At Seco, every action we take is calculated to overcome the challenges you face today and will face tomorrow. Our global team partners closely with manufacturers serving all industry segments in all geographic locations, maintaining an incredible knowledge base of market trends. This information drives our extensive investment in research and development, allowing us to focus our resources on the areas that will have the greatest impact on your operations.

Seco News 2014-1 contains a diverse array of new products and line expansions. With it, you’ll gain access to new solutions, whether you’re milling with small diameters, drilling in high temp alloys, turning stainless steels, or performing a wide range of other common applications.

As always, our team of over 5,000 members in over 45 countries is available to help you get the most out of your metal cutting operations. Whether you need to improve a simple, single-tool application or create and implement a full production line, we’re ready to provide the insight and expertise that will guarantee your success.

In this literature, you’ll find an overview of our newest innovative products and how they can impact your productivity. For more detailed information on any specific solution, please visit our website at www.secotools.com or contact your local Seco expert.

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The new Square T4-08 concept provides an ideal balance of high performance and cost effectiveness. Strong, reliable pocket seats combined with multi-edge inserts optimise stability and provide true 90° walls. Inserts are mounted tangentially, providing the strength needed for increased depths of cut with small diameters.

Square T4-08 provides a smooth cutting action through the use of positive rake angles with a variable lead angle of the cutting edge. The cutter will excel in most cast iron and steel applications, as well as when applied to contouring of more difficult-to-machine materials.

**HOW YOU BENEFIT:**
- Economical high performance due to four cutting edges
- Increased metal removal rates through innovative cutter design
A milling cutter with tangentially mounted inserts will direct the cutting forces along the thickest part of the inserts, providing very robust cutting.

Cutters:
- $D_t = 16 - 63 \text{ mm}$
- $a_p \text{ max} = 8 \text{ mm}$

Mounting types:
- Arbor connection (R220.94-08)
- Combimaster, cylindrical, cylindrical/Weldon (R217.94-08)

Inserts:
Geometries: M08, MD08
Grades: MP1500, MP2500, MP3000, MM4500, MK1500, MK2050, T350M, F40M

For more information, please refer to pages 40-45 in the Update Catalogue 2014.1.
Through a unique design and interface, X4 provides a flexible and high-performance solution to grooving and parting off applications. X4 incorporates strong tangential inserts with a rigid clamping system to maximise security and enable larger depths of cut.

Multiple cutting edge widths, ranging from 0.5 – 3 mm, provide flexibility in grooving while also allowing minimisation of material waste when parting off. With a maximum cutting depth of 6.5 mm, X4 can be used to cut off parts up to 13 mm in diameter. Additionally, all holders can accommodate any X4 insert, reducing the amount of tooling stock kept on hand.

Two new insert geometries have been introduced for X4. The FG geometry is designed for lock rings and flat standard threads, while the R geometry provides a series of full profile radius inserts.

To further boost tool life and chip control, X4 is compatible with Jetstream Tooling Duo, which uses two coolant jets for optimal chip formation and management.
HOW YOU BENEFIT:

- Economical performance due to four cutting edges
- High flexibility, as each insert can fit in any holder
- Reduced material waste from narrow cutting edge width
- Increased tool life and chip control through Jetstream Tooling Duo

Extensive range of holders and X4 indexable inserts
Shank versions: 16 mm, 20 mm, 25 mm
Seco-Capto*: C4, C5, C6
Groove widths $b = 0.5 – 3$ mm
Groove depths $a_{\text{p max}} = 6.5$ mm
Cutting edge design: neutral and angled (R/L)
Geometry choice: MC, FG*, R*
Grades: CP500, CP600

*New geometry!

For more information, please refer to pages 36-38 in the Update Catalogue 2014.1.
Utilising a new coating technique and substrate optimised for difficult conditions, the MS2050 insert grade increases process reliability and allows for higher cutting data in titanium applications. MS2050 inserts incorporate a PVD coating to strengthen wear resistance and eliminate reaction with the workpiece material.

Aerospace manufacturers and others machining titanium alloys will find MS2050 to be an excellent complement to the existing F40M and T350M grades. The new grade is available in a variety of positive geometries for square shoulder milling, face milling, copy milling and high feed milling.

