

**SECO NEWS
SUMMARY
2019.2**



**EXPECT MORE
FROM YOUR TOOLS**

SECO 

WELCOME TO SECO NEWS SUMMARY 2019.2

On the following pages you will find a short summary of our latest innovations and solutions for all your metal cutting challenges.

Selecting the correct insert grades, chip breakers and cutting parameters when machining austenitic and duplex stainless steels is so critical in order to optimize your metal cutting processes. Find out how our new TM1501, TM2501 and TM3501 turning grades boost performance

and add reliability to your machining applications.

Stop throwing away partly used inserts that are not fully worn out! Our new milling grades with Duratomic® edge detection technology will show you when the insert needs to be serviced or replaced. The highly complex coating also makes the inserts tougher so they last longer, reducing your tooling costs even further.

With high technical knowledge in all industry segments, Seco Tools will be able to support you in all your metal cutting challenges whether you are machining blisks and disks or turbine blades.

Read about these products and more, inside.



AEROSPACE

We understand your need for safe, quality products and our experts have many years of experience in the aerospace industry.



POWER GENERATION

Are you working with tough materials and want to see if you can work more efficiently? We can help you achieve your goals.



AUTOMOTIVE

You want to keep your costs down and your productivity high? We have competitive products to ensure your reliable output.

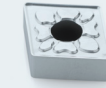


GENERAL ENGINEERING

Maybe flexibility is your main driver? Contact your local Seco representative to find out how we can help you.

PRODUCT OVERVIEW

DURATOMIC® TM1501, TM2501 AND TM3501 GRADES



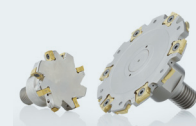
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NEW MP MILLING GRADES MP1501 AND MP2501



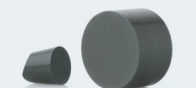
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TAKE DIFFICULTY OUT OF TURNING STAINLESS STEEL

DURATOMIC® TM1501, TM2501 AND TM3501 GRADES

In response to common challenges associated with turning stainless steel workpieces, Seco Tools offers a new grade line that eliminates short and inconsistent tool life, poor part quality and process instability. Put the new TM1501, TM2501 and TM3501 grades – designed specifically for stainless steels – to work for you and gain peak part-processing performance. These three new Duratomic® grades cover a broad range of stainless steel alloys and applications from finishing to heavy roughing while ensuring long insert life, high productivity and superior surface finishes.

YOUR CHALLENGES

- Inconsistent turning performance in stainless steels
- Varying machining and part conditions

OUR SOLUTION

High-performing, reliable grades and chip breakers for a wide range of applications

YOUR CHALLENGES

- Inserts discarded before completely used
- Unused edges increase tooling cost

OUR SOLUTION

Duratomic® advanced used-edge detection

YOUR CHALLENGES

- Poor chip formation in sticky stainless steels
- Tool breakage

OUR SOLUTION

A wider range of efficient chip breakers and tough grades for precise chip control and greater process consistency

TURNING



YOUR BENEFITS

- The new range covers a variety of stainless steel alloys and applications from finishing to heavy roughing
- The TM1501 provides high productivity and wear resistance on medium to large-sized austenitic stainless steel components under stable conditions
- TM2501 is the first choice in austenitic stainless steel alloy, providing long, predictable tool life and toughness for a variety of component sizes and conditions
- TM3501 peaks in a variety of component sizes and in difficult alloys stretching from duplex to complex, high-alloyed super-duplex stainless steel

RANGE OVERVIEW

- Duratomic® TM1501, TM2501, TM3501 (480 total products)
- Comprehensive geometry and chip breaker range

For more information check out our 2019.2 digital Turning Catalog insert pages on secotools.com.



Watch the application video.

DURATOMIC® WILL MAXIMIZE YOUR PRODUCTIVITY, USED-EDGE DETECTION WILL INCREASE YOUR EFFICIENCY

NEW MP MILLING GRADES MP1501 AND MP2501

Inconsistent and unreliable milling processes can keep you from being profitable and competitive. Increase your process security and cost-effectiveness for a savings of up to 20 percent with the MP1501 and MP2501 milling grades from Seco Tools, which deliver high reliability for steel and cast iron machining. As the first indexable milling grades to feature the newly improved Duratomic® coating, these grades also offer exceptional toughness and edge strength that prevent comb cracks and unexpected breakage for the highest level of productivity, tool life predictability and process reliability along with used-edge detection to prevent insert waste.

YOUR CHALLENGES

- Difficult to notice unused cutting edge in workshop environment
- Need to reduce waste of unused edges and increase efficiency

OUR SOLUTION

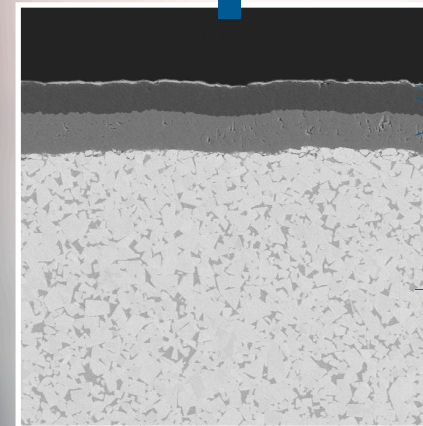
Chrome-colored used-edge detection

YOUR CHALLENGES

- High-mix/low-volume production needs
- Thermal stress cracks causing poor tool life and unpredictability
- Unexpected insert breakage and machine downtime
- Unreliable tool life from edge to edge
- Need to improve efficiency and productivity in steel and cast iron

OUR SOLUTION

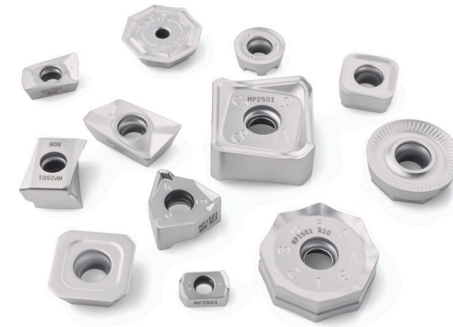
Newly improved Duratomic® coating for optimal insert toughness and breakage resistance



Chrome-colored used-edge detection layer
Functional coating (both layers)

New substrate

MILLING



YOUR BENEFITS

- Advanced Duratomic® coating provides improved toughness and strength
- Used-edge detection reduces waste and cost per edge
- A choice between longer tool life for cost-effectiveness or increased productivity/cutting speeds
- Greater process predictability in steel and cast irons

RANGE OVERVIEW

- MP1501 for medium-rough milling for hardened steel (up to 45HRC) and roughing grey as well as nodular cast iron
- MP2501 for milling steel and easy/medium stainless steel, suitable for machining with or without coolant and provides excellent finishing ability
- All new MP grades features the new Duratomic® coating and chrome colored used-edge detection

For more information check out our 2019.2 digital Milling Catalog insert pages on secotools.com.

WILL BE RELEASED DURING QUARTER 4 2019

Please check availability on secotools.com.

KEEP YOUR DISC MILLING OPERATIONS SMOOTH AND PROBLEM FREE

NEW 335.19 AND 335.18 DISC MILLING CUTTERS

Especially in difficult-to-machine materials, disc milling operations are hard processes to optimize. Accelerate your shop's productivity with the newly improved 335.19 and 335.18 disc mill close-pitch designed cutter bodies from Seco Tools. Designed to excel at high-speed slotting operations between 4 mm and 12 mm (0.157" – 0.500") and cutting-off operations from 4 mm to 8 mm (0.156" – 0.250") in some of the toughest materials, including sticky titanium and super alloys, these corrosion-resistant cutter bodies with internal coolant capabilities easily outperform high-speed steel cutters by using superior cutting data and indexable inserts with four cutting edges. And for the highest degree of flexibility, the 335.19 and 335.18 cutters utilize modular Combimaster™ connections for exceptional axial and radial reach.

YOUR CHALLENGES

- Underutilized machine tool capabilities
- Poor chip control, especially in sticky materials
- Short tool life and high overall tooling costs

OUR SOLUTION

Internal coolant channels



YOUR CHALLENGES

- Limited radial and axial reach range for disc milling
- Time-consuming tool assembly and spare parts management

OUR SOLUTION

Modular Combimaster™ connection

YOUR CHALLENGES

- Need greater productivity to keep up within a competitive industry
- Poor process stability
- Struggling with slow feeds and speeds

OUR SOLUTION

Close pitch pocket design and carbide inserts

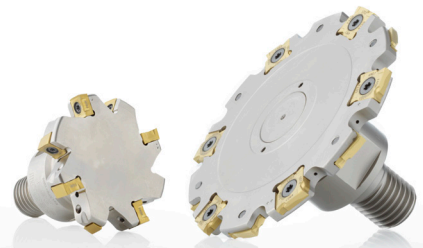
YOUR CHALLENGES

- High tool costs
- Complicated tool management with too many items
- Single-purpose tools limit flexibility

OUR SOLUTION

Durable and flexible corrosion-resistant hardened-steel cutter body and indexable inserts with four cutting edges

MILLING



YOUR BENEFITS

- Higher productivity enabled by the close pitch design
- Greater stability allows up to double tool life compared to the previous generation
- Plug-and-play internal coolant channels direct flow toward insert tips for reliable chip evacuation and uniform insert wear
- Easy to use flexible Combimaster™ connection provides greater radial and axial reach

RANGE OVERVIEW CUTTER BODIES

- Metric diameters from 32 mm to 125 mm, widths 4 mm to 12 mm
- Inch diameters from 1.25" to 4", widths 0.156" to 0.500"
- Designed for use with the modular Combimaster™ system

INSERTS

- Full range of inserts and multiple grades for all materials
- Edge geometries for various part materials and applications
- All corner radii available in standard range 0.2 mm to 6 mm (0.008" to 0.236")

For more information check out our 2019.2 digital Milling Catalog pages 250-253 and 261-262 on secotools.com.



