

**SECO NEWS
SUMMARY
2018.1**



**TOMORROW'S
TOOLING TODAY**

TOOLS FOR LIMITLESS PRODUCTIVITY AND PROFITABILITY

WELCOME TO SECO NEWS SUMMARY 2018.1

Discover how the latest Seco innovations, many of which are featured in this brochure, will give you the competitive advantage needed to succeed in today's manufacturing world. Increase productivity and profitability when you work closely with Seco engineers, technical experts and sales teams to determine the best processes and tooling solutions that fit your specific needs.

Within this Seco News Summary, you will not only learn about several new tooling advancements, you will also experience Seco's interactive Machining Navigator. With this new intelligent interactive page functionality, you will gain the power to quickly access additional product information, embedded demo videos and a digital order form – all right from the pages of this Seco News Summary.

On the innovative tooling side, this Seco News Summary includes new thread turning holders and adapters that deliver effective chip management through the use of Seco's high-pressure coolant technology. There are also new turning insert grades that further expand Seco's Duratomic® technology and new long-reach replaceable-end tangential helical roughing cutters as well as several other productivity-enhancing milling and holemaking solutions. Learn all about these products and many more featured in Seco News Summary 2018.1.

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JETSTREAM TOOLING®

12



HELICAL SQUARE T4-08

18



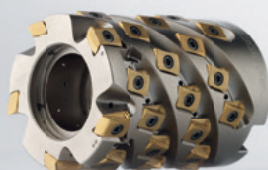
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T4-12 SQUARE SHOULDER CUTTER

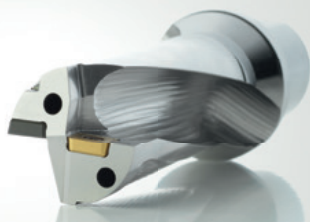
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HIGH FEED 6

FEATURED PRODUCTS

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NEW PERFORMAX® INDEXABLE INSERT DRILLS

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FEEDMAX™ -P DRILLS

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Code keys tools

SECO

Milling cutters
In milling, Seco uses product specific designation systems. There is no ISO system available for cutters. See example below:



Coding key for T4-12 square shoulder cutter 217035-68

217 - 12mm square
cutter - shoulder
Cutter for Seco tools

68 - 68mm
cutter diameter

32 - 32mm
cutter length

35 - 35mm
cutter width

12 - 12mm
cutter height

4 - 4mm
cutter width

AN - 4mm
cutter width

Right hand cutters
Cutter system
Cutter diameter
Cutter length
Cutter width
Cutter height
Cutter width

At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length
At 12mm length, standard length

INTERACTIVE MACHINING NAVIGATOR

GOODBYE TO LONG, TANGLED THREAD TURNING CHIPS

NEW JETSTREAM TOOLING® THREAD TURNING HOLDERS AND ADAPTERS DELIVER HIGH-PRESSURE COOLANT BENEFITS

Stop shutting down machines to clean out chips during thread turning operations. Now, easily prevent those hazardous tangles of curly chips that can stall production with new Seco Jetstream Tooling® high-pressure coolant technology applied to threading shank holders. Also, reap the benefits of Jetstream Tooling® high-pressure coolant on Seco-Capto™ turning center turrets and HSK-T multi-tasking machine spindles with Seco's new JETI adapters for those two common interfaces.

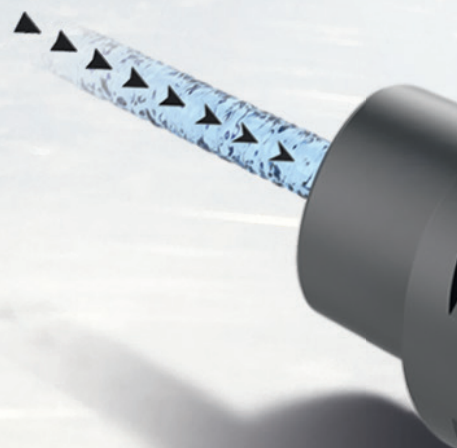
Optimize a wider range of machining operations with Seco's continued expansion of its JETI technology. Initially implemented for parting-off products such as JETI blades, blocks and VDI-to-blade adapters, JETI has made its way to Seco's square shank holders for thread turning (Snap-Tap®) and Seco-Capto/HSK-T-to-square shank holders. This technology will soon extend to Seco's grooving and parting-off holders with square shanks.

Gain the ability to guide chips in a certain direction away from the cut. These thread turning holders deliver a concentrated high-pressure jet of coolant – up to 150 bar/2,175 psi with adapter and 210 bar/3,045 psi to 275 bar/3,988 psi with hose connections – at high velocity straight to the optimal position close to the cutting edge.

For titanium parts and those made from similar materials, Jetstream Tooling® technology can actually break the tough threading chips to increase tool life. When threading steel and stainless steel, the improved chip control of the new thread turning tools allow for 30% to 60% higher potential cutting speeds without compromising thread surface quality.

HELPFUL HINT

Unlike flood coolant, high-pressure coolant can penetrate the heat vapor barrier that develops on a cutting tool and workpiece in the cut zone.