**HOW YOU BENEFIT:**

- Improved productivity, cost performance and tool life
- Better machine utilisation resulting from higher reliability

For more information, please refer to pages 64-78 in the Update Catalogue 2014.1.
MAKE YOUR MILLING OPERATIONS MORE FLEXIBLE

335.25 DISC MILLING CUTTER: ADJUSTABLE IN WIDTH

The highly successful 335.25 disc milling cutter has been expanded to include adjustable pocket cutters for widths of 21 – 32 mm. Available in diameters from 160 – 315 mm and featuring a complete milling cutter range of geometries, grades and corner radii, the new offerings make the 335.25 line even more comprehensive and flexible.

The adjustable disc milling cutter incorporates replaceable cassettes, making it easy to quickly adjust cutting width with precision. The cassettes feature a coating for extended durability, and two sizes of cassettes provide an optimised chip space and number of teeth to achieve a productive and reliable machining operation. Additionally, all cutters in the 335.25 line offer a unique insert geometry that reduces cutting forces and noise levels, while maximising chip flow.

HOW YOU BENEFIT:

• High flexibility through ability to easily adjust cutting width
• Economical performance due to four cutting edges per insert
• Excellent surface finish from built-in wiper flat
• Reduced cutting forces and optimised chip flow resulting from a unique insert and cutter design

From 21 – 32 mm groove width

\[ D_c = 125 – 315 \text{ mm} \]
\[ r_\varepsilon = 0.8 – 6 \text{ mm} \]

Geometry choice: E, M

Grades: MP2500, F40M, MK2050, H25

For more information, please refer to pages 46-57 in the Update Catalogue 2014.1.
OVERCOME THE CHALLENGE OF LONG OVERHANGS

STEADYLINE™ COMBIMASTER HOLDERS

Seco’s popular Combimaster tool holder system for medium-sized milling cutters now incorporates Steadyline technology to provide vibration dampening. These new holders provide optimal performance when long tool overhangs are required to machine difficult-to-reach areas. The Steadyline dynamic dampening system lengthens tool life, increases process security and allows machining times to be reduced by as much as 50%. The range of Steadyline Combimaster holders includes the type EPB K820, which is tapered to provide the best compromise between rigidity and accessibility to the workpiece. Type EPB K821 is cylindrical for maximum workpiece accessibility.

HOW YOU BENEFIT:
• Increased stability when working with long overhangs
• Higher cutting data made possible in both challenging and conventional applications
• Extends your capabilities for complex applications beyond the limits of conventional holders

For more information, please refer to pages 120-125 in the Update Catalogue 2014.1.
SIMPLIFY YOUR BORING APPLICATIONS

EPB 610 ROUGH BORING HEADS

Easy to use and set, EPB 610 rough boring heads are based on the Graflex® modular system and feature a push/pull mechanism to make diameter setting intuitive. EPB 610 allows both symmetrical and staggered operations, and is available in four sizes with diameters ranging from 39 – 115 mm.

HOW YOU BENEFIT:
• Easy-to-use and intuitive design eliminates need for training
• Compact design for maximum rigidity of the boring assembly
• High productivity by allowing a depth of cut up to half of the insert’s width

For more information, please refer to pages 105-108 in the Update Catalogue 2014.1.

REMOVE MATERIAL FASTER

EPB 5835 HYDRAULIC CHUCKS

Compared to classic hydraulic chucks, the “strong type” EPB 5835 hydraulic chucks’ shorter body length and larger outside diameter provide excellent rigidity and reduce vibrations. These chucks guarantee higher transmittable torque, allow aggressive cutting data and increase metal removal rates in rough milling. EPB 5835 improves performance compared to Weldon chucks, and provides an alternative for manufacturers not equipped with a Shrinkfit device.

HOW YOU BENEFIT:
• Increased rigidity, productivity and metal removal rates
• Run-out accuracy of 4 μm maximum at 3xD
• Can be used with diameters from 3 – 32 mm either directly or by using reducing sleeves

For more information, please refer to pages 135-140 in the Update Catalogue 2014.1.
Designed to maximise metal removal rates in steel and cast iron applications, the new Double Octomill High Feed enables large increases in productivity. The new high feed face milling cutter is available in diameters from 80 – 160 mm and offers the most benefit in applications featuring large parts. All Double Octomill high feed cutters use a unique pocket design and ground slots on the inserts to achieve maximum precision.

**WHAT IS HIGH FEED MILLING?**
This process pairs a shallow depth of cut with high feed per tooth, which provides higher metal removal rates and results in more parts being machined. Cutting forces are directed to the machine spindle in the axial direction, which increases stability, reduces vibrations and extends tool life.

