

SECO NEWS
SUMMARY
2019.1



**WE DELIVER
#TOOLS4YOU**

SECO 

WELCOME TO SECO NEWS SUMMARY 2019.1

YOU NEED A RELIABLE PARTNER THAT DELIVERS GENUINE MANUFACTURING SOLUTIONS THAT KEEP YOUR OPERATIONS RUNNING AT MAXIMUM OUTPUT?

You will find our solutions and much more in this Seco News Summary edition 2019.1.

The advancements and innovations inside this brochure not only represent the natural progression of the manufacturing industry but also set new standards in cutting tool development and performance. All are developed specifically to ensure your manufacturing success and keep you ahead of the competition.

Within this brochure, you will discover the tooling that will allow you to conquer your deep hole operations with turning and boring bars that reach 10xD. Confidently micro machine barely visible hardened part surfaces thanks to new mini end mills. Optimize grooving and parting-off with new additions to the Seco Jetstream Tooling® cooling technology; lower cutting forces while increasing depth of cut when you use a new Seco face mill; and effectively control chips during threading with our latest TTP2050 grade.

All this backed by the industry's best, most comprehensive training program, **Seco Technical Education Program (STEP)**, featured on pages 14 and 15 of this Seco News Summary. Expand your team's knowledge and empower them to perform at their full potential to increase your competitive advantage productively with STEP.

**NEW
PRODUCTS**

4



DOUBLE QUATTROMILL™ 14

6



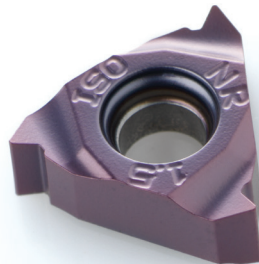
JABRO® JM100 MINI END MILLS

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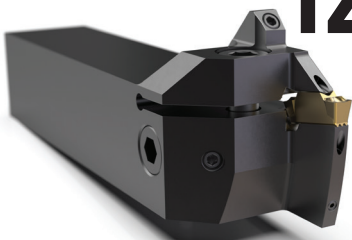
**STEADYLINE® ø25MM (1")
SERIES**

10



TTP2050

12



**JETI CONVERSION
GROOVING & PARTING-OFF**

14



**TECHNICAL
EDUCATION
PROGRAM**

DOES AVERAGE MACHINE POWER HINDER YOUR FACE-MILLING PERFORMANCE?

THE NEW SECO DOUBLE QUATTROMILL™ 14 FACE MILL AND ITS DOUBLE-SIDED INSERTS REDUCE CUTTING FORCES AND INCREASE DEPTH OF CUT WHILE COST-EFFECTIVELY OPTIMIZING OUTPUT.

Maximize machine output and gain lower cost per cutting edge thanks to the eight double-sided, multi-edge inserts of the Double Quattromill™ 14 face milling cutter. The specially developed and extremely free-cutting insert geometries actually lower cutting forces and require less machine power while also ensuring workpiece stability.

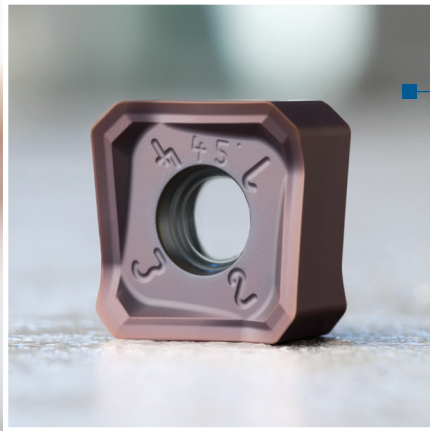
Significantly increase depth of cut for all roughing, semi-finishing and finishing operations with the two lead angle versions of the Double Quattromill™ 14 cutter. Take depths-of-cut up to 6mm with the cutter's 45-degree lead angle version and as deep as 8mm with its 68-degree version when face milling materials that include stainless steels, titanium and other sticky materials as well as steels, cast irons and superalloys.

