

WORKING WITH PRECISION: TOOL COMPANY REDUCES ASSEMBLY TIME WITH CNC MACHINING

ABOUT TIMBERLINE TOOL & CASTING. Since 1995, Timberline Tool has designed and manufactured tools for the natural gas, water, and firefighting industries. One of its first innovations was the creation of the Timberline Hose Clamp - developed for the wildland firefighting industry more than 30 years ago. In response to client needs, Timberline now makes a wide range of products designed to make it easier and safer to maintain and repair Polyethylene (PE) pipe, including squeeze-off tools for 1" to 6" PE pipe used by utility companies across the country. Based in Kalispell, Montana, Timberline's main customers consist of natural gas and water utility companies, utility contractors, US Navy and urban/wildland firefighters. Products have been sold across North America, South America, Europe, Asia and Australia.

THE CHALLENGE. Timberline used an in-house aluminum foundry to cast several of its tool models. The goal was to evaluate moving away from an aluminum casting process to a 100% CNC machined products, but the company needed assistance assessing the feasibility.

MEP CENTER'S ROLE. Timberline worked with the Montana Manufacturing Extension Center (MMEC), part of the MEP National Network™, on the feasibility analysis for conversion to CNC machining. MMEC managed the study from start to finish, which encompassed a thorough analysis of the numerous steps that would be involved in the conversion, including product design, CNC programming, fabrication of prototypes, testing and product costing. Applying the results of the study, Timberline moved forward with the implementation of expanded CNC machining.

As a result of the conversion process, Timberline now produces 100% of its aluminum tools using the CNC machining process. In addition to the quality and strength improvements achieved, the new machining process has yielded other operational benefits, including a 67% reduction in tool assembly time, and just-in-time production versus batch production.

"MMEC is a great resource with a strong commitment to help grow and sustain the manufacturing sector of Montana."

-Bill Nicholson, General Manager

RESULTS



\$512,300 investment in new products, equipment & other investments



\$22,500 cost savings in avoided unnecessary investment



67% reduction in assembly time for new machined products

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