and built for maximum strength and durability
- Heavy-duty construction materials and components provide low centre of gravity for stability and high residual capacities



Manoeuvrability

- A short wheelbase, compact chassis dimensions and smooth electric power steering ensure easy and efficient manoeuvring



Precision

- Assured manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive progressive and adjustable electric steering with essential 'road feel'

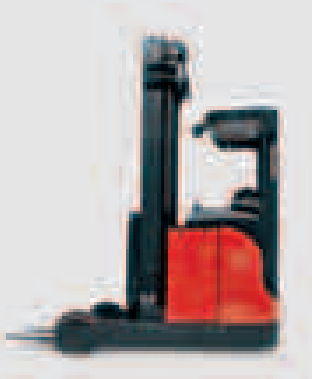


Electric Reach Trucks

Capacity 1400 kg – 2000 kg

R 14 S, R 16 S, R 20 S *Active*

SERIES 115-03



Model designation		R 14 <i>Active</i>	R 14 HD <i>Active</i>	R 14 N <i>Active</i>
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery
Load capacity	Q (kg)	1400 ²⁾	1400 ²⁾	1400 ²⁾
Load centre	c (mm)	600/500	600/500	600/500
Mast/fork carriage tilt, forward/backward	α/β (°)	2/4	2/4	2/4
Height of mast, lowered	h1 (mm)	2110	2930	2110
Free lift	h2 (mm)	1261	2081	1261
Lift	h3 (mm)	4655	6355	4655
Height of mast, extended	h4 (mm)	5395	7139	5395
Height of overhead guard (cab)	h6 (mm)	2110	2110	2110
Overall length	l1 (mm)	2334	2375	2415
Length to fork face	l2 (mm)	1184	1225	1265
Overall width	b1/b2 (mm)	1234/1250	1234/1250	1054/1080
Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2655	2685	2710
Aisle width, pallet 800 x 1200 along forks	Ast (mm)	2715	2750	2765
Travel speed, with/without load	km/h	13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}
Lifting speed, with/without load	m/s	0.42/0.66 ³⁾	0.36/0.51 ³⁾	0.42/0.66 ³⁾
Battery to DIN/IEC		43531C/254-2	43531C/254-2	43531B/254-2
Battery voltage/rated capacity (5 h)	V/Ah	48/420 ¹⁾	48/420 ¹⁾	48/420 ¹⁾

1) Alternative batteries increase length to fork face and 90° stacking aisle widths

2) Capacity may be reduced for high lifts

3) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights

4) Lifts 6355 mm and above increase length to fork face and 90° stacking aisle widths by 27 mm on R 20 and R 20 N

5) Alternative widths over reach legs of 1400 mm or 1600 mm are available for R 20

6) Reduced speed and acceleration on request

Safety

The Linde ACTIVE range has established itself as a leading performer in intensive narrow aisle storage and retrieval applications, with superb levels of operator comfort, safety and impressive productivity ratios.

Performance

The Linde ACTIVE drive and lift concept employing advanced Linde control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of batteries ensures that each truck is precisely matched to the demands of individual applications.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept, including spacious cab, comfort-class seat with lumbar support and intuitive layout of all controls. The operator's working environment ensures optimum performance.

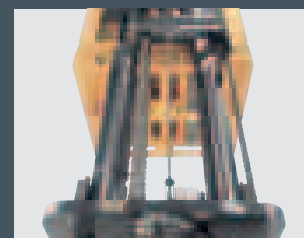
Reliability

The Linde ACTIVE range is constructed for heavy, sustained duty. Its compact robot-welded chassis is designed for maximum strength and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.

R 16 ACTIVE	R 16 HD ACTIVE	R 16 N ACTIVE	R 20 ACTIVE	R 20 N ACTIVE
Battery	Battery	Battery	Battery	Battery
1600 ²⁾	1600 ²⁾	1600 ²⁾	2000 ²⁾	2000 ²⁾
600/500	600/500	600/500	600/500	600/500
2/4	2/4	2/4	2/4	2/4
2110	2930	2110	2476	2476
1261	2081	1261	1627	1627
4655	6355	4655	4655	4655
5395	7139	5395	5395	5395
2110	2110	2110	2110	2110
2339	2375	2415	2411	2511
1189	1225	1265	1261 ⁴⁾	1361 ⁴⁾
1234/1250	1234/1250	1054/1080	1234/1250 ⁵⁾	1054/1080
2675	2705	2710	2770 ⁴⁾	2810 ⁴⁾
2720	2752	2765	2805 ⁴⁾	2860 ⁴⁾
13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}	13.5/13.5 ^{3) 6)}
0.40/0.66 ³⁾	0.35/0.51 ³⁾	0.40/0.66 ³⁾	0.32/0.51 ³⁾	0.33/0.51 ³⁾
43531C/254-2	43531C/254-2	43531B/254-2	43531C/254-2	43531B/254-2
48/420 ¹⁾	48/420 ¹⁾	48/420 ¹⁾	48/560 ¹⁾	48/560 ¹⁾



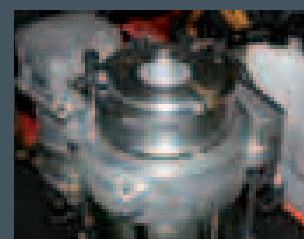
Linde clearview mast

- Torsion-resistant fixed triplex clearview mast
- Hydraulic hoses are reeved through the mast to enhance visibility



Batteries

- Capacities to suit every type of application: 360 Ah to 700 Ah
- Quick and easy battery change



Linde twin accelerator pedals

- Effortless forward/reverse selection places minimal demands on operator
- Operator is able to maintain high efficiency and productivity levels

Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours between services

Electric Reach Trucks

Capacity 2500 kg

R 25 S *Active*

SERIES 115-03

The R 25 S "Active" reach truck is designed to provide the ideal handling solution for narrow aisle storage applications where heavier than normal loads are involved.

The heavy duty chassis and components provide a low centre of gravity and stable platform for safe and secure handling while the powerful AC drive motor delivers powerful and flexible performance.

The fixed clearview mast with integral tilting fork carriage and side-shift as standard offers high residual capacities at maximum lift as well as excellent visibility.

Recognising that skilled operator's are the key to ensuring that mobile handling equipment performs to its full potential Linde designs its trucks around the operator to ensure outstanding comfort and safety levels.

With a maximum lifting capacity of 2500 kg these rugged trucks execute these heavy handling tasks with quiet efficiency and precision.



Safety

The R 25 S Active has been designed to handle heavy loads in intensive narrow aisle warehouse applications that require rugged durability and high performance, combined with superb operator comfort and safety for maximum efficiency.

Performance

The Linde Active drive concept employing advanced Linde control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of batteries ensures that each truck is precisely matched to the demands of individual applications.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept, including spacious cab, comfort-class seat with lumbar support and intuitive layout of all controls. The operator's working environment ensures optimum performance.

Reliability

The Linde Active range is constructed for heavy, sustained duty. Its compact robot-welded chassis is designed for maximum strength and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.

Model designation

R 25 Active

Power unit: battery, diesel, petrol, LP gas, mains power		Battery
Load capacity	Q (kg)	2500 ¹⁾
Load centre	c (mm)	600/500
Mast/fork carriage tilt, forward/backward	α/β (°)	2/4
Height of mast, lowered	h1 (mm)	2254
Free lift	h2 (mm)	150
Lift	h3 (mm)	3050
Height of mast, extended	h4 (mm)	3707
Height of overhead guard (cab)	h6 (mm)	2110
Overall length	l1 (mm)	2679
Length to fork face	l2 (mm)	1529
Overall width	b1/b2 (mm)	1235/1250
Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2967
Aisle width, pallet 800 x 1200 along forks	Ast (mm)	3044
Travel speed, with/without load	km/h	13.5/13.5 ^{2) 3)}
Lifting speed, with/without load	m/s	0.30/0.40 ^{2) 3)}
Battery to DIN/IEC		43531C/254-2
Battery voltage/rated capacity (5 h)	V/Ah	48/700

1) Capacity may be reduced for high lifts

2) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights

3) Reduced speed and acceleration on request



Superb working environment

- Linde Load Control: Precise, effortless fingertip control of all mast movements
- Ergonomic, full suspension comfort-class seat fully adjustable to the operator's personal preferences
- Adjustable steering console



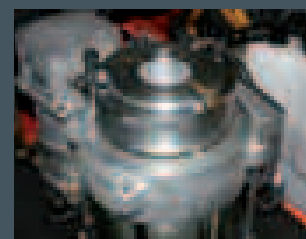
Precision

- Assured manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive, progressive and adjustable electric steering with essential 'road feel'



Batteries

- Capacities to suit heavy-duty applications: 600 Ah & 700 Ah
- Quick and easy battery change



Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours between services

Electric Reach Trucks

Capacity 1400 kg – 2000 kg

R 14 G, R 16 G, R 20 G *Active*

SERIES 115-03

There are many applications where there is a requirement to combine narrow aisle stacking duties with the need to work on less than perfect external and internal surfaces for either pallet transfers or lorry loading/unloading for example.

The Linde versatile 'G' series provides the perfect solution to these types of applications with its large cushion tyres able to cope with the varying surfaces encountered on sites where previously it might have been necessary to use two different types of trucks.

Employing advanced, Linde energy efficient control technology, the powerful output of the maintenance-free, high-torque AC drive motor translates into impressive performance.

The operator of a 'G' series reach trucks enjoys all the benefits of the other Linde 'Active' series reach trucks including the superbly functional and comfortable operator's compartment.

For those multi-purpose indoor-outdoor handling applications involving narrow aisle stacking the Linde 'G' series of reach trucks offers the perfect solution.



Safety

Designed for optimum operator comfort and safety, the Linde Active 'G' range can perform a dual-purpose role in both internal and external applications. Unique drive unit suspension and large tyres enable it to operate effectively outside on uneven surfaces, loading and unloading road vehicles, for example; as well as storing and retrieving loads in narrow aisle warehouses.

Performance

The Linde Active drive concept employing advanced Linde control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of batteries ensures that each truck is precisely matched to the demands of individual applications.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept, including spacious cab, comfort-class seat with lumbar support and intuitive layout of all controls.

The operator's working environment ensures optimum performance.

Reliability

The Linde Active range is constructed for heavy, sustained duty. Its compact robot-welded chassis is designed for maximum strength and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.

Model designation		R 14 G Active	R 16 G Active	R 20 G Active
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery
Load capacity	Q (kg)	1400 ²⁾	1600 ²⁾	2000 ²⁾
Load centre	c (mm)	600/500	600/500	600/500
Mast/fork carriage tilt, forward/backward	α/β (°)	2/4	2/4	2/4
Height of mast, lowered	h1 (mm)	2225	2225	2225
Free lift	h2 (mm)	1361	1361	1361
Lift	h3 (mm)	4955	4955	4655
Height of mast, extended	h4 (mm)	5695	5695	5395
Height of overhead guard (cab)	h6 (mm)	2246	2246	2246
Overall length	l1 (mm)	2506	2511	2511
Length to fork face	l2 (mm)	1356 ¹⁾	1361 ¹⁾	1361 ¹⁾
Overall width	b1/b2 (mm)	1234/1366	1234/1366	1234/1470
Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2785 ¹⁾	2789 ¹⁾	2833 ¹⁾
Aisle width, pallet 800 x 1200 along forks	Ast (mm)	2844 ¹⁾	2849 ¹⁾	2865 ¹⁾
Travel speed, with/without load	km/h	12.5/12.5 ^{3) 4)}	12.5/12.5 ^{3) 4)}	12.5/12.5 ^{3) 4)}
Lifting speed, with/without load	m/s	0.42/0.66 ⁴⁾	0.40/0.66 ⁴⁾	0.32/0.51 ⁴⁾
Battery to DIN/IEC		43531C/254-2	43531C/254-2	43531C/254-2
Battery voltage/rated capacity (5 h)	V/Ah	48/560 ¹⁾	48/560 ¹⁾	48/560 ¹⁾

1) Alternative batteries increase length to fork face, 90° stacking aisle widths and affects other dimensions

2) Capacity may be reduced for high lifts

3) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights

4) Reduced speed and acceleration on request



Superb working environment

- Linde Load Control: precise, effortless fingertip control of all mast movements
- Ergonomic, full suspension comfort-class seat fully adjustable to the operator's personal preferences
- Adjustable steering console



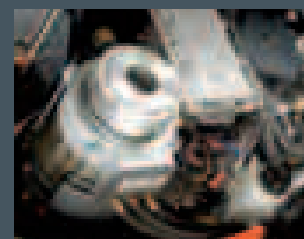
Precision

- Assured manoeuvring with Linde twin accelerator pedals
- Precision load handling with Linde Load Control
- Responsive, progressive and adjustable electric steering with essential 'road feel'



Wheels and tyres/suspension

- Large diameter for operation on uneven ground
- Unique drive unit suspension to reduce vibration and road shocks



Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours between services

Electric Reach Trucks

Capacity 1400 kg – 1700 kg

R 14 X, R 16 X, R 17 X

SERIES 116-02

The revolutionary X range of reach trucks from Linde represents the first truly seismic change in the design concept for reach trucks in over fifty years. By relocating the battery under the operator's compartment the Linde designers were able to double the space in cab to provide a spacious working environment previously unknown in the reach truck world. In addition the battery relocation also enabled an entirely new mast concept to be developed resulting in a panoramic 'window' between the mast uprights which is twice as wide as conventional designs.

Another break with convention is the fact that the mast is fixed to the chassis and does not reach backwards and forwards. Instead a unique traversing fork carriage carries out this function resulting in a superbly stable mast for outstandingly seamless and stable load handling at high lift with shorter cycle times.

Apart from the advanced and proven features such as finger tip, joystick Linde Load Control twin accelerator pedals and twin accelerator pedals, the X range also includes a new super-comfort 'armchair' seat with two adjustable armrests. The left armrest incorporates a compact electric steering wheel while the left armrest incorporates the fingertip joystick controls.

This superb working environment combines with the revolutionary features of the Linde X range to provide the competitive edge for any business requiring narrow aisle trucks.



Safety

The revolutionary Linde X range of reach trucks sets new industry standards for comfort and performance combined with outstanding safety in narrow aisle storage and retrieval applications.

Performance

The Linde drive and lift system employing advanced control technology translates the powerful output of the AC motors into seamless productivity. A comprehensive selection of DIN batteries ensures each truck is precisely matched to the demands of individual applications.

Comfort

A perfect interface between operator and truck is assured with the Linde X range concept, which has doubled the space in the cab. The comfort-class seat with lumbar support, incorporates the compact steering wheel and all hydraulic controls integrated into adjustable armrests. Unrestricted comfort and a truly intuitive control layout

provides the perfect working environment for optimum performance.

Reliability

The Linde X range is constructed for consistent reliability in demanding applications. Its compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged construction and components provide a low centre of gravity for excellent stability and high residual capacities.

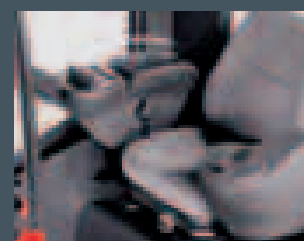
Productivity

Efficiency at work, efficiency in servicing. With uptime ratios of 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. All the truck's performance parameters can easily be configured to match the requirements of the customer's application.



Superb working environment

- Linde Load Control: precise, effortless fingertip control of all mast movements
- Ergonomic full suspension, comfort-class seat fully adjustable to the operator's personal preferences including two adjustable armrests



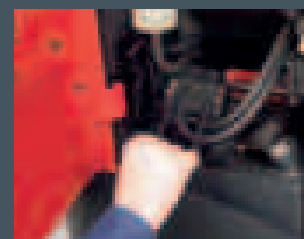
Linde twin accelerator pedals

- Effortless forward/reverse selection places minimal demands on operator
- Operator is able to maintain high efficiency and productivity levels



Batteries

- Capacities to suit every type of application: 480 Ah to 920 Ah
- Quick and easy battery change



Servicing

- Maintenance-free AC traction and lift motors
- Configurable Linde Digital Control system
- Incorporates diagnostic technology
- Easy service access
- Up to 1000 operating hours uptime between services

Model designation		R 14 X	R 16 X	R 17 X	R 17 X HD
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery	Battery
Load capacity	Q (kg)	1.400 ¹⁾	1.600 ¹⁾	1.700 ¹⁾	1.700 ¹⁾
Load centre	c (mm)	600/500	600/500	600/500	600/500
Axle load without load, front (drive)/rear (load)	kg	1960/1660	1980/1830	1817/1929	2100/2230
Mast/fork carriage tilt, forward/backward	α/β (°)	0/2.5 (2/2.5) ²⁾	0/2.5 (2/2.5) ²⁾	0/2.5 (2/2.5) ²⁾	0/2.5 (2/2.5) ²⁾
Height of mast, lowered	h1 (mm)	2455	2455	2955	2955
Free lift	h2 (mm)	1541	1541	2041	2041
Lift	h3 (mm)	4655	5155	6355	6955
Height of mast, extended	h4 (mm)	5614	6114	7314	7914
Height of overhead guard (cab)	h6 (mm)	2190 (2365) ³⁾	2355 (2530) ³⁾	2190 (2365) ³⁾	2355 (2530) ³⁾
Overall length	l1 (mm)	2444	2444	2660	2660
Length to fork face	l2 (mm)	1294	1294	1510	1510
Overall width	b1/b2 (mm)	1270/1270	1270/1270	1270/1270	1270/1270
Aisle width, pallet 1000 x 1200 across forks	Ast (mm)	2666	2666	2882	2882
Aisle width, pallet 800 x 1200 along forks	Ast (mm)	2761	2761	2977	2977
Travel speed, with/without load	km/h	14/14.2) ⁴⁾	14/14.2) ⁴⁾	14/14.2) ⁴⁾	14/14.2) ⁴⁾
Lifting speed, with/without load	m/s	0.44/0.7.2) ⁴⁾	0.41/0.7.2) ⁴⁾	0.4/0.7.2) ⁴⁾	0.4/0.7.2) ⁴⁾
Battery to DIN/IEC		43531A/254-2	43531A/254-2	43531A/254-2	43531A/254-2
Battery voltage/rated capacity (5h)	V/Ah	48/480	48/660	48/640	48/920

1) Traction, lift, lower and reach speeds and weights may vary with alternative lift heights

2) Figures in brackets are with manually operated hydraulic fork tilt

3) Figure in brackets is for optional overhead guard with increased headroom

4) Reduced speed and acceleration on request

Electric Four Way Reach Truck

Capacity 2500 kg

R 25 F

SERIES 8922

Cost-effective narrow aisle storage of long or wide loads is made easy with the Linde multi-directional electric reach truck the R 25 F.

This extremely versatile reach truck, which has the ability to travel sideways as well as in the forward and reverse directions, is able to handle conventional as well as the long and or wide loads encountered in various specialised industries.

With lift heights in excess of 9000 mm available and benefiting from maintenance-free AC drive and lift technology for seamless high-torque flexibility, the Linde R 25 F with its 2500 kg lifting capacity offers the perfect handling solution for those specialised handling applications.



Safety

The ability to drive the truck in any direction enables long or wide loads to be moved in the safest manner. Pin access code control sets the performance parameters appropriate to each individual operator as standard. Assured stopping power is provided by the electromagnetic disc brake on the drive wheel and hydraulic brakes on the twin mounted load wheels on the right hand reach leg.

Performance

Rapid lift and traction speeds are controlled by energy efficient digital AC technology for maximum productivity. The truck can be driven in any direction with smooth precision. A comprehensive selection of battery capacities enables each truck to be matched precisely to the needs of specific applications.

Comfort

Fully adjustable tilting seat for excellent ergonomics when storing or retrieving in high racking. Individual fingertip, lever con-

trol with wrist support. 360° electric power steering with adjustable steering wheel.

Reliability

Its compact chassis is designed for maximum strength and durability. A low centre of gravity, provides assured stability and high residual capacities.

Productivity

An integrated computer-controlled diagnostic system ensures optimum uptime and reduces costs. Operating parameters can be configured to precisely fit the requirement of the customer's application. The drive wheel and the twin mounted load wheels on the right hand side automatically turn through 90° at the push of a button for sideways traction. Fork spread options up to 2220 mm are designed to handle virtually every type of long or wide load.