**HOW YOU BENEFIT:**
- Substantial gains to productivity through increased material removal rates
- Reliable process security due to robust cutter body
- Excellent cost performance from 16 cutting edges per insert

**Cutters:**
- $D_c = 80 - 160$ mm
- $a_p \text{ max } = 2$ mm

**Mounting types:** Arbor connection

**Inserts:**
- Geometries: M12, M14, MD16
- Grades: MP1500, MP2500, MK1500, MK2050

For more information, please refer to pages 58, 61 in the Update Catalogue 2014.1.
OPTIMISE PARTING OFF OF SUPERALLOYS AND STAINLESS STEELS

150.10 JET BLADE

With a design that maximises rigidity, 150.10 Jet blade incorporates a high speed steel blade with Jetstream Tooling Duo to achieve a new solution for parting off in challenging materials. Complementing the existing range of parting-off blades, 150.10 Jet blade provides substantial value to manufacturers serving the aerospace segment or working with applications in stainless steel or superalloys.

Jetstream Tooling Duo technology delivers two coolant jets to optimal points in the cutting zone to ensure proper chip formation and effective evacuation. Its use in the 150.10 Jet blade boosts tool life and allows cutting speeds to be increased.

HOW YOU BENEFIT:
• Faster throughput by allowing the use of higher cutting data
• Reduced costs from longer tool life
• Increased process stability due to reduced vibration

Insert widths from 2 – 6 mm

Chipbreaker guidance:
- 12 first choice for steel at low feed rates
- 14 first choice for stainless steel and steel at medium-high feed rates
- 16 first choice for steel and cast iron under difficult conditions or at high feed rates

For more information, please refer to pages 34-35 in the Update Catalogue 2014.1.
IMPROVE PRODUCTIVITY AND QUALITY IN STAINLESS STEEL TURNING

W-MF4 GEOMETRY

Through dedicated development and design, W-MF4 achieves performance levels previously only achievable in ordinary steels. A wide variety of industry segments will benefit from the new geometry, including aerospace, shipbuilding, oil & gas, food, pump and general engineering.

With the W-MF4 high feed (wiper) geometry, stainless steel applications receive significant boosts to both surface finish and maximum feed rate. Manufacturers can obtain the same quality much faster, much higher quality in the same time or apply cutting data that improves both quality and productivity.

HOW YOU BENEFIT:

• Increased output through higher productivity and tool life
• Superior part quality from better surface finishes
• Better chip control
Grades: TM2000, TM4000, CP500
Inserts: CNMG, DNMX, WNMG

Comparison in chart:
CNMG120408W-MF4, TM4000 vs CNMG120408-MF4, TM4000
κ = 95°

For more information, please refer to pages 5, 15, 23, 31 in the Update Catalogue 2014.1.
Two new geometries have been added to the Crownloc Plus family of exchangeable-tip drills. This expansion allows an even greater range of applications to benefit from these cost effective tools. Crownloc Plus drills use a secure interface to attach the crown to the drill body, so that rather than replace an entire tool due to wear, users can simply change the crown.

The L geometry adds flexibility to countersink operations.
**EXISTING P GEOMETRY**
The first choice for general applications, the P geometry is a strong and versatile solution that provides reliable operation in applications across a range of different materials.

**M GEOMETRY**
Utilising a free cutting drill point to minimise heat generation, the M geometry provides excellent performance in high temp alloys, titanium, titanium alloys and stainless steel. A 10% micrograin substrate, TiAlN coating and low-friction TiN coating on the exchangeable head combine to increase toughness and reduce the potential of edge build up.

**HOW YOU BENEFIT**
- Long and predictable tool life in challenging materials
- Substantial reduction in heat generation

**L GEOMETRY**
The L geometry incorporates a flat geometry with a 140-degree centre point, achieving optimal chip control in ductile, long-chipping steels. Double land margins make the geometry a strong choice for demanding applications, such as angled exits. The 180° angle design makes the L geometry suitable for countersink operations for bolt heads. The diameter range covers the most common metric bolt sizes.

**HOW YOU BENEFIT**
- Higher process security through increased chip control
- Long and predictable tool life in demanding applications

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Drill body 3xD, 5xD, 8xD

\[ D = 12.00 - 19.99 \text{ mm} \]

\[ R_a = 1 - 3 \text{ μm} \]

Shank designs: cylindrical, ISO 9766
Hole tolerance IT9 – IT10

For more information, please refer to pages 95-97 in the Update Catalogue 2014.1.
With the M06 geometry on X0EX10T3 inserts, tool life is increased when machining stainless steels and titanium alloys. Developed for the existing Turbo 10 family of square shoulder milling cutters, the new insert geometry is available in grades F40M, T350M, MP2500, MP1020, MM4500, MS2500 and MS2050.