YOUR CHALLENGES

- High cost per insert edge
- Lack of tool endurance and high tooling costs

SECO'S SOLUTION

- Eight cutting edges
- Numbered cutting edges
- Wiper flat 1.5mm (.059")



MILLING



YOUR CHALLENGES

- Weak cutter bodies
- Short tool life leads to long cycle times and higher tooling costs

SECO'S SOLUTION

Optimized corrosive-resistant Idun tool steel. Eco-friendly, non-nickel coated body

YOUR CHALLENGE

- Chip buildup during milling interrupts production

SECO'S SOLUTION

Flute spacing

YOUR CHALLENGES

- Machines lack adequate cutting force and power
- Shallow depth of cut increase part-processing time

SECO'S SOLUTION

High axial rake angles

YOUR BENEFITS

- Idun body design for strength and durability
- Longer tool life and cost-effectiveness from double-sided inserts
- Versatility and increased performance with two lead angle versions

RANGE OVERVIEW

Cutter body

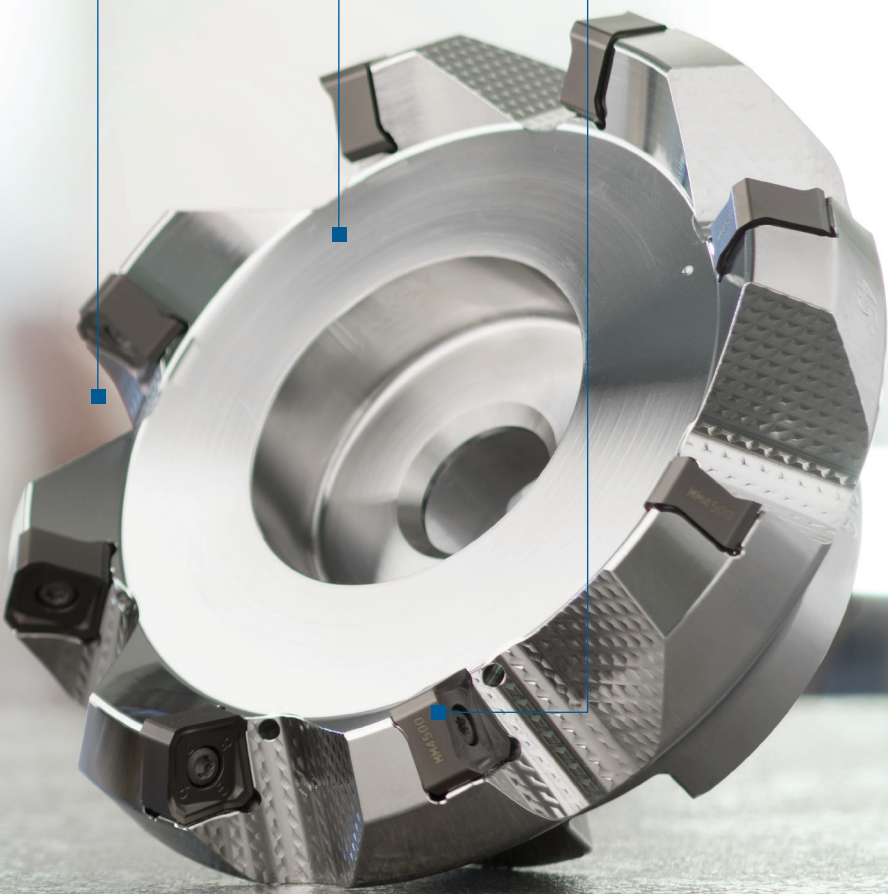
- Standard and close pitch from $\varnothing 50$ to 315mm (2"-12.50")
- Metric and inch versions
- Interchangeable cassettes or fixed pocket

Inserts

- 45-degree lead angle 6mm max. APMXS
- ME10, M10 and M16 geometries
- 68-degree lead angle 8mm max. APMXS

ADDITIONAL DETAILS

- Check out our 2019.1 digital Milling Catalog pages 135 - 141 at secotools.com.

