

Lift AGV



New Heights in Container Handling
Gottwald Lift AGV



The New, Active Gottwald Lift AGV

Decouples Container Transport from Storage Processes

The Lift AGV is a further development of Gottwald's existing AGV technology, which has been proven several hundred times over. Compared with the conventional AGV, the Lift AGV features a pair of electrically operated lifting platforms. These enable the vehicle to raise its load and deposit it independently and automatically on racks in the stacking crane interface zone and to pick up containers from those racks.

An Active Vehicle with an Increased Working Frequency

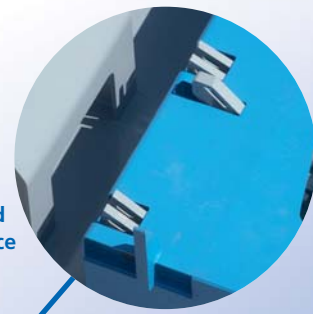
The Lift AGV decouples container transport from the storage processes. As an active, independent handling machine, it is constantly in motion. Fleet size can be considerably reduced as a result of the increased working frequency and the overall number of AGVs required to service each quay crane can be reduced by up to 50% compared with conventional AGVs.



Active: as soon as a Lift AGV has deposited its load on the racks, it is available for the next job

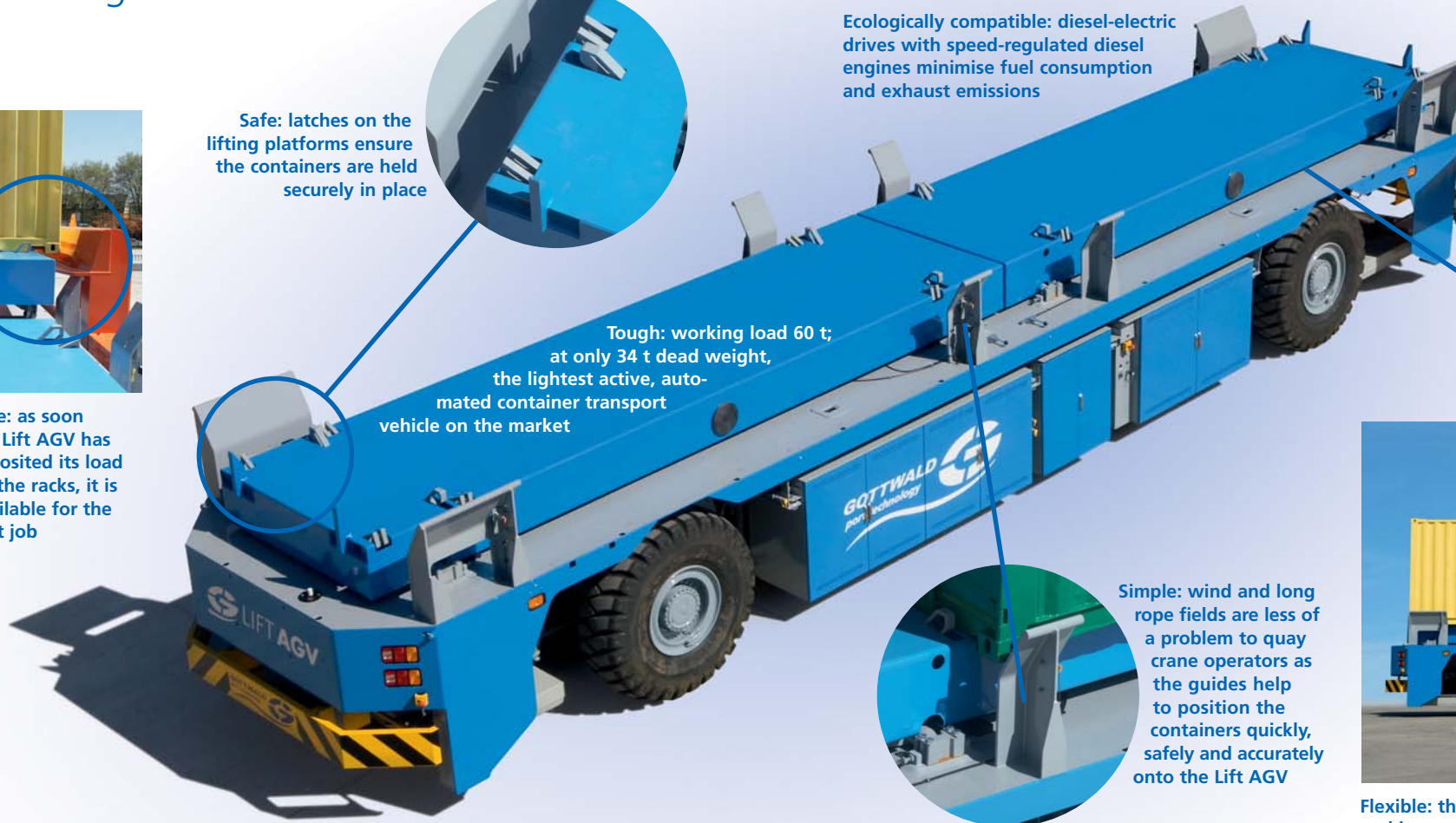


Safe: latches on the lifting platforms ensure the containers are held securely in place



Tough: working load 60 t; at only 34 t dead weight, the lightest active, automated container transport vehicle on the market