Model designation

R 25 F

Power unit: battery, diesel, petrol, LP gas, mains power		Battery
Load capacity	Q (t)	2.5
Load centre	c (mm)	600
Mast/fork carriage tilt, forward/backward	α/β (°)	1/3 – 1/1 ²⁾
Height of mast, lowered	h1 (mm)	2340
Free lift	h2 (mm)	1623
Lift	h3 (mm)	4620
Height of mast, extended	h4 (mm)	5210
Height of overhead guard (cabin)	h6 (mm)	2155
Overall length	l1 (mm)	2548 ¹⁾
Length to fork face	l2 (mm)	1398 ¹⁾
Overall width	b1 (mm)	1765
Aisle width with pallet 1000 x 1200 across forks	Ast (mm)	2895 ¹⁾
Aisle width with pallet 800 x 1200 along forks	Ast (mm)	2913 ¹⁾
Travel speed, with/without load	km/h	13.2/14
Lifting speed, with/without load	m/s	0.44/0.51
Battery according to IEC		254-2, C
Battery voltage/rates capacity (5 h)	V/Ah	48/480 – 840

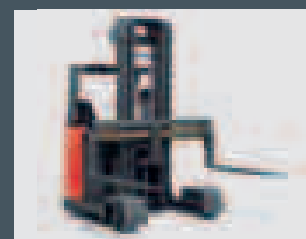
1) Alternative batteries increase length to fork face and aisle width

2) Above lift height 6750 mm



Comfortable operator compartment

- Ergonomic tilting seat
- Adjustable steering console
- Adjustable control console
- Cushioned, adjustable armrest
- Individual fingertip control levers with wrist support
- Central instrument display



Mast

- Tilting clearview triplex mast with full free lift
- Lifting, lowering, mast reach, mast tilt and sideshift are electronically adjustable
- Manual fork adjustment, adjustment range 560 – 1550 mm
- The optional hydraulic fork spreader is designed to provide good visibility and high residual capacities

Servicing

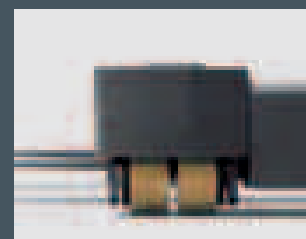
- Easy service access
- Maintenance-free AC traction and lift motors
- Digital control system enables performance parameters to be individually adjusted

Stability

- Chassis designed for maximum structural integrity, durability and stability

Batteries

- Battery capacities to suit every application: 480 Ah to 840 Ah
- Rapid and simple battery changing system



Maneuverability

- Four-way traction ability provides outstanding multi-directional versatility and manoeuvrability for handling long or wide loads across the forks, as well as standard pallets

Man-down Turret Truck

1000 kg

A 10

SERIES 040

The Linde A 10 man-down turret truck is designed to optimise the available storage space and to offer maximum throughput capabilities in very narrow aisle racking systems.

Whether the application is a proposed new facility or a converted warehousing unit the A 10 offers a wide range of specifications to match specific customer requirements and objectives.

Depending on those requirements the truck can be fitted with either an 'L' head with hydraulically operated reach and rotate functions or a telescopic fork head.

The ergonomic and highly functional operator's compartment enables the operator to execute highly efficient storage and retrieval cycles with smooth precision and safety.



Safety

The operator is fully protected within the operator's compartment. Three independent braking systems ensure effective stopping power for every eventuality. The innovative mast concept provides exceptional torsion resistance for impressive stability at high lift heights and the operator has excellent visibility to the forks and load for safe, assured handling operations.

Performance

The powerful 5 kW traction and 9.0 kW lift motors deliver high-torque performance. The truck is fitted with the advanced Linde digital control system, which governs the powerful drive and hydraulic pump motors for smooth, seamless acceleration, lift, reach and rotate movements.

Comfort

The spacious operator's compartment has a sideways seating position with a specially designed full suspension seat, which offers lateral, lumbar, weight, and height adjustments. This, combined with the highly functional and ergonomic layout of the operating

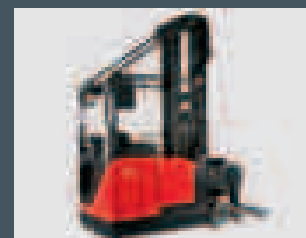
controls and the Linde twin accelerator pedal system, provides a superb, fatigue-free working environment.

Reliability

The key components of the truck are easily accessible for maintenance and integrated diagnostics ensure reduced servicing intervals. The rugged, torsion resistant mast is designed for an extended service life and the Linde digital control system enables the service engineer to adjust the performance parameters to suit individual applications.

Productivity

A clear view of the turret head and load during storage and retrieval operations as well as good all-round visibility within the very narrow aisles are important prerequisites for cost-effective efficiency and high throughput ratios. Performance is also enhanced by the smooth, responsive hydrostatic steering and the Linde twin accelerator pedal system. Linde very narrow aisle system trucks are designed to achieve maximum utilisation of the available storage space.



Chassis and mast:

- Excellent visibility due to the slim profile mast channels.
- Chassis designed for maximum structural integrity, durability and stability.
- Overhead guard protects operator's compartment and enhances stability.



Storage/retrieval:

- Two head types are available: 'L' head or telescopic forks.



Controller:

- The energy saving Linde digital controller ensures smooth, seamless acceleration, lift, reach and rotate movements.
- The powerful drive and lift motor capabilities are controlled with exceptional accuracy and precision.
- The performance and oil flow of the hydraulic unit is automatically optimized for efficiency and economy.



Operator's compartment:

- Comfort-class seat with excellent side support and is adjustable for body weight, height, seat position, backrest angle
- All-round view of load and environment
- Linde twin accelerator pedal system
- Effortless, on-demand hydrostatic power steering

Model designation		A 10 ¹⁾
Power unit: battery, diesel, petrol, LP gas, mains power		Battery
Load capacity	Q (kg)	1000
Load centre	c (mm)	600
Service weight	kg	4180
Height of mast, lowered	h1 (mm)	2750
Free lift	h2 (mm)	170
Lift	h3 (mm)	3750
Height of mast, extended	h4 (mm)	4790
Height of overhead guard (cabin)	h6 (mm)	2110
Overall length	l1 (mm)	2940 ²⁾
Head centre	A (mm)	560 ²⁾
Overall width	b1/b2 (mm)	1450 ²⁾
Drive motor, 60 minute rating	kW	5.0
Lift motor, 15 % rating	kW	9.0
Travel speed, with/without load	km/h	9.0/9.0
Lifting speed, with/without load	m/s	0.28/0.35
Battery according to IEC		254-2
Battery voltage/rated capacity (5h)	V/Ah	48/660 L

1) Specification with Standard Lift Mast and L-Head.

2) With pallet 800 x 1200 mm along forks.

Man-down Turret Truck

1350 kg

A 13

SERIES 005

Incorporating many advanced features based on Linde's extensive experience and expertise in manufacturing and supplying very narrow aisle system trucks the A 13 1350 kg capacity man-down turret truck offers a highly productive and cost-effective solution for high density storage facilities where the business imperative is to ensure that every possible square metre of costly storage space is fully utilised.

The A 13 is fitted with the energy saving Linde digital control system, which ensures the impressive power of the traction and lift motors, translates into smooth precision for superbly efficient work cycles in very narrow aisle operations.

The Linde A 13 can be fitted with rail guidance systems together with a range of operational interlocks and a choice of either 'L' head or telescopic forks to provide bespoke very narrow aisle system solutions for a wide range of industrial and commercial applications.



Safety

The operator is fully protected within the operator's compartment. Three independent braking systems ensure effective stopping power for every eventuality. The innovative mast concept provides exceptional torsion resistance for impressive stability at high lift heights and the operator has excellent visibility to the forks and load for safe, assured handling operations.

Performance

The powerful 4.2 kW traction and 15 kW lift motors deliver high-torque performance. The truck is fitted with the advanced Linde digital control system, which governs the powerful drive and hydraulic pump motors for smooth, seamless acceleration, lift, reach and rotate movements.

Comfort

The spacious operator's compartment has a sideways seating position with a specially designed full suspension seat, which offers lateral, lumbar, weight, and height adjustments. This, combined with the highly functional and ergonomic layout of the operating

controls and the Linde twin accelerator pedal system, provides a superb, fatigue-free working environment.

Reliability

The key components of the truck are easily accessible for maintenance and integrated diagnostics ensure reduced servicing intervals. The rugged, torsion resistant mast is designed for an extended service life and the Linde digital control system enables the service engineer to adjust the performance parameters to suit individual applications.

Productivity

A clear view of the turret head and load during storage and retrieval operations as well as good all-round visibility within the very narrow aisles are important prerequisites for cost-effective efficiency and high throughput ratios. Performance is also enhanced by the smooth, responsive hydrostatic steering and the Linde twin accelerator pedal system. Linde very narrow aisle system trucks are designed to achieve maximum utilisation of the available storage space.

Model designation		A 13 ¹⁾
Power unit: battery, diesel, petrol, LP gas, mains power		Battery
Load capacity	Q (kg)	1350
Load centre	c (mm)	600
Service weight	kg	7083
Height of mast, lowered	h1 (mm)	5900
Free lift	h2 (mm)	–
Lift	h3 (mm)	9960
Height of mast, extended	h4 (mm)	11215
Height of overhead guard (cabin)	h6 (mm)	2280
Overall length	l1 (mm)	3200 ²⁾
Head centre	A (mm)	600 ²⁾
Overall width	b1/b2 (mm)	1230/1230 – 1630
Aisle width, pallet 1000 x 1200 across forks		
Drive motor, 60 minute rating	kW	4.2
Lift motor, 15 % rating	kW	15.0
Lifting speed, with / without load	m/s	0.33/0.35
Battery according to IEC		254-2
Battery voltage / rated capacity (5h)	V/Ah	48/840 L

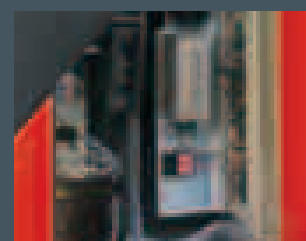
1) Specification with Standard Lift Mast and L-Head.

2) With pallet 800 x 1200 mm along forks.



Operator's compartment:

- Comfort-class seat with excellent side support and is adjustable for body weight, height, seat position, backrest angle
- All-round view of load and environment
- Linde twin accelerator pedal system



Drive and lift motors:

- 4.2 kW maintenance-free, high-torque AC drive motor
- Powerful 15 kW maintenance-free, high-torque hydraulic pump motor
- A potent combination for quiet running, high performance and versatility.



Storage/retrieval:

- Telescopic forks: The telescopic fork unit can transfer open based pallets from one side of the aisle to the other without rotation and therefore offers the narrowest aisle possibilities.



Storage/retrieval:

- The 'L' head has hydraulically operated reach and rotate functions and can handle both closed and open based pallets. It is also able to pick up or place pallets directly on the floor.

Modular Very Narrow Aisle (VNA) Dual Purpose Combi Truck Capacity up to 1500 kg K

SERIES 011

With its extensive experience and expertise regarding the manufacture and supply of very narrow aisle system trucks, Linde has developed the advanced K series very narrow aisle combi-truck to a modular design concept, which enables a bespoke specification to be created for every individual application.

The infinite choice of modules means that a custom-built match can be found based on the customers needs.

With lift heights up to 16200 mm and picking height in excess of 16000 mm. The 1500 kg capacity Linde K series combi-truck incorporates a superbly functional cab from where the operator is able to work in fatigue-free comfort and safety.

Whatever the picking and storage/retrieval sequences might be the Linde very narrow aisle combi K truck will deliver optimum performance with the lowest operational costs.



Safety

The new K range is a versatile, dual-purpose rising cab VNA system truck designed for high density storage and retrieval of unit loads, as well as order picking in very narrow aisles. With its modern, superbly functional cabin the K range provides an environment in which the operator can work in complete comfort and safety.

Performance

The intuitive panel control layout enables maximum throughput with minimal hand movement. The operator can check the truck's status via the multifunctional display in the control panel. Designed for low energy consumption, the K truck also returns energy to the battery during braking and main mast/cab lowering.

Comfort

The K truck enables the operator to immediately feel at ease and acclimatised. With protection against draughts and noise, the cab offers a comfortable operational environment and allows the operator to work effectively and with minimum fatigue.

Reliability

Modern technology, combined with Linde's vast experience in very narrow aisle applications to ensure optimum reliability and durability. Integrated diagnostic CAN bus technology minimises maintenance intervals.

Productivity

The unique modular design ensures that an individual K truck's specification can be tailored to match the application precisely in order to maximise productivity at all times. The smart electronics of Linde System Control (LSC) continuously monitors the truck's technical potential in order to deliver optimum simultaneous lift and travel speeds relative to lift height and load weight.

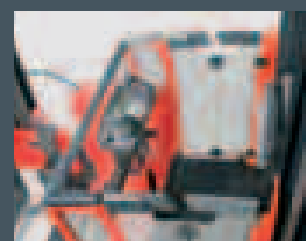
Model designation		K ¹⁾	K ¹⁾	K ¹⁾	K ¹⁾	K ¹⁾
Power type: battery, diesel, petrol, LPGas, mains power		Battery	Battery	Battery	Battery	Battery
Load capacity	Q (kg)	1000	1000	1250	1500	1500
Load centre distance	c (mm)	600	600	600	600	600
Height of mast, lowered	h1 (mm)	2900	2900	2900	2900	2900
Lift	h3 (mm)	3600	3600	3200	3200	3200
Height of mast, extended	h4 (mm)	6155	6155	5755	5755	5755
Height of overhead guard (cab)	h6 (mm)	2555	2555	2555	2555	2555
Picking height (h12 + 1600)	h28 (mm)	5645	5645	5245	5245	5245
Overall length (over forks)	l1 (mm)	3391	3401	3296	3440	3728
Overall width of chassis/axle bracket	b1/b2 (mm)	1160/1450	1160/1450	1160/1400	1160/1500	1160/1500
Aisle width	Ast (mm)	1640	1640	1640	1640	1640
Travel speed, with/without load	km/h	9.0/9.0	10.5/10.5	10.5/10.5	10.5/10.5	12.0/12.0
Lift speed, with/without load	m/s	0.38/0.40	0.38/0.47	0.36/0.47	0.38/0.47	0.48/0.60
Drive motor	kW	6.5/S2=60min	7.0/S2=60min	7.0/S2=60min	7.0/S2=60min	7.0/S2=60min
Lift motor	kW	13.0/S3=30%	20.0/S3=40%	20.0/S3=40%	20.0/S3=40%	24.0/S3=15%
Battery to IEC 254-2; A, B, C, No		IEC 254-2; B	IEC 254-2; A	IEC 254-2; A	IEC 254-2; A	IEC 254-2; A
Battery type, voltage, rated capacity (K5)	V/Ah	PzS, 48 V, 775 Ah	PzS, 80 V, 420 Ah	PzS, 80 V, 465 Ah	PzS, 80 V, 620 Ah	PzS, 80 V, 930 Ah

1) Example of modular truck configuration



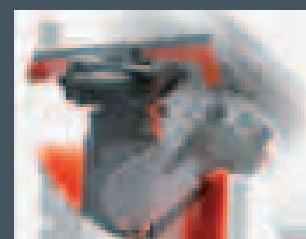
Modular concept

- Unique modular designed truck enables the perfect specification for each application
- Combination of different lift and drive motors (heavy duty/normal/light), chassis, masts, batteries, cabins, etc.



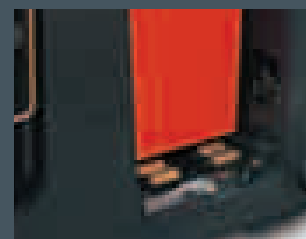
Cabin

- 5 different cabins available (combi (Standard)/truck/comfort/closed/cold store)
- Reduced shock and vibration due to the isolation of the cab from the chassis
- Easy and low heights access



Control panels

- Easy and comfortable use, without the need to encompass
- Combined driving and lifting/lowering
- Always in perfect reach, for the heights of the panels can be adapted



Batteries

- Battery changing from both sides possible through forklift or roller bed
- 4 different battery sizes available (420 Ah – 930 Ah)

Low-Level Order Picker

Capacity 2000 – 2400 kg

N 20, N 20 HP, N 24 HP

SERIES 132

Efficient order picking plays a key role in busy distribution facilities because maintaining fast, accurate picking rates is essential to the success of the business in what is a highly competitive industry.

The Linde range of order pickers is designed to match the challenge by offering that competitive edge. The unique design concept places the operator at the front with the battery behind to minimise the number of movements the operator has to make during an intensive picking cycle, resulting in faster pick rates without operator fatigue.

With its superbly functional Linde twin-grip steering control replacing the conventional tiller, a perfect interface between operator and truck is achieved. All operating controls are integrated in the head of the twin grip steering control for intuitive use with either hand. The twin grip electric steering is also self centring which save vital seconds moving between pick locations.

This outstanding series sets a new benchmark for low level order picker design to meet the needs of modern businesses in a constantly changing and demanding environment.



Safety

Unique Linde twin-grip steering and chassis design ensures that no part of operator's body is exposed outside its contours at any time. Steel front shield and twin-grip hand guard provide additional protection. The front driving position affords optimum visibility for enhanced safety and efficiency.

Performance

The Linde drive system employing advanced control technology translates the powerful output of the maintenance-free AC drive motor into seamless productivity. The 3 kW drive motor delivers full power to give 13 % gradeability and safe starting on gradients without rollback. A wide range of batteries is available to match individual order picking applications.

Comfort

A perfect interface between operator and truck is assured with the new Linde N series design concept. The series incorporates the unique Linde twin-grip steering and control system for effortless travelling and manoeuvring.

Truck functions are actuated by tactile, thumb operated dual controls intuitively grouped on the protected steering control head for ease of use by either hand. A low, cushioned platform and profiled scoop seat further enhance operator comfort.

Reliability

The new N series is constructed for consistent reliability in demanding applications. Its compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged structure and components provide a low centre of gravity for excellent stability.

Service

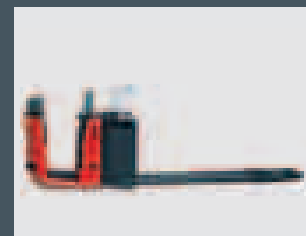
Efficiency at work, efficiency in servicing. With uptime ratios of up to 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. Easy accessibility of all components and the maintenance free AC technology employed play an additional part in maximising uptime.

Model designation			N 20 (2350 long forks)	N 24 (1150 long forks)
Load capacity	Q (kg)		2000	2400
Axle centre to fork face (fork raised/lowered)	(± 5 mm) x (mm)		1702/1763	902/963
Wheelbase (fork raised/lowered)	(± 5 mm) y (mm)		2264/2325 ¹⁾	1464/1525 ¹⁾
Service weight (with battery item 6,5)	(± 10 %) kg		1160	1115
Wheels number, drive side/load side (x = driven)			1x + 1/2 (1/4); 1x + 2/2 (2/4) ²⁾	1x + 2/2 (2/4) ³⁾
Height of the seats	h7 (mm)		900/1000	900/1000
Height of the tiller arm in operating position, min/max	h14 (mm)		1140/1190	1140/1190
Overall length	(± 5 mm) l1 (mm)		3747 ¹⁾	2547 ¹⁾
Length to fork face	(± 5 mm) l2 (mm)		1397 ¹⁾	1397 ¹⁾
Overall width	(± 5 mm) b1 (mm)		790	790
Fork dimensions	s/e/l (mm)		60 x 166 x 2350	60 x 166 x 1150
Aisle width with pallet 1000 x 1200 across forks	Ast (mm)		–	2797 ¹⁾
Aisle width with pallet 800 x 1200 along forks	Ast (mm)		3897 ¹⁾	2797 ¹⁾
Turning radius (fork raised)	Wa (mm)		3090/3158 ¹⁾	2290/2358 ¹⁾
Travel speed, with/without load (4 points; 5 points)	(± 5 %) km/h		10/12; 12/12	12/12 ³⁾
Driving motor (60 minutes rating)	kW		3	3
Battery weight	kg		485	485
Sound level at operator's ear	dB (A)		–	–

1) 4 PzS LS: 100 mm less for 3 PzS version

2) Data for 4 points version single load wheel (tandem); for 5 points version single load wheel (tandem)

3) The N 24 is only available in a 5 points version



Drive system

- Four-point contact configuration for maximum stability (N 20)
- Maximum speed 10 km/h laden, 12 km/h unladen
- Automatic braking as traction butterfly is released to neutral or opposite direction of travel is selected

High performance option (HP)

- Five-point contact configuration for optimum stability (N 20 HP/N 24 HP)
- Electronically controlled, hydraulically suspended active castor wheels automatically select optimum ratio between stability and traction for constant ground contact



Power steering

- Effortless, proportional electric power steering with positive feedback
- Self centring steering for faster picking cycles
- Automatic speed reduction when cornering
- Manoeuvring effort varies depending on the speed



Workstation

- Wide, easy access from either side
- Truck activated by PIN code or by ignition key
- Generous storage compartments for shrink wrapping, pens, gloves etc
- Digital instrument display
- Padded, adjustable scoop seat provides additional comfort

Order Picker with Fork Lift Capacity 1200 kg – 2000 kg N 20 L, N 20 Li

SERIES 132

Efficient order picking plays a key role in busy distribution facilities because maintaining fast, accurate picking rates is essential to the success of the business in what is a highly competitive industry.