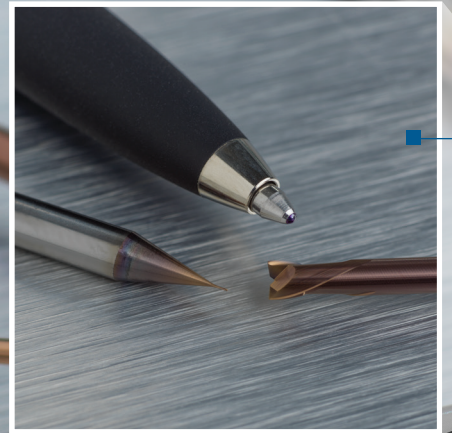


TAKE THE RISK OUT OF MICRO MILLING OPERATIONS

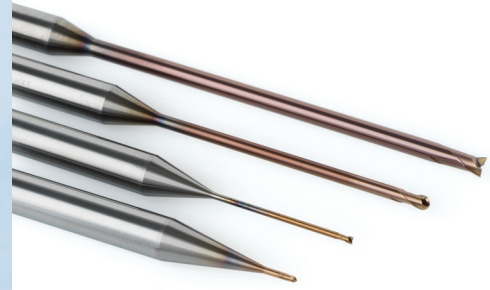
CONFIDENTLY MICRO MACHINE BARELY VISIBLE, HARDENED MOLD AND DIE SURFACES TO HIGH-PRECISION, HIGH-QUALITY FINISHES WITH THE NEW JABRO® JM100 MINI END MILLS.

Achieve accuracy, precision and most importantly high surface finish quality from the very start when machining small, micro-sized surfaces with Seco's wide and expanding range of solid-carbide Jabro® end mills. The newest of which is the JM100 Mini end mill. Our end mill series is dedicated to hardened tool steels ISO-H. JM100 Mini delivers longer tool life, stability and peace of mind for machining operations where it is typically impossible to actually see the workpiece and cutting tool as it works.

Precisely produced geometries, virtually zero runout, advanced coatings and tight radius tolerances give the JM100 Mini its incredibly long tool life and reliability. As a result, the tool helps eliminate any unforeseen problems during rough, pre-finish and final finish micro milling operations.



MILLING



YOUR CHALLENGES

- Increased tool costs because of extreme tool wear
- Rough and inconsistent surface finishes lead to poor mold and die performance
- Frequent tool changes during micro machining operations

SECO'S SOLUTION

Exclusive, in-house developed coating

YOUR CHALLENGES

- Constant tool breakage from high runout
- Longer part cycle times

SECO'S SOLUTION

Tight tolerance of $\pm 4\mu\text{m}$ on smallest diameters

YOUR CHALLENGES

- Achieving precise surface finishes for longer lasting mold and die components
- Increased part processing time due to extra secondary benchwork

SECO'S SOLUTION

High-precision geometry

YOUR BENEFITS

- High process precision, stability and reliability due to virtually zero tool runout
- Increased output and lower cost per part from tight tool radii and advanced coatings

RANGE OVERVIEW

- Tool diameters from 0.2mm to 3.0mm
- Various corner radii from 0.05 to 0.3mm RE = ± 0.005
- Overhang lengths from 1.5*DC to 20*DC
- Ballnose available in 2 flutes
Torical available 2 and 4 flutes (depending on cutting diameter)

ADDITIONAL DETAILS

- Check out our 2019.1 digital Solid End Mills Catalog pages 334 - 344 at secotools.com.

