

Assembly of Radio Remote Units in China

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INDUSTRY	PRODUCT	COUNTRY	PROCESS
Electronic	PRT2 Precision Track Systems	China	Assembly

Task

This Chinese manufacturer of Radio Remote Units needed to increase production rates and improve the quality of the assembly process. This involved totally automating the assembly to include the sub-processes such as fixture / closure location together with accurate positioning and installing the PCB's within the enclosure. The PCB's would require positioning to a repeatability figure of +/- 0.05mm, no simple task given the overall line length is 20m. The final operation is to fix and tighten screws.

Solution

A precision HepcoMotion TR76 track system, rectangular shaped with 30 carriages attached to a customer made chain drive system. The fixtures were located to each carriage and then the necessary components, supplied by robots situated around the track system, were added. To achieve the repeatability of +/-0.05mm, a custom designed locking system to physically lock each carriage was used to ensure uniformity of position.

Scope of supply

The rectangular track system was made up of 1 X TR76103390/C + 1 X TNL76B905 + 1 X TR76103390/C + 1 x TNL76B20307.52 + 1 X TR76103390/C + 1 X TNL76B905 + 1 X TR76103390/C + 1 X TNL76B20307.52, with 30 carriages. MCS 60x60 profiles to facilitate the installation of the track system.

Result

An impressive example of robots and continuous linear motion being used for maximum efficiency. The use of a Hepco track system ensures that the fixtures are in the right position prior to components being located and will allow a fully automated solution. The improvement comes from the reliability and consistency of the combination of two proven technologies working in harmony with little if any maintenance requirements.

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