The Linde range of order pickers is designed to match the challenge by offering that competitive edge. The unique design concept places the operator at the front with the battery behind to minimise the number of movements the operator has to make during an intensive picking cycle, resulting in faster pick rates without operator fatigue.

For added versatility there are mast versions of this outstanding model to enable double decker picking as well as an initial lift mast version which is able to operate over ramps and loading docks.

With its superbly functional Linde twin-grip steering control replacing the conventional tiller, a perfect interface between operator and truck is achieved. All operating controls are integrated in the head of the twin grip steering control for intuitive use with either hand. The twin grip electric steering is also self centring which save vital seconds moving between pick locations.

This outstanding series sets a new benchmark for low level order picker design to meet the needs of modern businesses in a constantly changing and demanding environment.



Safety

Unique Linde twin-grip steering and chassis design ensures that no part of operator's body is exposed outside its contours at any time. Steel front shield and twin-grip hand guard provide additional protection. The front driving position affords optimum visibility for enhanced safety and efficiency.

Performance

Efficiency on the job is the truck's true strength. Powered by a 3 kW AC motor, it rapidly accelerates to maximum speed (12 km/h unladen). Four-point surface contact ensures high stability and the OptiLift® control ensures high precision and productivity in order picking and pallet handling applications.

Comfort

A perfect interface between operator and truck is assured with the new Linde N series design concept. The unique Linde twin-grip steering control system with all operating controls grouped on the twin-grip head,

combines with a cushioned platform and profiled scoop seat to provide the operator with a superbly comfortable working environment.

Reliability

Consistent reliability in demanding applications is assured with the Linde N series. Its sturdy mast and compact, robot-welded chassis ensures maximum structural integrity and durability. The rugged structure and components provide a low centre of gravity for excellent stability.

Service

Efficiency at work, efficiency in servicing. With uptime ratios of up to 1000 hours between services and a computerised diagnostic system, maintenance intervals are minimal and operating costs are reduced. Easy accessibility of all components and the maintenance free AC technology employed play an additional part in maximising uptime.

Model designation			N 20 L	N 20 Li
Load capacity	Q (kg)		1200	1200/(2000)
Axle centre to fork face	(± 5 mm)	x (mm)	760	948
Wheelbase	(± 5 mm)	y (mm)	1401 ¹⁾	1625 ¹⁾
Service weight (with battery item 6.5)	(± 10 %)	kg	1195	1300
Wheels number, drive side/load side (x = driven)			1x + 1/2	1x + 1/2
Mast height, lowered		h1 (mm)	1315	1315
Lift		h3 (mm)	750	1574
Initialhub		h5 (mm)	–	125
Overall length	(± 5 mm)	l1 (mm)	2618 ¹⁾	2654 ¹⁾
Length to fork face	(± 5 mm)	l2 (mm)	1468	1504
Overall width	(± 5 mm)	b1 (mm)	790	790
Fork dimensions		s/e/l (mm)	55 x 180 x 1150	55 x 180 x 1150
Aisle width with pallet 800 x 1200 along forks		Ast (mm)	3031 ¹⁾	3118 ¹⁾
Turning radius (fork raised)		Wa (mm)	2236 ¹⁾	2445 ¹⁾
Travel speed (forward), with/without load	(± 5 %)	km/h	12/10	12/10
Travel speed (backwards), with/without load	(± 5 %)	km/h	10/10	10/10
Lifting speed, with/without load	(± 10 mm)	m/s	0.11/0.2	0.11/0.2
Lifting speed (initial lift), with/without load	(± 10 mm)	m/s	–	0.06/0.08
Drive motor (60 minutes rating)		kW	3	3
Lift motor rating 15 %		kW	1.7	1.7
Battery weight	(± 10 %)	kg	295	295
Sound level at operator's ear		dB (A)	< 70	< 70

1) With a 3 PzS Lateral battery change (+100 mm for 3 PzS vertical and 4 PzS lateral; +150 mm for the 4 PzS vertical)



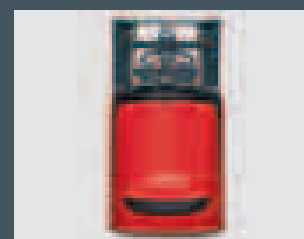
Drive system

- Four-point contact configuration for maximum stability
- Maximum speed 10 km/h laden, 12 km/h unladen
- Automatic braking as traction butterfly is released



OptiLift® Control

- Located behind scoop seat
- The 60° OptiLift® control brings smoothness and precision and quiet in operation
- High performance, energy efficient, compact lift unit
- 1200 kg capacity enables two pallets to be handled simultaneously



Power steering

- Effortless, proportional electric power steering with positive feedback
- Self centring steering for faster picking cycles
- Automatic speed reduction when cornering
- Manoeuvring effort varies depending on the speed



Workstation

- Wide, easy access from either side
- Truck activated by PIN code or by ignition key
- Generous storage compartments for shrink wrapping, pens, gloves, etc.
- Digital instrument display
- Padded, adjustable scoop seat provides additional comfort

Electric Medium-Level Order Picker 1000 kg V 10

SERIES 015

The superb Linde V range addresses the needs of modern businesses that require safe, fast and reliable multi-level order pickers.

The V 10 is capable of picking heights up to 3700 mm with a capacity of 1000 kg and combines excellent performance with simplified order picking and user-friendly design.

Recognising that no two order picking applications are the same, Linde designed the versatile V 10 with no less than four variants within which, a wide choice of options is available to meet the needs of different applications.

The suspension mounted platform has a low step height for easy access/exit and the intuitive control console layout simplifies the picking process for the operator resulting in highly efficient pick rates.

The Linde V 10 has to be the first choice for fast and efficient, medium-level order picking.



Safety

The V 10 order picker is designed to ensure the operator's safety. Its excellent visibility through and to either side of the mast offers the highest level of security. The low cab step height enhances safety and means the truck is as easy to use at maximum height as at floor level. The V 10 will only move when the floor mounted deadman switch is activated.

Performance

Efficiency and high-performance are words that graphically describe the capabilities of the V 10 medium-level order picker. It is capable of picking at heights up to 3700 mm. Its powerful and economical drive unit combines optimal performance with low energy consumption and is extremely durable.

Comfort

Designed not just to ensure high-performance, the V 10 is also very comfortable for the operator. Regardless of the weight of the load, the cab always sets it down gently thanks to the hydraulic cushioning

of the cylinder during the stroke process.

Suspension-mounted, the cab platform with its generous storage compartments cushions shocks and vibrations that may occur during travel lifting and lowering motions.

Reliability

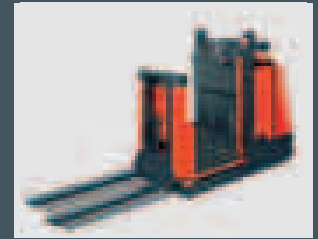
Thanks to the easy maintenance and programming, uptime is optimised and picking rates increased. Other technical features such as the central servicing and diagnosis interface, and a wide access cover that opens up even in an aisle, make the V 10 an extremely reliable truck.

Productivity

The advanced, highly functional ergonomic standards of the V 10 provide an environment that enables the operator to achieve consistently high picking rates. The integrated mast, console design and LED wheel position indicator make the V 10 a very manoeuvrable truck, fully at home in very narrow aisles.

Model designation		V 10 ¹⁾ low lift	V 10 ¹⁾ low lift with supplementary lift	V 10 ¹⁾ high lift without supplementary lift	V 10 ¹⁾ high lift with supplementary lift
Power type: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery	Battery
Load capacity	Q (kg)	1000	1000	1000	1000
Load centre distance	c (mm)	400/600	400/600	400/600	400/600
Height of mast, lowered	h1 (mm)	1470	1470	2200	2200
Lift	h3 (mm)	965	965	1700	1700
Height of mast, extended	h4 (mm)	2290	2290	3023	3950
Height of overhead guard (cabin)	h6 (mm)	–	–	2250	2250
Overall length	l1 (mm)	2465/2865	2555/2955	2465/2865	2555/2955
Length to fork face	l2 (mm)	1665	1755	1665	1755
Overall width	b1/b2 (mm)	880	880	880	880
Aisle width with pallet 1000 x 1200 across forks	Ast (mm)	1380	1380	1380	1380
Aisle width with pallet 800 x 1200 along forks	Ast (mm)	1080	1080	1080	1080
Travel speed, with/without load	km/h	9.0/9.0	9.0/9.0	9.0/9.0	9.0/9.0
Lifting speed, with/without load	m/s	0.10/0.15	0.10/0.15	0.10/0.15	0.10/0.15
Drive motor, 60 minute rating	kW	2.1	2.1	2.1	2.1
Lift motor, 15 % rating	kW	2.0	2.0	3.0	3.0
Battery according to IEC		254-2; A	254-2; A	254-2; A	254-2; A
Battery voltage/rated capacity (5 h)	V/Ah	24/440L (560L)	24/440L (560L)	24/560L (440L)	24/560L (440L)

1) Specifications with Simplex mast



Operators compartment

- Ample working space due to integration of control console in mast guide structure
- Platform is suspension-mounted and has a floor designed to absorb shock and vibration that may occur during travel, lifting and lowering motions



Battery and battery compartment

- Battery change by forklift, crane or roller track for multi-shift operation
- Battery compartments for 24 Volt batteries from 400 Ah – 620 Ah



Control panel and display

- Integrated control and display console positioned directly in operator's field of vision and displaying only relevant functions
- Ergonomic and simple, intuitive layout of steering knob on left, grab handle and butterfly drive switch on right
- Hydraulic functions and horn actuated by pushbuttons in grab handle bay



Drive

- The powerful and economical drive unit combines optimal performance with low energy consumption and low wear
- Latest MOSFET technology
- Rail guide rollers can be fitted for very narrow aisle working

Electric High-Level Order Picker 1100 kg V 11

SERIES 015

Designed for cost-effective and highly efficient high-level order picking up to 7000 mm the Linde V 11 with a capacity of 1100 kg, boasts many features aimed at optimising performance while keeping operating costs to a minimum.

Those features include a clearview mast; cushioned cab and a highly functional control layout, which are all designed to assist the operator in working to the highest levels of efficiency in a fatigue-free environment.

The maintenance-free AC traction and lift motors together with the Linde electronic control system deliver superbly smooth and seamless travel and lift movements.

A series of interlocks and two-handed operation of the controls protects the operator while working.

From this safe and comfortable environment the operator is able to fully focus on the order picking process to the benefit of the business.



Safety

The V 11 order picker is designed to ensure the operator's safety. Its excellent visibility through and to either side of the mast offers the highest level of security. The low cab step height enhances safety and means the truck is as easy to use at maximum height as at floor level. The V 11 is only operable when the floor mounted deadman switch is activated.

Performance

Efficiency and high-performance are words that accurately describe the capabilities of the V 11 medium-level order picker. It is capable of picking at heights up to 7000 mm. Its powerful, maintenance-free traction and lift motors combine optimal performance with low energy consumption and are extremely durable.

Comfort

Designed not just to ensure high-performance, the V 11 is also very comfortable for the operator. Regardless of the weight of the load, the cab always sets it down gently

thanks to the hydraulic cushioning of the cylinder during the stroke process. Suspension-mounted, the cab platform with its generous storage compartments cushions shocks and vibrations that may occur during travel lifting and lowering motions.

Reliability

Thanks to the easy maintenance and programming, uptime is optimised and picking rates increased. Other technical features such as the central servicing and diagnosis interface, and a wide access cover that opens up even in an aisle, make the V 11 an extremely reliable truck.

Productivity

The advanced, highly functional ergonomic standards of the V 11 provide an environment that enables the operator to achieve consistently high picking rates. The integrated mast, console design and LED wheel position indicator make the V 11 a very manoeuvrable truck, the ideal order picker in very narrow aisles.

Model designation		V 11 Simplex Mast	V 11 Telescopic Mast
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery
Load capacity	Q (kg)	1100	1100
Load centre distance	c (mm)	400/600	400/600
Height of mast, lowered	h1 (mm)	2250	2250
Lift	h3 (mm)	1700 ¹⁾	2825 ¹⁾
Height of mast, extended	h4 (mm)	4040	5165
Height of overhead guard (cabin)	h6 (mm)	2340	2340
Overall length	l1 (mm)	3180	3227
Length to fork face	l2 (mm)	1982	2027
Overall width	b1/b2 (mm)	880/900	880/900
Aisle width pallet 1000 x 1200 crosswise	Ast (mm)	–	–
Aisle width pallet 800 x 1200 lengthwise	Ast (mm)	1080	1080
Travel speed, with/without load	km/h	11/11	11/11
Lifting speed, with/without load	m/s	0.36/0.39	0.36/0.39
Drive motor, 60 minute rating	kW	4.6	4.6
Lift motor, 15 % rating	kW	11.5	11.5
Battery acc. IEC		254-2; A	254-2; A
Battery voltage/rated capacity (5 h)	V/Ah	48/420L	48/420L



Operators compartment

- High operator comfort to permit high order picking performance
- Cab is suspension-mounted and has a floor designed to absorb shock and vibration that may occur during travel, lifting and lowering motions



Motors

- Robust, economical high-performance AC-drive and AC-lifting concept employing minimum wear
- Highly responsive and constant driving independent of load weight
- The powerful drive and lift motors assure for the driver comfortable working with a high throughput



Safety

- Two-hand safety operation of controls
- Automatic travel speed reduction with high platform lift
- All travel and lift motions interlocked through deadman's switch and integrated two-hand operation



Control Panel and Display

- Clear and distinct control layout enables all main functions to be operated separately or in combination without shifting position of hands
- Key-lock truck switch and all controls integrated in housing to provide full order picking capability when installed on load-side

Electric High-Level Order Picker 1200 kg V 12

SERIES 015

For those businesses whose competitiveness and success depends on maintaining a consistent and high level of service to their clients with efficient and accurate order picking processes, choosing the right order picking equipment is vital.

Linde's advanced V range of multi-level orders was designed with those essential criteria in mind. The V 12 is the largest in the superb Linde V series with a lifting capacity of 1200 kg and picking height capabilities up to 10480 mm.

Given the best equipment, it is ultimately the operator who is the key to efficient and accurate order picking and with this in mind the Linde V 12 provides the perfect interface between operator and truck.

The spacious, cushioned cab and intuitive control console layout requiring minimal hand movement are designed to provide optimum comfort and simplify the picking process. Supplementary lift ensures the pallet is always at the most ergonomic picking height.



Safety

The V 12 order picker is designed to ensure the operator's safety. Its excellent visibility through and to either side of the mast offers the highest level of security. The low cab step height enhances safety and means the truck is as easy to use at maximum height as at floor level. The V 12 is only operable when the floor-mounted deadman switch is activated.

Performance

Efficiency and high-performance are words that accurately describe the capabilities of the V 12 high-level order picker. It is capable of picking at heights up to 10480 mm. Its powerful, maintenance-free traction and lift motors combine optimal performance with low energy consumption and are extremely durable.

Comfort

Designed not just to ensure high-performance, the V 12 is also very comfortable for the operator. Regardless of the weight of the load, the cab always sets it down gently

thanks to the hydraulic cushioning of the cylinder during the stroke process. Suspension-mounted, the cab platform with its generous storage compartments cushions shocks and vibrations that may occur during travel lifting and lowering motions.

Reliability

Thanks to the easy maintenance and programming, uptime is optimised and picking rates increased. Other technical features such as the central servicing and diagnosis interface, and a wide access cover that opens up even in an aisle, make the V 12 an extremely reliable truck.

Productivity

The advanced, highly functional ergonomic standards of the V 12 provide an environment that enables the operator to achieve consistently high picking rates. The integrated mast, console design and LED wheel position indicator make the V 12 a very manoeuvrable truck, the ideal order picker in very narrow aisles.

Model designation		V 12 Telescopic Mast	V 12 Triplex Mast
Power unit: battery, diesel, LP gas, mains power		Battery	Battery
Load capacity	Q (kg)	1200	1200
Load centre distance	c (mm)	400/600	400/600
Height of mast, lowered	h1 (mm)	2250	2250
Lift	h3 (mm)	2825 ¹⁾	4390 ¹⁾
Height of mast, extended	h4 (mm)	5165	6730
Height of overhead guard (cabin)	h6 (mm)	2340	2340
Overall length	l1 (mm)	2937	2982
Length to fork face	l2 (mm)	2137	2182
Overall width	b1/b2 (mm)	1180/1200	1180/1200
Aisle width pallet 800 x 1200 across forks	Ast (mm)	1380	1380
Aisle width pallet 800 x 1200 along forks	Ast (mm)	–	–
Travel speed, with/without load	km/h	11/11	11/11
Lifting speed, with/without load	m/s	0.30/0.37	0.30/0.37
Drive motor, 60 minute rating	kW	4.6	4.6
Lift motor, 15 % rating	kW	11.5	11.5
Battery according to IEC		254-2; A	254-2; A
Battery voltage/rated capacity (5 h)	V/Ah	48/560L	48/560L



Operators compartment

- High operator comfort to permit high order picking performance
- Cab is suspension-mounted and has a floor designed to absorb shock and vibration that may occur during travel, lifting and lowering motions



Motors

- Robust, economical high-performance AC-drive and AC-lifting concept employing minimum wear
- Highly responsive and constant driving independent of load weight
- The powerful drive and lift motors assure for the driver comfortable working with a high throughput



Safety

- Two-hand safety operation of controls
- Automatic travel speed reduction with high platform lift
- All travel and lift motions interlocked through deadman's switch and integrated two-hand operation



Control Panel and Display

- Clear and distinct control layout enables all main functions to be operated separately or in combination without shifting position of hands
- Key-lock truck switch and all controls integrated in housing to provide full order picking capability when installed on load-side

Stand-on Electric Counterbalance Truck E 10

SERIES 334

The unique design concept of the Linde E 10 stand-on electric counterbalance truck results in a compact, highly manoeuvrable truck suitable for a wide range of applications: such as storage/retrieval, block stacking and pallet transfer duties.

There are two versions available one of which is suitable for operation in ISO containers. The diagonal stand-on driving posture of the operator means that travelling and manoeuvring in either direction is accomplished with strain-free ease.

With the narrow aisle capability of a pallet stacker and the versatility of a forklift truck to handle both open and closed based pallets the E 10 has multi-purpose capabilities, which make it an attractive business proposition for companies seeking an adaptable truck that is able to undertake many different tasks.



Safety

The stand-on operator's compartment of the Linde E 10 electric counterbalance truck is designed to ensure the operator's body always remains within the contours of the truck. The diagonal driving posture provides safe, strain-free travel and visibility in either direction and two independent braking systems provide effective stopping power for every situation

Performance

With its compact chassis and hydrostatic power steering the E 10 is ideal for narrow aisle and block stacking applications. The unique multi-function control lever provides seamless, intuitive control and the clearview mast design provides excellent visibility for precise and efficient load handling.

Comfort

The low access stand-on platform can be hydraulically adjusted in height to suit individual operator preferences and together with a padded backrest provides a safe and comfortable working environment. A multi-

function control grip and the diagonal driving posture ensures effortless strain-free travelling and manoeuvring in either direction for optimum efficiency.

Reliability

The compact chassis, overhead guard and mast are integrated to form a rugged structure for maximum strength and durability and is profiled for optimum visibility and manoeuvrability. All key components are securely protected within the chassis structure.

