

# Shaped Bar Stock ...Runs Unattended

In the past year and a half, TI Automotive Group's Sanford, FL plant has been running jobs it never before would have attempted in an unattended bar-fed operation. The products are rocker-arm-shaped automotive air conditioning connector components made from shaped 6061 aluminum bars approximately 40" long. The improvement is credited to an SMW Systems SpaceSaver short magazine bar feed combined with Trusty-Cook polyurethane spindle liners having ID's specially shaped to fit the contour of the extruded bars.

Brad Hasty, regional Sales Manager for SMW puts it this way: The task was to feed custom-shaped extruded bars into the spindles of two Eurotech Elite twin-turret multi-axis turning centers so parts could be completed in the primary cycle without continual attention from an operator. One prerequisite for success, Mr. Hasty points out, was to orient the shaped bar stock so it would align with special EDM'd

collets in the lathe's spindle noses. Trusty-Cook's Polyurethane CNC Spindle Liner made it possible to orient and support shaped bars that have an approximate 2-1/2 by 1-1/2"

cross section that would have been difficult to run in the lathes even if they had had been manually loaded.

Jack Anderson, Project Engineer and coordinator at TI Automotive, says the parts previously were cut from shaped bar then run on

a machining center, unloading and re-fixturing each part on a pallet for first and second operations which included turning, hollow milling and drilling. The current process completes the parts in one 30-second cycle using the



Eurotechs' subspindles for back end work.

Mr. Anderson explains the new procedure thus: When a bar is depleted, the SMW's push rod ejects the bar remnant from the collet and retracts while the feeder positions a new bar in a V-shaped trough at back end of the spindle. Retraction of the push rod signals the lathe spindle to stop in position so a new bar

can be pushed into the chamfered back end of the Trusty-Cook spindle liner. A flange at the back is used to secure the liner so its I.D. profile remains in line with the contour of the collet. Mr. Anderson says the system allows both Eurotech machines to run unattended except for replenishing the stock racks on the feeders and checking parts as they exit on conveyors

Molding the I.D of the spindle liners, rather

than machining them, provides a smooth surface that closely supports shaped stock. The liner material has tensile strength to 7500 psi, is resistant to tearing or chip imbedment and withstands temperatures in excess of 300 degrees F. Trusty-Cook has furnished liners with profiles to suit several sizes of shaped bar stock used in TI Automotive's operations.



The spindle liners combined with shaped collets would allow what were once twin-operation machining center jobs to be run on the Eurotechs by stopping the machines and manually loading fresh bars at frequent intervals. It is the addition of a part feeder that can accommodate shaped bars that allows these parts to be finished in one

cycle with virtually no operator attention.

For more info on Trusty-Cook's CNC Spindle Liners visit [www.trusty-cook.com](http://www.trusty-cook.com)

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