**HOW YOU BENEFIT:**

- Reduced costs through longer tool life
- Compatible with existing Turbo 10 cutters

X0EX10T3 with the following radii: 0.4, 0.8, 1.2, 1.6, 2.0, 2.4, 3.1

For more information, please refer to pages 75 in the Update Catalogue 2014.1.
BOOST YOUR TURNING PERFORMANCE

JETSTREAM TOOLING

The highly productive Jetstream Tooling family now features a coolant inlet connected to the shank from the back, in addition to the inlet in the back of the shank. This allows the efficient chip control and high productivity of Jetstream Tooling to be easily implemented on a greater variety of machines. The alternative inlet is available on shank toolholders for positive inserts (centre-lock), as well as for negative inserts.

The new toolholders are also designed with Jetstream Tooling Duo technology, which applies an additional coolant jet to flush the clearance surface while the upper jet clears the rake face.

To further increase performance in roughing operations, Jetstream Tooling is now available with a new optional roughing inducer, in addition to the standard inducer for finishing and medium-roughing.

HOW YOU BENEFIT:

• Better chip formation and control through optimal coolant delivery
• Improved tool life and part quality due to increased thermal control

Toolholders with this feature are identified with the letter B at the end of the product description. e.g. PCLNR2525K12JETLB

For more information, please refer to pages 2-3, 6-10 in the Update Catalogue 2014.1.
GET MORE OUT OF YOUR TURNING APPLICATIONS

SECO TURNING SOLUTIONS

CP600 POSITIVE INSERTS
The extremely tough PVD-coated CP600 insert grade is now available in positive centre-lock inserts. CP600 utilises its tough carbide composition, PVD coating and sharp edges to provide excellent results in challenging internal operations in stainless steels. Process security is greatly improved in turning applications with narrow bores or heavy interruptions.

HOW YOU BENEFIT:
• Greatly increased process security in demanding turning applications

TH1000/TH1500 INSERT GRADES
The TH1000/TH1500 insert grades have been expanded to include a broader range of geometries. These extremely hard grades excel in difficult-to-machine materials such as hardened steels and superalloys. TH1000/TH1500 provide substantial benefit to manufacturers in the aerospace and automotive segments.

HOW YOU BENEFIT:
• Excellent performance in challenging materials
M6 CHIPBREAKER FOR TK2001
The highly productive M6 chipbreaker geometry is now available in TK2001, a Duratomic® grade optimised for turning cast iron. This introduction increases tool life and reliability at high cutting data when roughing ductile cast iron or other challenging cast irons.

HOW YOU BENEFIT:
- Security or productivity when turning cast irons

HEAVY HOLDER INCH EXPANSION
The highly successful range of heavy machining toolholders has been expanded to include inch sizes. The benefits of these robust products can now be applied to an even wider range of applications.

HOW YOU BENEFIT:
- High performance can now be achieved in a greater array of applications
JS522 JABRO SOLID END MILLS INCH RANGE

A long-flute finishing tool, the JS522 corresponds to the aerospace market’s high standards for perpendicularity and fine surface finishes, while boosting material removal rates. Now available in frequently requested inch sizes, the cutter achieves required finished part quality levels in a single pass.

HOW YOU BENEFIT:
• Cycle time reduction through single-pass finishing
• Simplifies maintaining high quality standards
JABRO SOLID JS400 END MILLS ADDITIONS FOR ALUMINIUM ALLOYS
Four new geometries of the JS400 series have been specifically designed for machining aluminium alloys in general machining and aerospace applications. To further adapt the range for aerospace-related applications, the JS453 has been expanded with new corner radii and long-length versions.

HOW YOU BENEFIT:
• Optimal chip formation allows higher cutting data
• New radii and overhang lengths result in an increased area of applications

JABRO JC0710 ZN4 FLUTE AND ZN6 FLUTE VERSIONS
This new addition of zn-4 flute versions to the JCO710 line of solid HSS-E end mills increases process security in full slotting operations, especially in less than ideal cutting conditions.

Additionally, new zn-6 flute versions of the JCO710 allow an efficient and effective solution for side milling high shoulders of up to 4xD in a single pass.

HOW YOU BENEFIT:
• High process security and full slotting with the JCO710 geometry
• High volume, single-pass machining of high shoulders made possible on older machinery