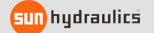


Sun Hydraulics Corporation

www.sunhydraulics.com



Objective: Increase Accuracy Reduce Change Over
 Increase Throughput

Background

Sun Hydraulics Corporation was co-founded in 1970 by Robert E. Koski and John Allen. This Sarasota, Florida-based manufacturing company specializes in screw-in hydraulic cartridge valves and manifolds for industrial and mobile markets.

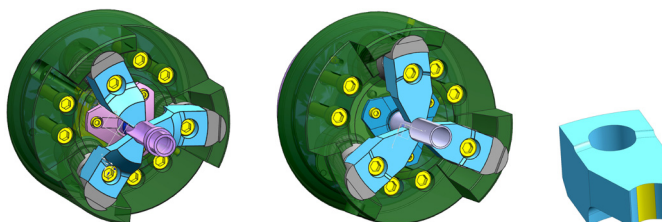
Scope

Sun Hydraulics contacted Kitagawa-NorthTech in 2010 to engineer a sophisticated workholding solution to allow them to run (3) different parts on one machine with minimal change-outs and the associated downtime. The manufacturing process at Sun Hydraulics an intensive 24 hour - 7days a week manufacturing operation with automation extensively used to ensure product consistency. The requirement for Kitagawa-NorthTech was to develop a custom workholding solution for their CNC lathes that could run three different parts with minimal change-over, in addition to provide complete part gripping for high volume machining. This type of solution would allow maximized throughput without effecting finished part quality. Thus providing Sun Hydraulics high volume production per hour with virtually no rejects; as well as fitting within the automation system's cutting parameters.

Solution Value

Kitagawa-NorthTech designed a custom solution by modifying a long stroke production style chuck (PU206). This sealed, pin arbor pull-back chuck, permitted very high repeatability and maintained grip force through high volume machining operations. The chuck was built to be compatible with automation by incorporating part seating confirmation, which allows freedom for the operator to step away confident that each part is loaded correctly. Additionally, downtime to conduct routine chuck maintenance was reduced as the chuck only required grease about once a month. The top tooling was developed specifically around application functionality and reducing operations. Kitagawa-NorthTech's custom design allowed the jaws to hold multiple parts, preventing the need for the top tooling to be changed over when machining a different part.

Maintaining the status-quo is no longer needed with the availability of new innovations to add onto or heighten your current applications. By selecting the correct workholding for your machining operation you can, in some cases, increase production by over 100%.



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