THREADING

RANGE OVERVIEW HOLDERS

- 58 toolholders (16 external, 28 internal, 14 GL-heads)
- Insert pocket sizes 16, 22 and 27
- Metric square shanks with Duo-Jet coolant outlet
- Available JETI-interface up to 80 bar coolant inlets
- Internal bars with coolant connection from back
- Applies to Seco's Steadyline® boring bars for thread turning by using Seco's GL-Heads

ADAPTERS

- Face mount adapters for Seco-Capto C5, C6 and C8 turrets and multi-tasking spindles
- Star mount adapters for Seco-Capto C5, C6, C8 and HSK-T 63 turrets and multi-tasking spindles
- Accommodates square shank sizes 20 mm and 25 mm (0.79" and 0.98")
- 150 bar maximum pressure for Seco-Capto adapters (with back-end coolant tube)
- 100 bar maximum pressure for HSK-T adapters (with back-end coolant tube)
- 80 bar maximum pressure without coolant tube use

KEY FEATURES

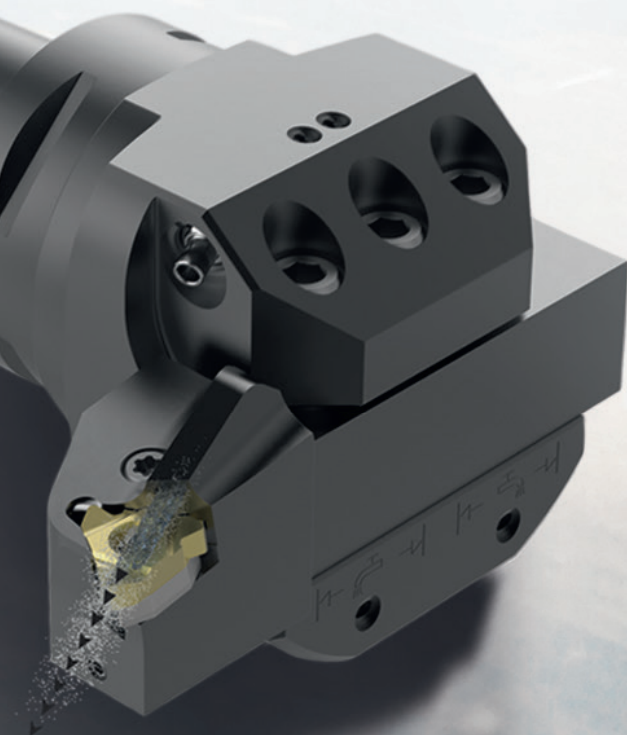
- High-pressure coolant capability
- Adaptability for turrets and multi-tasking spindles
- Application versatility with JETI adapters
- Effective chip control
- Potential for fewer threading passes

KEY BENEFITS

- Optimized heat removal
- Higher cutting speeds
- Longer and predictable tool life
- Reduced machine downtime
- Maximized productivity
- Superior thread surface quality

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 39-45 for more information.



GET SMART ABOUT TURNING

REDUCE INSERT WASTE WITH SECO USED-EDGE-DETECTION CAPABILITY

Never waste another turning insert cutting edge again with Seco's complete Duratomic® insert grade chain for all steel and cast iron turning. Within that chain are the company's ever-expanding TP and TK grade inserts featuring the unique Seco edge-detection coating technology. Quickly and easily identify if a cutting edge has made contact with a workpiece as a result of the inserts' chrome-colored used-edge-detection coating. It provides the highest possible contrast to detect if an edge

has been used, especially in low-light environments.

Tackle even wider ranges of steel and cast iron applications now that Seco has added new sizes and geometries to Duratomic® grades. Easily overcome the machining challenges of these materials with the grades and their balance of toughness and hardness.

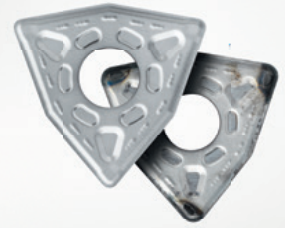
You can also easily optimize cutting parameters and maximize tool life with these grades. This is a direct result of Seco's Edge Intelligence concept,

which is a comprehensive integration of our extensive high-performance insert experience and knowledge.

The new grades include TP3501, TP2501, TP1501, TP0501, TK1501 and TK0501.

They feature design improvements that make them applicable to both roughing and finishing operations while significantly boosting lowest-level peak-performance ratings over previous generation insert grades.

TURNING



RANGE OVERVIEW

- Finishing to roughing applications
- Continuous and heavy interrupted cutting
- Available for coolant and non-coolant machining or both

TP GRADES

- TP3501 grade – approximately 400 items
- TP2501 grade – approximately 500 items
- TP1501 grade – approximately 300 items
- TP0501 grade – approximately 150 items
- ISO P steels, mixed steels and cast iron

TK GRADES

- TK1501 grade – approximately 200 items
- TK0501 grade – approximately 100 items
- ISO K cast irons

HELPFUL HINT

Even in shops with dedicated tool set up staff, as much as 10% of tool insert edges can go unused.

KEY FEATURES

- Seco used-edge detection for reduced waste
- Wear resistant and tough adaptability to stable and high-heat conditions

KEY BENEFITS

- Consistent part quality
- Waste reduction
- Long, predictable tool life
- Cost-effective part processing
- High usability, covers a wider range of applications
- Higher material removal rates
- Smooth surface finishes
- Maximum productivity
- Versatility

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 45 - 46, 394-451 for more information.