Ecologically compatible: diesel-electric drives with speed-regulated diesel engines minimise fuel consumption and exhaust emissions



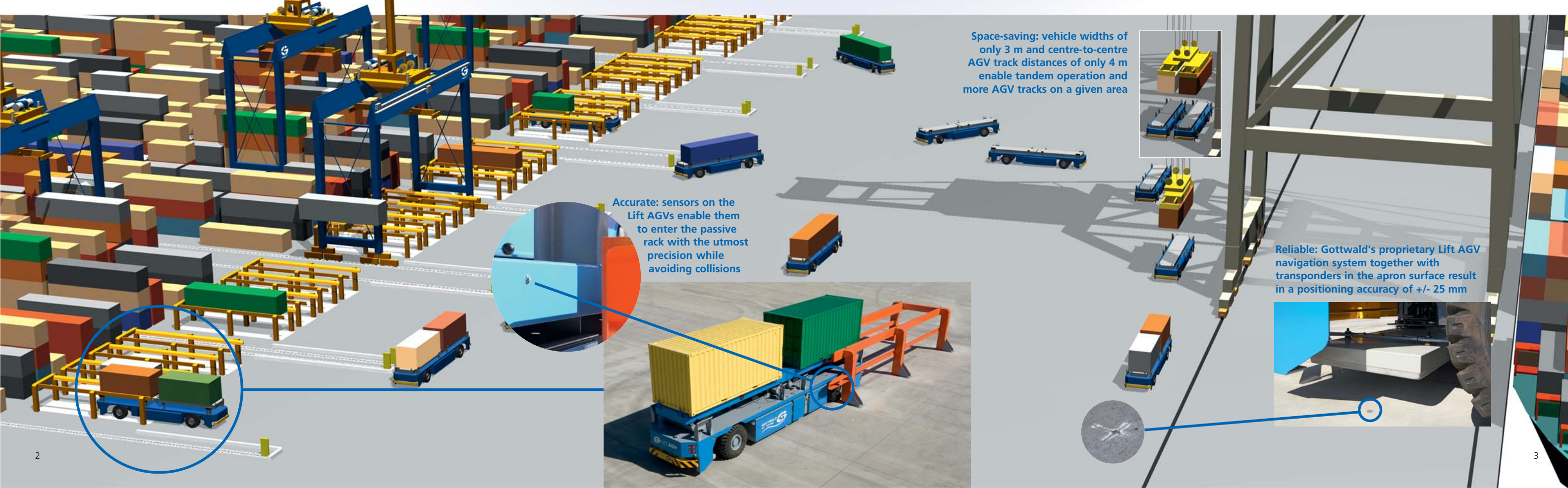
Consistent: environmentally-sound electric drives also raise and lower the platforms



Simple: wind and long rope fields are less of a problem to quay crane operators as the guides help to position the containers quickly, safely and accurately onto the Lift AGV



Flexible: the two lifting platforms can be raised and lowered individually or jointly



Space-saving: vehicle widths of only 3 m and centre-to-centre AGV track distances of only 4 m enable tandem operation and more AGV tracks on a given area



Accurate: sensors on the Lift AGVs enable them to enter the passive rack with the utmost precision while avoiding collisions



Reliable: Gottwald's proprietary Lift AGV navigation system together with transponders in the apron surface result in a positioning accuracy of +/- 25 mm



Low-maintenance and economical: uncomplicated Lift AGV construction for collecting and depositing containers – technology that avoids the need for service-hungry spreaders

Gottwald Lift AGV

Environmentally Aware Technology and Reduced Fleet Size



Lift AGV – Technical Data	
Positioning accuracy	+/- 25 mm
Fuel tank capacity	1,400 l
Fuel consumption	approx. 10 l/h*
Container Types	
1 x 20', 1 x 40' and 1 x 45' container	
2 x 20' containers	
1 x 30' container as an option	
Load Weights	
Max. weight of a single container	40 t
Max. weight of 2 x 20' containers	60 t
Dimensions	
Length (depending on bumper)	approx. 14.8 m
Width	approx. 3.0 m
Loading area height	approx. 2.4 m
Dead weight	approx. 34 t
Tyre size	18.00 R 25
Speeds	
Max. speed forward / reverse	6 m/s
Max. speed in curves	3 m/s
Travelling in crab mode	1 m/s

* Depending on site and operating conditions

Lift AGVs are not only suited to green-field developments and converting existing terminals, they are also the ideal choice when it comes to converting fleets of conventional AGVs

The diesel-electric drive concept with speed-regulated diesel engines coupled with a potential halving of the fleet size, if Lift AGVs are used, not only reduces overall capital investment but also makes a contribution to the port's ecological footprint because exhaust gas and noise emissions are sustainably reduced.

Future-Orientated Drive Technology

With a view to achieving totally emission-free operation of Lift AGVs, Gottwald is already developing alternative drive technologies – e.g.

using battery cells as a contribution to even more environmentally aware operations.

Intelligent Solutions Featuring Hardware and Software from a Single Source

The Lift AGV makes Gottwald's diesel-electric AGV technology even more flexible and even more productive, while retaining its high standards of reliability.

The reliability of the overall concept is based on the successful application of AGV technology to hundreds of

vehicles already in use and the fleet management and navigation software developed in-house. To date, no other manufacturer has installed a comparable AGV system.



In conjunction with Gottwald's ASC Automated Stacking Cranes Lift AGVs form a fully automated holistic handling system

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