Productivity

The E 10 is fitted with the advanced digital control system which governs traction and hydraulics for optimum utilisation of battery energy together with precise, responsive and seamless speed control, plus automatic and reverse electrical braking for highly efficient and productive work throughput.

Model designation		E 10 Simplex	E 10 Duplex	E 10 Triplex
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery
Load capacity	Q (kg)	1000	1000	1000
Load centre	c (mm)	600	600	600
Service weight	kg	1973	2070	2189
Mast/fork carriage tilt, forward/backward	α/β (deg)	1.4/4 ¹⁾	1.4/4 ¹⁾	1.4/4 ¹⁾
Height of mast, lowered	h1 (mm)	2120 (2000)	2180 (2060)	2230 (2110)
Lift	h3 (mm)	1600 (1480)	3520 (3280)	5255 (4895)
Height of overhead guard (cabin)	h6 (mm)	2130 (2010)	2130 (2010)	2130 (2010)
Overall length	l1 (mm)	2402	2402	2402
Length to fork face	l2 (mm)	1252	1252	1252
Overall width	b1/b2 (mm)	850	850	850
Aisle width with pallet 1000 x 1200 crosswise	Ast (mm)	2600	2600	2600
Aisle width with pallet 800 x 1200 lengthwise	Ast (mm)	2710	2710	2710
Travel speed, with/without load	km/h	8.0/9.0	8.0/9.0	8.0/9.0
Lifting speed, with/without load	m/s	0.17/0.27	0.16 /0.26	0.16/0.25
Drive motor (S2 60 min)	kW	2.2	2.2	2.2
Lift motor (S3 15 %)	kW	3.0	3.0	3.0
Battery voltage/rated capacity (5 h)	V/Ah	24/420	24/420	24/420

1) With optional tilting fork carriage unit



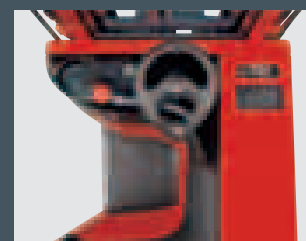
Chassis

- Rounded contours for optimum manoeuvrability
- Compact dimensions ideal for block storage
- Integrated chassis, mast and overhead guard form high strength structure)



Mast

- Precision lift control by proportional valve
- Powerful 3.0 kW lift motor for rapid lifts
- Clearview design for excellent visibility
- Optional tilting forks and sideshift



Ergonomics

- Ergonomic operator's compartment
- Padded backrest
- Multi-function fingertip grip control
- Height adjustable stand-on platform
- Hydrostatic power steering and compact steering wheel

Operator's compartment

- Side-stance stand-up position ensures good visibility in all directions
- Operator well protected within truck
- Excellent view of forks and load

Electric Counterbalanced Trucks

Capacity 1200 – 2000 kg

E 12, E 14, E 15,
E 16, E 18, E 20

SERIES 386



This outstanding range of three wheeled configuration electric forklifts from Linde offers a comprehensive selection of specifications to meet the hugely varying requirements of every type of industrial and commercial application.

Whether the requirement is for compact chassis, long wheelbase or high versions for bulky loads this exciting new series offers the optimum solution.

Powerful AC maintenance-free twin drive motors combine with Linde twin accelerator control to offer impressive, energy efficient performance and safe, precise load handling.

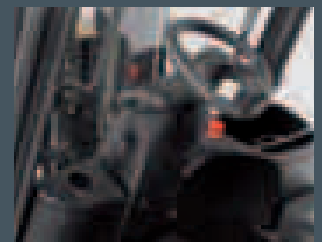
Designed around the operator these fine models offer the highest levels of comfort and safety with unique features such as the Linde Protector Frame, which integrates the operator's compartment and overhead guard to create a total protection zone.

Whatever the task these industry leading trucks will complete it safely, efficiently and cost-effectively.



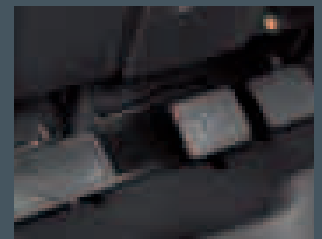
Linde clearview mast design with top mounted tilt cylinders for seamless load control and stability

- Excellent view of load and surroundings through the robust yet slim mast profiles
- Nominal capacity retained to maximum lift heights



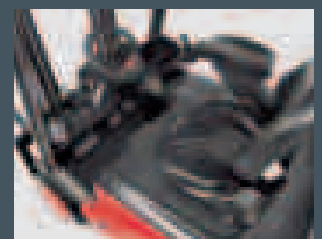
Linde hydrostatic power steering

- Progressive steering torque
- Minimal physical demands on the operator
- Compact ergonomically designed steering wheel



Linde twin accelerator control

- Seamless, rapid reversing without repositioning the feet
- Short pedal travel
- Increased throughput and performance



Linde operator's compartment

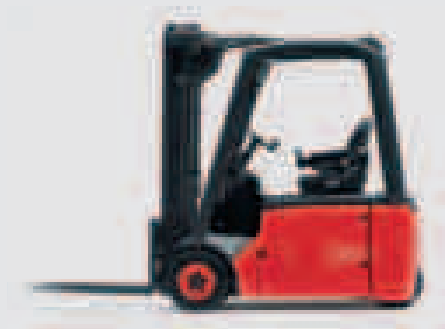
- Ergonomically designed for efficient, fatigue-free working
- Spacious operator's compartment with generous floor plate area
- Cushioned comfort – mast and drive axle are isolated from the chassis and cab by a unique resilient suspension system that absorbs shock loadings

Electric Counterbalanced Trucks

Capacity 1200 – 2000 kg

E 12, E 14, E 15,
E 16, E 18, E 20

SERIES 386



Safety

Linde ProtectorFrame: The protective overhead guard and its supporting frame together form a strong and completely enclosed protective zone providing optimum structural integrity, safety and protection for the operator. The top mounted tilt cylinders provide seamless, smooth control of the tilt movements for excellent load stability in all operating conditions. This unique design also enables slimmer mast profiles to be fitted for outstanding visibility.

Performance

One would expect a high performance truck to have a high performance traction system – and that is exactly what the Linde compact drive axle and lift system delivers. Powerful motors, maintenance-free brakes and intelligent electronic control form an impressive power pack to deliver the highest levels of efficiency and productivity.

Manufacturer's type designation		E 12	E 14	E 15	E 16 C	E 16
Drive: electric (battery or mains), diesel, petrol, fuel gas		Battery	Battery	Battery	Battery	Battery
Load capacity/rated load	Q (t)	1.2	1.4	1.5	1.6	1.6
Load centre distance	c (mm)	500	500	500	500	500
Service weight	kg	2805	2890	2985	3095	3060
Tilt of mast/fork carriage forward/backward	Grad	5/7	5/7	5/7	5/7	5/7
Height, mast lowered	h1 (mm)	2019 ¹⁾	2019 ¹⁾	2019 ¹⁾	2019 ¹⁾	2019 ¹⁾
Lift	h3 (mm)	2800	2800	2800	2800	2800
Height of overhead guard (cabin)	h6 (mm)	1970	1970	1970	1970	1970
Overall length	l1 (mm)	2601	2746	2746	2766	2854
Length to face of forks	l2 (mm)	1701	1846	1846	1866	1954
Overall width	b1/b2 (mm)	1090/1050 ²⁾	1090/1050 ²⁾	1090/1050 ²⁾	1090/1050 ²⁾	1090/1050 ²⁾
Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3040	3177	3177	3196	3281
Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3164	3301	3301	3320	3405
Travel speed, laden/unladen	km/h	12.5/13.5	16/16	12.5/13.5	16/16	16/16
Lift speed, laden/unladen	m/s	0.3/0.5	0.4/0.6	0.3/0.5	0.4/0.6	0.4/0.6
Drive motor rating S2 60 min	kW	2 x 3.5	2 x 4.6	2 x 3.5	2 x 4.6	2 x 4.6
Lift motor rating at S3 15 %	kW	5	10	5	10	10
Battery voltage, nominal capacity K5	V/Ah	24/550 (575) ³⁾	48/440 (460) ³⁾	24/880 (920) ³⁾	48/440 (460) ³⁾	48/550 (575) ³⁾

1) With 150 mm free lift

2) With wrap-around tyre, 18 x 6 b1 – 1074

3) Data between brackets are taken from the ZVEI instruction leaflet on

"Use of European-series cells in DIN-standard batteries" (July 2002 edition).

Comfort

Consistently high levels of performance and efficiency for extended periods is only possible if the operator is comfortable. The ergonomic layout of all the controls, the adjustability the armrest and seat, Linde Load Control, and twin accelerator pedals provide the best possible intuitive interface between the truck and the operator.

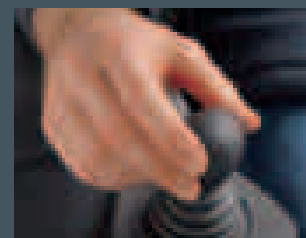
Reliability

An electric fork lift truck depends on reliable electronic systems. The Linde electronic control system provides a high level of reliability because of its dual circuit monitoring system and the sealed aluminium housing which provides total protection for the electronics from the ingress of dust and moisture. For additional adaptability a simple programming system enables the performance parameters to be adjusted to meet individual application requirements.

Productivity

Effective in operation, efficient in reducing costs: the unique Linde energy management system ensures intelligent and economical consumption of energy. Energy can also be obtained quickly utilising the optional built-in charging unit or one of the five simple and rapid battery changing methods. The result: more uptime and increased productivity.

E 16 L	E 16 H	E 18	E 18 L	E 20 L
Battery	Battery	Battery	Battery	Battery
1.6	1.6	1.8	1.8	2.0
500	500	500	500	500
3075	3340	3295	3270	3335
5/7	5/7	5/7	5/7	5/7
2019 ¹⁾	2194 ¹⁾	2019 ¹⁾	2019 ¹⁾	2019 ¹⁾
2800	3150	2800	2800	2800
1970	2130	1970	1970	1970
2962	2906	2879	2967	2967
2062	2006	1979	2067	2067
1090/1050 ²⁾	1090/1050 ²⁾	1172/1050 ²⁾	1172/1050 ²⁾	1172/1050 ²⁾
3389	3332	3305	3394	3394
3513	3456	3429	3518	3518
16/16	16/16	16/16	16/16	16/16
0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6	0.4/0.6
2 x 4.6	2 x 4.6	2 x 4.6	2 x 4.6	2 x 5
10	10	10	10	11
48/660 (690) ³⁾	48/700 (700) ³⁾	48/550 (575) ³⁾	48/660 (690) ³⁾	48/660 (690) ³⁾



Linde Load Control

- Safe and seamless load handling with millimetre accuracy
- Effortless fingertip control of all mast functions
- Joystick controls integrated into the armrest



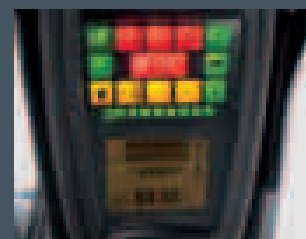
Linde compact drive axle

- Twin drive design with high performance Linde AC technology
- Integrate lift motor
- Optimum energy efficiency



Economical AC drive

- Seamless acceleration and variable torque characteristics
- Excellent structural integrity and stability
- Extremely quiet in operation



Linde energy management

- Optimised energy consumption
- Simple horizontal or vertical battery changing options
- Optional built-in high frequency charger for convenience and flexibility

Electric Counterbalanced Trucks

Capacity 1600 – 2000 kg

E 16, E 18, E 20

SERIES 386

The unique combi-steer axle fitted to this series enables this four wheeled truck to operate in narrow aisles, which are normally the preserve of three wheeled trucks. This offers the customer the added versatility of using the truck in a wider range of tasks that might previously have required two different models.

Able to operate both outside and inside in confined areas the combination of four wheeled stability and the manoeuvrability of a three wheeler this series offers total flexibility and real value for money.

This superb four wheeled range incorporates powerful high torque, AC twin drive motors and an operators compartment that provides and outstanding, fatigue-free working environment for optimum productivity

Safety and comfort is assured with the Linde Protector Frame, which integrates the operator's compartment and overhead guard to create a total protection zone.

These advanced design features are unique to Linde and the total package guarantees unsurpassed performance.



Safety

Linde ProtectorFrame: The protective overhead guard and its supporting frame together form a strong and completely enclosed protective zone providing optimum structural integrity, safety and protection for the operator. The top mounted tilt cylinders provide seamless, smooth control of the tilt movements for excellent load stability in all operating conditions. This unique design also enables slimmer mast profiles to be fitted for outstanding visibility.

Performance

One would expect a high performance truck to have a high performance traction system – and that is exactly what the Linde compact drive axle and lift system delivers. Powerful motors, maintenance-free brakes and intelligent electronic control form an impressive power pack to deliver the highest levels of efficiency and productivity.

Comfort

Consistently high levels of performance and efficiency for extended periods is only

possible if the operator is comfortable. The ergonomic layout of all the controls, the adjustability the armrest and seat, Linde Load Control, and twin accelerator pedals provide the best possible intuitive interface between the truck and the operator.

Reliability

An electric fork lift truck depends on reliable electronic systems. The Linde electronic control system provides a high level of reliability because of its dual circuit monitoring system and the sealed aluminium housing which provides total protection for the electronics from the ingress of dust and moisture.

Productivity

Effective in operation, efficient in reducing costs: the unique Linde energy management system ensures intelligent and economical consumption of energy. Energy can also be obtained quickly utilising the optional built-in charging unit or one of the five simple and rapid battery changing methods. The result: more uptime and increased productivity.

Manufacturer's type designation		E 16 P	E 16 PH	E 18 PH	E 20 PL	E 20 PH	E 20 PHL
Drive: electric (battery or mains), diesel, petrol, fuel gas		Battery	Battery	Battery	Battery	Battery	Battery
Load capacity/rated load	Q (t)	1.6	1.6	1.8	2.0	2.0	2.0
Load centre distance	c (mm)	500	500	500	500	500	500
Service weight	kg	3017	3158	3335	3386	3516	3514
Tilt of mast/fork carriage forward/backward	Grad	5/7.5	5/7.5	5/7.5	5/7.5	5/7.5	5/7.5
Height, mast lowered	h1 (mm)	2194 ²⁾	2194 ¹⁾	2194 ²⁾	2194 ²⁾	2194 ²⁾	2194 ²⁾
Lift	h3 (mm)	3110	3110	3110	3110	3110	3110
Height of overhead guard (cabin)	h6 (mm)	1970	2130	2130	1970	2130	2130
Overall length	l1 (mm)	2929	2978	2983	3045	2987	3095
Length to face of forks	l2 (mm)	2029	2078	2083	2145	2087	2195
Overall width	b1/b2 (mm)	1090/ 1050 ³⁾	1090/ 1050 ³⁾	1172/ 1050 ³⁾	1172/1050	1172/1050	1172/1050
Aisle width for pallets 1000 x 1200 crossways	Ast (mm)	3355	3404	3409	3470	3412	3520
Aisle width for pallets 800 x 1200 lengthways	Ast (mm)	3479	3528	3533	3595	3537	3645
Travel speed, laden/unladen	km/h	20/20	20/20	20/20	20/20	20/20	20/20
Lift speed, laden/unladen	m/s	0.48/0.6	0.48/0.6	0.47/0.6	0.45/0.6	0.45/0.6	0.45/0.6
Drive motor rating S2 60 min	kW	2 x 5	2 x 5	2 x 5	2 x 5	2 x 5	2 x 5
Lift motor rating at S3 15 %	kW	11	11	11	11	11	11
Battery voltage, nominal capacity K5	V/Ah	48/550 (575) ⁴⁾	48/700 (700) ⁴⁾	48/700 (700) ⁴⁾	48/660 (690) ⁴⁾	48/700 (700) ⁴⁾	48/840 (840) ⁴⁾

1) Optional: pneumatic tyres, 16 x 68/10 PR

2) With 150 mm free lift

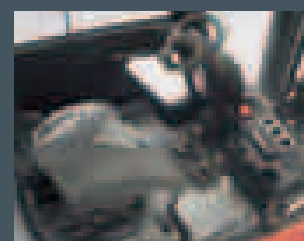
3) With wrap-around tyre, 18 x 6 b1 – 1074

4) Data between brackets are taken from the ZVEI instruction leaflet on "Use of European-series cells in DIN-standard batteries" (July 2002 edition).



Linde combi axle

- Combi axle gives this four wheeled truck the maneuverability of a three wheeler
- Excellent four wheeled stability and safety on hard uneven surfaces
- The perfect flexible combination for inside/outside working



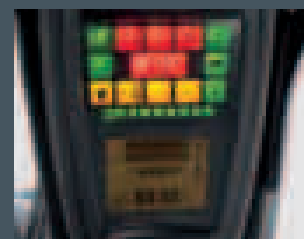
Linde operator's compartment

- Ergonomically designed for efficient, fatigue-free working
- Spacious operator's compartment with generous floor plate area
- Cushioned comfort – mast and drive axle are isolated from the chassis and cab by a unique resilient suspension system that absorbs shock loadings



Linde compact drive axle

- Twin drive design with high performance Linde AC technology
- Integrate lift motor
- Optimum energy efficiency



Linde energy management

- Optimised energy consumption
- Simple horizontal or vertical battery changing options
- Optional built-in high frequency charger for convenience and flexibility

Electric Counterbalanced Trucks

Capacity 2000, 2500 & 3000 kg

E 20, E 20/600, E 25, E 25/600, E 30, E 30/600

SERIES 336-02

With its unique Linde combi steer axle, this popular and well proven series provides the versatility and outstanding manoeuvrability to operate both inside and outside to carry out a hugely variable range of tasks in every conceivable type of industrial application.

The combi steer axle enables this four wheeled truck to operate in aisles normally the preserve of three wheelers since the steering angle of this outstanding design concept enables the truck to turn on the spot around its front axle. Another valuable benefit is the tilting cabin which allows wide, easy access from either side to the battery and components making battery changing a simple routine and service intervals are minimised. The spacious, comfortable and superbly functional operator's compartment provides a truly functional interface between operator and truck. This combines with powerful, high torque twin drive motors to deliver impressive cost-effective efficiency and productivity.



Safety

Outstanding manoeuvrability. With its unique, patented Linde combi-steer axle and rugged profiled chassis, these versatile high performance forklifts combine exceptional stability characteristics with impressive manoeuvrability for safe, precision load handling in a wide variety of intensive applications.

Performance

Powerful twin drive motors combined with the intuitive fingertip, joystick Linde Load Control system enable the operator to translate the trucks impressive performance capabilities into unsurpassed efficiency and productivity.

Comfort

Consistently high levels of performance and efficiency for extended periods is only possible if the operator is comfortable. The ergonomic layout of the controls, the adjustability of the armrest and the seat, Linde Load Control, and twin accelerator pedals provide the best possible intuitive interface between the operator and truck.

Reliability

Electric forklifts depend on reliable electronics. The Linde Digital Control system provides a high level of reliability with its dual circuit monitoring system and sealed aluminium housing, which provides total protection for the electronics from the ingress of dust and moisture. Linde Digital Control enables the performance parameters to be adjusted to suit individual application requirements.

Productivity

Effective and cost-efficient at work. Battery change completed in record time in one easy motion thanks to the tilting cab. Minimal downtime is an added benefit of this convenient access. Time for battery maintenance is reduced to mere minutes.