Watch the application video.

WEAK TURNING INSERTS SLOWING DOWN YOUR PRODUCTIVITY IN HEAT RESISTANT SUPER ALLOYS?

SECOMAX™ CW100 INSERT GRADE

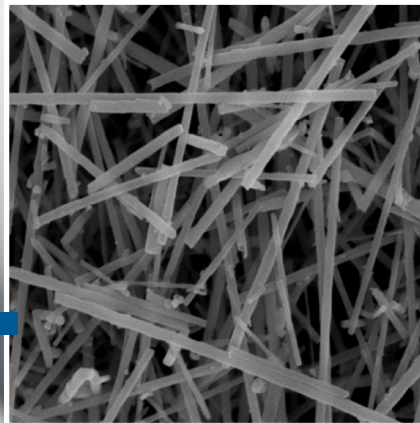
Unpredictable tool life and slow rough-machining speeds can hinder critical heat-resistant super alloy (HRSA) component productivity. Get your high-volume roughing operations in these materials back under control and machine at elevated speeds with the newly added geometries in Secomax™ CW100 family of ceramic insert grades. The whisker-reinforced CW100 grade inserts are round and offer superior wear, fracture and notch resistance as well as high hardness at elevated temperatures when machining challenging materials often used in the aerospace and power generation industries, such as Inconel 718, Hastalloy, Waspaloy, MAR, Nimonic, Rene and Udimet.

YOUR CHALLENGES

- Difficult to machine HRSA materials
- Excessive tool wear and breakage

OUR SOLUTION

Silicon carbide whisker-type ceramic grade with optimized micro geometries



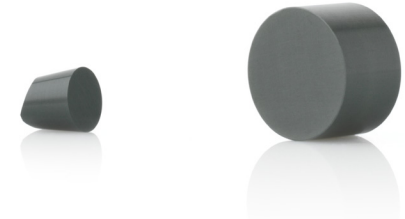
YOUR CHALLENGES

- High tooling costs
- High cost per edge

OUR SOLUTION

Strong, round shape with multiple cutting edges

TURNING



YOUR BENEFITS

- Turn more parts per cutting edge with round geometry
- Greater wear resistance and high strength made possible with whisker-reinforced, aluminum-oxide substrate
- Better tool life via flank and notch wear resistance enabled by chamfered (T) or honed edges (E)

RANGE OVERVIEW

- 4 new round insert formats with 2 geometries E- and T-01020
- 4 grooving insert geometries with widths of 3.175 mm (0.125"), 6.35 mm (0.25") and 7.925 mm (0.312")
- Recommended cutting window of 150-300 m/min (490-985 sfm) speeds and 0.05-0.25 mm/rev (0.002-0.010 in/rev) feed
- Extends and enhances the Secomax™ ceramics lineup, which also includes the two SiAlON-type grades - CS100 grade for ISO turning inserts and CS300 grade for both milling and turning

For more information check out our 2019.2 digital Turning Catalog insert pages on secotools.com.

PERFECTLY IN-TOLERANCE FINISH MACHINING FOR REDUCED PRODUCTION TIME IN HYBRID CFRP/TITANIUM AND CFRP/ALUMINIUM STACKED MATERIAL

JC898 AND JC899

Finally eliminate the extremely time-consuming task of disassembling the individual layers of stacked materials thanks to the highly innovative two-in-one geometry of the JC899 Hybrid Stack Finisher from Seco Tools. Designed primarily for holemaking operations in the advanced material combinations used in the aerospace industry, particularly carbon-fibre reinforced polymer (CFRP) and titanium or CFRP and aluminum, this unconventional finishing tool's patented advanced geometry and material design generates a defect- and scratch-free surface finish. Perfect for complex material combinations with high precision demands such as those used in aerospace engine pylons, the JC899 finisher, together with the JC898 rougher of Seco Tools, can boost process efficiency by as much as 200 percent and provide significantly longer tool life than that of conventional reamers.

YOUR CHALLENGES

- High pressures on part during Z-axis drilling
- Delamination of CFRP material when drilling

OUR SOLUTION

High feed frontal teeth geometry designed for helical interpolation and through-tool channel for material removal with compressed air

YOUR CHALLENGES

- Material delamination and fibre pull out
- Poor chip evacuation

OUR SOLUTION

Left-hand helix stack finisher for perfect surface finishes without secondary cleaning/benchwork

YOUR CHALLENGES

- Chip pollution when processing holes in stacked materials
- Long lead times caused by manually separating, cleaning and reassembling material layers
- Slow cycle times due to separate holemaking operations

OUR SOLUTION

Patented two-in-one geometry for complete finishing of stacked materials in one cycle

YOUR CHALLENGES

- Short tool life increases part-processing costs
- Worn tools producing poor part surface finishes

OUR SOLUTION

Diamond-based STAX coating for longer tool life and tighter component tolerances

SOLID END MILLS



YOUR BENEFITS

- Increase process precision, efficiency and reliability
- Generate defect- and scratch-free holes to reduce production time, cost and scrap with new two-in-one tool geometry
- Reduce tooling costs with longer lasting tools

RANGE OVERVIEW

- JC898 (roughing) and JC899 (finishing) geometries
- 8 or 15 mm (roughing) 8.5 mm, 3/8" and 14.8 mm (finishing)
- Tool lengths/stack heights range from 15 to 60 mm
- Additional sizes are available as custom products

For more information check out our 2019.2 digital Solid End Mills Catalog pages 383-387 on secotools.com.



Watch the application video.



ACHIEVE NEXT-LEVEL PRODUCTIVITY THROUGHOUT YOUR MANUFACTURING JOURNEY

HOW THE 'LITTLE THINGS' STACK UP

As a cutting tool manufacturer, Seco Tools has been answering questions about application and performance for eighty years. Now, Seco Consultancy is helping customers ask a new set of questions designed to uncover inefficiencies, improve communication and increase overall productivity:

- What don't we know about our overall operations?
- Is there more to learn from my worn cutting tools?
- How do I get the most from my work force?
- Is our inventory up to speed?
- How can we remove production bottlenecks (before they happen)?
- How can we save more time in setup?

The changing industrial marketplace is driving down batch sizes, shortening reaction time and demanding higher workforce skill level. Consequently, especially High-Mix, Low-Volume (HMLV) manufacturers have an increased need to get in front of challenges such as increased setup time, higher production costs and greater scrap rates, ultimately determining their success or failure.

Seco Consultancy takes a macro look at customer operations to identify issues, get answers, and is backed by solutions that impact business from the front office to production and delivery.

Seven comprehensive solutions are offered by an experienced team of global metalworking professionals:

- Manufacturing evaluation
- Inventory management
- Machine monitoring
- Tool wear analysis
- Tool identification
- CAM programming
- Education for manufacturing excellence and applied metal cutting physics



Scan the QR code and find out more.

KNOW YOUR INVENTORY

AUTOMATE AND CONTROL CRITICAL ASSETS TO REMOVE INEFFICIENCIES AND INCREASE PRODUCTIVITY

Seco Consultancy's Inventory Management solutions use IoT technology and provide actionable insight to four key management issues - knowledge, productivity, administration and cost control. Secured data is shared across a diverse set of point-of-use solutions that allow you to control, track and manage inventories of consumable and returnable shop floor assets when and where you need it most. The choice in installation type, hardware and software has been strategically assembled to address needs for efficiency and productivity from the front office to the shop floor.

The latest-tech solution of Seco Tools is comprised of three distinct levels of security – from open inventory to complete control – and is combined with choices in software and service. Match the level of security you need with software functionality and installation type – cloud-based or on-premise – for an optimal solution.

A key strength in this robust system is in the software, which not only serves as a portal to the inventory hardware systems but connects in multiple ways to your business for a fully integrated and streamlined solution.



KEY BENEFITS

- Continuous information with 24/7 availability
- Automated and detailed reporting
- Improved inventory accuracy and optimized stock levels
- Streamlined order process
- Business systems integration
- Cost reduction

INVENTORY MANAGEMENT OVERVIEW

Trust Control – a convenient cabinet top or tablet allows for the open inventory but adds the element of control for greater knowledge and efficiency.

Access Control utilizes drawer and lid configurations in a cabinet guiding the way for a user to locate and take, or return, the item indicated.

Dispense Control allows users the choice for only a single item when logged in to the system.

- TC100 and 200
- AC100, main unit and extension
- AC200, main unit and extension
- DC100, main unit and extension

INCREASE UPTIME WITH MACHINE MONITORING

CLOSE THE COMMUNICATION GAP AND CONNECT MACHINE OPERATORS AND MANAGERS WITH THE MANUFACTURING PROCESS

Seco Consultancy offers machine monitoring solutions that deliver real-time feedback to operators and shop floor managers. This Industrial Internet of Things (IIoT) solution relays critical information about machine performance to employees, allowing you to track and improve production, and helping you anticipate problems before they happen.

The key to understanding downtime and equipment-usage problems lies in knowing why machines stop running. On a fundamental level, any unplanned stoppage – whether it stems from materials, personnel, maintenance or an equipment breakdown – constitutes downtime.

Our Machine Monitoring solution provides 24/7 connectivity directly from the CNC control of each connected machine on your shop floor, yielding dynamic data. Machine operators can access an interface at the machine to categorize downtime issues. Common stoppages such as part or tool changeovers and even breakages can be categorized automatically through a combination of machine data and artificial intelligence (AI).

The touchscreen, tablet and mobile compatibility make it easy to learn and use immediately. The cloud-based software encrypts all your data to provide visibility and security wherever you go.

With a constant stream of valuable performance data relayed to operators and managers, you reduce reaction time and errors while you increase communication within your organization. Machine monitoring creates a valuable feedback loop and tracks the improvements you make over time as a result of this visibility, which in many cases can produce up to a 20% increase in uptime.



