



SUCCESS STORY

A pre-assembled solution for customized AGVs

A company specialized in the development and construction of individual, mobile transport platforms, based in the Nuremberg metropolitan area, relies on robust connectors from the experts for power transmission in its electric drive systems. Stäubli Electrical Connectors' customized pre-assembled cables and its modular, high-performance CombiTac system provides unrestricted flexibility in driving and maneuvering, as well as failsafe operation of the mobile logistic platforms.

The business needs

Automated guided vehicles (AGVs) are an integral part of fully-automated production and logistics processes. They must work in a wide variety of environments, function under precise control, have an extremely high load capacity depending on use, and offer reliable long-term operation. WFT specializes in the construction of custom machinery

and mobile platforms. The company has been part of the Stäubli Group since 2018 and today operates under the name Stäubli WFT GmbH. Based on its own WFTM.I.T. (Mobile Individual Transportation) systems, the highly-motivated team of specialists develops technologically advanced platforms for automated transport. The customer base for these custom-made machines includes well-known industrial businesses throughout Europe, from airplane construction firms to manufacturers of agricultural machinery, rail vehicles and compressors.

The various types of drive systems of the WFTM.I.T. allow them to carry loads of up to 500 tons. If necessary, multiple M.I.T. systems can be easily combined into one large platform.



Market Segment: E-Mobility



Industrial Connectors: CombiTac with pre-assembled cables

Application: electrical connection between power supply and a variable number of drives, distributed to various axles beneath the platform.

- Vibration-resistant
- Reliable installation
- Flexible cable length
- Immune to interference from electromagnetic effects

STÄUBLI



The challenge

The innovative drive technology provides unrestricted flexibility and control in all directions. As a result, the **WFTM.I.T.** systems can be used in an almost unlimited number of ways. A secure connection for transmitting power to drive systems requires a high-performance, vibration-resistant connector with flexible connection cables.

The solution

Not only was the CombiTac modular connector system from Stäubli readily adapted to WFT's specific needs, it's also extremely robust and offers high current-carrying capacity, thanks to Stäubli's innovative MULTI-LAM contact technology. Connecting multiple drive axles to the control cabinet on the base frame required flexible wiring to allow a 360° range of motion in all directions, while also ensuring a failsafe connection. In discussions with Stäubli Electrical Connectors during the project development phase also the complete wiring specification was fine

tuned, so the CombiTac solution is delivered with pre-assembled wiring harnesses from about 20 inches to almost 40 feet in length. This shortens installation times while also eliminating sources of error during assembly, thereby ensuring smooth operation in customer applications without limiting maneuverability. The required cable length can vary from one **WFTM.I.T.** design to the next, and Stäubli flexibly adapts its assembled supply as needed.

The added-value provided

The use of pre-assembled cables for the implemented CombiTac solution, and Stäubli's flexibility on the lengths and cross-sections that are needed for the cable design, improves the production quality and increases the reliability of the **WFTM.I.T.** Based on the positive experience with CombiTac connectors and pre-assembled cables for the first small batch of M.I.T.s, this type of connection has been set as the standard for all the other M.I.T. in the portfolio as well.

Customer benefits

- Quick installation time for an efficient assembly process
- Secure and reliable connection ensures smooth operation
- Custom pre-assembly for unrestricted freedom of movement

About Stäubli

Stäubli is a global mechatronics solution provider with three core activities: Connectors, Robotics and Textile. The international Group has a presence in 29 countries.

Stäubli Electrical Connectors is a specialist for advanced contact technology and technically mature solutions with a product portfolio ranging from miniature connectors up to high-power connectors for various industries.

www.staubli.com/electrical