KEEP DEEP-HOLE OPERATIONS FROM SCRAPPING YOUR PARTS

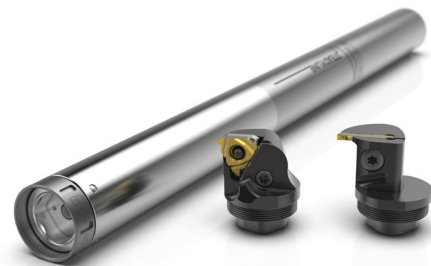
STABILITY VIBRATION DAMPING SOLUTIONS FOR DEEP TURNING OPERATIONS UP TO 10XD WITH NEW GL-HEAD ADDITIONS TO SECO'S STEADYLINE® Ø25MM (1") SERIES.

Eliminate scrapping large, expensive workpieces during final deep-hole operations with two new threading heads and grooving heads each for Seco's Steadyline® turning and boring bars; for operations inside hole diameters as small as 30mm, the new heads with Seco's high-repeatability GL-connection and Jetstream Tooling® high-pressure coolant capability mount to the recently released Ø25mm (1") Steadyline® bar diameter.

The new threading and grooving heads provide application diversity for Ø25mm (1") Steadyline® bar along with its reach/overhang capabilities, providing highly effective anti-vibration technology for threading or grooving at depth up to 10xD.



TURNING



YOUR CHALLENGES

- Achieving centered accuracy and probing repeatability within 5µm
- Tool changes are long and laborious
- Lack of operational versatility

SECO'S SOLUTION

GL-connection for positional accuracy and easy clamping for different applications

YOUR CHALLENGES

- Poor surface finishes
- Heat and chips accelerate tool wear

SECO'S SOLUTION

Jetstream Tooling® technology for grooving and threading operations

YOUR CHALLENGES

- Too much vibration during operations
- Instability in turning processes
- High rate of scrap
- Inability to machine deep holes
- Poor performance due to tool deflection

SECO'S SOLUTION

Steadyline® turning and boring bars, carbide reinforced bar for 10xD cylindrical shanks

YOUR BENEFITS

- Improved control on deep turning operations, less heat and longer tool life with Seco Jetstream Tooling® high-pressure coolant
- Excellent process stability from Steadyline® vibration control technology

RANGE OVERVIEW

Tool Holders (2018.2 launch)

- Steadyline® bar ø25mm (1.00") 6xD, 8xD and 10xD reaches with Seco-Capto™, HSK-T/A and cylindrical shank machine-side interfaces. Carbide reinforced bars
- Steadyline® bar ø100mm (4.00") 10xD; cylindrical shank only

Exchangeable Heads

- **NEW!** Threading heads: GL25-PNR/L-17025-16AHDJET
- **NEW!** Grooving heads: GL25-CGIR/L-19025-1902JET
- GL25 turning heads (2018.2)
- GL rough boring heads (2018.2) ø60mm, ø80mm (2.50", 3.00") Steadyline® bars for boring range of ø66mm to ø115mm (2.60" to 4.53")
- 20 different GL25 heads incl. general turning, recessing & back boring heads

ADDITIONAL DETAILS

- Check out our 2019.1 digital Turning Catalog page 309 and digital Threading Catalog page 74 at secotools.com.



NEW NANO-LAMINATE PVD GRADE ENSURES PREDICTABLE THREADING OPERATIONS

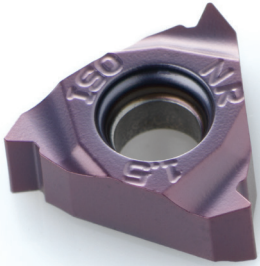
CHIPS GLIDE MORE FREELY AWAY FROM THE CUTTING ZONE AND TOOLS LAST LONGER WITH THE NEW TTP2050 THREADING GRADE FROM SECO.

Avoid unstable threading that can scrap parts with large amounts of time and money invested in them. Seco's TTP2050 threading grade with a new advanced coating delivers the security, reliability and most importantly the performance stability and predictability needed for critical threading operations.

Gain longer tool life for potentially up to 30 percent process improvement. Different from typical used general-threading coatings, the TTP2050 has a nano-laminate PVD coating consisting of alternating TiAlN/TiSiN layers that are extremely wear resistant and useful for machining tool steels, stainless steels, other harder steels and cast irons.