KEY FEATURES

- Real-time dashboards
- Operator interface
- Encrypted data
- Mobile notifications

KEY BENEFITS

- Visibility
- Simple setup
- Understand and reduce machine downtime
- Understand shop floor OEE and machine utilization

REPORTING AND ANALYTICS

- OEE performance reporting
- Quality tracking and reporting
- Machine utilization reporting
- Job setup/Changeover tracking
- Detailed machine production analytics
- Detailed part number and job analytics
- RAW data export capability

HELPFUL HINT

Machine monitoring provides real-time performance data to your decision makers.



SUGGEST



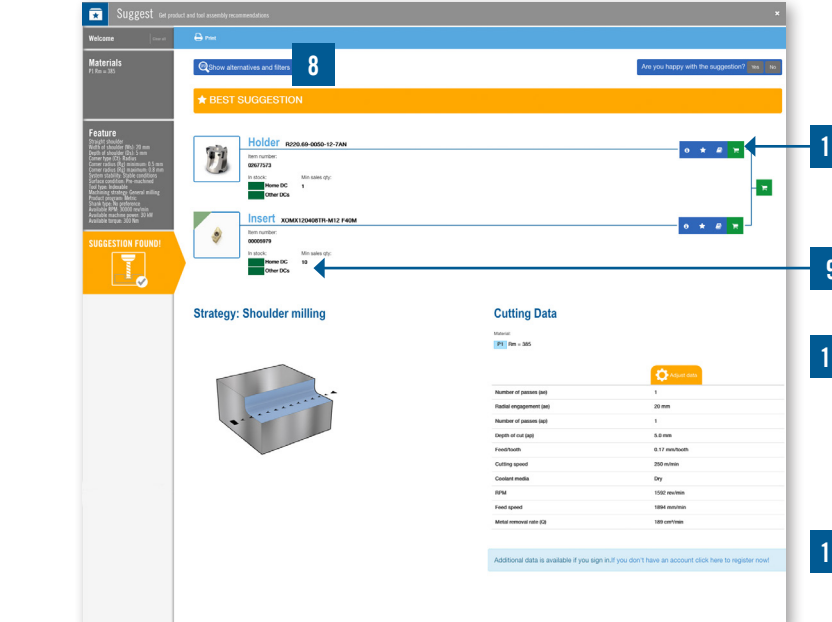
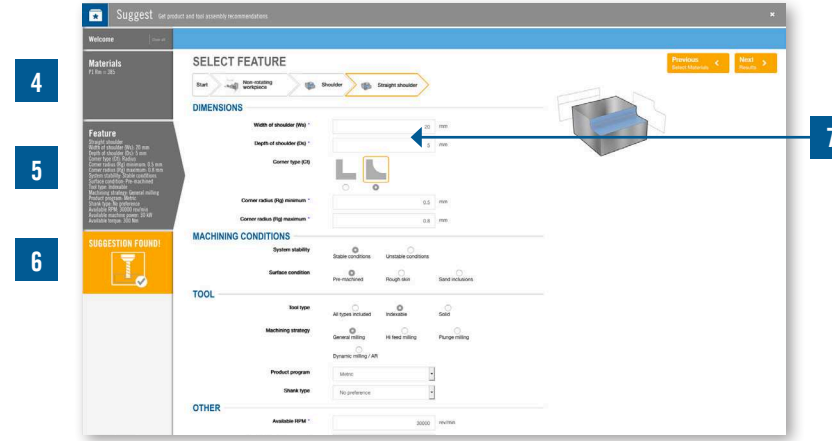
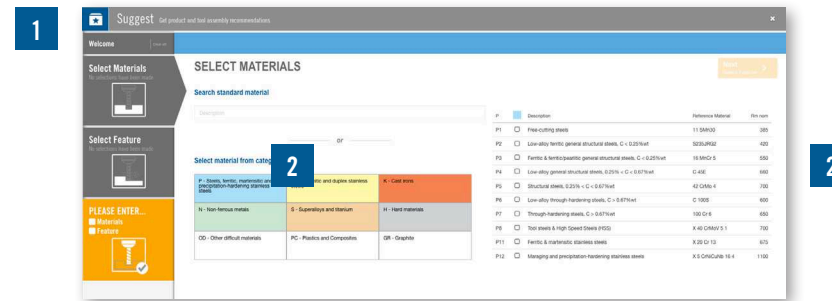
GET YOUR PERSONAL TOOL RECOMMENDATION WITHIN SECONDS - WITH OUR ONLINE APPLICATION

Whether you need cutting tool advice for a new application or want to explore another tooling option for a recurring project, this comprehensive online resource can help you with process planning anytime. As part of the My Pages digital portal, Suggest uses your application data to quickly identify a Seco tool and cutting strategy to machine your part to the required tolerance.

WHEN CAN YOU USE SUGGEST?

- You want a product recommendation for a particular material and feature
- You need cutting data for your tool recommendation
- You want to compare products within our range
- You want to check stock availability or product information
- You want to have optimized CNC-codes for threading applications

Available for use with smartphones, tablets, laptops and desktop computers, everything about Suggest is quick, easy and convenient. Follow the link to Suggest via secotools.com or scan the QR code to find the product that suits your application.



- 1 Search for standard material
- 2 Select material from category
- 3 Select your feature
- 4 Your selected material
- 5 Your selected parameters
- 6 Did you know you already have a suggestion based on feature, material and default parameters?
- 7 Fill in your preferred parameters to find the best solution for your specific needs
- 8 Prefer an "alternative suggestion"? Search through our alternative list and compare suggestion
- 9 Check stock availability
- 10 • Find product information
• Add to favorites
• Search the digital catalog
• Add to your wishlist
- 11 Adjust your cutting data
- 12 Sign-up for your personal My Pages account to get access to even more advanced data:

- Advanced cutting data
- CNC-code generation for threading
- Cutting data graphs
- Pricing



Scan the QR code to discover Suggest.

DURATOMIC® TM1501, TM2501 AND TM3501 GRADES

PRODUCT NUMBER	DESIGNATION
03275902	CCMT060202-F1, TM2501 (CCMT21.50.5-F1, TM2501)
03275903	CCMT060202-FF1, TM3501 (CCMT21.50.5-FF1, TM3501)
03275905	CCMT060202-M3, TM3501 (CCMT21.50.5-M3, TM3501)
03275907	CCMT060202-MF2, TM3501 (CCMT21.50.5-MF2, TM3501)
03275908	CCMT060204-F1, TM1501 (CCMT21.51-F1, TM1501)
03275909	CCMT060204-F1, TM2501 (CCMT21.51-F1, TM2501)
03275910	CCMT060204-F1, TM3501 (CCMT21.51-F1, TM3501)
03275912	CCMT060204-FF1, TM3501 (CCMT21.51-FF1, TM3501)
03275914	CCMT060204-M3, TM1501 (CCMT21.51-M3, TM1501)
03275915	CCMT060204-M3, TM2501 (CCMT21.51-M3, TM2501)
03275916	CCMT060204-M3, TM3501 (CCMT21.51-M3, TM3501)
03275917	CCMT060204-MF2, TM1501 (CCMT21.51-MF2, TM1501)
03275918	CCMT060204-MF2, TM3501 (CCMT21.51-MF2, TM3501)
03277067	CCMT060204W-MF2, TM2501 (CCMT21.51W-MF2, TM2501)
03275919	CCMT060208-F1, TM2501 (CCMT21.52-F1, TM2501)
03275921	CCMT060208-M3, TM2501 (CCMT21.52-M3, TM2501)
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03275923	CCMT060208-MF2, TM1501 (CCMT21.52-MF2, TM1501)
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03275929	CCMT091304-F1, TM2501 (CCMT32.51-F1, TM2501)
03275930	CCMT091304-F1, TM3501 (CCMT32.51-F1, TM3501)
03280012	CCMT091304-FF1, TM3501 (CCMT32.51-FF1, TM3501)
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03275935	CCMT091304-M5, TM2501 (CCMT32.51-M5, TM2501)
03275936	CCMT091304-MF2, TM1501 (CCMT32.51-MF2, TM1501)
03275937	CCMT091304-MF2, TM2501 (CCMT32.51-MF2, TM2501)
03275938	CCMT091304-MF2, TM3501 (CCMT32.51-MF2, TM3501)
03277068	CCMT091304W-MF2, TM2501 (CCMT32.51W-MF2, TM2501)

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03275942	CCMT091308-FF1, TM3501 (CCMT32.52-FF1, TM3501)
03275943	CCMT091308-M3, TM1501 (CCMT32.52-M3, TM1501)
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03275982	CNMG090308-M3, TM2501 (CNMG322-M3, TM2501)
03275983	CNMG120404-F1, TM3501 (CNMG431-FF1, TM3501)
03280014	CNMG120404-M3, TM2501 (CNMG431-M3, TM2501)
03280015	CNMG120404-M3, TM3501 (CNMG431-M3, TM3501)
03275984	CNMG120404-M5, TM1501 (CNMG431-M5, TM1501)
03275985	CNMG120404-M5, TM2501 (CNMG431-M5, TM2501)
03275986	CNMG120404-MF1, TM1501 (CNMP431-MF1, TM1501)
03275987	CNMG120404-MF1, TM2501 (CNMP431-MF1, TM2501)
03275988	CNMG120404-MF1, TM3501 (CNMP431-MF1, TM3501)
03273899	CNMG120404-MF4, TM1501 (CNMG431-MF4, TM1501)
03273901	CNMG120404-MF4, TM2501 (CNMG431-MF4, TM2501)
03273902	CNMG120404-MF4, TM3501 (CNMG431-MF4, TM3501)
03277071	CNMG120404W-MF1, TM3501 (CNMG431W-MF1, TM3501)
03277072	CNMG120404W-MF4, TM1501 (CNMG431W-MF4, TM1501)