ADD NEW FLEXIBILITY TO YOUR LONG-REACH AEROSPACE MILLING

SIDE-MILLING VERSATILITY WITH NEW T4-12 REPLACEABLE-END ROUGHING CUTTERS

Choose from the industry's most complete range of long-reach, replaceable-end tangential helical cutters – 40 mm to 100 mm (2" to 4") in diameter – for economical and versatile roughing and semi-finishing operations as a result of Seco's latest Square T4-12 product line expansion. Designed specifically with aerospace manufacturers in mind, the new long-reach cutters with HSK-100A back ends optimize side-milling operations and feature replaceable ends if a custom solution is needed or when a first-row insert radii breaks.

Make easy work of sticky materials such as stainless steels and high-temperature alloys while also boosting tool life due to the high-positive, free-cutting insert geometries and grades of the five new Helical Step T4-12 side-milling cutters (three metric and two inch). The cutters' tangentially mounted multi-edged inserts enable efficient chip flow and provide stability for large depths-of-cut up to 12 mm (0.47").

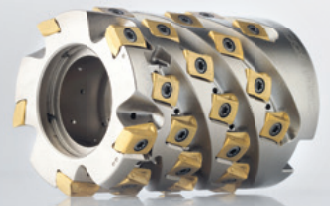
Tangential mounting provides easy access to insert mounting screws and allows for the use of thicker inserts for higher speeds and feeds. This mounting design also directs the cutting forces to the thickest part of the inserts, providing highly robust milling performance and increased metal-removal rates while also reducing vibration.

RANGE OVERVIEW Cutters

- Seco-Capto C6 and HSK-100A (metric range)
- Arbor style (inch range)
- Metric diameters 40 mm to 100 mm
- Inch diameters 2" to 4"
- Depth of cut \leq 81 mm (3.18"), max 30% ae



MILLING



INSERTS

- Corner radii range 0.8 mm to 6.3 mm (0.03" to 0.25")
- Four cutting edges for corner radius 0.8 mm to 4.0 mm (0.03" to 0.16")
- Two cutting edges for corner radius 5.0 mm and 6.3 mm (0.20" and 0.25")
- Eight different grades for all material types

HELPFUL HINT

For roughing operations, replaceable-end tangential helical cutters require machines with high power ratings for optimal results.

KEY FEATURES

- Long reach
- Replaceable ends
- Optimized for roughing and semi-finishing
- Excels in sticky material applications
- Advanced insert geometries and grades
- Ease of use

KEY BENEFITS

- Cost-effectiveness
- High versatility
- Stability
- Increased metal removal
- Longer tool life

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 114 - 116 for more information.



MACHINE WITH TOP INDUSTRY-PROVEN ADVANCED TOOLING TECHNOLOGY

RECENTLY RELEASED SECO TOOLING SOLUTIONS SHOW THEIR VALUE IN THE FIELD

Maximize machining performance with innovative Seco tools that continue to prove essential to manufacturers for increased productivity. Well established in industries such as aerospace, medical, automotive, energy and moldmaking, among others, these select tooling solutions include Seco's Feedmax™ -P and Perfomax® for holemaking, T4-08 and T4-12 for helical square shoulder milling as well as Jabro® JHF980 and JHF181 for high feed material removal.

Today's manufacturers have experienced increased productivity and up to 35% longer tool life due to the solid-carbide Feedmax -P drill and its innovative geometry and advanced coating technology. Designed for ISO P materials and diameters from 2 mm to 20 mm (0.078" to .787"), the drill efficiently evacuates chips and ensures application security while maintaining high productivity levels.

Shops generating large-diameter holes are now running with more aggressive drilling parameters and gaining longer tool life with Seco's Perfomax indexable insert drill. For optimal chip control and evacuation, the flutes on the bodies of the drills feature Seco's recently developed anti-friction surface technology – a special wave pattern that minimizes the contact between chips and the flutes for higher application security and lubricity.

With Seco's T4-08 and T4-12 Square Shoulder milling cutters, material-removal rates have skyrocketed, especially in the machining of challenging metals that include cast iron, steel, stainless steel and alloy



FEATURED PRODUCTS

- HELICAL SQUARE T4-08
- T4-12 SQUARE SHOULDER CUTTER
- HIGH FEED 6
- JABRO-HFM JHF980 AND JHF181 SOLID-CARBIDE END MILLS
- NEW PERFORMAX INDEXABLE INSERT DRILLS
- FEEDMAX -P DRILLS
- INTERACTIVE MACHINING NAVIGATOR

materials. Maximum depths-of-cut as deep as 12 mm (0.5"), for instance, are now the norm because of the precision of the T4-12 cutter diameters (between 25 mm and 125 mm or 1" and 5").

With the right cutting tool and machine, high feed machining can remove metal at rates significantly higher than conventional methods. And when applied at the same table feed rates used with their predecessors, Seco's JHF980 and JHF181 high feed cutters deliver longer tool life.

The tools take advantage of the latest design developments to incorporate an increased number of flutes, doubling their feed rate capability compared to previous tools. As a result, shops have experienced major gains in productivity.

Seco's exclusive HXT coating contributes to high wear resistance, in particular for the JHF181 end mill. The coating adds a hard-top layer to the cutter, resulting in advanced thermal protection and high wear resistance, while a special edge preparation that occurs prior to coating helps reduce edge chipping.

As one of the world's largest providers of comprehensive metal cutting solutions for milling, turning/static and holmaking tooling systems, Seco continues to develop new tooling technologies that quickly earn their place in today's manufacturing facilities. These tools become depended upon to ensure continued and maximized productivity and profitability.