THREADING



YOUR CHALLENGE

- Need to increase efficiency and productivity?

SECO'S SOLUTION

Nano-laminate PVD coating with TiAlN/TiSiN layers for more wear-resistance

YOUR CHALLENGE

- Threading chips can cause scrapped parts

SECO'S SOLUTION

Advanced threading tool geometry for reliable chip control

YOUR BENEFITS

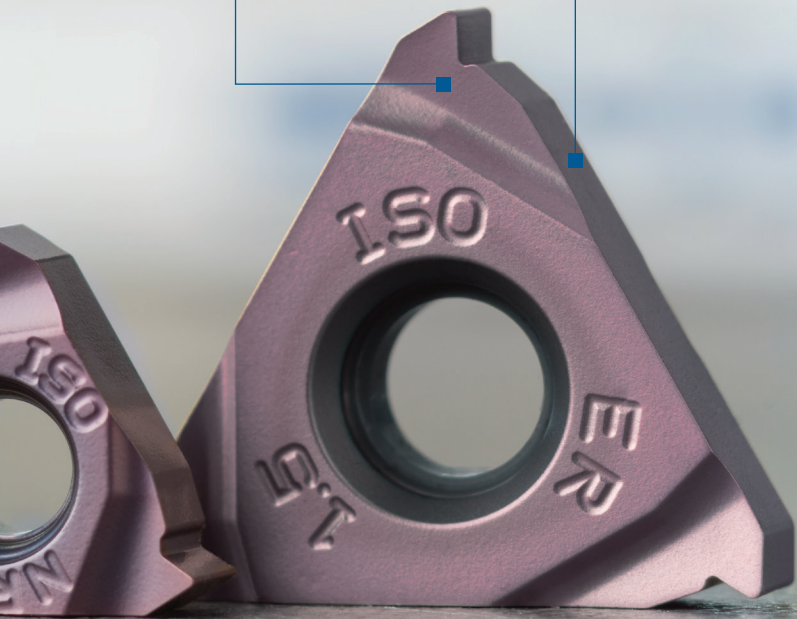
- Reliability and high performance from advanced grade and geometry
- Durability and exceptional wear resistance with new alternating coating

RANGE OVERVIEW

- 44 different profiles and with geometry -A
- Sizes are 11mm and 16mm
- Both internal and external threading
- All standard/common thread types

ADDITIONAL DETAILS

- Check out our 2019.1 digital Threading Catalog pages 87 - 119 at secotools.com.

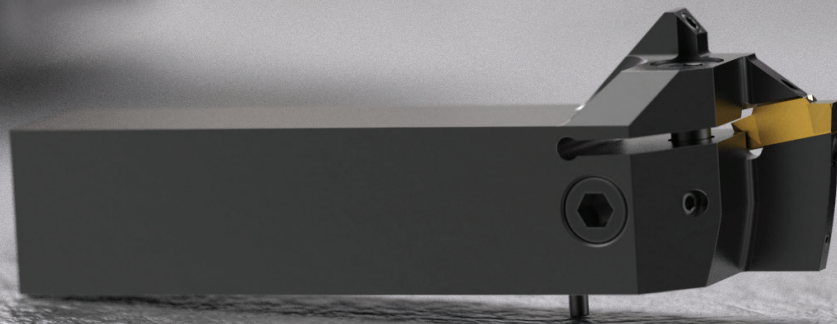
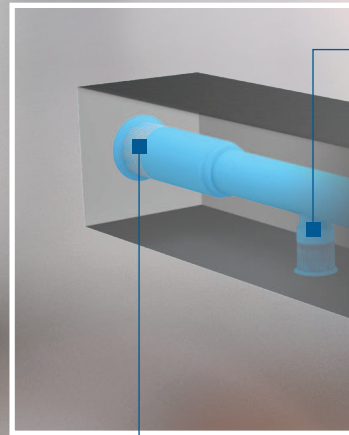


STOP STRUGGLING WITH HIGH-PRESSURE COOLANT HOSES, PIPES AND FITTINGS WHEN GROOVING AND PARTING-OFF

OPTIMIZE GROOVING AND PARTING-OFF WHILE CONTROLLING CHIPS WITH SECO'S INTERFERENCE-FREE JETI INTERNAL HIGH-PRESSURE COOLANT TECHNOLOGY.

