

Compact by Design

Robotic Welding Equipment Retrofit

“Plug and Play” Space-Efficient Custom CAP Model Replaces Original Oversize Slide

Application Challenge

A leading OEM of Robotic Welding Equipment utilizes a ball slide unit in the robotic torch reaming/welding attachment that removes the welding slag from the EOAT (End Of Arm Tooling). The robot lowers the torch reamer into a precise location, via the slide unit. A vision system “spots” the slag or flash to be removed. Then a torch reamer is activated and burns away the slag or flash, leaving the surface to specifications. In the past, the manufacturer has made their own unit, purchasing the individual components and making the assembly themselves. The customer was looking for a way to improve the performance of this process as well as eliminate the in-house manufacturing of the slide unit itself.

Project Solution

Compact’s Ball Slide Cylinder (BSC) series was suggested as a solution. Its compact design allowed the customer to replace the original oversized slide, thus reducing the weight and clutter on the EOAT. With the assistance of a local Compact distributor, the cylinders are pre-assembled with additional components to form a sub assembly for the welding equipment. The finished product is provided to the customer as a complete “plug-and-play unit” enclosed in a custom housing.

Customer Benefit

Satisfied with the results, the customer plans to make further enhancements to its manufacturing process. CAP will design a complete bolt-on attachment to provide both labor savings and “plug-and-play” capabilities to what is currently a multiple step assembly process for all of the bracketing connections. Many of these robotic welding systems are heavily used in the automotive industry. Additional BSC units can be marketed to other robotic companies to meet comparable application requirements.