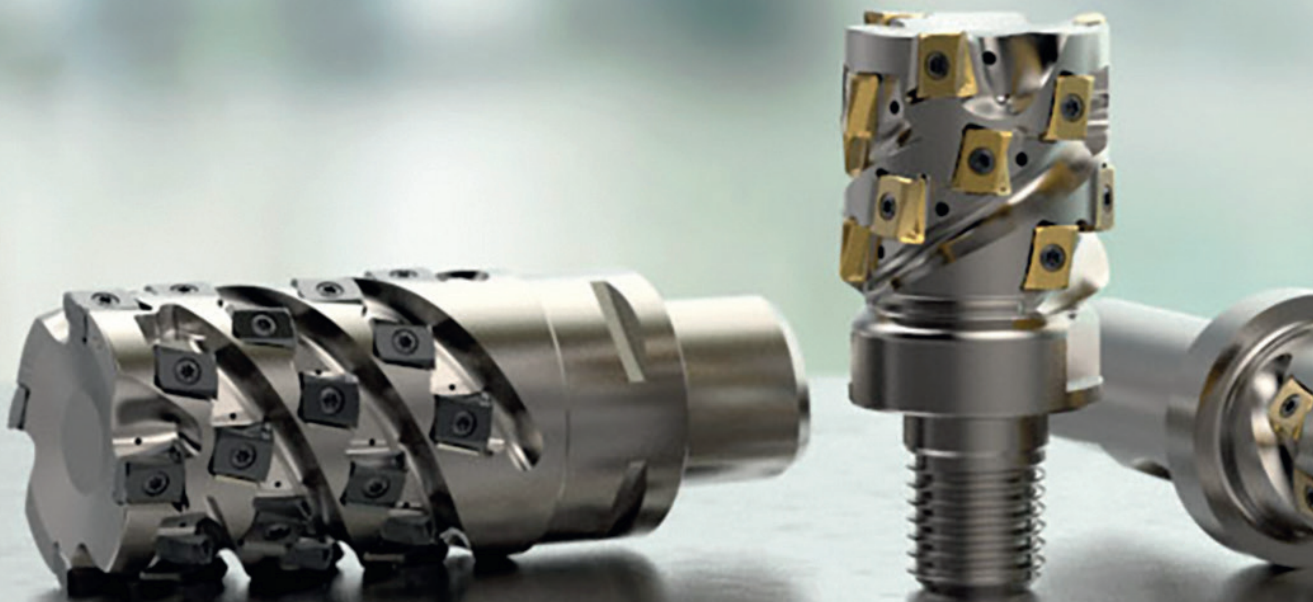


RELIABLE AND COST-EFFECTIVE HELICAL SQUARE SHOULDER MILLING

NEW SQUARE T4-08 HELICAL MAKES EASY WORK OF THE TOUGH STUFF

Easily and efficiently machine challenging metals, including cast iron, steel, stainless steel and alloy materials, thanks to Seco's Helical Square T4-08 shoulder milling cutter. The new cutter expands Seco's tangentially mounted inserts line and delivers excellent performance for slotting and contouring/shouldering applications.

Gain versatility and generate excellent surface quality with both normal and close pitch variations of the Square T4-08 Helical. For extended tool life and minimization of insert misalignment, the whole product range has integrated through-coolant channels and high-precision copy milled insert pockets with axial support.



MILLING



RANGE OVERVIEW INSERTS

- M08 and MD08 insert geometries
- PVD grades MP2050, MS2050, MP3000, MK2050 and F40M
- Depth of cut capability of 22 mm to 64 mm (0.866" to 2.52")
- A variety of corner radii (0.4 mm/0.8 mm/1.2 mm/1.6 mm)
- Tangential insert LOEX0804 (4 cutting edges)

CUTTER BODIES

- Helical cutter bodies from Ø25 mm to Ø54 mm (Ø1" to Ø2")
- Combimaster, Weldon & Seco Weldon shanks, shell end type, Seco-Capto
- Corner radii in the upper rows 0.8 mm (0.031") maximum
- Slotting and contouring versions
- Contouring only versions
- 90° quality wall (mismatch <0.04 mm)

HELPFUL HINT

When cutting cast iron with a machine that has high power capability, choose a close pitch cutter and normal pitch one for a machine that has limited power capability.

KEY FEATURES

- Slot milling and contouring/shouldering machining
- Integrated through-coolant channels
- High-precision copy milled insert pockets with axial support
- Two different pitches – normal and close
- Tangential insert mounting
- Complements the Helical Turbo range

KEY BENEFITS

- High productivity
- Increased tool life
- Process security and reliability
- Cost-effectiveness
- Exceptional surface finishes

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 48-53 for more information.



GO TO GREAT DEPTHS WITH THIS CUTTER'S NEW LARGER INSERTS

SECO'S T4-12 SQUARE SHOULDER CUTTER MAXIMIZES METAL-REMOVAL RATES AND ENSURES PROCESS STABILITY

Easily obtain 12-mm (0.5") maximum depths-of-cut for high metal removal rates in roughing and semi-finishing applications with Seco's T4-12 Square Shoulder milling cutter featuring larger size inserts. Four cutting edges per insert help lower tooling costs, while tangential mounting maximizes insert stability and permits easy access to mounting screws.

Maintain smooth cutting action and reduce vibration due to the curved insert edges, as the internal channels that direct coolant to the cutting zones of each insert efficiently evacuate chips and help extend tool life. The T4-12 Square Shoulder cutters are engineered for general milling applications in steels and cast irons as well as more difficult materials, including stainless steels, titanium and heat-resistant superalloys under appropriate cutting conditions.