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03277073	CNMG120404W-MF4, TM2501 (CNMG431W-MF4, TM2501)
03277074	CNMG120404W-MF4, TM3501 (CNMG431W-MF4, TM3501)
03279988	CNMG120408-FF1, TM3501 (CNMG432-FF1, TM3501)
03275990	CNMG120408-M3, TM2501 (CNMG432-M3, TM2501)
03275991	CNMG120408-M3, TM3501 (CNMG432-M3, TM3501)
03275992	CNMG120408-M5, TM1501 (CNMG432-M5, TM1501)
03275993	CNMG120408-M5, TM2501 (CNMG432-M5, TM2501)
03275994	CNMG120408-MF1, TM1501 (CNMP432-MF1, TM1501)
03275995	CNMG120408-MF1, TM2501 (CNMP432-MF1, TM2501)
03275996	CNMG120408-MF1, TM3501 (CNMP432-MF1, TM3501)
03275999	CNMG120408-MF3, TM2501 (CNMG432-MF3, TM2501)
03276000	CNMG120408-MF3, TM3501 (CNMG432-MF3, TM3501)
03273903	CNMG120408-MF4, TM1501 (CNMG432-MF4, TM1501)
03273904	CNMG120408-MF4, TM2501 (CNMG432-MF4, TM2501)
03273905	CNMG120408-MF4, TM3501 (CNMG432-MF4, TM3501)
03272737	CNMG120408-MF4, TP3501 (CNMG432-MF4, TP3501)
03280979	CNMG120408-MR3, TM2501 (CNMG432-MR3, TM2501)
03280983	CNMG120408-MR3, TM3501 (CNMG432-MR3, TM3501)
03276001	CNMG120408-MR7, TM2501 (CNMG432-MR7, TM2501)
03277075	CNMG120408W-MF4, TM1501 (CNMG432W-MF4, TM1501)
03277077	CNMG120408W-MF4, TM2501 (CNMG432W-MF4, TM2501)
03277078	CNMG120408W-MF4, TM3501 (CNMG432W-MF4, TM3501)
03276030	CNMG120412-M3, TM2501 (CNMG433-M3, TM2501)
03276031	CNMG120412-M3, TM3501 (CNMG433-M3, TM3501)
03273906	CNMG120412-M5, TM1501 (CNMG433-M5, TM1501)
03273907	CNMG120412-M5, TM2501 (CNMG433-M5, TM2501)
03276032	CNMG120412-MF3, TM3501 (CNMG433-MF3, TM3501)
03273908	CNMG120412-MF4, TM1501 (CNMG433-MF4, TM1501)
03273909	CNMG120412-MF4, TM2501 (CNMG433-MF4, TM2501)
03273910	CNMG120412-MF4, TM3501 (CNMG433-MF4, TM3501)
03272738	CNMG120412-MF4, TP3501 (CNMG433-MF4, TP3501)
03280980	CNMG120412-MR3, TM2501 (CNMG433-MR3, TM2501)
03280984	CNMG120412-MR3, TM3501 (CNMG433-MR3, TM3501)
03276033	CNMG120412-MR7, TM2501 (CNMG433-MR7, TM2501)
03277079	CNMG120412W-MF4, TM1501 (CNMG433W-MF4, TM1501)
03277080	CNMG120412W-MF4, TM2501 (CNMG433W-MF4, TM2501)
03277081	CNMG120412W-MF4, TM3501 (CNMG433W-MF4, TM3501)
03276034	CNMG120416-M5, TM2501 (CNMG434-M5, TM2501)
03276035	CNMG120416-MF4, TM1501 (CNMG434-MF4, TM1501)
03276036	CNMG120416-MF4, TM2501 (CNMG434-MF4, TM2501)
03276037	CNMG120416-MF4, TM3501 (CNMG434-MF4, TM3501)
03276038	CNMG160608-M3, TM2501 (CNMG542-M3, TM2501)
03273912	CNMG160608-M5, TM2501 (CNMG542-M5, TM2501)

PRODUCT NUMBER	DESIGNATION
03273913	CNMG160608-MF4, TM1501 (CNMG542-MF4, TM1501)
03273915	CNMG160608-MF4, TM2501 (CNMG542-MF4, TM2501)
03273917	CNMG160608-MF4, TM3501 (CNMG542-MF4, TM3501)
03276039	CNMG160612-M3, TM2501 (CNMG543-M3, TM2501)
03276040	CNMG160612-M3, TM3501 (CNMG543-M3, TM3501)
03273919	CNMG160612-M5, TM1501 (CNMG543-M5, TM1501)
03273921	CNMG160612-M5, TM2501 (CNMG543-M5, TM2501)
03273923	CNMG160612-MF4, TM1501 (CNMG543-MF4, TM1501)
03273926	CNMG160612-MF4, TM2501 (CNMG543-MF4, TM2501)
03273928	CNMG160612-MF4, TM3501 (CNMG543-MF4, TM3501)
03276041	CNMG160616-M3, TM2501 (CNMG544-M3, TM2501)
03273930	CNMG160616-M5, TM1501 (CNMG544-M5, TM1501)
03273932	CNMG160616-M5, TM2501 (CNMG544-M5, TM2501)
03276042	CNMG160616-MR7, TM2501 (CNMG544-MR7, TM2501)
03276043	CNMG190608-M3, TM3501 (CNMG642-M3, TM3501)
03276044	CNMG190608-M5, TM2501 (CNMG642-M5, TM2501)
03273934	CNMG190612-M3, TM3501 (CNMG643-M3, TM3501)
03273936	CNMG190612-M5, TM1501 (CNMG643-M5, TM1501)
03273938	CNMG190612-M5, TM2501 (CNMG643-M5, TM2501)
03276045	CNMG190612-MF4, TM1501 (CNMG643-MF4, TM1501)
03276046	CNMG190612-MF4, TM2501 (CNMG643-MF4, TM2501)
03276047	CNMG190612-MF4, TM3501 (CNMG643-MF4, TM3501)
03274153	CNMG190612-MR7, TM2501 (CNMG643-MR7, TM2501)
03276048	CNMG190616-M3, TM2501 (CNMG644-M3, TM2501)
03276177	CNMG190616-M3, TM3501 (CNMG644-M3, TM3501)
03274154	CNMG190616-M5, TM1501 (CNMG644-M5, TM1501)
03274155	CNMG190616-M5, TM2501 (CNMG644-M5, TM2501)
03290924	CNMG190616-MF4, TM1501 (CNMG644-MF4, TM1501)
03276178	CNMG190616-MF4, TM2501 (CNMG644-MF4, TM2501)
03276179	CNMG190616-MF4, TM3501 (CNMG644-MF4, TM3501)
03276180	CNMG190616-MR7, TM2501 (CNMG644-MR7, TM2501)
03276182	CNMM160612-RR6, TM1501 (CNMM543-RR6, TM1501)
03276183	CNMM160612-RR6, TM2501 (CNMM543-RR6, TM2501)
03276184	CNMM160612-RR6, TM3501 (CNMM543-RR6, TM3501)
03279989	CNMM160616-RR6, TM1501 (CNMM544-RR6, TM1501)
03279990	CNMM160616-RR6, TM2501 (CNMM544-RR6, TM2501)
03279991	CNMM160616-RR6, TM3501 (CNMM544-RR6, TM3501)
03276185	CNMM190612-RR6, TM1501 (CNMG434-RR6, TM1501)
03276186	CNMM190612-RR6, TM2501 (CNMG434-RR6, TM2501)
03276187	CNMM190612-RR6, TM3501 (CNMG434-RR6, TM3501)
03276188	CNMM190616-RR6, TM2501 (CNMG444-RR6, TM2501)
03276189	CNMM190624-RR6, TM1501 (CNMG46-RR6, TM1501)
03276190	CNMM190624-RR6, TM2501 (CNMG46-RR6, TM2501)

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03276195	DCMT070202-F1, TM1501 (DCMT21.50.5-F1, TM1501)
03276196	DCMT070202-MF2, TM3501 (DCMT21.50.5-MF2, TM3501)
03276197	DCMT070204-F1, TM1501 (DCMT21.51-F1, TM1501)
03276198	DCMT070204-F1, TM2501 (DCMT21.51-F1, TM2501)
03276199	DCMT070204-M3, TM1501 (DCMT21.51-M3, TM1501)
03276200	DCMT070204-M3, TM3501 (DCMT21.51-M3, TM3501)
03276201	DCMT070204-MF2, TM3501 (DCMT21.51-MF2, TM3501)
03276202	DCMT070208-F1, TM1501 (DCMT21.52-F1, TM1501)
03276203	DCMT070208-F1, TM2501 (DCMT21.52-F1, TM2501)
03276204	DCMT070208-M3, TM1501 (DCMT21.52-M3, TM1501)
03276205	DCMT070208-M3, TM3501 (DCMT21.52-M3, TM3501)
03276206	DCMT070208-MF2, TM3501 (DCMT21.52-MF2, TM3501)
03276207	DCMT11T302-F1, TM3501 (DCMT32.50.5-F1, TM3501)
03280016	DCMT11T302-FF1, TM3501 (DCMT32.50.5-FF1, TM3501)
03276208	DCMT11T302-MF2, TM3501 (DCMT32.50.5-MF2, TM3501)
03276209	DCMT11T304-F1, TM1501 (DCMT32.51-F1, TM1501)
03276210	DCMT11T304-F1, TM2501 (DCMT32.51-F1, TM2501)
03276211	DCMT11T304-F1, TM3501 (DCMT32.51-F1, TM3501)
03280017	DCMT11T304-FF1, TM3501 (DCMT32.51-FF1, TM3501)
03276212	DCMT11T304-M3, TM1501 (DCMT32.51-M3, TM1501)
03276213	DCMT11T304-M3, TM2501 (DCMT32.51-M3, TM2501)
03276214	DCMT11T304-M3, TM3501 (DCMT32.51-M3, TM3501)
03276215	DCMT11T304-MF2, TM1501 (DCMT32.51-MF2, TM1501)
03276216	DCMT11T304-MF2, TM2501 (DCMT32.51-MF2, TM2501)
03276250	DCMT11T304-MF2, TM3501 (DCMT32.51-MF2, TM3501)
03276251	DCMT11T308-F1, TM1501 (DCMT32.52-F1, TM1501)
03276252	DCMT11T308-F1, TM2501 (DCMT32.52-F1, TM2501)
03276253	DCMT11T308-FF1, TM3501 (DCMT32.52-FF1, TM3501)
03276254	DCMT11T308-M3, TM1501 (DCMT32.52-M3, TM1501)
03276255	DCMT11T308-M3, TM2501 (DCMT32.52-M3, TM2501)
03276256	DCMT11T308-M3, TM3501 (DCMT32.52-M3, TM3501)
03276257	DCMT11T308-M5, TM2501 (DCMT32.52-M5, TM2501)
03276258	DCMT11T308-MF2, TM1501 (DCMT32.52-MF2, TM1501)
03276259	DCMT11T308-MF2, TM2501 (DCMT32.52-MF2, TM2501)
03276260	DCMT11T308-MF2, TM3501 (DCMT32.52-MF2, TM3501)
03276261	DCMT11T312-M5, TM2501 (DCMT32.53-M5, TM2501)
03276262	DCMT11T312-MF2, TM3501 (DCMT32.53-MF2, TM3501)
03276264	DCMT150404-M3, TM3501 (DCMT431-M3, TM3501)
03276267	DCMT150408-M3, TM3501 (DCMT432-M3, TM3501)
03276269	DNMG150404-M3, TM3501 (DNMP431-M3, TM3501)
03276270	DNMG150404-MF4, TM2501 (DNMG431-MF4, TM2501)
03276271	DNMG150404-MF4, TM3501 (DNMG431-MF4, TM3501)