Model designation		E 20	E 20/600	E 25	E 25/600	E 30	E 30/600
Power unit: Battery, diesel, gasoline, LP gas, AC		Battery	Battery	Battery	Battery	Battery	Battery
Load capacity	Q (kg)	2000	2000	2500	2500	3000	3000
Load center	c (mm)	500	600	500	600	500	600
Service weight	kg	3770	4200	4505	4985	4925	5445
Mast/fork carriage tilt, forward/back	α/β (°)	5/7.5	5/7.5	5/7.5	5/7.5	5/7.5	5/7.5
Mast height, lowered	h1 (mm)	2227 ¹⁾	2227 ¹⁾	2229 ¹⁾	2229 ¹⁾	2229 ¹⁾	2229 ¹⁾
Lift	h3 (mm)	3150	3150	3050	3050	3050	3050
Overhead guard/cab height	h6 (mm)	2070	2227	2070	2257	2100	2252
Overall length	l1 (mm)	3150	3350	3370	3578	3425	3587
Head length	l2 (mm)	2150	2150	2370	2378	2425	2387
Overall width	b1/b2 (mm)	1090	1090	1170	1170	1170	1228
Aisle width, 1000 x 1200 pallet crosswise	Ast (mm)	3472	3472	3691	3691	3744	3744
Aisle width, 800 x 1000 pallet lengthwise	Ast (mm)	3599	3660	3819	3819	3872	3872
Travel speed, with/without load	km/h	15.5/17	15.5/17	15/16	15/16	15/16	15/16
Lift speed, with/without load	m/s	0.34/0.53	0.34/0.53	0.33/0.48	0.33/0.48	0.31/0.48	0.31/0.55
Drive motor (60 minutes rating)	kW	2 x 5.5	2 x 5.5	2 x 6.4	2 x 6.4	2 x 6.4	2 x 6.4
Lift motor, 15 % rating	kW	13.5	13.5	13.5	13.5	13.5	13.5
Battery voltage/rated capacity (5 h)	V/Ah	80/440	80/560	80/550	80/700	80/550	80/700

1) With 150 mm free lift



Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Combination of dual motor drive and patented Linde combi axle results in supreme maneuverability in tightest spaces, enabling truck to turn around on the spot



Linde twin drive pedals

- Quick change of forward/reverse direction without changing feet on pedals
- Short pedal stroke
- Increased productivity



Linde combi axle

- Unites the advantages of both center-pivoted and swing axle
- Small turning radius equivalent to three-wheel truck
- Four-wheeler stability and comfort



Tiltback cab

- Quick battery change and streamlined servicing
- Convenient access to battery
- Safe, rugged chassis enclosed on all sides

Electric Counterbalanced Trucks

Capacity 2500 & 3000 kg

E 25 S, E 25/600 S, E 30 S, E 30/600 S

SERIES 336-03

With its unique Linde combi steer axle, this popular and well proven series provides the versatility and outstanding manoeuvrability to operate both inside and outside to carry out a hugely variable range of tasks in every conceivable type of industrial application.

The combi steer axle enables this four wheeled truck to operate in aisles normally the preserve of three wheelers since the steering angle of this outstanding design concept enables the truck to turn on the spot around its front axle. Another valuable benefit is the tilting cabin which allows wide, easy access from either side to the battery and components making battery changing a simple routine and service intervals are minimised. The spacious, comfortable and superbly functional operator's compartment provides a truly functional interface between operator and truck. This combines with powerful, high torque AC twin drive motors to deliver impressive cost-effective efficiency and productivity.



Safety

Outstanding manoeuvrability. With its unique, patented Linde combi-steer axle and rugged profiled chassis, these versatile high performance forklifts combine exceptional stability characteristics with impressive manoeuvrability for safe, precision load handling in a wide variety of intensive applications.

Performance

Powerful twin AC drive motors combined with the intuitive fingertip, joystick Linde Load Control system enable the operator to translate the trucks impressive performance capabilities into unsurpassed efficiency and productivity.

Comfort

Consistently high levels of performance and efficiency for extended periods is only possible if the operator is comfortable. The ergonomic layout of the controls, the adjustability of the armrest and the seat, Linde Load Control, and twin accelerator pedals provide the best possible intuitive interface between the operator and truck.

Reliability

Electric forklifts depend on reliable electronics. The Linde Digital Control system provides a high level of reliability with its dual circuit monitoring system and sealed aluminium housing, which provides total protection for the electronics from the ingress of dust and moisture. Linde Digital Control enables the performance parameters to be adjusted to suit individual application requirements.

Productivity

Effective and cost-efficient at work. Battery change completed in record time in one easy motion thanks to the tilting cab. Minimal downtime is an added benefit of this convenient access. Time for battery maintenance is reduced to mere minutes.

Model designation		E 25 S	E 25/600 S	E 30 S	E 30/600 S
Power unit: Battery, diesel, gasoline, LP gas, AC		Battery	Battery	Battery	Battery
Load capacity	Q (kg)	2500	2500	3000	3000
Load center	c (mm)	500	600	500	600
Service weight	kg	4505	4985	4925	5445
Mast/fork carriage tilt, forward/backward	α/β (°)	5/7.5	5/7.5	5/7.5	5/7.5
Mast height, lowered	h1 (mm)	2229 ²⁾	2229 ²⁾	2229 ²⁾	2229 ²⁾
Lift	h3 (mm)	3050	3050	3050	3050
Overhead guard/cab height	h6 (mm)	2070	2227	2070	2227
Overall length	l1 (mm)	3371	3579	3425	3587
Head length	l2 (mm)	2371	2379	2425	2387
Overall width	b1/b2 (mm)	1180	1228	1180 (1228) ¹⁾	1228
Aisle width, 1000 x 1200 mm pallet crosswise	Ast (mm)	3691	3691	3744	3749
Aisle width, 800 x 1000 mm pallet lengthwise	Ast (mm)	3819	3819	3872	3827
Travel speed with/without load	km/h	20/20	20/20	20/20	20/20
Lift speed with/without load	m/s	0.44/0.53	0.44/0.53	0.42/0.51	0.42/0.51
Drive motor (S2 60 minutes rating)	kW	2 x 9	2 x 9	2 x 9	2 x 9
Lift motor (S3 15 % rating)	kW	17	17	17	17
Battery voltage/rated capacity (5 h)	V/Ah	80/550	80/700	80/550	80/700

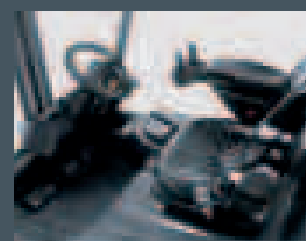
1) Figures in parentheses for 23 x 10-12 tyres

2) With 150 mm free lift



Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Combination of dual motor drive and patented Linde combi axle results in supreme maneuverability in tight spaces, enabling truck to turn around on the spot



Linde operator compartment

- Ergonomic design for efficient, fatigue-free working
- Spacious cab with comfortable footwell and adjustable seat
- Excellent visibility of load and surroundings due to slim-line mast sections



Linde combi axle

- Unites the advantages of both center-pivoted and swing axle
- Small turning radius equivalent to three-wheel truck
- Four-wheeler stability and comfort



Tiltback cab

- Convenient access to battery
- Quick battery change and streamlined servicing
- Safe, rugged chassis enclosed on all sides

Electric Counterbalanced Trucks

Capacity 3500 – 4800 kg

E 35, E 40, E 48

SERIES 337

These high capacity, heavy-duty electric trucks are designed to provide optimum versatility in applications requiring heavy loads to be handled both inside and outside. Equally at home moving palletised or palletless loads using specialised attachments, these high performance trucks carry out any task with impressive efficiency and precision.

Fitted with large capacity batteries the truck will keep on working through long, demanding shifts, only needing to stop for the operator's natural breaks. The operator sits in splendid comfort in the spacious, hydraulically cushioned cab fitted with a comfort-class seat and all controls located for effortless, intuitive use. Employing energy-efficient Linde truck control technology, the output of the powerful, high torque drive motor, together with the unique Linde twin accelerator pedal system translates into unsurpassed, precision load handling.

The Linde twin pedal accelerator system actuates regenerative electric braking as either pedal is released and also enables rapid and safe travel direction changes for busy shunting duties. The perfect interface between operator and truck has been achieved to ensure consistently high efficiency and productivity levels to optimise the return on the customer's investment in the equipment.



Safety

High-level engineering, high-grade construction. These fork-lifts are designed and built for tough duty. The operator retains precise control of the truck at all times with three independent braking systems and anti-kick hydraulic power steering.

Performance

The powerful 12.5 kW tractor motor enables the operator to turn the truck's vast potential into utmost productivity on the job. All mast and auxiliary hydraulics functions are controlled effortlessly with the central control lever.

Comfort

Man and machine are perfectly interfaced on these high-capacity forklifts. Intuitive operation without any need to shift hands from the steering wheel or control levers or switch feet between pedals means that the operator can concentrate wholly on the essentials: basic for fast, stress-free working.

Reliability

Well proven in demanding, heavy duty applications. Designed using computerised stress analysis. Optimum structural integrity, stability and durability is assured.

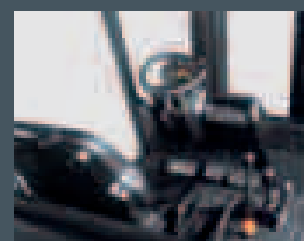
Productivity

Effective and costefficient at work. Linde electric forklifts are equipped with the Linde Digital Control (LDC) system, which achieves driving characteristics very similar to hydrostatic-drive trucks. As a result, productivity is enhanced and energy consumption stays low. A fault diagnosis system reduces time and expense for maintenance.



Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Unsurpassed maneuverability in this truck size category, including tight cornering



Linde twin drive pedals

- Quick change of forward/reverse direction without changing feet on pedals
- Short pedal stroke
- Increased productivity



Battery change

- Battery changed in next to no time, easily lifted out of counterweight using hoist or lift truck
- High-capacity 80 V batteries, 580 – 840 Ah



Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity

Model designation		E 35	E 40	E 48
Power unit: battery, diesel, petrol, LP gas, mains power		Battery	Battery	Battery
Load capacity	Q (kg)	3500	4000	4800
Load centre	c (mm)	500	500	500
Service weight	kg	6240	6870	6980
Mast/fork carriage tilt, forward/backward	α/β (°)	6/9 ²⁾	6/9 ²⁾	6/9 ²⁾
Height of mast, lowered	h1 (mm)	2382 ¹⁾	2382 ¹⁾	2375 ¹⁾
Lift	h3 (mm)	3250	3250	3150
Height of overhead guard (cabin)	h6 (mm)	2270	2270	2270
Overall length	l 1 (mm)	3690 ³⁾	3835 ³⁾	4135 ³⁾
Length to fork face	l 2 (mm)	2690 ³⁾	2835 ³⁾	3135 ³⁾
Overall width	b1/b2 (mm)	1350 ⁴⁾	1350 ⁴⁾	1350 ⁴⁾
Aisle width with pallets 1000 x 1200 across forks	Ast (mm)	4075 ³⁾	4240 ³⁾	4550 ³⁾
Aisle width with pallets 800 x 1200 along forks	Ast (mm)	4275 ³⁾	4440 ³⁾	4750 ³⁾
Travel speed, with/without load	km/h	15/17,5	14/16	13/15
Lifting speed, with/without load	m/s	0.35/0.45	0.32/0.45	0.29/0.45
Drive motor, 60 minutes rating	kW	12.5	12.5	12.5
Lift motor, 15 % rating	kW	15	15	15
Battery voltage/rated capacity (5 h)	V/Ah	80/560	80/700	80/770

1) With 150 mm free lift on standard mast (h1 reduced by 45 mm on duplex mast)

2) Figures are for standard and duplex masts. Triplex mast = 6°/8° (E 35/E 40), 6°/5° (E 48)

3) Fitment of triplex mast increases l1, l2, x and Ast by 30 mm

4) Twin mounted front wheels available as option. Dimensions as

Diesel, LPG and CNG* Forklift Trucks

Capacity 1400 – 2000 kg

H 14 – H 20

SERIES 391

* available on request



This highly successful series of compact hydrostatic drive engine trucks has established an enviable reputation for exceptionally cost-effective efficiency and productivity, coupled with reduced fuel and maintenance costs.

As with all Linde trucks the operator takes priority and in this case the operator enjoys unsurpassed levels of comfort and safety within the Linde Protector Frame protective zone.

This innovative range of trucks is fitted with the world renowned Linde hydrostatic transmission system with the added feature of direct hydrostatic drive of the front wheels without reduction gears (A world first) This

virtually maintenance-free system delivers seamless acceleration, reversing and precision load handling.

Among the many new features included in these outstanding trucks is the resilient mounting of the integrated mast and front axle. Isolation of the mast and drive axle from the cab and chassis provides cushioned comfort and protection from road shocks and vibrations.

Whatever the industry or application an investment in these highly economical models is guaranteed to deliver rapid returns for any business.



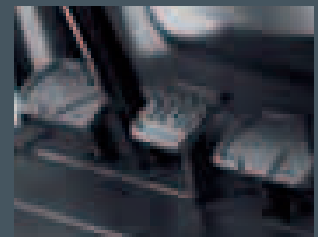
Original Linde hydrostatic drive

- Responsive, smooth and precise driving
- No clutch, differential or drum brakes; hydrostatic drive assumes function of service brake
- Low maintenance costs and long life



Linde ProtectorFrame

- Safe and robust chassis, enclosed on all sides
- Engine hood and servicing doors open wide for convenient access to all components



Linde twin drive pedals

- Quick change of forward/reverse direction without changing feet on pedals
- Short pedal stroke
- No leg fatigue
- Increased productivity



Linde operator compartment

- Spacious cab with automobile-equivalent legroom
- Excellent visibility of load and surroundings due to slim-line mast sections
- Cushioned drive axle reduces road shock



Diesel, LPG and CNG* Forklift Trucks

Capacity 1400 – 2000 kg

H 14 – H 20

SERIES 391



Model designation		H 14 D	H 14 T	H 16 D	H 16 T
Power unit: Battery, diesel, gasoline, LP gas, AC		Diesel	LPG	Diesel	LPG
Load capacity	Q (t)	1.4	1.4	1.6	1.6
Load center	c (mm)	500	500	500	500
Service weight	kg	2590	2570	2745 (2795) ³⁾	2725 (2775) ³⁾
Mast/fork carriage tilt, forward/back	α/β (°)	6.0/9.0	6.0/9.0 ¹⁾	6.0/9.0 ¹⁾	6.0/9.0 ¹⁾
Height of mast, lowered	h1 (mm)	2197 ²⁾	2197 ²⁾	2197 ²⁾	2197 ²⁾
Lift	h3 (mm)	3110	3110	3110	3110
Height of overhead guard/cab	h6 (mm)	2123	2123	2123	2123
Overall length	l1 (mm)	3112	3112	3112 (3222) ³⁾	3112 (3222) ³⁾
Length to fork face	l2 (mm)	2212	2212	2212 (2322) ³⁾	2212 (2322) ³⁾
Overall width	b1/b2 (mm)	1086	1086	1086	1086
Aisle width, 1000 x 1200 mm pallet crosswise	Ast (mm)	3570	3570	3570 (3686) ³⁾	3570 (3686) ³⁾
Aisle width, 800 x 1200 mm pallet lengthwise	Ast (mm)	3770	3770	3770 (3886) ³⁾	3770 (3886) ³⁾
Travel speed, with/without load	km/h	20/20	20/20	20/20	20/20
Lift speed, with/without load	m/s	0.6/0.63	0.6/0.63	0.6/0.63	0.6/0.63
Engine manufacturer/type		VW/BXT	VW/BEF	VW/BXT	VW/BEF
Engine output to ISO 1585	kW	26	28	26	28
Number of cylinders/cubic capacity	cm ³	4/1896	4/1984	4/1896	4/1984

1) Lift height and equipment can alter rear mast tilt angle

2) With 150 mm free lift on standard mast

3) When ordering ETB Diesel particulate filter (Filter changing) and LPG bottles (big) for GB, AUS, J

* available on request

Safety

Linde ProtectorFrame: Overhead guard and frame form a structural unit, resulting in maximum stability and safety. Top-mounted tilt jacks allow use of slim mast channel sections for optimum visibility

Performance

Advanced engine and drive technology combined with the intelligent Linde Load Control system and precise fingertip control of all mast functions, enables the operator to use the truck's impressive potential to maximise productivity.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept. The spacious, cushioned cab comfort-class seat with adjustable armrest and integrated intuitive controls create a superb stress-free environment that promotes optimum efficiency and high productivity.

Reliability

The enclosed robot-welded chassis is designed for maximum strength and durability. The resilient, maintenance-free mountings of the axles and tilt jacks isolates the cab from shocks and vibrations and also increases uptime ratios and reduces operating costs

Productivity

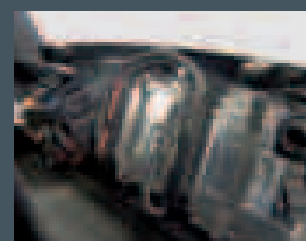
This superb range is fitted with the renowned Linde hydrostatic transmission, which requires no differential, no conventional service brake, no gear box and no clutch. As a result, uptime is optimised, productivity is increased and maintenance costs are low.

H 18 D	H 18 T	H 20 D	H 20 T
Diesel	LPG	Diesel	LPG
1.8	1.8	2.0	2.0
500	500	500	500
2910	2890	3060	3040
6.0/9.0 ¹⁾	6.0/9.0 ¹⁾	6.0/9.0 ¹⁾	6.0/9.0 ¹⁾
2197 ²⁾	2197 ²⁾	2198 ²⁾	2198 ²⁾
3110	3110	3110	3110
2123	2123	2123	2123
3152 (3227) ³⁾	3152 (3227) ³⁾	3231	3231
2252 (2327) ³⁾	2252 (2327) ³⁾	2331	2331
1086	1086	1152	1152
3611 (3691) ³⁾	3611 (3691) ³⁾	3695	3695
3811 (3891) ³⁾	3811 (3891) ³⁾	3895	3895
20/20	20/20	20/20	20/20
0.6/0.63	0.6/0.63	0.54/0.57	0.54/0.57
VW/BXT	VW/BEF	VW/BXT	VW/BEF
26	28	26	28
4/1896	4/1984	4/1896	4/1984



Linde Load Control

- Accurate, safe load handling
- Effortless fingertip control of all mast functions
- Traction and lift functions completely separate



Linde Truck Control

- High dependability resulting from redundant monitoring systems
- Automatic control of engine speed as function of load
- Casing totally enclosed for protection from dust and dirt



High-economy engine technology

- Diesel, LPG and CNG engines incorporating most advanced technology
- Low fuel consumption
- Low exhaust gas and soot emission levels



Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity

Diesel, LPG and CNG* Forklift Trucks

Capacity 2000 – 2500 kg

H 20, H 25

SERIES 392

Unsurpassed performance combined with low fuel consumption and low maintenance requirements is assured by the advanced Linde hydrostatic transmission and intelligent engine management control.

This, together with a twin accelerator pedal system and advanced low emission engines, offers a package of features that offer tangible benefits to the customer.

Designed around the operator, the spacious cab provides generous leg and head room and a comfort seat incorporating an adjustable armrest with integrated joystick control of all mast movements for a stress free and motivating working environment.

With its resiliently mounted mast and drive axle assembly and top mounted tilt cylinders, isolation of road shocks and totally smooth mast control are assured.

The truck positively excels in demanding applications, delivering seamless performance night and day.



Safety

Linde Protector Frame: The protective overhead guard and its supporting frame together form a strong and completely enclosed protective zone providing optimum structural integrity, safety and protection for the operator. The top mounted tilt cylinders provide seamless, smooth control of the tilt movements for excellent load stability in all operating conditions. This unique design also enables slimmer mast profiles to be fitted for outstanding visibility

Performance

Advanced engine and drive technology combined with the intelligent Linde Load Control system and precise fingertip control of all mast functions, enables the operator to use the truck's impressive potential to maximise productivity.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept. The spacious, cushioned cab comfort-class seat with

adjustable armrest and integrated intuitive controls create a superb stress-free environment that promotes optimum efficiency and high productivity.

Reliability

Proven in tough sustained operation. Isolation of the cab from the mast, drive axle and chassis, cushions the operator from road shocks and vibrations. Maintenance-free mounting of axles and tilt jacks increases uptime and reduces costs.

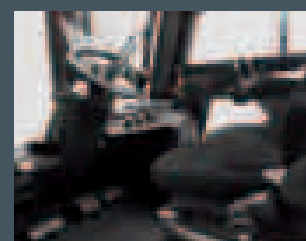
Productivity

This superb range is fitted with the renowned Linde hydrostatic transmission, which requires no differential, no conventional service brake, no gear box and no clutch. As a result, uptime is optimised, productivity is increased and maintenance costs are low.