MILLING



RANGE OVERVIEW

- Cutter diameters from 25 mm to 125 mm (1" to 5")
- Wide selection of insert grades and geometries
- Normal and close pitch versions
- Corner radii from 0.8 mm to 6.3 mm (0.031" to 0.248"), includes LOEX12 range

HELPFUL HINT

Helical side milling is ideal for workpieces such as big housings and engine covers in the automotive industry segment and aircraft window frames and stringers.



KEY FEATURES

- High metal-removal rates from large, four-edge inserts
- Tangential insert mounting stabilizes cutting and lowers vibration
- Easy-access insert mounting screws
- Internal coolant channels for optimized insert performance

KEY BENEFITS

- Increased productivity
- Smoother machining
- Improved chip flow
- Reduced tool costs
- Process reliability

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 54-59 for more information.

MAKE HIGH-PERFORMANCE MILLING A HABIT

BOOST MATERIAL REMOVAL RATES IN A WIDE RANGE OF MATERIALS WITH HIGH FEED 6

Efficiently tackle a variety of difficult-to-machine materials from stainless steel to heat-resistant superalloys with Seco's High Feed 6 – the latest addition to the High Feed series of indexable-insert milling cutters. The new cutter features a design created specifically to boost material removal rates and handle high chip loads to achieve high performance and exceptional tool life.

Optimize all high-feed machining applications, including face milling, slotting, contouring, plunging and helical interpolation, with the High Feed 6. Its large-diameter cutter bodies are capable of 1.8 mm (0.070") axial depths of cut and feature double-sided inserts with six cutting edges for unsurpassed material removal and low operating costs.

High Feed 6 inserts mount at low lead angles to create axial rather than radial cutting forces, which lets tools experience less vibration and provide long, predictable performance.

HELPFUL HINT

High Feed 6's high performance in machining difficult-to-machine materials makes it particularly valuable to the mold and die segment.

RANGE OVERVIEW INSERTS

- Three cutting geometries
- Wide variety of advanced grade and coating options



MILLING



CUTTER BODIES

- 15 metric cutters with outer diameters from 40 mm to 160 mm
- 10 imperial cutters ranging with outer diameters from 1.5" to 4"
- Normal and close-pitch versions

KEY FEATURES

- High metal-removal rates with double-sided inserts with six cutting edges
- V-shaped cutting edge ensures optimal positioning
- Cutter bodies with large cutting diameters
- Inserts mount to cutter bodies at low lead angles for reduced vibration

KEY BENEFITS

- Excellent cutting behavior
- Increased tool life
- Highly stable performance
- Low operating costs
- Unsurpassed material removal
- Application versatility

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 454 - 455, 464 - 465 for more information.

SOLID SOLUTIONS FOR MAXIMIZED HIGH-FEED MILLING

SECO JHF980/JHF181 SOLID-CARBIDE END MILLS DELIVER INDUSTRY'S FASTEST METAL-REMOVAL RATES

Achieve the utmost in high feed machining metal-removal rates with Seco's Jabro®-HFM JHF980 and JHF181 solid-carbide end mills. With 4- and 5-flute cutter options as well as some with Seco's HXT coating technology, the cutters deliver metal removal rates significantly higher than conventional methods – in some instances up to 30%.

Experience extremely productive face, slot and select plunge milling applications as well as those involving helical interpolation, ramping or Z-leveling because of the increased number of flutes on each tool. This doubles the feed rate capability compared to previous Jabro end mills, and when applied at the same table feed rates as the prior tools, the new high-feed cutters last significantly longer.

HELPFUL HINT

In operation, keep high feed end mills as engaged as possible across the full diameter or less than half the functional diameter width (DCX).



MILLING



RANGE OVERVIEW

JHF980

- 4-flute end mill diameters from 2 mm to 6 mm (0.079" to 0.236")
- 5-flute end mill diameters from 8 mm to 12 mm (0.315" to 0.472")
- 1.5xD, 3xD, 5xD and 7xD length versions available

JHF181

- Available in 3-, 4- or 5-flute options
- Cutting diameters from 2 mm to 16 mm (0.079" to 0.63")
- Length options range from 2xD to 7xD
- Through-tool coolant capability – 6 mm to 12 mm (0.236" to 0.472") diameters

KEY FEATURES

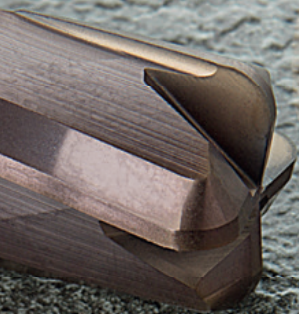
- High-feed capability
- Advanced coating technology
- Increased number of flutes
- Through-coolant capable

KEY BENEFITS

- Higher metal-removal rates
- Longer tool life
- Reduced vibration
- Greater process stability
- Less stress on machine tool

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 122-125, 281-282 for more information.



MANAGE CHIPS BETTER AND DRILL MORE HOLES FASTER

RE-ENGINEERED PERFOMAX® IS A CUT ABOVE THE REST IN HOLEMAKING PRODUCTIVITY

Increase your drilling parameters and boost tool life with Seco's new Perfomax indexable insert drill with optimized chip flutes for superior chip control and evacuation. The flutes on the bodies of the new drills feature recently developed "anti-friction surfaces."

