

Semiconductor Industry Case Study

ADAPTING OUR DESIGN TO AN ULTRA-HIGH VACUUM ENVIRONMENT



A customer contacted Belden Universal for a custom universal joint to be used in a newly developed ultra-high vacuum application. The universal joint was machined to incorporate a keyless bushing component and needed to be corrosion resistant, easily lubricated with a booted center section to prevent contamination that could withstand the high pressure nature of the application. A rubber boot kept collapsing under the extreme pressure of the application but a protective cover was required to contain

the Krytox LVP High Vacuum grease and protect the knuckle of the universal joint, all while operating up to a 22 degree angle. Belden Universal's R&D team developed a boot-like interlocking steel cover to replace the standard rubber nitrile boot consisting of two pivoting interconnecting pieces of stainless steel sheathing a majority of the universal joint. The boot concept was stringently tested and approved by the customer, and Belden Universal has added another product offering to its extensive list of custom solutions to meet or exceed customers' application requirements.