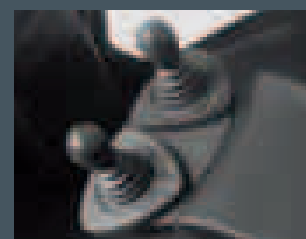
Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Unsurpassed maneuverability in this truck size category, including tight cornering



Linde operator compartment

- Spacious cab with automobile-equivalent legroom
- Excellent visibility of load and surroundings due to slim-line mast sections
- Cushioned drive axle reduces road shock



Linde Load Control

- Accurate, safe load handling
- Effortless fingertip control of all mast functions
- Traction and lift functions completely separate



Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity

Model designation		H 20 D	H 20 T	H 25 D	H 25 T
Power unit: Battery, diesel, gasoline, LP gas, AC		Diesel	LPG	Diesel	LPG
Load capacity	Q (kg)	2000	2000	2500	2500
Load center	c (mm)	500	500	500	500
Service weight	kg	3274	3255	3575	3556
Mast/fork carriage tilt, forward/back	α/β (°)	5/8	5/8	5/8	5/8
Height of mast, lowered	h1 (mm)	2227 ¹⁾	2227 ¹⁾	2227 ¹⁾	2227 ¹⁾
Lift	h3 (mm)	3150	3150	3150	3150
Height of overhead guard/cab	h6 (mm)	2170	2170	2170	2170
Overall length	l1 (mm)	3635	3635	3675	3675
Length to fork face	l2 (mm)	2635	2635	2675	2675
Overall width	b1/b2 (mm)	1180 ²⁾	1180 ²⁾	1180 ²⁾	1180 ²⁾
Aisle width, 1000 x 1200 mm pallet crosswise	Ast (mm)	3972	3972	4010	4010
Aisle width, 800 x 1200 mm pallet lengthwise	Ast (mm)	4172	4172	4210	4210
Travel speed, with/without load	km/h	22/22	22/22	22/22	22/22
Lift speed, with/without load	m/s	0.55/0.56	0.55/0.56	0.55/0.56	0.55/0.56
Engine manufacturer/type		VW/BXT	VW/BEF	VW/BXT	VW/BEF
Engine output to ISO 1585	kW	30	36	30	36
Number of cylinders/cubic capacity	cm ³	4/1896	4/1984	4/1896	4/1984

1) With 150 mm free lift on standard mast

2) 1024 mm for SE 23 x 10 - 12 tyres

* available on request

Diesel, LPG and CNG* Forklift Trucks

Capacity 2500 – 3500 kg

H 25, H 30, H 35

SERIES 393

The many unique features included in this fine series includes slim-line mast profiles for excellent visibility and the virtually maintenance-free Linde hydrostatic transmission, coupled with powerful, fuel efficient engines and twin accelerator pedals for smooth seamless load handling that has to be seen to be believed.

Operator comfort and safety is optimised by the integrated chassis and operator's module, which form the Linde Protector Frame to create the ultimate safety zone.

The spacious cab is cushioned from road shocks and vibrations by the resilient mast/axle assembly mountings which are unique in the industry. Added to this the top mounted tilt jacks are also resiliently mounted and have cushioned tilt travel stops for outstandingly smooth load handling.

This excellent range sets the standards for functional style, performance, comfort and safety. The low-maintenance design addresses the need to deliver consistent reliability and high performance, while keeping handling costs to a minimum



Safety

Linde ProtectorFrame: Overhead guard and frame form a structural unit, resulting in maximum stability and safety. Top-mounted tilt jacks allow use of slim mast channel sections for optimum visibility

Performance

Advanced engine and drive technology combined with the intelligent Linde Load Control system and precise fingertip control of all mast functions, enables the operator to use the truck's impressive potential to maximise productivity.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept. The spacious, cushioned cab comfort-class seat with adjustable armrest and integrated intuitive controls create a superb stress-free environment that promotes optimum efficiency and high productivity.

Reliability

Proven in tough sustained operation. Isolation of the cab from the mast, drive axle and chassis, cushions the operator from road shocks and vibrations. Maintenance-free mounting of axles and tilt jacks increases uptime and reduces costs.

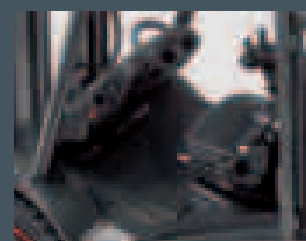
Productivity

This superb range is fitted with the renowned Linde hydrostatic transmission, which requires no differential, no conventional service brake, no gear box and no clutch. As a result, uptime is optimised, productivity is increased and maintenance costs are low.



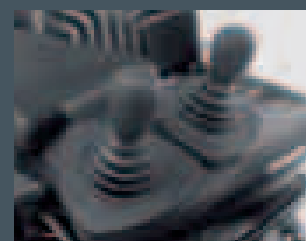
Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Unsurpassed maneuverability in this truck size category, including tight cornering



Linde operator compartment

- Spacious cab with automobile-equivalent legroom
- Excellent visibility of load and surroundings due to slim-line mast sections
- Cushioned drive axle reduces road shock



Linde Load Control

- Accurate, safe load handling
- Effortless fingertip control of all mast functions
- Traction and lift functions completely separate



Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity

Model designation		H 25 D	H 25 T	H 30 D	H 30 T	H 35 D	H 35 T
Power unit: battery, diesel, petrol, LP gas, mains power		Diesel	LPG	Diesel	LPG	Diesel	LPG
Load capacity	Q (kg)	2500	2500	3000	3000	3500	3500
Load centre	c (mm)	500	500	500	500	500	500
Service weight	kg	3870	3850	4220	4200	4680	4665
Mast lift, forward/backward	α/β (°)	5.0/8.0 ³⁾	5.0/8.0 ³⁾	5.0/8.0 ³⁾	5.0/8.0 ³⁾	5.0/8.0 ³⁾	5.0/8.0 ³⁾
Height of mast, lowered	h1 (mm)	2264 ¹⁾	2264 ¹⁾	2264 ¹⁾	2264 ¹⁾	2264 ¹⁾	2264 ¹⁾
Lift	h3 (mm)	3050	3050	3050	3050	3050	3050
Height of overhead guard	h6 (mm)	2210	2210	2210	2210	2210	2210
Overall length	l1 (mm)	3727	3727	3755	3755	3795	3795
Length to fork face	l2 (mm)	2727	2727	2755	2755	2795	2795
Overall width	b1/b2 (mm)	1256 ²⁾	1256 ²⁾	1256 ²⁾	1256 ²⁾	1256 ²⁾	1256 ²⁾
Aisle width pallet 1000 x 1200 across forks	Ast (mm)	4065	4065	4089	4089	4126	4126
Aisle width pallet 800 x 1200 along forks	Ast (mm)	4265	4265	4289	4289	4326	4326
Travel speed, with/without load	km/h	22/22	22/22	22/22	22/22	22/22	22/22
Lifting speed, with/without load	m/s	0.47/0.48	0.47/0.48	0.47/0.48	0.47/0.48	0.47/0.48	0.47/0.48
Engine manufacturer/type		VW/BEU	VW/BEF	VW/BEU	VW/BEF	VW/BEU	VW/BEF
Engine performance according to ISO 1585	kW	43	39	43	39	43	39
Number of cylinders	cm ³	4/1896	4/1984	4/1896	4/1984	4/1896	4/1984

1) With 150 mm free lift on standard mast

2) 1337 mm for SE 28 x 12.5 - 15 tyres; 1611 mm for SE 7.00 - 12 twin tyres; 1271 mm for P 27 x 10 - 12/20 PR tyres; 1264 mm for P 250/75 R12 tyres; 1614 mm for P 7.00 - 12/16 PR twin tyres; 1630 mm for 7.00 R10 twin tyres

3) Lift height and equipment can alter rear mast tilt angle

* available on request, except for H 35

Diesel, LPG and CNG* Forklift Trucks

Capacity 4000 – 5000 kg

H 40, H 45, H 50

SERIES 394

With capacities from 4000 kg to 5000 kg this is the largest truck in an outstanding new series, which has led a quiet revolution in the design of engine powered trucks.

Some of the features that have created this quiet revolution include the resiliently mounted mast and axle assembly, which cushions the operator's compartment from vibrations.

Fitted with the exceptionally fuel-efficient and virtually maintenance-free Linde hydrostatic transmission and the Linde twin accelerator pedal system, the formidable performance of the truck makes it the first choice for handling heavy, high value loads with sensitive precision.

A comfortable operator is a motivated one and this outstanding series is the ultimate motivator by providing the perfect interface between operator and truck, resulting in fatigue-free comfort and superb efficiency and productivity ratios.

An investment in this superb series is a solid investment with rapid returns assured.



Safety

Linde ProtectorFrame: Overhead guard and frame form a structural unit, resulting in maximum stability and safety. Top-mounted tilt jacks allow use of slim mast channel sections for optimum visibility

Performance

Advanced engine and drive technology combined with the intelligent Linde Load Control system and precise fingertip control of all mast functions, enables the operator to use the truck's impressive potential to maximise productivity.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept. The spacious, cushioned cab comfort-class seat with adjustable armrest and integrated intuitive controls create a superb stress-free environment that promotes optimum efficiency and high productivity.

Reliability

Proven in tough sustained operation. Isolation of the cab from the mast, drive axle and chassis, cushions the operator from road shocks and vibrations. Maintenance-free mounting of axles and tilt jacks increases uptime and reduces costs.

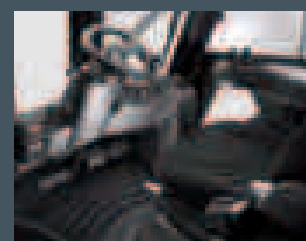
Productivity

This superb range is fitted with the renowned Linde hydrostatic transmission, which requires no differential, no conventional service brake, no gear box and no clutch. As a result, uptime is optimised, productivity is increased and maintenance costs are low.



Linde hydrostatic steering

- No kickback and virtually no play
- Ergonomic size of steering wheel
- Unsurpassed maneuverability in this truck size category, including tight cornering



Linde operator compartment

- Spacious cab with automobile-equivalent legroom
- Excellent visibility of load and surroundings due to slim-line mast sections
- Cushioned drive axle reduces road shock



Linde Load Control

- Accurate, safe load handling
- Effortless fingertip control of all mast functions
- Traction and lift functions completely separate



Linde clear-view mast

- Superb visibility through slim-profile sections of mast
- Full load capacity up to maximum lift height
- Exceptional residual capacity

Model designation		H 40 D	H 40 T	H 45 D	H 45 T	H 50 D	H 50 T
Power unit: battery, diesel, petrol, LP gas, mains power		Diesel	LPG	Diesel	LPG	Diesel	LPG
Load capacity	Q (kg)	4000	4000	4500	4500	5000	5000
Load centre	c (mm)	500	500	500	500	500	500
Service weight	kg	5785	5968	6295	6480	6580	6763
Mast lift, forward/backward	α/β (°)	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0
Height of mast, lowered	h1 (mm)	2420(2375/2375) ^{2) 3)}	2420(2375/2375) ^{2) 3)}	2421(2376/2376) ^{2) 3)}	2421(2376/2376) ^{2) 3)}	2421(2376/2376) ^{2) 3)}	2421(2376/2376) ^{2) 3)}
Lift	h3 (mm)	3100 3130/4675) ^{2) 3)}	3100 3130/4675) ^{2) 3)}	3000 3030/4525) ^{2) 3)}	3000 3030/4525) ^{2) 3)}	3000 3030/4525) ^{2) 3)}	3000 3030/4525) ^{2) 3)}
Height of overhead guard	h6 (mm)	2383	2383	2416	2416	2416	2416
Overall length	l1 (mm)	3984	3984	4066	4066	4116	4116
Length to fork face	l2 (mm)	2984	2984	3066	3066	3116	3116
Overall width	b1/b2 (mm)	1446/1423 (2003/1423) ¹⁾	1446/1423 (2003/1423) ¹⁾	1448/1423 (1988/1423) ¹⁾	1448/1423 (1988/1423) ¹⁾	1448/1423 (1988/1423) ¹⁾	1448/1423 (1988/1423) ¹⁾
Aisle width pallet 1000 x 1200 across forks	Ast (mm)	4355	4355	4433	4433	4480	4480
Aisle width pallet 800 x 1200 along forks	Ast (mm)	4555	4555	4633	4633	4680	4680
Travel speed, with/without load	km/h	21/21	21/21	24/24	24/24	24/24	24/24
Lifting speed, with/without load	m/s	0.53/0.56	0.53/0.56	0.53/0.56	0.53/0.56	0.48/0.50	0.48/0.50
Engine manufacturer/type		VW/BJC	VW/BMF	VW/BJC	VW/BMF	VW/BJC	VW/BMF
Engine performance according to ISO 1585	kW	53	55	53	55	53	55
Number of cylinders	cm ³	4/1896	6/3189	4/1896	6/3189	4/1896	6/3189

1) Figures in parentheses for SE twin tyres: H 40, 250 – 15, H 45/H 50, 8.25 – 15

2) With 150 mm free lift on standard mast

3) Figures in parentheses for duplex/triplex mast

* available on request

Diesel and LPG Forklift Trucks

Capacity 5000 – 8000 kg

H50, H60, H70, H80, H80/900, H80/1100

SERIES 396

With a capacity range from 5000 up to 8000 kg this is the largest truck in an outstanding new series, which combines rugged power and performance with controlled refinement for smooth precise handling of heavy, high value loads.

The unique Linde Torsional Support system absorbs up to 30 per cent of the dynamic torsional effects generated by heavy bulky loads, resulting in exceptionally stable and safe load handling in the toughest of operating conditions.

Powered by a modern, high performance 87 kW diesel engine and the virtually maintenance-free Linde hydrostatic transmission system, this fine heavy truck range displays an agility and versatility which is second to none.

From the spacious and superbly comfortable operator's compartment, which is isolated and cushioned from road shocks and vibrations the operator is able to work with fatigue-free efficiency throughout the shift.



Safety

With loads weighing up to 8000 kg, safe, precision load handling is ensured by the unique Linde Torsion Support system mounted on the roof of the cab/overhead guard, which neutralises up to 30 % of the dynamic torsional forces and stresses imposed on the mast by the load, resulting in outstanding stability.

Performance

Advanced engine and drive technology combined with the intelligent Linde Load Control system and precise fingertip control of all mast functions, enables the operator to use the truck's impressive potential to maximise productivity.

Comfort

A perfect interface between operator and truck has been achieved with the Linde ergonomic design concept. The spacious, cushioned cab comfort-class seat with adjustable armrest and integrated intuitive controls create a superb stress-free enviro-

ment that promotes optimum efficiency and high productivity.

Reliability

Proven in tough sustained operation. Isolation of the cab from the mast, drive axle and chassis, cushions the operator from road shocks and vibrations. Maintenance-free mounting of axles and tilt jacks increases uptime and reduces costs.

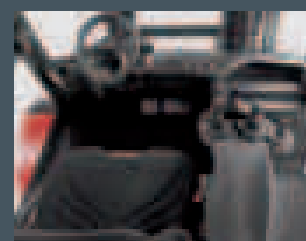
Productivity

This superb range is fitted with the renowned Linde hydrostatic transmission, which requires no differential, no conventional service brake, no gear box and no clutch. As a result, uptime is optimised, productivity is increased and maintenance costs are low.



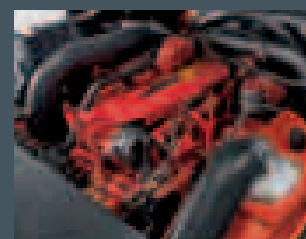
Original Linde hydrostatic drive

- Responsive, smooth and precise driving
- No clutch, differential or drum brakes; hydrostatic drive assumes function of service brake
- Low maintenance costs and long life



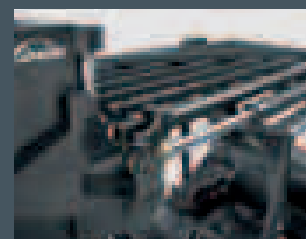
Linde operator compartment

- Spacious cab with automobile-equivalent legroom
- Excellent visibility of load and surroundings due to slim-line mast sections
- Cushioned drive axle reduces road shock



High-economy engine technology

- Industrial DEUTZ Diesel engine incorporating most advanced technology
- Low fuel consumption
- Low engine-out emissions



Linde Torsion Support

- Reduction of mast distortion up to ca. 30 % thanks to Linde Torsion Support
- Minimized loading and wear of truck frame and mast
- Safety bonus: Lever action makes possible significantly increased residual capacity at high lifts

Model designation		H 50 D	H 60 D	H 70 D	H 80 D	H 80 D/900	H 80 D/1100 ²⁾
Power unit: battery, petrol, LP gas, mains power		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Load capacity	Q (t)	5.0	6.0	7.0	8.0	8.0	8.0
Load centre	c (mm)	600	600	600	600	900	1100
Service weight	kg	9902	10181	11431	12276	14046	14826
Mast/fork carriage tilt, forward/backward	α/β (°)	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0	5.0/9.0
Height of mast, lowered	h1 (mm)	2735 ¹⁾	2736 ¹⁾	2738 ¹⁾	2738 ¹⁾	2736 ¹⁾	2738 ¹⁾
Lift	h3 (mm)	3550	3550	3150	3150	2750	2750
Height of overhead guard (cabin)	h6 (mm)	2746	2746	2745	2747	2746	2747
Overall length	l1 (mm)	4639	4639	4649	4649	5629	5929
Length to fork face	l2 (mm)	3439	3439	3449	3449	3829	4129
Overall width	b1/b2 (mm)	1864	1891	2232/2252	2232	2232	2299
Aisle width with pallets 1200 x 1000 across forks	Ast (mm)	4890	4890	4900	4900	5215	5505
Aisle width with pallets 800 x 1200 along forks	Ast (mm)	5090	5090	5100	5100	5415	5705
Travel speed, with/without load	km/h	22/22	22/22	22/22	22/22	22/22	22/22
Lifting speed, with/without load	m/s	0.57/0.58	0.57/0.58	0.46/0.54	0.46/0.54	0.46/0.54	0.46/0.54
Manufacturer of engine/type		Deutz TCD 2012 L04-2V	Deutz TCD 2012 L04-2V	Deutz TCD 2012 L04-2V	Deutz TCD 2012 L04-2V	Deutz TCD 2012 L04-2V	Deutz TCD 2012 L04-2V
Engine rated power to ISO 1585	kW	87	87	87	87	87	87
Number of cylinders/Displac. ccm	cm ³	4/4000	4/4000	4/4000	4/4000	4/4000	4/4000

1) With 150 mm free lift
2) Available from 09/2008

Diesel Forklift Trucks
Capacity 10000 – 18000 kg
H 100, H 120, H 140, H 150,
H 160, H 180

SERIES 359



The impressive Linde 10 to 18 tonne heavy truck range now incorporates the world-renowned Linde high precision hydrostatic drive train that operates without gearbox, clutch, differential or conventional brakes.

The potent combination of Linde hydrostatic transmission and an advanced high torque diesel engine as well as Linde twin accelerator pedals, provides seamless control of forward reverse travel and load handling cycles to make this the most nimble and responsive heavy truck in its class.

The modular design of the main structures results in a more compact truck for excellent manoeuvrability and versatility. With its panoramic mast, and superbly spacious, cushioned cab featuring a wrap-around front screen for outstanding visibility and an intuitive, functional control layout, the operator's working environment is unsurpassed.

Designed for both palletised and pallet-less heavy load handling including empty container handling, these highly adaptable and rugged trucks offer the ideal solution in a wide range of heavy industrial applications.

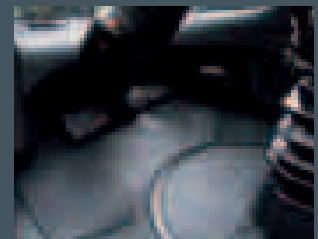


Power and Drive system

- Linde hydrostatic transmission
- For seamless, precision driving
- Well proven durability and reliability in the toughest of applications
- A low-maintenance system for long life and maximum uptime
- Advanced high torque diesel engine with rpm precisely matched to hydrostatic drive and hydraulic demands
- Traction speed is separate and unaffected by hydraulic demands on engine rpm

Operators compartment

- The cabin is in a forward location for optimum visibility through the mast
- Wrap-around front screen and large side windows for all-round visibility
- Integrated cabin and overhead guard structure for maximum strength and protection



Linde twin accelerator pedals

- Rapid and smooth travel direction changes without having to constantly move feet to the brake pedal
- Precision travelling, reversing and manoeuvring
- Short pedal strokes
- No strain on the ankles or legs

Operators controls

- Finger tip joystick control levers
- Linde twin accelerator pedals
- Automatic hydrostatic braking as accelerator pedal is released
- Multi-function overhead instrument display
- Emergency brake pedal located between accelerator pedals
- Auxilliary switches within easy reach
- Column mounted handbrake



Diesel Forklift Trucks

Capacity 10000 – 18000 kg

H 100, H 120, H 140, H 150, H 160, H 180

SERIES 359



Safety

Impressive manoeuvrability and safe, precise load handling even in confined areas is ensured by the optimum forward position of the cabin for excellent visibility through the panoramic mast to the fork tips and load. Superb all-round visibility is provided by the cabins wraparound front screen, large side windows and glass top panel. The operator is able to work with assured confidence and efficiency, with everything safely in view.

