



Pneumatics instead of driverless transport system

150 meters for the onboard electronics of a compact car

KEY FACTS

- Bridging of 150 m with an eCATS test device during the production of a compact car
- Enhancing the efficiency of the production
- Development of an individual transport carrier fitted to customer's needs
- Close collaboration between customer, distributor, and manufacturer for optimal results

Our customer

Our customer is a German automotive manufacturer that produces a well-known compact car in its main facility. The car has been sold over 15 million times all over the world. One of the models is produced every 68 seconds.

Programming the cars' electronics

The car can be equipped with 15 different assistance systems – for example, a braking assistant or a park distance control. Due to the numerous different configuration settings the produced cars receive their individual onboard electronics by the eCATS system on the line.

The device receives the necessary data via wi-fi and programs the cars with the particular electronics while these move further on the production line.

Decision upon a pneumatic tube system

The customer discussed various options to overcome the given transport challenge. Besides the pneumatic tube system, it would have been possible to convey the eCATS by a driver with a trailer. Furthermore, a driverless transport system could have taken on the job.

In the end, they decided on the pneumatic

tube system which has two major advantages in comparison with the alternatives:

1. A driver is only profitable if more than one test device has to be conveyed at the same time
2. Unlike the alternatives, the tube lines do not need to use the ground floor in the production facility

Co-creation of the plant

To join the best competences during the realization of the system, different groups of persons worked together closely. The customer's cross-functional team comprised process analysts and production engineers.

The identified requirements were talked over with Rolf Heitmann (Hörtig distributor). At the Hörtig headquarters in Bayreuth, a test plant was built to check the system and the developed carrier.



Special carrier with configuration device



315 mm carrier

The carrier is a custom-made product because of its big diameter of 315 mm. The inside of the carrier was tailored precisely to the form of the eCATS.

Thanks to the optimized closure mechanism, the users are able to open the carrier with only one hand needed. Contacts report to the station via RFID if the carrier was closed correctly.

HÖRTIG system

The pneumatic tube system contributes to a smoothly flowing production process at our customer's since 2017. The production staff enjoys the use of the stations thanks to the user-friendly operation.

As desired, the tube lines were installed at the ceilings to avoid using the frequently used ground floor even more. Valuable floor space that stays available for the production.

The system overcomes the transport route with the eCATS around 400.000 times per year.



CUSTOMER'S PNEUMATIC TUBE SYSTEM

- 8 pneumatic tube stations with 600 m tubes and 4 zones connect the beginning and the end of a production line
- Transport of 1.100 carriers per day with a speed of around 5 meters per second
- 8 individually developed stations
- Customized transport carrier with extra big diameter (315)



Made in Germany

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