Do away with the components and connectors required for coolant-through tooling that can interfere with your grooving, parting-off and other turning operations when you incorporate Seco's JETI (Jetstream Integrated) tooling. Achieve optimized machining, chip control and process reliability with Seco's Jetstream Tooling®, which uses internal channels in the tool holder to aim high-pressure coolant directly into the cutting zone.

Seco continues to expand its JETI family of products, the latest being new holders for grooving and parting-off. Besides internal coolant, the new holders provide the ability to also use Seco's Jetstream Tooling® Duo capability – upper and lower coolant channels. But unlike other holders, Seco's new JETI holders give manufacturers the choice to switch the underside stream channel on and off as the application requires.

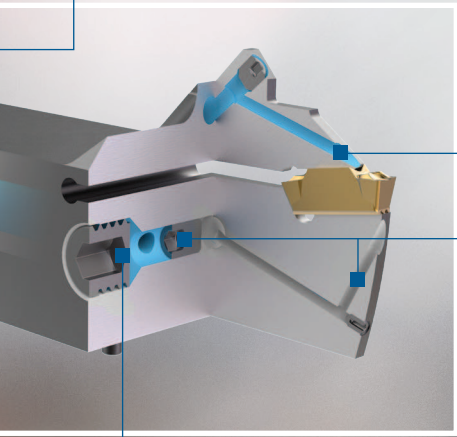


YOUR CHALLENGES

- External coolant components cause interference during machining
- Poor machining performance due to inaccurate, low-pressure coolant delivery

SECO'S SOLUTION

JETI integrated coolant channels for interference-free, precise, high-pressure coolant delivery



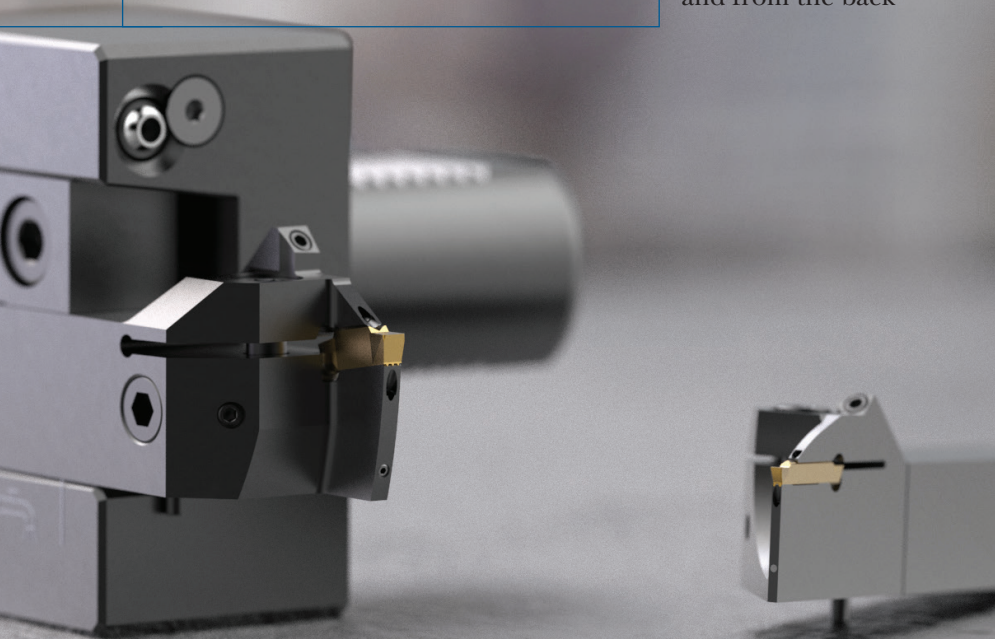
YOUR CHALLENGES

- Unreliable process due to bad chip formation
- Difficulty in efficiently processing certain parts and material that require either both upper and lower coolant delivery or only one of them