Performance

This superb heavy truck benefits from the potent combination of Linde hydrostatic transmission and an advanced high torque diesel engine together with a truly exceptional operator/truck interface. The result is unsurpassed, precision load handling and productivity as well as seamless acceleration and travel. However tough the task, this outstanding truck completes it with impressive cost-effective efficiency and safety.

Model designation		H 100	H 120	H 140	H 150
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel	Diesel
Load capacity	Q (kg)	10.0	12.0	14.0	15.0
Load centre	c (mm)	600	600	600	600
Service weight	kg	16587	17411	20774	21370
Mast/fork carriage/truck tilt, forward/backward	α/β (°)	5/10	5/10	5/10	5/10
Height of mast lowered	h1 (mm)	3329	3329	3661	3661
Lift	h3 (mm)	4000	4000	4000	4000
Height of overhead guard (cabin)	h6 (mm)	2905	2905	2950	2950
Overall length	l1 (mm)	5729	5729	5902	5902
Length to fork face	l2 (mm)	4578	4578	4752	4752
Overall width	b1/b2 (mm)	2545/2545	2545/2545	2545/2545	2545/2545
Aisle width with pallets 1000 x 1200 crosswise	Ast (mm)	6297	6297	6357	6357
Aisle width with pallets 800 x 1200 lengthwise	Ast (mm)	–	–	–	–
Travel speed, with/without load	km/h	27.8/29.7	27.8/29.7	29.7/30.0	29.7/30.0
Lift speed, with/without load	m/s	0.54/0.56	0.54/0.56	0.43/0.45	0.43/0.45
Engine manufacturer/type		Cummins QSB 6.7	Cummins QSB 6.7	Cummins QSB 6.7	Cummins QSB 6.7
Engine performance according to ISO 1585	kW	142	142	142	142
Number of cylinders/displacement	/cm ³	6/6700	6/6700	6/6700	6/6700

Comfort

The spacious, tilting operator's cabin is cushioned by heavy duty resilient rubber mountings. Operational and surface vibrations are absorbed and isolated from the cabin to create a stress-free working environment. A comfort-class seat and ergonomic controls also enhance the excellent operator/truck interface.

Reliability

Built to last: Linde forklifts are constructed to undertake sustained heavy-duty tasks in their stride. The enclosed robot-welded chassis is designed for maximum strength and durability. The rugged construction and quality components together with endurance testing, ensures long life and consistent reliability.

Productivity

This superb range is fitted with the world leading Linde hydrostatic drive system which requires no differential, no conventional service brake no gear box and no clutch. Infinitely variable speed control, Linde twin accelerator pedals, and fingertip joystick controls enable the operator to sustain high productivity levels with minimal physical input for fatigue-free working.



Linde Load Control

- Small tactile joysticks integrated in an adjustable armrest
- Precise and effortless fingertip control of all mast functions
- Engine rpm is automatically synchronised to precisely match hydraulic demand
- Traction speed is completely separate and not affected by lift rpm function

Linde Truck Control

- Intelligent electronic controller
- Automatically matches engine rpm to hydraulic demand
- Diagnostic facility
- All safety-related components are duplicated
- Controller is sealed in aluminium enclosure against ingress of dust and moisture

H 160	H 180	H 120/1200	H 140/1200	H 160/1200
Diesel	Diesel	Diesel	Diesel	Diesel
16.0	18.0	12.0	14.0	16.0
600	600	1200	1200	1200
20779	21391	21082	23431	24271
5/10	5/10	5/10	5/10	5/10
3661	3661	3661	3661	3661
4000	4000	4000	4000	4000
2950	2950	2950	2950	2950
6242	6242	7492	7545	7845
5092	5092	5092	5145	5445
2545/2545	2545/2545	2545/2545	2545/2545	2545/2545
6774	6774	-	-	-
-	-	8024	8077	8366
29.7/30.0	29.7/30.0	29.7/30.0	29.7/30.0	29.7/30.0
0.43/0.45	0.35/0.36	0.43/0.45	0.43/0.45	0.43/0.45
Cummins QSB 6.7	Cummins QSB 6.7	Cummins QSB 6.7	Cummins QSB 6.7	Cummins QSB 6.7
142	142	142	142	142
6/6700	6/6700	6/6700	6/6700	6/6700



Linde free-sight mast

- Unique and functional mast profile designed to work with conventional heavy loads or for empty container handling operations
- Visibility through the mast is optimised by locating all operational components behind or to the outside of the mast channels
- Universal, terminal west' type carriage system with interchangeable carriers and forks for multi-task operations

Modern, powerful engine

- Diesel motor, stage 111 emissions
- 6-cylinder, 6.7 ltr
- 142 kW rated at 2200 rpm
- Maximum torque 931 Nm @ 1400 rpm

Forklift Truck

Capacity 42000 – 46000 kg

H 420 – H 460

SERIES 356

With nominal capacities of 42000 kg and 46000 kg respectively, this superb range of multi-purpose 'heavy' trucks brings a new dimension to the handling of very heavy load handling in a wide variety of heavy industries and container terminals.

The range benefits from an ultra-wide mast design, which combines outstanding torsional strength with panoramic visibility. In addition the resiliently mounted centrally located cab provides excellent all-round visibility which is of particular importance when handling large, bulky loads.

A stylish, low profile chassis provides wide step, easy access to the spacious cabin which incorporates a comfort-class seat and a superbly functional layout for effortless, precision control of traction and hydraulic functions.

A superbly versatile and adaptable truck to meet the constantly changing handling needs of heavy industry



Safety

Neutral start interlock preventing unintentional in-gear starting. Drive system inhibitors prevent incorrect downshift and reverse direction operation when in motion. Master warning lamp, steering column mounted, indicates monitored system warning.

Performance

The combination of a powerful, low revving – high torque engine, matched with an electrically controlled 4-speed transmission, and a multi-pump hydraulic system, ensures highly efficient use of energy, with optimised speed of operation and minimal wear on hydraulic components for extended working life.

Comfort

The spacious, cushioned cab, comfort-class seat and integrated, pilot line' control joystick combines with effortless hydrostatic power steering and compact steering wheel to create an intuitive, fatigue-free working environment that motivates and promotes consistently high productivity levels.

Reliability

The central position and forward location of the cabin optimises visibility through the mast to the fork carriage when picking, depositing and transferring loads. The all round visibility when working in confined areas is also excellent. When these features are combined with superb operator comfort, intuitive controls and impressive truck performance, the result is unsurpassed efficiency and productivity levels.

Productivity

The forward central positioning of the operators cabin optimises the visibility to the fork carriage for loading and unloading operations, through the mast when travelling, and also around the machine when working in confined operating areas; Combining the operator comfort and component performance with intuitive ergonomics further enhances the ease of operation.

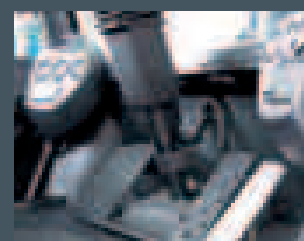
Model designation		H 420	H 460	H 460 GPCH/2 ¹⁾	H 460 GPCH/3 ¹⁾
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel	Diesel
Load capacity	Q (kg)	42000	46000	36000 (46000) ¹⁾	36000 (46000) ¹⁾
Load centre	c (mm)	1200	1200	1200	1200
Service weight	kg	51640	54140	60130	62240
Mast/fork carriage/truck tilt, forward/backward	α/β (°)	5/10	5/10	5/10	5/10
Height of mast, lowered	h1 (mm)	5980	5980	7210	8710
Lift	h3 (mm)	5000	5000	7000	10000
Height of overhead guard (cab)	h6 (mm)	3425	3425	3425	3425
Overall length	l1 (mm)	10400	10400	9850	9850
Length of fork face	l2 (mm)	8000	8000	7750	7750
Overall width	b1/b2 (mm)	4180/3400	4180/3400	4180/3400	4180/3400
Aisle width with pallets 1000 x 1200 crosswise	Ast (mm)	12500	12500	12500	12500
Aisle width with pallets 800 x 1200 lengthwise	Ast (mm)	14500	14500	14500	14500
Travel speed, with/without load	km/h	23.3/24.9	23.3/24.9	23.3/24.9	23.3/24.9
Lifting speed, with/without load	m/s	0.30/0.40	0.30/0.40	0.30/0.40	0.30/0.40
Engine manufacturer/type		Cummins QSM11	Cummins QSM11	Cummins QSM11	Cummins QSM11
Engine output to ISO 1585	kW	246	246	246	246
Number of cylinders/displacement	/cm ³	6/10820	6/10820	6/10820	6/10820

1) A container spreader is necessary to lift containers 2 or 3 high



Stable, robust chassis

- Heavy duty main chassis for optimised stress handling
- Unique mast construction for fork or container load handling
- Heavy guage side panels providing impact protection



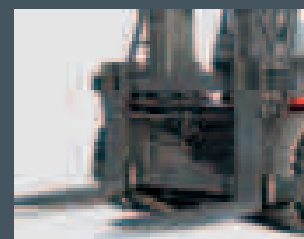
Operators compartment

- Fully adjustable high quality seat
- Forced air heating and ventilation system
- Adjustable steering column
- Adjustable armrest and hydraulic control console
- Optimised position of operator control instrumentation



Comprehensive display

- Engine – water temperature, oil pressure
- Transmission – oil pressure and temperature
- Hydraulic & Brake oil temperature
- Fuel – level
- Electrical – battery state
- Air – cleaner restriction warning



Universal fork carriage system

- Heavy duty fork carriage
- Twin fork-carrier shifting cylinders for precise fork positioning
- Roller mounted fork carriers for smooth operation
- Pin mounted forks for quick change operation

Laden Container Handler
Reachstacker
Capacity 42000 – 45000 kg
C 4230 TL – C 4531CH

SERIES 357



A large percentage of the world's freight is moved in containers between busy ports and container terminals around the globe. This continuously expanding and competitive process requires highly efficient handling equipment to ensure rapid turnaround times.

This tough and demanding industry needs rugged and durable equipment that also combines sophistication in the handling of heavy and very valuable loads.

The impressive Linde Reachstacker was designed and built by engineers who understand the specialised demands of container handling.

These superb trucks bring a new dimension to the efficient handling of ISO containers. The Linde reach stacker utilises either a toplift telescopic handler or a combination handler for up to five-high stacking, three-deep in container storage applications.

For the tough and demanding environment of the container handling industry the Linde reach stacker more than measures up to the challenge, delivering consistent high performance, reliability and durability while keeping operational costs to a minimum.

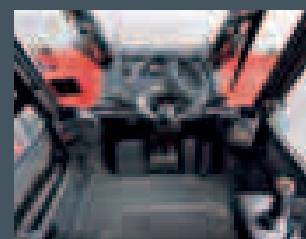


Power and drive system

- Powerful yet fuel efficient
- Advanced, low revving, high torque six cylinder diesel engine
- 4 speed electronically controlled transmission
- Reversing interlock and speed controlled downshift protection
- Wide-track drive axle with oil actuated wet disc brake system

Stable, robust chassis

- Rugged, low profile chassis with excellent torsional resistance and impressive stability
- Provides all-round visibility
- Heavy gauge steel side panels for optimum impact resistance and long life
- Exceptionally robust telescopic stacking boom for safe, assured load handling



Operators compartment

- Full suspension, fully adjustable comfort-class seat
- Linde 'pilot line' multi-function joystick control integrated in adjustable armrest
- Forced air heating and ventilation system
- Adjustable steering column
- Comprehensive instrument display in-line-of-sight
- Auxilliary switches within easy reach

Load sensing hydraulics

- Highly efficient variable displacement pumps
- Metered oil for function selected
- Synchronised with truck load and operational conditions for optimised performance



Laden Container Handler Reachstacker

Capacity 42000 – 45000 kg

C 4230 TL – C 4531 CH

SERIES 357



Model designation		C 4230 TL/4	C 4230 TL/5	C 4531 TL/4	C 4531 TL/5	C 4234 TL/4	C 4234 TL/5	C 4535 TL/4
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
Load capacity (L1, L2, L3)	Q (kg)	42000/30000/16000	42000/30000/16000	45000/31000/16000	45000/31000/16000	42000/34000/17000	42000/34000/17000	45000/35000/19000
Load centre, First row (L1)	c (mm)	1760	1760	1760	1760	1760	1760	1670
Service weight	kg	70400	70400	71400	71400	73200	73200	76300
Telescopic boom lift angle, Raised/lowered	α/β (°)	56/0	61/0	56/0	61/0	56/0	61/0	56/0
Height telescopic boom lowered	h1 (mm)	4900	4900	4900	4900	4900	4900	5000
Lift (L1, L2, L3)	h3 (mm)	13400/11120/6850	15900/14100/11350	13400/11120/6850	15900/14100/11350	13400/11120/6850	15900/14100/11350	13500/11220/6950
Height of overhead guard (cabin)	h6 (mm)	3900	3900	3900	3900	3900	3900	4000
Overall length with attachment	l1 (mm)	11618	11618	11618	11618	11618	11618	11618
Overall length	l2 (mm)	8408	8408	8408	8408	8408	8408	8408
Overall width	b1/b2 (mm)	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400
Stacking aisle 20' container	Ast (mm)	10225	10225	10225	10225	10225	10225	10225
Stacking aisle 40' container	Ast (mm)	13050	13050	13050	13050	13050	13050	13050
Travel speed, with/without load	km/h	22/25	22/25	22/25	22/25	22/25	22/25	22/25
Lift speed, with/without load	m/s	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39
Engine manufacturer/type		Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11
Engine performance according to ISO 1585	kW	246	246	246	246	246	246	246
Number of cylinders/displacement	/cm³	6/10820	6/10820	6/10820	6/10820	6/10820	6/10820	6/10820

According to VDI 219802 edition)

Safety

On-board microprocessors constantly measure load weight, boom angle and extension; immediately responding to potential overload conditions by warning the operator and cutting-out lift and telescopic reach functions while allowing the operator to return the machine to a safe operational condition.

Performance

The combination of a powerful, low revving – high torque engine, matched with an electrically controlled 4-speed transmission, and a multi-pump hydraulic system, ensures highly efficient use of energy, with optimised speed of operation and minimal wear on hydraulic components for extended working life.

Operator comfort

The spacious, cushioned cab, comfort-class seat and integrated, pilot line' control joystick combines with effortless hydrostatic power steering and compact steering wheel to create an intuitive, fatigue-free working environment that motivates and promotes consistently high productivity levels.

Reliability

The high performance of the Linde Reach-stacker is matched by the robustness of its construction. The high quality, heavy duty drive line components are designed to ensure maximum performance and durability. Heavy-duty main structural elements provide stress relief over the load bearing areas, thus ensuring lifelong product integrity.

Productivity

The resiliently mounted cab is located centrally for optimum visibility to the top spreader at all times. All-round visibility is also excellent when working in confined areas. Combining these features with superb operator comfort, intuitive controls and impressive truck performance results in unsurpassed efficiency and productivity.



Linde load management

- Head-up twistlock status display
- Toplift mounted 'flags' for instant verification
- Interlocked spreader twistlocks prevent accidental release of container
- Lift sensors prevent inadvertent lowering when toplift is seated
- Continuous fault monitoring

Comprehensive display

C 4535 TL/5	C 4026 CH/4	C 4026 CH/5	C 4030 CH/4	C 4030 CH/5	C 4531 CH/4	C 4531 CH/5
Diesel	Diesel	Diesel	Diesel	Diesel	Diesel	Diesel
45000/35000/ 19000	40000/26000/ 12000	40000/26000/ 12000	40000/30000/ 13000	40000/30000/ 13000	45000/31000/ 15000	45000/31000/ 15000
1670	1760	1760	1760	1760	1670	1670
76300	73950	73950	76700	76700	81250	81250
61/0	56/0	61/0	56/0	61/0	56/0	61/0
5000	5000	5000	4900	4900	5000	5000
16000/14200/ 11550	13075/10800/ 6550	15575/13780/ 11050	13075/10800/ 6550	15575/13780/ 11050	13175/10900/ 6650	15675/13880/ 11550
4000	3900	3900	3900	3900	4000	4000
11618	11618	11618	11618	11618	11618	11618
8408	8408	8408	8408	8408	8408	8408
4180/3400	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400
10225	10225	10225	10225	10225	10225	10225
13050	13050	13050	13050	13050	13050	13050
22/25	22/25	22/25	22/25	22/25	22/25	22/25
0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39	0.28/0.39
Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11
246	246	246	246	246	246	246
6/10820	6/10820	6/10820	6/10820	6/10820	6/10820	6/10820



Telescopic spreader

- 20' to 40' extension
- Rotation 95/185 degrees
- Twin sideshift cylinders
- Sideshift 800mm +/-
- Slope pile +/- 2 degrees
- Twin brake hub units
- Twistlock safety interlock

Modern powerfull engine

- Diesel motor stage 111 emissions
- Turbocharger and Intercooler
- 6 cylinder – 11 litre
- 246 kW (330 bhp) @ 2100 rpm
- maximum torque 1674 @ 1100 rpm

Empty Container Handler Capacity 9000 kg C 90

SERIES 318

The innovative Linde C 90 dedicated empty container handler series brings a different perspective to the storage and retrieval of all types of empty standard ISO containers and reefers.

The superbly spacious and comfortable elevated cabin provides outstanding all-round visibility and the revolutionary ultra-wide mast where the outer mast telescopes and the inner mast is pivoted, provides unparalleled visibility and torsion resistance for smooth precision and outstanding stability throughout the container handling cycle.

With its telescopic, side shifting, side lift beam and 7 high stacking capabilities the Linde C 90 represents a very efficient and cost-effective investment with rapid returns.



Safety

Perfect load control and maneuverability in close surroundings is assured at all times. Linde achieves this by placing the cabin in the raised rearward, optimised position to allow through-mast and direct visibility to the twistlock pick-up position. Visibility around the machine from the operator position is optimised by the utilisation of generous glass panels.

Performance

The finely tuned hydrostatic drive system delivers precision in operation balanced with optimised speed of performance. The stepless drive system ensures that acceleration through to top speed is without mechanical intervention.

Comfort

The operators cabin is mounted to a raised platform on high density rubber mounts, this ensures that drive and power train vibration, together with operational vibrations are suppressed thus provides the operator with a comfortable working place.

The standard operators seat is equipped with hydraulic damping for additional cushioning.

Reliability

The proven reputation of the hydrostatic drive systems coupled together with the power unit provide peace of mind for the drive system; the mast and lifting device has been thoroughly tested for endurance and security in operation.

Productivity

With the utilisation of the world-class hydrostatic drive system, speed and precision in operation is assured, the operational characteristics of the twin pedal drive system, and Linde Load Control hydraulic operators controls, ensure that minimum operator movement is required to operate the machine, thereby saving time and limiting operator fatigue.

Model designation		C 90/5	C 90/6	C 90/7
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel
Load capacity	Q (t)	9	9	9
Load center	c (mm)	1295	1295	1295
Service weight	kg	34161	34948	35206
Lift	h1 (m)	12678	15574	16352
Height of overhead guard (cabin)	h5 (m)	4179	4179	4179
Overall length	l1 (mm)	6177	6177	6177
Overall width	b1/b2 (mm)	3600/2545	3600/2545	3600/2545
Stacking aisle, 20' containers	Ast (mm)	9702	9702	9702
Stacking aisle, 40' container	Ast (mm)	14232	14232	14232
Travel speed, with/without load	km/h	25/25	25/25	25/25
Lift speed, with/without load	m/s	0.58/0.58	0.58/0.58	0.58/0.58
Engine manufacturer/type		Cummins	Cummins	Cummins
Engine performance according to ISO 1586	kW	142	142	142
Number of cylinders/displacement	/cm³	6/6700	6/6700	6/6700



Power and drive system

- Linde hydrostatic drive system providing stepless, precise operator control.
- Low speed, high torque diesel engine matched to hydrostatic drive and hydraulic service pump requirements



Operators compartment

- Raised, rear positioned for optimised all-round visibility, and free-sight to the twistlocks at all lift heights
- Impact tested loadguard structure
- Access stairway and platform on left
- Emergency ladder and platform on right



Double pedal operation

- Instant direction change
- Precise travel movement
- Reduces operator foot movement



Linde Load Control

- Standard operator controls providing effortless operation
- Twin pedal drive system
- Linde load central control lever
- Reduced operator fatigue

Laden Container Handler Gantry Truck Capacity 36000 – 40000 kg C 360 – C 400

SERIES 356

The Linde gantry truck range brings a new dimension to the efficient handling of laden ISO containers for up to five high stacking in container terminals.

