

High-Speed Machining 5X faster with CoolSpeed® Spindles!

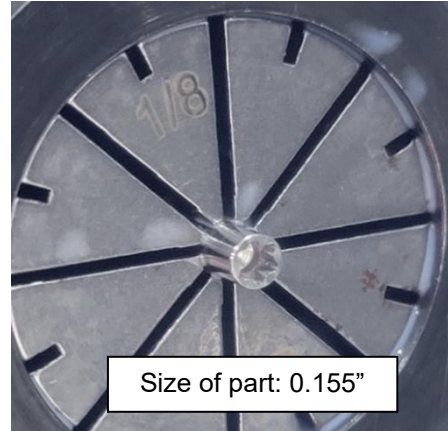


By Brian Neale, WTO

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Customer: Area 419

Application: T20 Torx Screw Heads
Machine: DMG MORI NLX2500
CoolSpeed® mini Model: CM-CE-R016-046-4-A
Driven by: Coolant/Oil
Coolant Pressure: 260 psi
Spindle Speed: 35,000 rpm
DOC: 0.012"
Stepover: 0.0026" (11%)
Feed rate: 84 IPM
Material: 303SS
Hardness: 19C
Pilot Drill: 2.8 mm Mikron CrazyDrill™
Endmill: 0.6 mm Mikron CrazyMill™ Hexalobe 4 Flute



About Area 419:

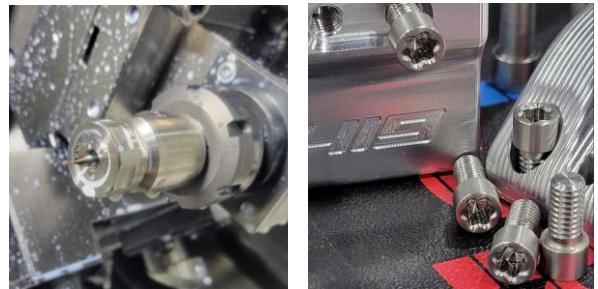
Over the course of 14 years, Area 419 has grown from having a 1,200 sq ft facility with a single manual turning lathe to a 20,000 sq ft facility with high end machines like the DMG MORI NLX2500. What started as some basic gunsmithing for friends has turned into a global customer and dealer base – making what was once a backyard hobby business in Northwest Ohio into a worldwide brand in the precision firearm accessory and reloading space.

Issue:

Previously, it was a struggle to produce small Torx screws efficiently with a max spindle speed of 10K rpm. Torx screws are notoriously hard to make with small groves requiring specialized microtools at ultra-high spindle speeds. With CoolSpeed® mini running at 35K rpm, spindle speed is no longer a limiting factor in improving productivity.

Cost Savings Calculation (Per Batch):

Original operation time per part	5 min 30 s
New operation cycle time using CoolSpeed® mini	1 min 22 s
Parts produced per batch	30,000 pcs
Total production time conventional	2,750 hrs
Total production time with CoolSpeed® mini	683 hrs
Time savings with CoolSpeed® mini	2,067 hrs
Machine hourly rate	\$110
Hours per shift	8
Shifts per day	2
Savings per part (USD)	\$7.61



ROI: < 8 hours

Savings per batch in 43 days \$227,370

Testimonial:

“CoolSpeed® mini has allowed us to make small Torx head screws more efficiently on our DMG MORI NLX2500 turning center. We were able to cut over 4 MINUTES of time off EACH part using CoolSpeed® mini. It has literally paid for itself within a week. Being able to spin the micro tool at the required 35,000 rpm vs. the max of the machine at 10,000 rpm has been a HUGE benefit to our operations.” - Marcus Burciaga



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