

**CONTROL**   
**TECHNIQUES**

# UNIDRIVE THE DRIVE OF CHOICE

MERCEDES-BENZ | AUTOMOTIVE

**DRIVE OBSESSED**

# SIMPLIFY MAINTENANCE & MINIMISE DOWNTIME

More than 800 AC drives have been installed at the Sprinter production facility in Mercedes-Benz's Ludwigsfelde plant near Berlin. The drives are used in various functions, from the control of conveyor belts, scissor lifts, and advanced compact storage operations, to ventilation and extraction systems.

## The Challenge

The plant needed a drive with the programming flexibility and versatility to deliver on a vast range of tasks.

This was across all three core areas of the facility (the body shop, paint shop and final assembly) to simplify maintenance and minimise downtime.

## The Benefit

**"We like the programming flexibility & openness of the Unidrive range."**

"It enabled us to use a standard equipment range for all relevant applications and allowed us to use our own process expertise in the form of a standard user programme. To simplify maintenance, we have restricted ourselves to one make and one type of frequency converter for all applications over 1.1 kW, and the system was designed to eliminate long downtimes", said Technical Engineer Mr Wagner.

## The Solution

Over 200 Unidrives are used in the body shop, operating in open loop mode for transport tasks and closed loop mode for hoist units.

A typical precision application is the automatic welding cells where two Unidrives, coupled with servo motors, were used in a master/slave configuration for the lifting mechanism, synchronised with a third Unidrive with Unimotor in position control. Around 200 drives are used in the paint shop for ventilation and extraction tasks, as well as a number of blowers and pumps for hydraulic axes. Most of these drives run in open loop mode, with Interbus communication links to the corresponding PLCs. Synchronous motors with resolver feedback to the controlling Unidrives are used in the 15-workstation cathodic electro dip coating plant.

Approximately 400 Unidrives are used in the final assembly. Applications include two high density storage systems employing Unidrive AC drives for the automated storage/retrieval systems. Two vehicles in the small components storage system are fitted with four Unidrives giving 3 axis servo control, as well as a small, integral 1.5 kW conveyor for the picking process.



**Programming versatility**



**Extremely reliable**



**Open & closed loop functionality**

**Nidec**