With its ultra-wide mast, panoramic view to the load and elevated, superbly spacious and comfortable cabin, featuring large window areas for all-round visibility and an intuitive and highly functional control layout, the operator's working environment is second to none.

Fitted with an advanced high-torque, fuel efficient diesel engine and four-speed powershift automatic transmission, the rugged Linde gantry trucks are constructed to undertake sustained heavy-duty container handling tasks in their stride year after year.

The 20' to 40' extension telescopic spreader with outreach, side-shift and slope/pile provides the versatility to handle every type of container.

The Linde gantry truck represents an excellent value for money investment with rapid returns through consistently high productivity.



Safety

Interlocks in the spreader twistlocks prevent un-intentioned container release; sensors in the lift system prevent damage to containers and spreader by cutting-out lowering functions when the toplift is seated. Drive system inhibitors prevent incorrect downshift and reverse direction operation.

Performance

The combination of a powerful, low revving – high torque engine, matched with an electrically controlled 4-speed transmission, and a multi-pump hydraulic system, ensures highly efficient use of energy, with optimised speed of operation and minimal wear on hydraulic components for extended working life

Comfort

The spacious, cushioned cab, comfort-class seat and integrated, pilot line' control joystick combines with effortless hydrostatic power steering and compact steering wheel to create an intuitive, fatigue-free working environment that motivates and promotes consistently high productivity levels

Reliability

The high performance of the Linde Laden Container Handler is matched by the robustness of its construction. The high quality, heavy duty drive line components are designed to ensure maximum performance and durability. Heavy-duty main structural elements provide stress relief over the load bearing areas, thus ensuring lifelong product integrity.

Productivity

The elevated central positioning of the operator's cabin optimises visibility through the mast when travelling and to the load handler during handling operations. All-round visibility is also excellent when working in confined areas. Combining these features with superb operator comfort, intuitive controls and impressive truck performance results in unsurpassed efficiency and productivity.

Model designation		C 360/3	C 360/4	C 360/5	C 400/3	C 400/4
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel	Diesel	Diesel
Load capacity	Q (kg)	36000	36000	36000	40000	40000
Load centre	C (mm)	1220/1460	1220/1460	1220/1460	1220/1460	1220/1460
Service weight	kg	65660	67970	70280	67660	69970
Mast/fork carriage/truck tilt, forward/backward	α/β (°)	2/5	2/5	2/5	2/5	2/5
Height of mast, lowered	h1 (mm)	7665	9165	10665	7665	9165
Lift	h3 (mm)	7000	10000	13000	7000	10000
Height of overhead guard (cabin)	h6 (mm)	4690	4690	4690	4690	4690
Overall length	l1 (mm)	10168	10168	10168	10168	10168
Length to fork face	l2 (mm)	7730	7730	7730	7730	7730
Overall width	b1/b2 (mm)	4180/3400	4180/3400	4180/3400	4180/3400	4180/3400
Aisle width with 20' container	Ast (mm)	11500	11500	11500	11500	11500
Aisle width with 40' container	Ast (mm)	14500	14500	14500	14500	14500
Travel speed, with/without load	km/h	23.3/24.9	23.3/24.9	23.3/24.9	23.3/24.9	23.3/24.9
Lift speed, with/without load	m/s	0.30/0.40	0.30/0.40	0.30/0.40	0.30/0.40	0.30/0.40
Engine manufacturer/type		Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11	Cummins QSM 11
Engine performance according to ISO 1585	kW	246	246	246	246	246
Number of cylinders/displacement	/cm	6/10820	6/10820	6/10820	6/10820	6/10820



Power and drive system

- Powerful engine – high torque at low speed
- 4 speed electrically controlled transmission
- Wide-track drive axle with wet disk brake system



Operators compartment

- Full suspension, fully adjustable comfort-class seat
- Linde 'pilot line' multi-function joystick control integrated in adjustable armrest
- Forced air heating and ventilation system
- Adjustable steering column



Comprehensive display

- Engine – water temperature, oil pressure
- Transmission – oil pressure and temperature
- Hydraulic & Brake – oil temperature
- Fuel – level
- Electrical – battery state
- Air – cleaner restriction warning



Telescopic spreader

- 20' – 40' extension
- Outreach 240 mm
- sideshift 200 mm +/-
- internal extension cylinders
- slope pile +/- 3 degrees
- twistlock safety interlock
- non-hydraulic cylinder suspended toplift

Sideloader
3000 – 6000 kg
S 30 – S 60

SERIES 316



The Linde S 30 to S 60 range of engine powered side-loaders with capacities from 3000 to 6000 kg provide the perfect solution for handling long or wide loads such as timber packs, pipes, steel plate or similarly dimensioned loads.

Designed to handle the loads by the forks reaching out sideways, the Linde side-loader range is able to store and retrieve long loads in aisles, which are little more than the width of the side-loader itself for the most effective use of the available space.

Fitted with the renowned Linde hydrostatic transmission and a powerful high-torque diesel engine these robust side-loaders deliver high performance with outstanding precision and control.

An ergonomic all-weather cabin ensures the operator is able to work in total comfort and safety in all climatic conditions for optimum productivity.



Hydrostatic transmission

- The Linde hydrostatic transmission system has no clutch, multiple clutch pack, no reversing gear and none of the maintenance and costs associated with these parts.
- The system is highly fuel efficient and excels in applications requiring smooth, precise handling and frequent travel direction changes



Power

- A direct injection, water cooled diesel engine provides the power to match the output required for each model to ensure optimum performance.

Sideloader

3000 – 6000 kg

S 30 – S 60

SERIES 316



Model designation		S 30	S 30 W	S 40	S 40 W
Power unit: battery, diesel, LP gas, mains power		Diesel	Diesel	Diesel	Diesel
Load capacity	Q (kg)	3000	3000	4000	4000
Load centre	c (mm)	600	700	600	700
Service weight	kg	6220	6420	7060	7310
Mast/fork carriage/truck tilt, forward/backward	α/β (°)	3.5/4	3/3.5	3.5/4	3/3.5
Height of mast lowered	h1 (mm)	2730	2730	2730	2730
Lift	h3 (mm)	3550 ¹⁾	3550 ¹⁾	3550 ¹⁾	3550 ¹⁾
Height of overhead guard (cabin)	h6 (mm)	2510	2510	2510	2510
Overall length	l1 (mm)	4150	4150	4150	4150
Length of fork face					
Overall width	b1/b2 (mm)	1975/1975	2155/2155	1975/1975	2155/2155
Aisle width with pallets 1000 x 1200 crosswise	Ast (mm)	2175	2355	2175	2355
Aisle width with pallets 800 x 1200 lengthwise	Ast (mm)	2175	2355	2175	2355
Travel speed, with/without load	km/h	24/26	24/26	24/26	24/26
Lift speed, with/without load	m/s	0.51/0.53	0.51/0.53	0.44/0.53	0.44/0.53
Engine manufacturer/type		Perkins 1104-44	Perkins 1104-44	Perkins 1104-44	Perkins 1104-44
Engine performance according to ISO 1585	kW	64	64	64	64
Number of cylinders/displacement	/cm ³	4/4400	4/4400	4/4400	4/4400

1) See mast tables

Safety

Perfect load control and maneuverability in close surroundings is assured at all times. Linde archives this by placing the cabin in the optimised position, also providing generous glass area to the front, rear, sides and top.

Performance

The finely tuned hydrostatic drive system delivers precision in operation balanced with optimised speed of performance. The stepless drive system ensures acceleration through to top speed and coupled to a mechanical drive axle, therefore providing smooth operation. The precision in operation of the hydrostatic system enables the operator to position the machine with precision.

Operator comfort

The operators cabin is mounted to the chassis on high density rubber mounts, this ensures that drive and power train vibration, together with operational vibrations are suppressed thus providing the operator with a comfortable working place. The standard

operators seat is equipped with hydraulic damping for additional cushioning.

Reliability

The proven reputation of the hydrostatic drive systems coupled together with the power unit and drive axle provide peace of mind for the drive system; the lifting mast has been thoroughly tested for endurance and security in operation, to ensure a long operational life.

Productivity

With the utilisation of the world-class hydrostatic drive system, speed and precision in operation is assured. The operational characteristics of the hydraulic drive system coupled with the ergonomic arrangement of the operator controls ensure that minimum operator movement is required to operate the machine, thereby saving time and limiting operator fatigue.



Maintenance

→ Thoughtful design, enabling easy access for routine maintenance procedures, results in maximum up-time ratios and therefore increased productivity and utilisation of the materials handling asset, for lower operating costs, and a faster return on investment

S 50	S 50 W	S 60	S 60 W
Diesel	Diesel	Diesel	Diesel
5000	5000	6000	6000
600	700	600	700
8600	8800	9080	9280
3/5	4.5/4.5	3/5	4.5/4.5
2730	2730	2730	2730
3550 ¹⁾	3550 ¹⁾	3550 ¹⁾	3550 ¹⁾
2600	2600	2600	2600
4150	4150	4150	4150
1975/1975	2155/2155	1975/1975	2170/2170
2175	2355	2175	2355
2175	2355	2175	2355
23/26	23/26	23/26	23/26
0.40/0.41	0.40/0.41	0.39/0.41	0.39/0.41
Perkins 1104-44	Perkins 1104-44	Perkins 1104-44	Perkins 1104-44
64	64	64	64
4/4400	4/4400	4/4400	4/4400



Deck widths

→ There is a choice of either 1220 mm or 1400 mm deck width to meet individual customer requirements.
 → The heavy section chequer plate deck has a tilt mechanism to facilitate easier, safer stacking, destacking and travelling

Forklift Trucks for Explosion-Hazardous Areas Full Protection

For many years now, Linde has been one of the world's leading experts in the manufacture of vehicles for explosion-hazardous areas. With Linde, you are not only assured of the highest levels of safety when working in hazardous areas, but also benefit from the innovative, cutting-edge technology of a world-leading manufacturer of fork lift and warehouse trucks. Linde can minimise energy consumption in your daily operations; maximise the efficiency of your performance; optimise quality, durability and service.

Linde – Quality you can rely on.



Experts

The excellent features of Linde trucks, combined with everything required for protection against potential ignition sources, ensure quality at the highest level. There is good reason for our attention to detail. Every component is carefully analysed and adapted to comply with safety regulations. We thus meet our objective of combining the highest standards in safety with the positive features of Linde trucks, without compromise.

Responsibility

The Linde safety concept represents a complete solution, which is not only certified and type-tested, but also optimised to suit your needs. Where gases are stored, combustible materials are produced or when working with flammable chemicals, professional operation with safe machinery and equipment is an essential prerequisite.

Reliability

With regard to vehicles with high safety requirements, it's all a question of trust. Engines and electronic controls are all Linde series production items and are optimised to deliver excellent safety benefits and a long service life. The components are adapted to meet the requirements for use in EX trucks.

Service

Virtually no other company offers a service as comprehensive as that of Linde Material Handling. As a market leader in materials handling equipment and components, Linde is the provider of Europe's best customer service network.

Application

Each sector is faced with different safety, efficiency and variability requirements. Therefore, we provide you with EX trucks that suit your individual needs exactly. The ergonomic workspace offers good visibility and simple operation, enabling fast and safe working.

Category	Series	Model	Zone 1	Zone 2
Warehouse trucks	115	R 14/16/20 Ex S	o	o
	126	P 60 Ex Z	o	o
	131	T 20/24 Ex AP/SP	x	x
	131	T 20/30 Ex	x	x
	131	L 14/16 Ex AS AP/SP	x	x
	132	N 20 Ex	x	x
	362	T 20/30 Ex *	o	o
	365	L 14/16 Ex	o	o
Electric lift trucks	365	L 14/16 Ex AS	o	o
	365	L 10/12/16 Ex AC	o	o
	324	E 15/16 Ex *	o	o
	335	E 16/20 Ex P	o	o
	336	E 20-30 Ex	o	o
	336	E 25/30 Ex S **	-	-
	386	E 14/16/20 Ex P/PL *	o	o
Engine powered lift trucks	351	H 20-30 Ex D	o	o
	353	H 50-80 Ex D	o	o
	391	H 16-20 Ex D	x	x

* Model for zone 21 and 22 available

** Model only for zone 22 available

Applications for zone 22 on request

o Model available

x Model available from 12/2008



Certified components

- Highest priority: safety
- All EX truck components for each specific truck
- Electrical components and controls are housed in flameproof enclosures



Ex IC-truck

- Robustness
- Proven benefits
- Electrically conductive seat, plastic parts and tyres
- This prevents sparks being generated by electrostatic discharge
- Forks are protected with non-sparking material



Innovations that inspire confident decisions

- Type-tested trucks
- Complete product range
- Individual solution



Certifications

- Certificate to ISO 9001
- Certificate to Atex 94/9/EC
- Type examination certificate (truck)
- EC-Type examination certificate (components)

Forklift Trucks for Explosion-Hazardous Areas With Gas Safety System

Forklift trucks for explosion-hazardous areas fitted with a Gas Safety System are often used internationally and are only allowed to operate in zone 2 classified applications. These versions are not so complex because the components, which are used in trucks with Gas Safety System are usually enclosed in pressure tight rather than gas tight casings. However, this pressure tight enclosure is very important, because it ensures safety, especially against a penetration of gas (gas penetration test).

Linde – Quality you can rely on.



Linde GS-System

The Linde Gas Safety System is a measurement system from "Dräger", is a well known and established producer of these devices. These systems are used successfully in static hazardous areas. They provide assured reliability and system availability. The Dräger-System is tested by DMT (Deutsche Montan Technologie GmbH) and certified to ATEX.

Sensors

The DrägerSensors Ex PR M (PR = poison resistant) for the detection of flammable gases and vapors are based on the catalytic effect. These sensors have a longer lifetime than conventional ones. The measuring range of the sensors are below the lower explosion limit (LEL). They check the ambient air for gases and vapors and send a signal to the control unit.

Control unit

To ensure a correct and safe operating, the control unit is placed in a pressure tight casing (2G). The control unit is a processor, which is tuned and calibrated by a test gas such as butane. If the tested value does not comply with desired value, either a warning is activated or

the truck will be cut out. If the truck cuts out, the control unit will continue working and will always remain on standby. A re-calibration is not necessary.

Indicators of control unit

The green control light confirms the operational status of the monitoring unit. After rising to a gas concentration of 10 %, it resounds an audible advice for the operator and the environment. When the operator acknowledges by depressing the green button the acoustic advice stops. When a gas concentration of 25 % is reached the truck cuts out immediately. An automatic switch-on of the truck after acknowledgement (by depressing the green acknowledgement button) and exceeding of gas concentration. Gas concentration thresholds: 10 % Acoustic warning 25 % Truck cuts out.

Service

The high standards of manufacturing and performance means that calibration is only required every 3 months (250 operating hours) by a technical expert using test gas. The sensors must be checked and cleaned.

Category	Series	Model	Zone 2 with GS-System
Warehouse trucks	115	R 14/16/20 Ex S	0
	131	T 20/24 Ex AP/SP	0
	131	T 20/30 Ex	0
	131	L 14/16 Ex AS AP/SP	0
	132	N 20 Ex	0
	144	T 20 Ex SF	0
Electric lift trucks	372	L 14/16 Ex AP	0
	336	E 25/30 Ex S	0
	386	E 14-20 Ex PHL	0



Sensors

- Depending on the height of truck, there are 1 or 2 sensors fitted
- One is located near ground level for light gases
- Another at face level for heavy gases



Control unit

- The control unit is provided with a power supply by an auxiliary storage battery
- Disconnecting of the control unit from the main truck battery for up to 2 hours without requiring a new calibration



Indicators of control unit

- Acknowledgement-button (green) for GS-System
- Battery discharge indicator (storage battery) and hour meter (GS-System) in pressure-tight Ex-version module
- Digital multifunction display including component failure alarm, maintenance due alert, battery discharge indicator (truck battery) and hour meter (truck)



Operator's workplace

- Ergonomically designed for efficient, fatigue-free working
- Spacious operator's compartment with generous floor plate area
- Linde twin drive pedal
- Linde Load Control

Tailored performance for maximum success

What it takes to achieve the best possible results.

All customers of Linde Material Handling get just what they need to secure their own success. Our solutions are as individual as the companies of our customers. We not only supply technically perfected and top-quality trucks, but also provide assistance in fleet planning, offer individual financing options and maximum security with our flexible service models.

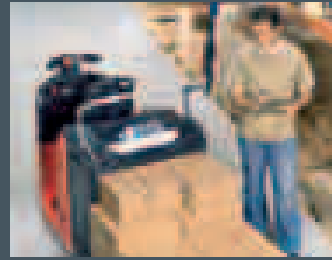
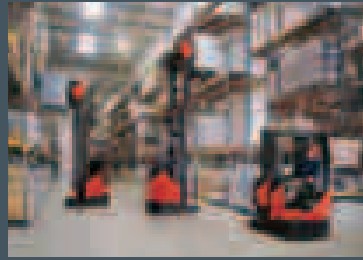
We start by investigating the conditions at the customer's premises to ensure an optimum, truck-supported material flow. Hardly any other area offers so much scope for savings and productivity improvements than goods handling inside the company's perimeter. Clever planning saves time and money in material flow and warehouse logistics. With efficient calculation using intelligent software tools, the right vehicles always work at the right place, ensuring heightened productivity for maximised benefits.

Another special service of Linde Material Handling analyses the workflows in the company and determines the optimum composition of the fleet. Our dynamic planning and simulation software is a decisive tool for material flow and warehouse planning – from the identification of suitable warehousing methods through to layout organisation and virtual material flow simulation.

Individual financing options to suit all requirements.

No matter in which sector the Linde Material Handling customers are active, which goods they transport or which trucks they want to use – Linde naturally offers all conventional financing models with maximum flexibility in all respects. We work with our customers to draw up financing concepts which are tailored to their company's situation.





With the Linde fleet management system (LFM) and the two modules, LFM access for access control and LFM basic for analysis of the use of individual forklift trucks and entire fleets of trucks, customers are able to optimise their forklift truck fleet themselves. LFM enhances the transparency of truck use and makes in-house material flows safer and less expensive.

All-round packages for perfect logistics.

Downtimes are expensive. Smooth and continuous intralogistics processes are therefore at the top of the priority list. The all-round service of Linde Material Handling guarantees that customers can rely on a fully functional company truck fleet. We offer service à la carte with spare parts management, maintenance and full service agreements – tailored, practical services which each customer can select to suit their individual needs. Around the world thousands of service technicians are constantly on the road for our customers. This availability is complemented by fast and reliable spare parts service.

When time plays a key role as in logistics, driver know-how plays an even more important role, as trained drivers work more safely and reliably. Linde Material Handling therefore offers a number of training courses at which the focus is not only on teaching, but which also give attendees the chance to sit behind the wheel themselves – an opportunity which tens of thousands of drivers make use of every year.

All customers get exactly what they need to achieve the best results.



LFM access: Vehicle access control has never been simpler. Vehicles can only be started by entering a personalised password.



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With annual sales exceeding 80,000 forklift and warehouse trucks, Linde ranks among the world's leading manufacturers. This position has been justly earned. Linde trucks excel not only with their recognized innovative technology but especially their low energy and operating costs, which can be as much as 40% less than competitors.

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

Your local Linde partner offers you a complete single-source package. From qualified pre-sales consulting through the sale to after-sales service; including finance packages matched to your business requirements. Leasing, rental or hire purchase. Flexibility is maintained in your operational and decision-making processes.