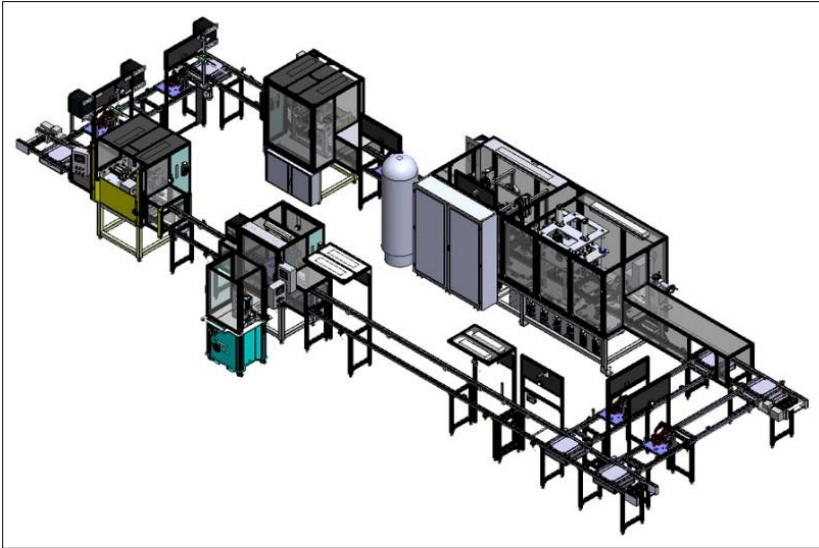


Brake Pedal Sub-Assemblies



Location: Canada, Mexico
Project Value: \$750 k
Turnaround Time: 12 to 40 Weeks

At **IAT Global**, we produce turnkey custom manufacturing systems that make use of the most advanced and reliable robotic assembly and inspection technologies available. The automated assembly system highlighted here was manufactured for a customer in the automotive industry for use in their assembly plants located in Mexico, Canada, Brazil, and China. For this project, we were tasked with designing a system to assemble 30 components that comprise a brake pedal cluster sub-assembly and then perform the necessary functional testing and inspection to ensure that the assembly meets all applicable quality and safety standards.

Due to the different labor costs of each plant in which the system was to be implemented, the customer requested different levels of automation for each system. We designed similar systems, but with a varying number of automated processes, ranging from 5 to 20 processes, to optimize assembly costs given the labor rates of each respective location. However, the quality testing and inspection system is identical in all of the systems.

Bosch pallet transfer technology is used to precisely stack parts in the desired configuration and parts are traced by scanning the barcode on thermal transfer stickers located on the components. A combination of Vision systems and physical measurement tools are used to verify the accuracy of the assemblies to dimensional tolerances as tight as ± 0.5 mm. LabVIEW software is used to perform motor and sound drive analysis of the automatic height pedal transmissions. Custom Poke -A- Yoke systems specifically related to the brake pedals were also implemented to ensure that these safety critical assemblies meet all customer specifications and industry safety standards.

The total value of this project is \$750,000 and the systems required between 12 and 40 weeks to build, depending on the level of automation contained in the specific system. For additional information about the custom assembly equipment project, contact us directly at info@iatglobalmfg.com.