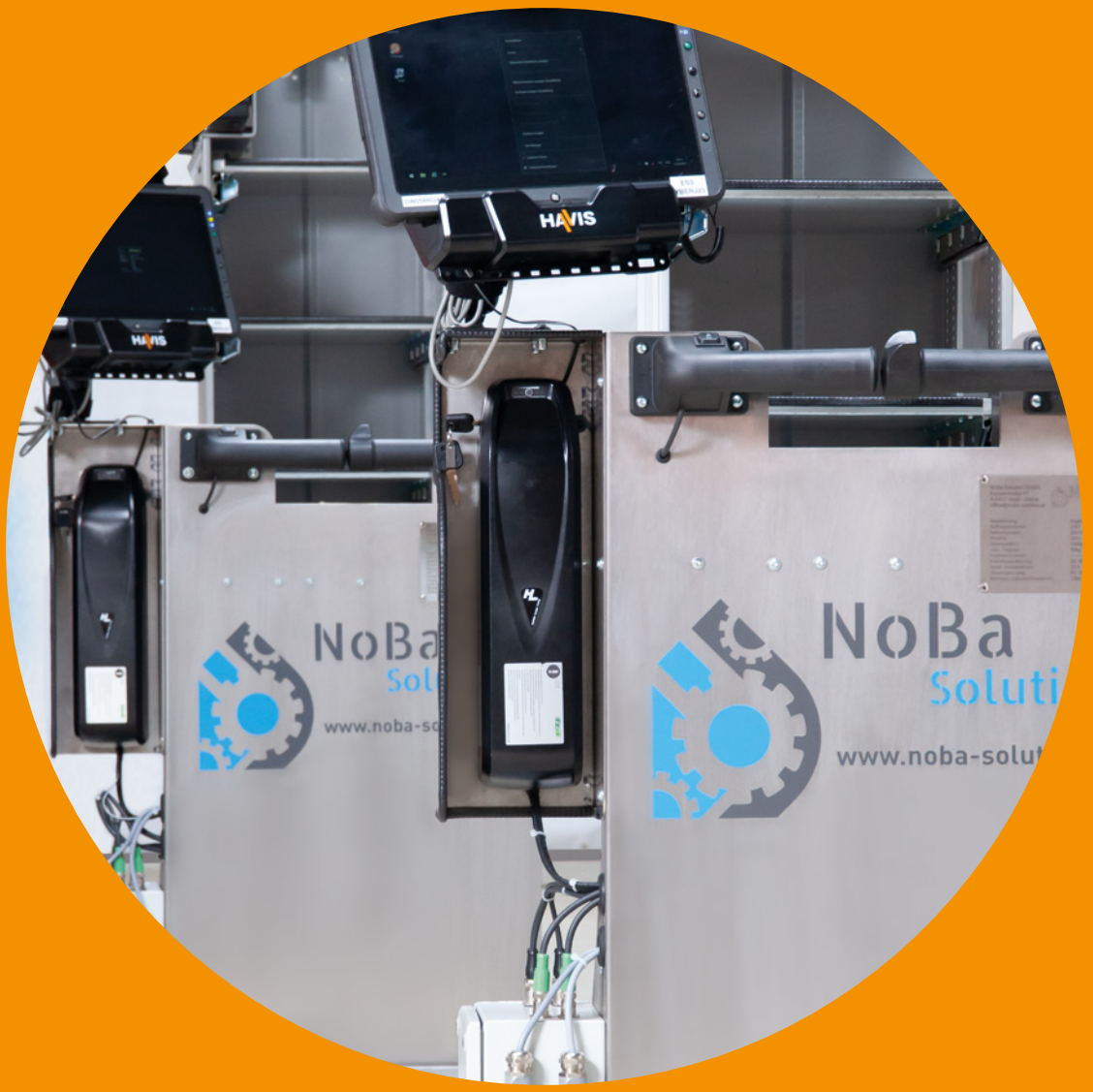
CUSTOMTER REFERENCE
PICKING TROLLEY
WITH E-DRIVE



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EASY AND SAFE PICKING
SO THE BELT KEEPS ON MOVING

The employees of a leading global engine manufacturer in the automotive industry in Austria assemble all necessary parts on trolleys in order to build their engines. This task requires accuracy and perfect timing, as the picking process follows a precise schedule in a circular system. To analyze and improve these working conditions, the engine manufacturer consulted the company NoBa Solution GmbH.

THE STARTING POINT

The company ranks among the world's largest engine factories with one engine coming off the production line every twelve seconds. At peak times, the company produces up to 5,500 engines on a daily basis. In recent years, the company has developed ergonomic workplaces in its production areas. This involved installing electric overhead conveyors on its assembly lines, which can be adjusted to the different body sizes of the employees. In this way, the factory ensures better health and performance of its employees and responds to studies by the World Health Organisation. These studies state that lower back problems belong to the most common causes of physical disability worldwide. It was now the task of the supplier NoBa Solution GmbH to also create an ergonomic system for the picking of engine parts in preparation for production.

STANDARDISED PROCESSES AND PRECISE TIMING

The employees working in the order picking of engine parts push four to eight trolleys closely behind each other on a circular path. Next, they scan their order, take the matching parts from boxes and then load them onto specially adapted trolleys. This is a stop-and-go process where workers have to stop their trolleys briefly as they scan their order and load the matching part onto the trolley. On top of that, they have to work fast to avoid blocking the workers arriving directly from behind.

NoBa Solution GmbH examined this process closely and analyzed the work processes using an app. The state-certified safety experts discovered the following: The employees often pushed their picking trolleys with their thighs since repeating the movement required a lot of strength, even though the loaded trolleys usually only weighed around 100 kilograms. In addition, they constantly had to bend down and reach to the side to pick up the components. This resulted in two tasks for NoBa Solution GmbH: First the picking trolleys were to be equipped with an electric drive and sevond the storage levels for the motorized parts were to be automatically adjusted to the appropriate height for the respective employees. At the same time, occupational safety needed to be the top priority. So NoBa Solution GmbH decided to use the existing order picking trolleys to grant its customer's employees the opportunity to operate as usual.

OUR SMART MOBILITY SOLUTION

The employees at the engine production site should be able to push and stop their order picking trolleys easily. At the same time, the drive unit should be easy to handle and to maintain. For this purpose, NoBa Solution GmbH used the E-Drive system from TENTE . The hand control can be easily operated with one hand. The other hand can be used to operate the scanner or the iPad for order picking.

NoBa Solution slowed down the speed of TENTE's E-Drive system to 5 km/h. This way, even if a worker bumps into the trolley up front, the trolley will stop automatically without causing any injuries. A foot protection in front of the castors also prevents potential accidents.

The speed of the picking trolley can be controlled at any time. As soon as the employees take their hand off the control, it slowly stops. If the employee does not want to use the drive unit, the driving wheel of the E-Drive system from TENTE moves back up automatically. The setting of the control unit as well as the duration of the battery can be adapted to the specific needs of the customer. Also, the mobility solution from TENTE is constructed logically and easy to maintain.

OPTIMISED PROCESSES, ERGONOMIC OPERATIONS

By providing automatically adjustable working stations and by installing the E-Drive from TENTE in the picking trolleys, the employees benefit from ergonomic operation. Now the employees of the engine company can easily push and stop their trolleys without having to bend down to load the trolleys.

In this way, an ergonomic work process has been developed that preserves the health and performance of the employees.

„We were particularly impressed with the simple installation of TENTE's E-Drive system and its low maintenance requirements for our customer."

Florian Bauer
Shareholder and Managing Director of NoBa Solution GmbH


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