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03276273	DNMG150408-M3, TM2501 (DNMG432-M3, TM2501)
03276274	DNMG150408-M3, TM3501 (DNMG432-M3, TM3501)
03274156	DNMG150408-M5, TM1501 (DNMG432-M5, TM1501)
03274157	DNMG150408-M5, TM2501 (DNMG432-M5, TM2501)
03276275	DNMG150408-MF4, TM1501 (

PRODUCT NUMBER	DESIGNATION	PRODUCT NUMBER	DESIGNATION	PRODUCT NUMBER	DESIGNATION	PRODUCT NUMBER	DESIGNATION	PRODUCT NUMBER	DESIGNATION	PRODUCT NUMBER	DESIGNATION
03276307	DNMG150612-MF4, TM1501 (DNMG443-MF4, TM1501)	03276584	SCMT120408-M3, TM1501 (SCMT432-M3, TM1501)	03276589	TCMT110204-F1, TM2501 (TCMT21.51-F1, TM2501)	03276683	TNMG220408-M3, TM3501 (TNMG432-M3, TM3501)	03276623	VBMT160404-MF2, TM3501 (VBMT331-MF2, TM3501)	03277086	WNMG060408W-MF4, TM2501 (WNMG332W-MF4, TM2501)
03276308	DNMG150612-MF4, TM2501 (DNMG443-MF4, TM2501)	03276585	SCMT120408-M3, TM3501 (SCMT432-M3, TM3501)	03276590	TCMT110204-F1, TM3501 (TCMT21.51-F1, TM3501)	03274178	TNMG220408-M5, TM2501 (TNMG432-M5, TM2501)	02966612	VBMT160408-F1, TH1000 (VBMT332-F1, TH1000)	03277088	WNMG060408W-MF4, TM3501 (WNMG332W-MF4, TM3501)
03276309	DNMG150612-MF4, TM3501 (DNMG443-MF4, TM3501)	03276586	SCMT120408-M5, TM2501 (SCMT432-M5, TM2501)	03276591	TCMT110204-MF2, TM3501 (TCMT21.51-MF2, TM3501)	03276684	TNMG220408-MF4, TM1501 (TNMG432-MF4, TM1501)	03276624	VBMT160408-F1, TM1501 (VBMT332-F1, TM1501)	03276709	WNMG060412-M3, TM3501 (WNMG333-M3, TM3501)
03280982	DNMG150612-MR3, TM2501 (DNMG443-MR3, TM2501)	03276587	SCMT120408-MF2, TM3501 (SCMT432-MF2, TM3501)	03276592	TCMT110208-MF2, TM3501 (TCMT21.52-MF2, TM3501)	03276685	TNMG220412-M5, TM2501 (TNMG432-MF4, TM2501)	03276625	VBMT160408-F1, TM2501 (VBMT332-F1, TM2501)	03276710	WNMG060412-M5, TM2501 (WNMG333-M5, TM2501)
03280986	DNMG150612-MR3, TM3501 (DNMG443-MR3, TM3501)	03281577	SCMT120412-MF2, TM1501 (SCMT432-MF2, TM1501)	03276593	TCMT16T302-F1, TM2501 (TCMT32.50.5-F1, TM2501)	03276686	TNMG220408-MF4, TM3501 (TNMG432-MF4, TM3501)	03276626	VBMT160408-M3, TM1501 (VBMT332-M3, TM1501)	03273958	WNMG060412-MF4, TM1501 (WNMG333-MF4, TM1501)
03276310	DNMG150616-M3, TM3501 (DNMG444-M3, TM3501)	03281578	SCMT120412-MF2, TM3501 (SCMT433-MF2, TM3501)	03276594	TCMT16T304-F1, TM1501 (TCMT32.51-F1, TM1501)	03276687	TNMG220412-M3, TM3501 (TNMG433-M3, TM3501)	03276627	VBMT160408-M3, TM2501 (VBMT332-M3, TM2501)	03273960	WNMG060412-MF4, TM2501 (WNMG333-MF4, TM2501)
03276311	DNMG150616-M5, TM2501 (DNMG444-M5, TM2501)			03276595	TCMT16T304-F1, TM2501 (TCMT32.51-F1, TM2501)	03276688	TNMG220412-M5, TM2501 (TNMG433-M5, TM2501)	03276628	VBMT160408-M3, TM3501 (VBMT332-M3, TM3501)	03276711	WNMG060412-MF4, TM3501 (WNMG333-MF4, TM3501)
		03276645	SNMG120408-M3, TM3501 (SNMG432-M3, TM3501)	03276596	TCMT16T304-F1, TM3501 (TCMT32.51-F1, TM3501)	03276689	TNMG220412-MF4, TM1501 (TNMG433-MF4, TM1501)	03276629	VBMT160408-M5, TM2501 (VBMT332-M5, TM2501)	03276713	WNMG080404-M3, TM3501 (WNMG431-M3, TM3501)
03276312	DNMU110402-M3, TM3501 (DNMU330.5-M3, TM3501)	03274165	SNMG120408-M5, TM1501 (SNMG432-M5, TM1501)	03276597	TCMT16T304-M3, TM1501 (TCMT32.51-M3, TM1501)	03276690	TNMG220412-MF4, TM2501 (TNMG433-MF4, TM2501)	03276630	VBMT160408-MF2, TM2501 (VBMT332-MF2, TM2501)	03276714	WNMG080404-MF1, TM1501 (WNMP431-MF1, TM2501)
03276314	DNMU110404-M3, TM2501 (DNMU110404-M3, TM2501)	03274166	SNMG120408-M5, TM2501 (SNMG432-M5, TM2501)	03280021	TCMT16T304-MF2, TM3501 (TCMT32.51-MF2, TM3501)	03276691	TNMG220412-MF4, TM3501 (TNMG433-MF4, TM3501)	03276631	VBMT160408-MF2, TM3501 (VBMT332-MF2, TM3501)	03276715	WNMG080404-MF1, TM2501 (WNMP431-MF1, TM2501)
03276315	DNMU110404-M3, TM3501 (DNMU331-M3, TM3501)	03276647	SNMG120408-MF1, TM1501 (SNMP432-MF1, TM1501)	03276598	TCMT16T308-F1, TM1501 (TCMT32.52-F1, TM1501)	03276692	TNMG220412-M5, TM2501 (TNMG434-M5, TM2501)	03276632	VBMT160412-F1, TM1501 (VBMT333-F1, TM1501)	03276716	WNMG080404-MF1, TM3501 (WNMP431-MF1, TM3501)
03276316	DNMU110404-MF1, TM1501 (DNMU331-MF1, TM1501)	03276648	SNMG120408-MF1, TM3501 (SNMP432-MF1, TM3501)	03276599	TCMT16T308-F1, TM2501 (TCMT32.52-F1, TM2501)	03280007	TNMG270612-M5, TM2501 (TNMG543-M5, TM2501)	03280024	VBMT160412-M3, TM1501 (VBMT333-M3, TM1501)	03280028	WNMG080404-MF3, TM3501 (WNMG431-MF3, TM3501)
03276317	DNMU110404-MF1, TM2501 (DNMU331-MF1, TM2501)	03274046	SNMG120408-MF4, TM1501 (SNMG432-MF4, TM1501)	03276600	TCMT16T308-M3, TM1501 (TCMT32.52-M3, TM1501)	03280008	TNMG270616-M5, TM2501 (TNMG544-M5, TM2501)	03280025	VBMT160412-M3, TM2501 (VBMT333-M3, TM2501)	03276717	WNMG080404-MF4, TM1501 (WNMG431-MF4, TM1501)
03276318	DNMU110404-MF1, TM3501 (DNMU331-MF1, TM3501)	03274024	SNMG120408-MF4, TM2501 (SNMG432-MF4, TM2501)	03276601	TCMT16T308-M3, TM3501 (TCMT32.52-M3, TM3501)			03280026	VBMT160412-M3, TM3501 (VBMT333-M3, TM3501)	03276718	WNMG080404-MF4, TM2501 (WNMG431-MF4, TM2501)
03276320	DNMU110404-MF4, TM1501 (DNMU331-MF4, TM1501)	03273946	SNMG120408-MF4, TM3501 (SNMG432-MF4, TM3501)	03276602	TCMT16T308-M5, TM2501 (TCMT32.52-M5, TM2501)	03276610	VBMT110202-MF2, TM3501 (VBMT21.50.5-MF2, TM3501)	03276633	VBMT160412-MF2, TM3501 (VBMT333-MF2, TM3501)	03276719	WNMG080404-MF4, TM3501 (WNMG431-MF4, TM3501)
03276321	DNMU110404-MF4, TM2501 (DNMU331-MF4, TM2501)	03280987	SNMG120408-MR3, TM2501 (SNMG432-MR3, TM2501)	03276603	TCMT16T308-MF2, TM3501 (TCMT32.52-MF2, TM3501)	03276612	VBMT110204-MF2, TM3501 (VBMT21.51-MF2, TM3501)			03280030	WNMG080408-M3, TM2501 (WNMG432-M3, TM2501)
03276322	DNMU110404-MF4, TM3501 (DNMU331-MF4, TM3501)	03280991	SNMG120408-MR3, TM3501 (SNMG432-MR3, TM3501)	03276604	TNMG160404-M3, TM3501 (TNMG331-M3, TM3501)	03276613	VBMT110302-F1, TM3501 (VBMT220.5-F1, TM3501)	03276725	WNMG160404-MF1, TM3501 (WNMG331-MF1, TM3501)	03280031	WNMG080408-M3, TM3501 (WNMG432-M3, TM3501)
03280019	DNMU110408-M3, TM2501 (DNMU332-M3, TM2501)	03276650	SNMG120408-MR7, TM2501 (SNMG432-MR7, TM2501)	03276605	TNMG160404-M3, TM2501 (TNMG331-M3, TM2501)	03276614	VBMT110304-F1, TM3501 (VBMT221-F1, TM3501)	03276727	WNMG160404-M3, TM2501 (WNMG331-M3, TM2501)	03274179	WNMG080408-M5, TM1501 (WNMG432-M5, TM1501)
