

World's first Safety Pilot  
Go to your limits. But never beyond.

Linde Material Handling

*Linde*



# For all counterbalanced trucks up to 8t\*. The Linde Safety Pilot. Perfecting the art of safety.

Even the best forklift truck driver in the world cannot remain completely focused at all times. And nobody can ever know the exact limits of a truck and its load in every situation. However, Linde is now offering an electronic assistance system that always intervenes when critical ranges are reached — and before the limits are exceeded. The new Linde Safety Pilot leaves no scope for risk or compromise. Safety-related information is electronically analysed and evaluated during every driving and lifting phase. If a potential safety risk is detected, the truck functionality is regulated automatically.

\* For electric counterbalanced trucks up to 5t









### Simulation of a typical driving error.

The Linde Safety Pilot was developed on the basis of the analysis and simulation of various driving errors that occur when starting up the truck, braking or cornering.





# Maximum performance. Minimum risk.

Linde forklift trucks are renowned on the market for the outstanding quality that they offer, not least in terms of safety. However, human error remains a key cause of operating errors and significant accidents, thereby continuing to hinder work processes.

In order to reduce the margin for human error as far as possible – whether it results from a lack of knowledge or a lack of concentration in stressful situations – Linde has developed a unique and intelligent driver assistance system: the **Linde Safety Pilot**.

The most common cause of accidents at work is human error:



■ 95 % human error  
■ 5 % technical error

Source: SiBe-Report 4/2013



1. The load is picked up.
2. The load is lifted while the truck is in motion.
3. The truck is braked with the load raised, and the truck begins to tip.
4. The result: The truck tips over.

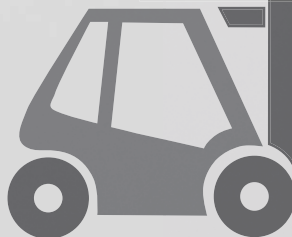
# An intelligent passenger.

**Revolutionary:** The Linde Safety Pilot helps the forklift truck driver to prevent operating errors and driving errors, thereby minimising the risk of an accident occurring. The Linde Safety Pilot provides support within the maximum load range, regulates the lift and tilt functions based on the lift load and lift height, and offers an enhanced level of safety when handling loads. As a result, forklift truck drivers are given the green light to focus on increasing productivity.





- **Critical range.**  
Load capacity limit reached.  
A warning sound is emitted. The truck stops the action.
- **Load capacity limit range approaching.**  
The lifting and tilting speed is reduced.
- **Safe working range.**  
No restrictions.



Effective driver support is also provided by the „traffic light system“ on the colour display.



# Focusing on productivity.

## The Linde Safety Pilot offers more.

To make each working day that bit easier, the Linde Safety Pilot offers the driver numerous functions to make working with a Linde forklift truck even safer and more efficient.

In addition to its active intervention and regulation safety features, the Linde Safety Pilot offers a wide array of additional comfort features. These features support the driver by allowing settings to be pre-configured manually and then checked using the electronic display.

TOP 5 comfort features include:





### Lift height preselector

- Selecting the required lift height
- Automatic stop
- Fewer minor collisions with shelves

### Lift height limitation

- Automatic lift stop at height X
- Adjustable
- Fewer minor collisions with gates

### Lowering limitation

- Automatic lowering stop above the ground
- Adjustable
- Less fork arm wear

### Weighing and load addition function

- Weighing and addition of individual loads
- Improved incoming goods checks
- Compliance with max. payloads for heavy-goods vehicles

### Speed limit

- Adjustable on a case-by-case basis
- Compliance with specific regulations such as zone restrictions and regulations for trailer operation





## Passive Safety meets Active Safety. World's first Roadster meets world's first Safety Pilot.

Every car driver has experienced the challenges presented by poor visibility due to the A-pillars leading to potentially dangerous situations. The same problem is encountered by forklift truck operators. Linde changes the status quo with a revolutionary new forklift concept – the unique "Revolutionary Roadster".

- Unlimited visibility towards load and working area by the removal of A-pillars
- A classic steel strutted overhead guard or the option of the world's largest armored glass forklift truck roof provide boundless visibility during load handling
- Minimised risk of accidents in combination with speedier working
- Optional, frameless windshield provides draught-free driving



Conclusion: Optimal panoramic view maximizes passive safety. In combination with Linde Safety Pilot as an active assistance system you see the most innovative truck for a warehouse.



# 3-wheel trucks. 2-motors front wheel drive. ONE Safety Pilot.

For Linde 4-wheel trucks the unique Linde Safety Pilot is well known in the market. Now, Linde engineers found a technical solution to implement the Linde Safety Pilot for Linde's center-pivot axle (3-wheel trucks), as well. Consequently, with this next step in technical innovation leadership, Linde customers can equip their fleets up to 5t trucks with the Linde Safety Pilot.

## Linde center-pivot axle

- 180° steering lock- Truck rotates around center of front axle due to 2-motors front wheel drive

## Built-in benefits:

- Excellent maneuverability in confined spaces
- Less energy consumption due to reduced steering resistance



# A tailored level of safety.

## LSP Select and LSP Active.

Visualised comfort feature or active intervention — you can choose.  
The Linde Safety Pilot can be tailored to your individual safety requirements thanks to the „Select“ and „Active“ variants.

SAFETY	INTERVENTION/REGULATION	<ul style="list-style-type: none"> <li>Visualisation of the limit range</li> <li>Visual and audible warning</li> <li>The lift height depending on the load, load centre of gravity distance and tilt angle</li> <li>The tilt angle depending on the load, lift height and load centre of gravity distance</li> <li>The driving speed depending on the load, lift height and tilt angle, and load centre of gravity distance</li> </ul>
	COMFORT FEATURES	<ul style="list-style-type: none"> <li>Lift height preselector</li> <li>Tilt angle preselector</li> <li>Lift limitation</li> <li>Lowering limitation (protection against fork arm wear)</li> <li>Load weighing (with tare function)</li> <li>Load addition</li> <li>Driving dynamics settings</li> <li>Energy consumption display</li> <li>Speed limit</li> </ul>
DISPLAY		<ul style="list-style-type: none"> <li>Current load</li> <li>Current lift height</li> <li>Current max. permissible lift height</li> <li>Current tilt angle</li> <li>Load centre of gravity distance</li> <li>Current max. permissible tilt angle</li> <li>Current driving speed</li> <li>Current steering angle</li> <li>Current/pre-selected drive direction (two pedals/one pedal)</li> <li>Current temperature of the drive unit</li> </ul>



Visualised  
comfort features:  
LSP Select.

Active  
intervention:  
LSP Active.

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**Linde IC- and E-trucks:**  
The safest counterbalanced truck fleet in the





world is available for you from now on!



## Just in case.

# Innovative technology from Linde.

Improved safety means enhanced performance. And enhanced performance means increased profitability. Innovative forklift truck technology from Linde can help you to achieve high productivity targets. We would be happy to provide you with advice on investing in future-oriented technologies from Linde.

### **Linde Material Handling GmbH**

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Engineered for your Performance

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