The special wave patterns of these surfaces minimize the contact between chips and the flutes for higher application security.

Seco also laser hardens the fronts of the flutes to a high surface hardness of HRC 60, which provides longer drill body tool life.

The Perfomax DS2050 and DS4050 insert grades are especially well-suited for heat resistant materials like titanium and titanium alloys. The grades enhance productivity and extend tool life with the newly developed free-cutting MP and MC chip breakers launched together with the new grades.

The new insert grades have

niobium nitride (NbN) top layers that do not chemically react with titanium.

The prevention of that reaction – the most common wear factor with titanium – significantly extends tool life.

The combination of both heat and wear resistance with the DS2050 and DS4050 coatings makes the inserts a first choice for also drilling HRSA and difficult stainless steel materials as well as titanium and titanium alloys.



DRILLING

RANGE OVERVIEW

PERFOMAX DRILL BODIES

- Diameter range 15 mm to 59 mm (0.594" to 2.375")
- Length to diameter ratios of 2xD, 3xD, 4xD and 5xD
- Most common spindle interfaces

INSERT GRADES

- DS2050 – Periphery cutting
- DS4050 – Center cutting

HELPFUL HINT

Choosing the correct drill requires considering the material being drilled and the desired type of hole.



KEY FEATURES

- Innovative anti-friction flute surfaces
- Heat-resistant insert grades
- MP and MC insert chip breakers

KEY BENEFITS

- Effective chip control for long-chipping ductile materials
- Fast and efficient chip evacuation
- Higher cutting parameters for increased drilling output
- Longer tool life reduces tool cost
- Exceptional process predictability and reliability
- Better hole tolerance

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 155-171 for more information.



DRILLING PERFORMANCE BEYOND EXISTING TECHNOLOGY

INCREASE HOLEMAKING PRODUCTIVITY WITH NEW FEEDMAX™ -P DRILLS

Experience increased productivity of up to 35% as well as longer tool life with the solid-carbide Feedmax -P and its new geometry and advanced coating technology. Designed for ISO P materials, the new drill enhances chip evacuation to ensure application security while also maintaining high productivity levels.

Drill more holes in a shorter amount of time and use fewer drills with Feedmax -P.

The drills feature strong straight cutting edges with coolant holes in close proximity for precise cutting-edge cooling and narrow land margins that help minimize the effects of heat on the drills.

New Feedmax -P flute designs protect drill point corners and provide exceptional chip

control and evacuation. The combined design features of the Feedmax -P drills optimize them for steel and cast-iron workpiece applications.

With a new dark-colored TiAlN coating, the Feedmax -P allows you to use your machine tools to their full drilling potential.

Because of the drill's strong point geometry and its modern coating, cutting

HELPFUL HINT

Coolant is critical in drilling, and any failure in chip evacuation or heat reduction can cause production slowdowns or even scrapped workpieces.

speeds of up to 190 m/min in SMG P5 are possible without sacrificing tool life.

RANGE OVERVIEW

- Diameter range 2 mm to 20 mm (0.078" to 0.787")
- Length-to-diameter ratios of 3xD, 5xD and 7xD
- Internal coolant supply standard
- MQL-compatible shanks
- Intermediate sizes, chamfers and step drills available

DRILLING



KEY FEATURES

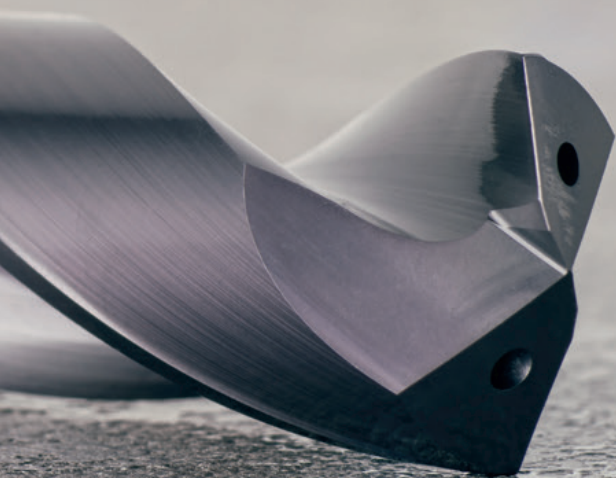
- Enhanced geometry
- Advanced coating technology
- Optimized coolant hole locations

KEY BENEFITS

- Increased drilling productivity through higher cutting speeds
- Longer tool life and reduced part costs
- Efficient chip evacuation
- Higher per-drill output
- Process predictability and reliability
- Good hole tolerance (IT8)

ADDITIONAL DETAILS

- Check out our machining navigator 2018.1 on pages 38-48, 51-52 for more information.



SECO'S INTERACTIVE MACHINING NAVIGATOR CATALOG

GET MORE INFORMATION, FASTER

Get valuable information and support beyond the traditional product catalog with Seco's new interactive Machining Navigator pdf.


The pages look just like those in a standard flip magazine but provide several useful capabilities.

Now, the Machining Navigator enables you to quickly access the catalog page for a specific product range by clicking on the name of the product from the list on the contents pages. Instead of searching through multiple catalogs, brochures and website pages, just a few clicks will take you directly to the product's interactive catalog page where you'll find detailed information and helpful links.