03280020	DNMU110408-M3, TM3501 (DNMU332-M3, TM3501)	03276651	SNMG120412-M3, TM3501 (SNMG433-M3, TM3501)	03276606	TNMG160404-M3, TM3501 (TNMG331-M3, TM3501)	03276615	VBMT110308-F1, TM3501 (VBMT222-F1, TM3501)	03273974	WNMG160404-MF4, TM1501 (WNMG331-MF4, TM1501)	03274180	WNMG080408-M5, TM2501 (WNMG432-M5, TM2501)
03276323	DNMU110408-MF1, TM1501 (DNMU332-MF1, TM1501)	03274167	SNMG120412-M5, TM1501 (SNMG433-M5, TM1501)	03276607	TNMG160404-M3, TM3501 (TNMG331-M3, TM3501)	03276616	VBMT160402-MF2, TM3501 (VBMT330.5-MF2, TM3501)	03273976	WNMG160404-MF4, TM2501 (WNMG331-MF4, TM2501)	03276720	WNMG080408-MF1, TM2501 (WNMP432-MF1, TM2501)
03276324	DNMU110408-MF1, TM2501 (DNMU332-MF1, TM2501)	03274168	SNMG120412-M5, TM2501 (SNMG433-M5, TM2501)	03274173	TNMG160404-MF1, TM1501 (TNMP331-MF1, TM1501)	03276617	VBMT160404-F1, TM1501 (VBMT331-F1, TM1501)	03273978	WNMG160404-MF4, TM3501 (WNMG331-MF4, TM3501)	03276721	WNMG080408-MF1, TM3501 (WNMP432-MF1, TM3501)
03276325	DNMU110408-MF1, TM3501 (DNMU332-MF1, TM3501)	03276652	SNMG120412-MF1, TM3501 (SNMP433-MF1, TM3501)	03274174	TNMG160404-MF1, TM2501 (TNMP331-MF1, TM2501)	03276618	VBMT160404-F1, TM2501 (VBMT331-F1, TM2501)	03276729	WNMG160408-M3, TM2501 (WNMG332-M3, TM2501)	03280032	WNMG080408-MF3, TM2501 (WNMG432-MF3, TM2501)
03276327	DNMU110408-MF4, TM1501 (DNMU332-MF4, TM1501)	03273948	SNMG120412-MF4, TM1501 (SNMG433-MF4, TM1501)	03274175	TNMG160404-MF1, TM3501 (TNMP331-MF1, TM3501)	03276619	VBMT160404-M3, TM1501 (VBMT331-M3, TM1501)	03273980	WNMG160408-MF4, TM1501 (WNMG332-MF4, TM1501)	03280033	WNMG080408-MF3, TM3501 (WNMG432-MF3, TM3501)
03276328	DNMU110408-MF4, TM2501 (DNMU332-MF4, TM2501)	03273950	SNMG120412-MF4, TM2501 (SNMG433-MF4, TM2501)	03276662	TNMG160404-MF4, TM1501 (TNMG331-MF4, TM1501)	03276620	VBMT160404-M3, TM2501 (VBMT331-M3, TM2501)	03273982	WNMG160408-MF4, TM2501 (WNMG332-MF4, TM2501)	03273962	WNMG080408-MF4, TM1501 (WNMG432-MF4, TM1501)
03276329	DNMU110408-MF4, TM3501 (DNMU332-MF4, TM3501)	03273952	SNMG120412-MF4, TM3501 (SNMG433-MF4, TM3501)	03276663	TNMG160404-MF4, TM2501 (TNMG331-MF4, TM2501)	03276687	TNMG220412-M3, TM3501 (TNMG433-M3, TM3501)	03273984	WNMG160408-MF4, TM3501 (WNMG332-MF4, TM3501)	03273964	WNMG080408-MF4, TM2501 (WNMG432-MF4, TM2501)
		03280988	SNMG120412-MR3, TM2501 (SNMG433-MR3, TM2501)	03276664	TNMG160404-MF4, TM3501 (TNMG331-MF4, TM3501)	03276688	TNMG220412-M5, TM2501 (TNMG433-M5, TM2501)	03280036	VNMU130404-M3, TM3501 (VNMU2.531-M3, TM3501)	03273966	WNMG080408-MF4, TM3501 (WNMG432-MF4, TM3501)
03277083	DNMX150408W-MF4, TM1501 (DNMX432W-MF4, TM1501)	03280992	SNMG120412-MR3, TM3501 (SNMG433-MR3, TM3501)	03276665	TNMG160408-M3, TM2501 (TNMG332-M3, TM2501)	03276689	TNMG220412-MF4, TM1501 (TNMG433-MF4, TM1501)	03280037	VNMU130408-M3, TM3501 (VNMU2.532-M3, TM3501)	03272736	WNMG080408-MF4, TP3501 (WNMG432-MF4, TP3501)
03277084	DNMX150608W-MF4, TM1501 (DNMX442W-MF4, TM1501)	03276653	SNMG120416-M5, TM2501 (SNMG434-M5, TM2501)	03276667	TNMG160408-M3, TM2501 (TNMG332-M3, TM2501)	03276690	TNMG220412-MF4, TM2501 (TNMG433-MF4, TM2501)			03277089	WNMG080408W-MF4, TM1501 (WNMG432W-MF4, TM1501)
		03274169	SNMG150612-M5, TM2501 (SNMG543-M5, TM2501)	03276668	TNMG160408-M3, TM3501 (TNMG332-M3, TM3501)	03276691	TNMG220412-MF4, TM3501 (TNMG433-MF4, TM3501)	03276634	WCMT06T308-F1, TM3501 (WCMT32.52-F1, TM3501)	03277090	WNMG080408W-MF4, TM2501 (WNMG432W-MF4, TM2501)
03276564	RCMT10T3M0-F1, TM1501 (RCMT10T3M0-F1, TM1501)	03274170	SNMG150616-M5, TM2501 (SNMG544-M5, TM2501)	03274176	TNMG160408-M5, TM1501 (TNMG332-M5, TM1501)	03276692	TNMG220416-M5, TM2501 (TNMG434-M5, TM2501)	03277091	WNMG080408W-MF4, TM3501 (WNMG432W-MF4, TM3501)	03277091	WNMG080408W-MF4, TM3501 (WNMG432W-MF4, TM3501)
03276565	RCMT10T3M0-M3, TM1501 (RCMT10T3M0-M3, TM1501)	03274171	SNMG190612-M5, TM2501 (SNMG643-M5, TM2501)	03274177	TNMG160408-M5, TM2501 (TNMG332-M5, TM2501)	03280007	TNMG270612-M5, TM2501 (TNMG543-M5, TM2501)	03276694	WNMG060404-M3, TM3501 (WNMG433-M3, TM3501)	03280034	WNMG080412-M3, TM2501 (WNMG331-M3, TM2501)
03276566	RCMT1204M0-F1, TM1501 (RCMT1204M0-F1, TM1501)	03276654	SNMG190612-MR7, TM2501 (SNMG643-MR7, TM2501)	03276669	TNMG160408-MF1, TM1501 (TNMP332-MF1, TM1501)	03280008	TNMG270616-M5, TM2501 (TNMG544-M5, TM2501)	03276695	WNMG060404-MF1, TM2501 (WNMP331-MF1, TM2501)	03280035	WNMG080412-M3, TM3501 (WNMG433-M3, TM3501)
03276567	RCMT1204M0-M3, TM1501 (RCMT1204M0-M3, TM1501)	03274172	SNMG190616-M5, TM2501 (SNMG644-M5, TM2501)	03276670	TNMG160408-MF1, TM2501 (TNMP332-MF1, TM2501)			03276696	WNMG060404-MF1, TM3501 (WNMP331-MF1, TM3501)	03274182	WNMG080412-M5, TM1501 (WNMG433-M5, TM1501)
		03276655	SNMG190616-MR7, TM2501 (SNMG644-MR7, TM2501)	03276671	TNMG160408-MF1, TM3501 (TNMP332-MF1, TM3501)	03276610	VBMT110202-MF2, TM3501 (VBMT21.50.5-MF2, TM3501)	03276698	WNMG060404-MF4, TM1501 (WNMG331-MF4, TM1501)	03274183	WNMG080412-M5, TM2501 (WNMG433-M5, TM2501)
03276573	SCMT060204-M3, TM3501 (SCMT21.51-M3, TM3501)			03280022	TNMG160408-MF3, TM3501 (TNMG332-MF3, TM3501)	03276612	VBMT110204-MF2, TM3501 (VBMT21.51-MF2, TM3501)	03276699	WNMG060404-MF4, TM2501 (WNMG331-MF4, TM2501)	03273968	WNMG080412-MF4, TM1501 (WNMG433-MF4, TM1501)
03276574	SCMT070308-M3, TM3501 (SCMT2.52-M3, TM3501)	03279998	SNMM120408-RR6, TM2501 (SNMM432-RR6, TM2501)	03276673	TNMG160408-MF4, TM1501 (TNMG332-MF4, TM1501)	03276613	VBMT110302-F1, TM3501 (VBMT220.5-F1, TM3501)	03276700	WNMG060404-MF4, TM3501 (WNMG331-MF4, TM3501)	03273970	WNMG080412-MF4, TM2501 (WNMG433-MF4, TM2501)
03276575	SCMT09T304-M3, TM1501 (SCMT32.51-M3, TM1501)	03281369	SNMM150616-RR6, TM2501 (SNMM544-RR6, TM2501)	03276674	TNMG160408-MF4, TM2501 (TNMG332-MF4, TM2501)	03276614	VBMT110304-F1, TM3501 (VBMT221-F1, TM3501)	03276702	WNMG060408-M3, TM3501 (WNMG332-M3, TM3501)	03273972	WNMG080412-MF4, TM3501 (WNMG433-MF4, TM3501)
03276576	SCMT09T304-M3, TM3501 (SCMT32.51-M3, TM3501)	03276656	SNMM190616-RR6, TM2501 (SNMM644-RR6, TM2501)	03276675	TNMG160408-MF4, TM3501 (TNMG332-MF4, TM3501)	03276615	VBMT110308-F1, TM3501 (VBMT222-F1, TM3501)	03280027	WNMG060408-M5, TM2501 (WNMG332-M5, TM2501)	03272735	WNMG080412-MF4, TP3501 (WNMG433-MF4, TP3501)
03276577	SCMT09T304-MF2, TM3501 (SCMT32.51-MF2, TM3501)	03279999	SNMM190624-RR6, TM2501 (SNMM646-RR6, TM2501)	03276677	TNMG160412-M3, TM2501 (TNMG333-M3, TM2501)	03276616	VBMT160402-MF2, TM350				

