

## *MAHLE Logistik GmbH, Stuttgart*



MAHLE Logistik GmbH is a 100 % subsidiary of Mahle GmbH Stuttgart. Mahle is a top systems supplier to the automotive and engine industry around the world and is represented on four continents with approximately 28,000 employees and 52 production locations.

The company provides the full range of components for small engines, diesel and petrol car engines, commercial vehicle engines and stationary engines. This includes ready-to-install pistons and assemblies in standard or larger sizes according to the specifications of the vehicle manufacturers, cylinder sleeves made from grey cast iron for combustion

engines, piston rings and complete piston ring sets, sleeve bearings, cylinder heads and camshafts as well as valves and valve train components like guides, rocker arms, tappets and seat rings.

MAHLE Logistik GmbH runs a replacement parts logistics centre for the engine components division of MAHLE GmbH. The replacement parts are dispatched all over the world from the centre in Schorndorf near Stuttgart.

### **Requirements**

The logistics centre comprises a high-bay storage area with approximately

5,500 storage positions on 7 levels that are two-positions deep as well as an automated small parts store with around 12,000 storage positions. Over 60,000 articles are stored in the logistics centre and approximately 800 items are picked and received in the goods-in area every day.

The *advantics.WM* and *advantics.TC* systems from PSI Logistics are now responsible for warehouse management and transport control in the logistics centre. All goods movements in the warehouse are controlled by way of mobile radio data communications or, as in the miniload warehouse, using programmable logic controllers (PLC). Picking is carried out in the high-bay warehouse and miniload warehouse according to the goods-to-person principle via mobile radio data terminals or, in the miniload warehouse, using automatic conveyor systems. Picking using documentation on paper is now only carried out in the special storage locations. The forklifts used in the high-bay warehouse are equipped with radio data terminals and in some cases with mobile printers. The replenishment system takes stock from the high-bay warehouse and places it in the small parts store.

### Specific characteristics of the interfaces

The software supplied by PSI Logistics communicated with the overlying SAP R/2 initially via an SAP R/3 that acted as a gateway. This system was not used for normal operation but served only as an

interface converter. The standard IDOC interface of the R/3 could thus be used for the link-up to the newly introduced *advantics* system even though Mahle was still working with the R/2. Mahle has meanwhile migrated to SAP/R3 so communications now take place via the certified interface from PSI Logistics. Only minor modifications were needed for this step.

The following objectives were focused on when implementing the warehouse management software from PSI Logistics:

- Merging of various warehouse areas
- Optimised warehouse processes
- Achieved synergy effects (e.g. storage cost savings) through concentration on the Mahle filter systems site.

*R/3 used as a gateway for connection to the WMS*

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