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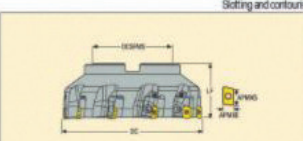
Square shoulder and slot milling cutters
SECO

Turbo 12-R220-69-12C



- For insert selection and cutting data recommendations, see page 15-16
- For complete insert programs, see page 16H
- For ISO substitute explanation, see page 15

Slitting and contouring



NRHS-07

Designation	Type of mounting	Dimensions in mm										Insert		
		ARMS	ARM2	DC	DC2MM	DC3	LF	MM2	C2MM	C3MM	MM			
SECO12R220-69-12C-100	Arise	7.0	11.0	125.0	80	40	80.0	135	237.12	240.25	3	3.1	1000	30X30
SECO12R220-69-12C-100-1	Arise	7.0	11.0	180.0	80	40	80.0	135	287.12	290.25	3	3.1	1000	30X30
SECO12R220-69-12C-100-2	Arise	7.0	11.0	200.0	100	60	80.0	—	307.12	310.25	12	7.3	7000	30X30
SECO12R220-69-12C-100-3	Arise	7.0	11.0	250.0	100	60	80.0	—	407.12	410.25	36	14.0	1000	30X30

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Spare Parts

For cutter	Settling gauge	Key (Taperless)	Insert screw	Insert key	Cartridge screw	Cassette	Torque value (Nm)