MILLING GRADES MP1501 AND MP2501

PRODUCT NUMBER	DESIGNATION
03272681	218.19-080T-M04, MP2501
03272677	218.19-100T-M06, MP2501
03272672	218.19-100T-MD08, MP2501
03272678	218.19-125T-T3-M07, MP2501
03272680	218.19-125T-T3-MD10, MP1501
03272673	218.19-125T-T3-MD10, MP2501
03272679	218.19-160T-04-M08, MP2501
03272675	218.19-160T-04-M11, MP1501
03272676	218.19-160T-04-M11, MP2501
03272682	218.19-160T-04-MD11, MP1501
03272674	218.19-160T-04-MD11, MP2501
03273088	218.21-230TR-06-M15, MP2501
03273090	218.21-230TR-06-MD17, MP1501
03273089	218.21-230TR-06-MD17, MP2501
03272706	335.18-1005T-M10, MP1501
03272703	335.18-1005T-M10, MP2501
03272707	335.18-1305T-M11, MP1501
03272704	335.18-1305T-M11, MP2501
03272708	335.18-1606T-M12, MP1501
03272705	335.18-1606T-M12, MP2501
03272766	335.19-1205T-MD09, MP2501
03272457	ABEX2606ZFFR-M15, MP1501
03272456	ABEX2606ZFFR-M15, MP2501
03273155	ACET150612TR-M11, MP1501
03273153	ACET150612TR-M11, MP2501
03273154	ACET150612TR-M14, MP2501
03273156	ACET150612TR-MD15, MP1501
03273157	ACET150630TR-MD15, MP1501
03272477	ACMT150612TR-M14, MP2501

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03273320	HPMN1206ZETR-D25, MP1501
03273321	HPMN1206ZETR-D25, MP2501
03273289	LNHQ140708TN4-M11, MP2501
03273290	LNHQ140731TN4-M11, MP2501
03273288	LNHQ140750TN4-M11, MP2501
03273291	LNHQ140760TN4-M11, MP2501
03272709	LNKT060504PPTN-M06, MP2501
03272710	LNKT060508PPTN-M06, MP2501
03272711	LNKT080504PPTN-M06, MP2501
03272712	LNKT080508PPTN-M06, MP2501
03272713	LNKW060508PPN-MD08, MP2501
03272714	LNKW080508PPN-MD08, MP2501
03272883	LOEX080404TR-M08, MP1501
03272884	LOEX080404TR-M08, MP2501
03272888	LOEX080404TR-MD08, MP2501
03272885	LOEX080408TR-M08, MP1501
03272886	LOEX080408TR-M08, MP2501
03272889	LOEX080408TR-MD08, MP1501
03272882	LOEX080408TR-MD08, MP2501
03272887	LOEX080412TR-M08, MP2501
03272890	LOEX080416TR-MD08, MP2501
03272900	LOEX120708R-M09, MP2501
03272891	LOEX120708TR-M12, MP2501
03272896	LOEX120708TR-MD13, MP1501
03272892	LOEX120708TR-MD13, MP2501
03272897	LOEX120712TR-MD13, MP1501
03272893	LOEX120712TR-MD13, MP2501
03272898	LOEX120716TR-MD13, MP1501
03272899	LOEX120716TR-MD13, MP2501
03272894	LOEX120720TR-M12, MP2501
03272901	LOEX120724TR-M12, MP2501
03272895	LOEX120731TR-M12, MP2501
03273340	LOHT060310TR-M07, MP2501
03273341	LOHT060310TR-MD07, MP1501
03273338	LOHT060310TR-MD07, MP2501
03273339	LOHW060310TR-D07, MP1501
03273545	LPHT060310TR-M06, MP2501
03273544	LPHW060310TR-MD07, MP2501
03273547	LPKT05T210TR-M05, MP2501
03273549	LPKT09T420TR-M13, MP2501
03273546	LPKW05T210TR-MD05, MP2501
03273548	LPKW09T420TR-MD15, MP2501

PRODUCT NUMBER	DESIGNATION
03272995	OFEN070405TN-D18, MP1501
03272998	OFEN070405TN-D18, MP2501
03272996	OFER070405TN-M16, MP1501
03272988	OFER070405TN-M16, MP2501
03272989	OFER070405TN-ME10, MP2501
03272990	OFER070405TN-ME15, MP2501
03272997	OFEW070405TN-D18, MP1501
03272987	OFEX05T305TN-D09, MP1501
03272983	OFEX05T305TN-M08, MP2501
03272984	OFEX05T305TN-ME07, MP2501
03272991	OFMR070405TR-M15, MP2501
03272992	OFMR070405TR-ME13, MP2501
03272985	OFMT050405TR-M14, MP2501
03272986	OFMT050405TR-ME12, MP2501
03272993	OFMT070405TN-M15, MP2501
03272994	OFMT070405TN-ME13, MP2501
03273043	ONEU050410ZZTN4-M10, MP2501
03273047	ONEU090520ZZTN4-M12, MP1501
03273048	ONEU090520ZZTN4-M12, MP2501
03273046	ONEU090520ZZTN4-M14, MP1501
03273045	ONEU090520ZZTN4-M14, MP2501
03272999	ONMU050410ANTN-M10, MP1501
03273000	ONMU050410ANTN-M10, MP2501
03273001	ONMU050410ANTN-M11, MP1501
03273002	ONMU050410ANTN-M11, MP2501
03273003	ONMU050410ANTN-ME10, MP2501
03273004	ONMU050410ANTN-ME11, MP1501
03273005	ONMU050410ANTN-ME11, MP2501
03273013	ONMU090520ANTN-M12, MP1501
03273014	ONMU090520ANTN-M12, MP2501
03273012	ONMU090520ANTN-M13, MP1501
03273009	ONMU090520ANTN-M13, MP2501
03273011	ONMU090520ANTN-M14, MP1501
03273008	ONMU090520ANTN-M14, MP2501
03273010	ONMU090520ANTN-M15, MP1501
03273007	ONMU090520ANTN-M15, MP2501
03273019	OONMU090520ANTN-MD16, MP1501
03273017	ONMU090520ANTN-MD16, MP2501
03273020	ONMU090520ANTN-MD17, MP1501
03273018	ONMU090520ANTN-MD17, MP2501
03273022	ONMU090520ANTN-ME12, MP1501
03273016	ONMU090520ANTN-ME12, MP2501
03273021	ONMU090520ANTN-ME13, MP1501
03273015	ONMU090520ANTN-ME13, MP2501
03272719	RDKW0803MOT-MD05, MP2501