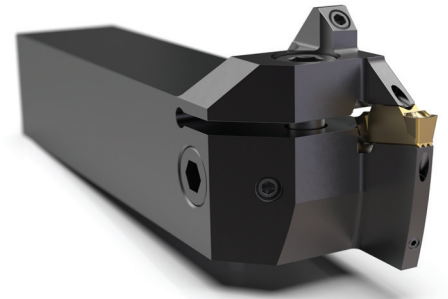
SECO'S SOLUTION

Jetstream Tooling® Duo on/off switch to achieve best performance, by optimizing coolant delivery depending on operation

Can still be used on machines with conventional coolant supply with connections from side and from the back



TURNING



YOUR BENEFITS

- Operational stability, reliability, improved tool life and surface finishes – all from Jetstream Tooling®
- Application flexibility with Duo JET coolant on or off functionality
- Elimination of hoses, fittings or spare parts increase both productivity and cost-effectiveness

RANGE OVERVIEW

MDT Holders

- 2, 3, 4, 5, 6 and 8mm insert sizes
- With square shank sizes 20 x 20mm, 25 x 25mm

X4 Holders

- With square shank sizes 20 x 20mm, 25 x 25mm

150.10 Holders

- For 15-size blades
- With square shank sizes 20 x 20mm, 25 x 25mm

ADDITIONAL DETAILS

- Check out our 2019.1 digital Turning Catalog at secotools.com.

OUR TOOLS ARE THE SOLUTION FOR TODAY – KNOWLEDGE IS A SOLUTION FOR THE FUTURE.

DID YOU KNOW?

- That in most square shoulder milling applications, cutting conditions can be increased by 30% while maintaining long tool life?
- That by using Steadyline® tooling for damping the vibrations caused by chip fragmentation, tool life goes up by more than 40%?
- That, on average, one out of five cutting edges end up in the scrap bin without having been in contact with workpiece material?

Knowledge has always been power. Today, it's also a necessity. Manufacturing technology is advancing faster than ever before. The best of yesterday is standard today and obsolete tomorrow. Keeping abreast of these constant improvements is an enormous challenge, but one that must be undertaken. Seco as a partner can help you bridge the knowledge gap and supply your machinists with the tools they need.






EDUCATION TODAY. SUCCESS TOMORROW.

TECHNICAL EDUCATION PROGRAM

STEP: FOR EVERYONE FROM APPRENTICES TO EXPERTS

The Seco Technical Education Program (STEP) brings together all of Seco's knowledge and expertise in a format that serves machining professionals of all skill levels. Our curriculum is constantly refined to reflect the changes that are happening today and those we foresee happening tomorrow.

We cover all aspects of metal cutting with courses for every skill level, from apprentices to highly skilled and experienced machinists. STEP also conforms to your needs, allowing you to participate in whatever form of training is most convenient for you, from hands-on, real-life seminars to e-learning modules, all with comprehensive textbooks and other educational materials.

STEP COURSE LEVELS	 STEP CORE CURRICULUM	 STEP ADVANCED CURRICULUM	 NEXT STEP	 STEP COLLECTION	 STEP PRODUCTION TECHNIQUES
	Basic module for machining and tooling technology	Advanced models for machining and tooling technology	Coursework connecting machining technology to economies of production models	Short presentations on key factors in machining	Introduction to other machining factors and tools

EDUCATION CHANNELS	e-Learning	Classroom learning	Customized and blended learning
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For more detailed information about our Technical Education Program and local on-site courses please visit secotools.com.



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