Square shoulder and slot milling cutters
SECO

R217220-69-12-Insert selection

SMD	SMD	%	V _c		
			100%	50%	30%
P1	SECO12R220-69-12C-100	5.0	0.14	0.30	0.28
P2	SECO12R220-69-12C-100-1	5.0	0.14	0.30	0.28
P3	SECO12R220-69-12C-100-2	5.0	0.14	0.30	0.22
P4	SECO12R220-69-12C-100-3	5.0	0.13	0.30	0.22
P5	SECO12R220-69-12C-100-4	5.0	0.10	0.17	0.16
P6	SECO12R220-69-12C-100-5	5.0	0.10	0.17	0.16
P7	SECO12R220-69-12C-100-6	5.0	0.10	0.17	0.16
P8	SECO12R220-69-12C-100-7	5.0	0.10	0.17	0.16
P9	SECO12R220-69-12C-100-8	5.0	0.10	0.17	0.16
P10	SECO12R220-69-12C-100-9	5.0	0.10	0.17	0.16
P11	SECO12R220-69-12C-100-10	5.0	0.10	0.17	0.16
P12	SECO12R220-69-12C-100-11	4.5	0.10	0.17	0.12
P13	SECO12R220-69-12C-100-12	4.5	0.10	0.17	0.12
P14	SECO12R220-69-12C-100-13	4.5	0.10	0.17	0.12
P15	SECO12R220-69-12C-100-14	4.5	0.10	0.17	0.12
P16	SECO12R220-69-12C-100-15	4.5	0.10	0.17	0.12
P17	SECO12R220-69-12C-100-16	4.5	0.10	0.17	0.12
P18	SECO12R220-69-12C-100-17	4.5	0.10	0.17	0.12
P19	SECO12R220-69-12C-100-18	4.5	0.10	0.17	0.12
P20	SECO12R220-69-12C-100-19	4.5	0.10	0.17	0.12
P21	SECO12R220-69-12C-100-20	4.5	0.10	0.17	0.12
P22	SECO12R220-69-12C-100-21	4.5	0.10	0.17	0.12
P23	SECO12R220-69-12C-100-22	4.5	0.10	0.17	0.12
P24	SECO12R220-69-12C-100-23	4.5	0.10	0.17	0.12
P25	SECO12R220-69-12C-100-24	4.5	0.10	0.17	0.12
P26	SECO12R220-69-12C-100-25	4.5	0.10	0.17	0.12
P27	SECO12R220-69-12C-100-26	4.5	0.10	0.17	0.12
P28	SECO12R220-69-12C-100-27	4.5	0.10	0.17	0.12
P29	SECO12R220-69-12C-100-28	4.5	0.10	0.17	0.12
P30	SECO12R220-69-12C-100-29	4.5	0.10	0.17	0.12
P31	SECO12R220-69-12C-100-30	4.5	0.10	0.17	0.12
P32	SECO12R220-69-12C-100-31	4.5	0.10	0.17	0.12
P33	SECO12R220-69-12C-100-32	4.5	0.10	0.17	0.12
P34	SECO12R220-69-12C-100-33	4.5	0.10	0.17	0.12
P35	SECO12R220-69-12C-100-34	4.5	0.10	0.17	0.12
P36	SECO12R220-69-12C-100-35	4.5	0.10	0.17	0.12
P37	SECO12R220-69-12C-100-36	4.5	0.10	0.17	0.12
P38	SECO12R220-69-12C-100-37	4.5	0.10	0.17	0.12
P39	SECO12R220-69-12C-100-38	4.5	0.10	0.17	0.12
P40	SECO12R220-69-12C-100-39	4.5	0.10	0.17	0.12
P41	SECO12R220-69-12C-100-40	4.5	0.10	0.17	0.12
P42	SECO12R220-69-12C-100-41	4.5	0.10	0.17	0.12
P43	SECO12R220-69-12C-100-42	4.5	0.10	0.17	0.12
P44	SECO12R220-69-12C-100-43	4.5	0.10	0.17	0.12
P45	SECO12R220-69-12C-100-44	4.5	0.10	0.17	0.12
P46	SECO12R220-69-12C-100-45	4.5	0.10	0.17	0.12
P47	SECO12R220-69-12C-100-46	4.5	0.10	0.17	0.12
P48	SECO12R220-69-12C-100-47	4.5	0.10	0.17	0.12
P49	SECO12R220-69-12C-100-48	4.5	0.10	0.17	0.12
P50	SECO12R220-69-12C-100-49	4.5	0.10	0.17	0.12
P51	SECO12R220-69-12C-100-50	4.5	0.10	0.17	0.12
P52	SECO12R220-69-12C-100-51	4.5	0.10	0.17	0.12
P53	SECO12R220-69-12C-100-52	4.5	0.10	0.17	0.12
P54	SECO12R220-69-12C-100-53	4.5	0.10	0.17	0.12
P55	SECO12R220-69-12C-100-54	4.5	0.10	0.17	0.12
P56	SECO12R220-69-12C-100-55	4.5	0.10	0.17	0.12
P57	SECO12R220-69-12C-100-56	4.5	0.10	0.17	0.12
P58	SECO12R220-69-12C-100-57	4.5	0.10	0.17	0.12
P59	SECO12R220-69-12C-100-58	4.5	0.10	0.17	0.12
P60	SECO12R220-69-12C-100-59	4.5	0.10	0.17	0.12
P61	SECO12R220-69-12C-100-60	4.5	0.10	0.17	0.12
P62	SECO12R220-69-12C-100-61	4.5	0.10	0.17	0.12
P63	SECO12R220-69-12C-100-62	4.5	0.10	0.17	0.12
P64	SECO12R220-69-12C-100-63	4.5	0.10	0.17	0.12
P65	SECO12R220-69-12C-100-64	4.5	0.10	0.17	0.12
P66	SECO12R220-69-12C-100-65	4.5	0.10	0.17	0.12
P67	SECO12R220-69-12C-100-66	4.5	0.10	0.17	0.12
P68	SECO12R220-69-12C-100-67	4.5	0.10	0.17	0.12
P69	SECO12R220-69-12C-100-68	4.5	0.10	0.17	0.12
P70	SECO12R220-69-12C-100-69	4.5	0.10	0.17	0.12
P71	SECO12R220-69-12C-100-70	4.5	0.10	0.17	0.12
P72	SECO12R220-69-12C-100-71	4.5	0.10	0.17	0.12
P73	SECO12R220-69-12C-100-72	4.5	0.10	0.17	0.12
P74	SECO12R220-69-12C-100-73	4.5	0.10	0.17	0.12
P75	SECO12R220-69-12C-100-74	4.5	0.10	0.17	0.12
P76	SECO12R220-69-12C-100-75	4.5	0.10	0.17	0.12
P77	SECO12R220-69-12C-100-76	4.5	0.10	0.17	0.12
P78	SECO12R220-69-12C-100-77	4.5	0.10	0.17	0.12
P79	SECO12R220-69-12C-100-78	4.5	0.10	0.17	0.12
P80	SECO12R220-69-12C-100-79	4.5	0.10	0.17	0.12
P81	SECO12R220-69-12C-100-80	4.5	0.10	0.17	0.12
P82	SECO12R220-69-12C-100-81	4.5	0.10	0.17	0.12
P83	SECO12R220-69-12C-100-82	4.5	0.10	0.17	0.12
P84	SECO12R220-69-12C-100-83	4.5	0.10	0.17	0.12
P85	SECO12R220-69-12C-100-84	4.5	0.10	0.17	0.12
P86	SECO12R220-69-12C-100-85	4.5	0.10	0.17	0.12
P87	SECO12R220-69-12C-100-86	4.5	0.10	0.17	0.12
P88	SECO12R220-69-12C-100-87	4.5	0.10	0.17	0.12
P89	SECO12R220-69-12C-100-88	4.5	0.10	0.17	0.12
P90	SECO12R220-69-12C-100-89	4.5	0.10	0.17	0.12
P91	SECO12R220-69-12C-100-90	4.5	0.10	0.17	0.12
P92	SECO12R220-69-12C-100-91	4.5	0.10	0.17	0.12
P93	SECO12R220-69-12C-100-92	4.5	0.10	0.17	0.12
P94	SECO12R220-69-12C-100-93	4.5	0.10	0.17	0.12
P95	SECO12R220-69-12C-100-94	4.5	0.10	0.17	0.12
P96	SECO12R220-69-12C-100-95	4.5	0.10	0.17	0.12
P97	SECO12R220-69-12C-100-96	4.5	0.10	0.17	0.12
P98	SECO12R220-69-12C-100-97	4.5	0.10	0.17	0.12
P99	SECO12R220-69-12C-100-98	4.5	0.10	0.17	0.12
P100	SECO12R220-69-12C-100-99	4.5	0.10	0.17	0.12
P101	SECO12R220-69-12C-100-100	4.5	0.10	0.17	0.12

SMD = Steel material group
 V_c = m/min
 a_p = mm
 a_p/DC = %
 All cutting data are start values

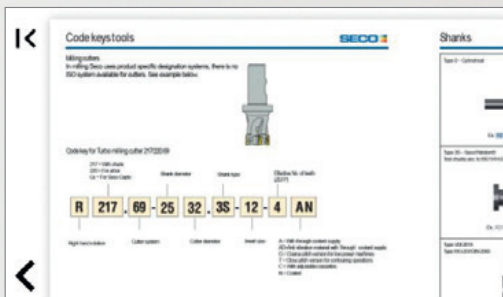
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