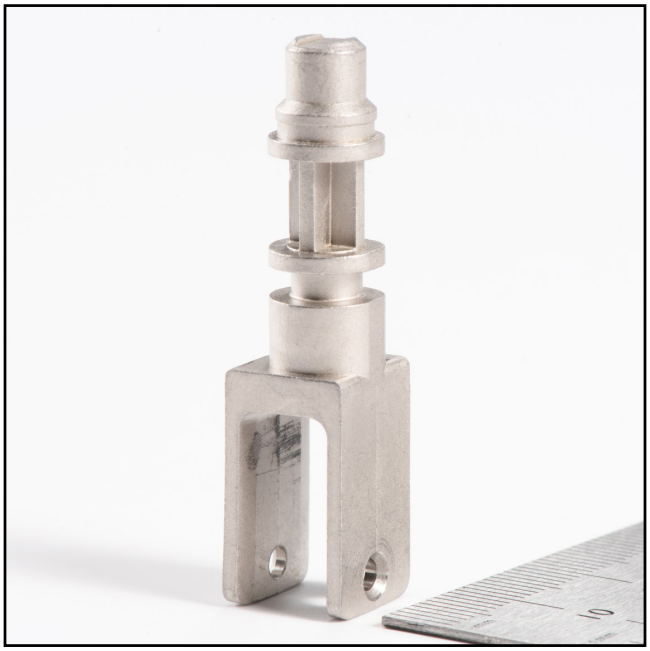
CASE STUDY



A 2021 Award of Distinction Winner in the Medical/Dental category for metal injection molded components

Pump Latch

Process:
Metal injection molding (MIM)

Material:
304L stainless steel

End Use and Function
The pump latch is used in an IV pump. In application, it latches a mating component to complete the latch/hook mechanism.

Fabrication
The part was developed to ensure that each step of the process did not have a negative impact on the next. There is a fair amount of labor involved in the value-added operations. Minor machining is required, and a roller and rivet are included in the value-added operations. 3D printed fixturing added to the successful assembly operation.

Results
When considering alternative manufacturing methods, it was apparent that MIM was the logical choice as more than 100% of the weight of the part would be turnings if the part were machined from bar stock, not to mention numerous set-up steps during the process. MIM was not only a cost-savings solution, but it is also a sustainable solution that reduced scrap.