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03273063	REHR1605MOT-MD15, MP1501
03272700	RNMU1204MOT-M10, MP2501
03272725	RPHT1204MOT-6-M08, MP2501
03272726	RPHT1204MOT-6-M13, MP2501
03273060	RPHT2006MOT-ME12, MP2501
03272727	RPKT1204MOT-6-M15, MP1501
03272716	RPKT1204MOT-6-M15, MP2501
03273062	RPKT2006MOT-M15, MP2501
03273058	RPKT2006MOT-M20, MP1501
03273059	RPKT2006MOT-M20, MP2501
03272729	RPKW1204MOT-6-MD10, MP1501
03272728	RPKW1204MOT-6-MD10, MP2501
03273061	RPKW2006MOT-MD22, MP1501
03273263	SCET120612T-M11, MP1501
03273258	SCET120612T-M11, MP2501
03273259	SCET120612T-M14, MP2501
03273264	SCET120612T-MD15, MP1501
03273260	SCET120630T-M14, MP2501
03273261	SCET120630T-MD16, MP1501
03273262	SCET120630T-MD16, MP2501
03273560	SEAN1203ZZTN-MD15, MP1501
03272962	SEEX09T3AFTN-D09, MP1501
03272959	SEEX09T3AFTN-ME07, MP2501
03272963	SEEX1204AFN-M10, MP2501
03272969	SEEX1204AFTN-M14, MP1501
03272964	SEEX1204AFTN-M14, MP2501
03272970	SEEX1204AFTN-MD18, MP1501
03272965	SEEX1204AFTN-ME11, MP2501
03272971	SEEX1204ZZTN-M14, MP1501
03272966	SEEX1204ZZTN-M14, MP2501
03272974	SEEX1505AFN-M12, MP2501
03272978	SEEX1505AFTN-M17, MP1501
03272975	SEEX1505AFTN-M17, MP2501
03272976	SEEX1505ZZTN-M17, MP2501
03273562	SEKN1203AFTN-D16, MP1501
03273561	SEKN1203AFTN-M14, MP1501
03273557	SEKN1203AFTN-M14, MP2501
03273558	SEKN1504AFTN-M18, MP2501
03273571	SEKN1504AFTN-MD20, MP1501
03273559	SEKR1203AFTN-ME13, MP2501

PRODUCT NUMBER	DESIGNATION
03272960	SEM09T3AFTN-M08, MP2501
03272961	SEM09T3AFTN-ME06, MP2501
03272972	SEM01204AFTN-M15, MP1501
03272967	SEM01204AFTN-M15, MP2501
03272973	SEM01204AFTN-MD19, MP1501
03272968	SEM01204AFTN-ME12, MP2501
03272979	SEM01505AFTN-M18, MP1501
03272977	SEM01505AFTN-M18, MP2501
03272980	SEM01505AFTN-MD20, MP1501
03272981	SEM01505AFTN-MD20, MP2501
03272933	SNEX1407AZTR-M10, MP1501
03272934	SNEX1407ZZTR-M10, MP1501
03272750	SNHQ110204TL4-M07, MP2501
03272751	SNHQ110204TR4-M07, MP2501
03272752	SNHQ110304TL4-M07, MP2501
03272753	SNHQ110304TR4-M07, MP2501
03272754	SNHQ120304TL4-M07, MP2501
03272755	SNHQ120304TR4-M07, MP2501
03272756	SNHQ120308TL4-M07, MP2501
03272757	SNHQ120308TR4-M07, MP2501
03272758	SNHQ120408TL4-M07, MP2501
03272759	SNHQ120408TR4-M07, MP2501
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03272747	SNHQ1204508TR4-M07, MP2501
03272762	SNHQ120504TL4-M07, MP2501
03272763	SNHQ120504TR4-M07, MP2501
03272748	SNHQ120508TL4-M07, MP2501
03272749	SNHQ120508TR4-M07, MP2501
03272765	SNHQ120708TL4-M07, MP2501
03272764	SNHQ120708TR4-M07, MP2501
03272730	SNHX1106TN8-M11, MP2501
03272731	SNHX1406TN8-M12, MP2501
03272942	SNMU120408TN-M10, MP1501
03272943	SNMU120408TN-M10, MP2501
03272944	SNMU120408TN-MD13, MP1501
03272945	SNMU120408TN-MD13, MP2501
03272946	SNMU120410TN-M10, MP1501
03272947	SNMU120410TN-M10, MP2501
03272948	SNMU120410TN-MD13, MP1501
03272949	SNMU120410TN-MD13, MP2501
03272950	SNMU160610TN-M10, MP1501

PRODUCT NUMBER	DESIGNATION
03272951	SNMU160610TN-M10, MP2501
03272952	SNMU160610TN-MD16, MP1501
03272957	SNMU160610TN-MD16, MP2501
03272953	SNMU160612TN-M10, MP1501
03272954	SNMU160612TN-M10, MP2501
03272955	SNMU160612TN-MD16, MP1501
03272956	SNMU160612TN-MD16, MP2501
03272925	SNMX1407ANTR-M10, MP1501
03272926	SNMX1407ANTR-M10, MP2501
03272927	SNMX1407ANTR-M16, MP1501
03272928	SNMX1407ANTR-M16, MP2501
03272929	SNMX1407ZNTR-M10, MP1501
03272930	SNMX1407ZNTR-M10, MP2501
03272931	SNMX1407ZNTR-M16, MP1501
03272932	SNMX1407ZNTR-M16, MP2501
03272937	SNMX2209ANTR-M12, MP2501
03272935	SNMX2209ANTR-M18, MP1501
03272938	SNMX2209ANTR-M18, MP2501
03272939	SNMX2209ZNTR-M12, MP2501
03272936	SNMX2209ZNTR-M18, MP1501
03272940	SNMX2209ZNTR-M18, MP2501
03273280	SONX09T308TR-M10, MP2501
03273285	SONX120508TR-M12, MP1501
03273279	SONX120508TR-M12, MP2501
03273281	SONX150508TR-M14, MP2501
03272656	SPEN1906ZETL-MD20, MP2501
03272660	SPEN1906ZETR-D25, MP1501
03272663	SPEN1906ZETR-D25, MP2501
03272657	SPEN1906ZETR-MD20, MP2501
03272661	SPEN1906ZZTR-D25, MP1501
03272662	SPEN1906ZZTR-D25, MP2501
03272658	SPEN1906ZZTR-MD20, MP2501
03272664	SPEN2807ZETR-D35, MP1501
03272659	SPER1906ZZTR-M17, MP2501
03272905	XNEX040304TR-M08, MP1501
03272902	XNEX040304TR-M08, MP2501
03272904	XNEX040308R-M06, MP2501
03272906	XNEX040308TR-M08, MP1501
03272903	XNEX040308TR-M08, MP2501
03272915	XNEX080604TR-ME09, MP2501
03272923	XNEX080608TL-M13, MP2501
03272910	XNEX080608TR-M13, MP1501
03272909	XNEX080608TR-M13, MP2501

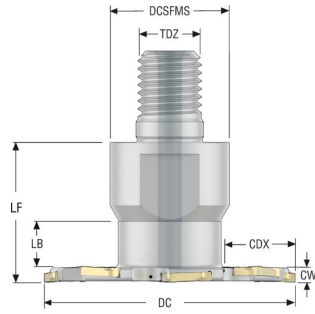
PRODUCT NUMBER	DESIGNATION
03272917	XNEX080608TR-MD15, MP1501
03272916	XNEX080608TR-MD15, MP2501
03272920	XNEX080608TR-ME09, MP1501
03272907	XNEX080608TR-ME09, MP2501
03272914	XNEX080612TR-M13, MP2501
03272921	XNEX080612TR-MD15, MP1501
03272922	XNEX080612TR-MD15, MP2501
03272908	XNEX080612TR-ME09, MP2501
03272924	XNEX080616TL-M13, MP2501
03272912	XNEX080616TR-M13, MP1501
03272913	XNEX080616TR-M13, MP2501
03272918	XNEX080616TR-MD15, MP1501
03272919	XNEX080616TR-MD15, MP2501
03272911	XNEX080616TR-ME09, MP2501
03273103	XNHQ090508TN4-M08, MP2501
03273104	XNHQ090516TN4-M08, MP2501
03273105	XNHQ120608TN4-M10, MP2501
03273106	XNHQ120616TN4-M10, MP2501
03273100	XNHQ140708TN4-M11, MP2501
03273099	XNHQ140716TN4-M11, MP2501
03273098	XNHQ140731TN4-M11, MP2501
03273101	XNHQ170708TN4-M13, MP2501
03273102	XNHQ170716TN4-M13, MP2501
03272838	XOEX10T304R-M06, MP2501
03272839	XOEX10T308R-M06, MP2501
03272849	XOEX120404R-M07, MP2501
03272825	XOEX120408R-M07, MP2501
03272836	XOMX10T304TR-M09, MP1501
03272843	XOMX10T304TR-M09, MP2501
03272841	XOMX10T304TR-ME07, MP1501
03272834	XOMX10T304TR-ME07, MP2501
03272837	XOMX10T308TR-M09, MP1501
03272844	XOMX10T308TR-M09, MP2501
03272842	XOMX10T308TR-ME07, MP1501
03272835	XOMX10T308TR-ME07, MP2501
03272840	XOMX10T312TR-ME07, MP2501
03272848	XOMX10T316TR-ME07, MP2501
03272845	XOMX10T320TR-ME07, MP2501
03272847	XOMX10T324TR-ME07, MP2501
03272846	XOMX10T331TR-ME07, MP2501
03272857	XOMX120404TR-MD13, MP1501
03272850	XOMX120404TR-ME08, MP2501
03272830	XOMX120408TR-D14, MP1501
03272828	XOMX120408TR-D14, MP2501

PRODUCT NUMBER	DESIGNATION
03272831	XOMX120408TR-M12, MP1501
03272826	XOMX120408TR-M12, MP2501
03272829	XOMX120408TR-MD13, MP1501
03272832	XOMX120408TR-MD13, MP2501
03272827	XOMX120408TR-ME08, MP2501
03272858	XOMX120412TR-MD13, MP1501
03272851	XOMX120412TR-ME08, MP2501
03272859	XOMX120416TR-MD13, MP1501
03272852	XOMX120416TR-ME08, MP2501
03272853	XOMX120420TR-ME08, MP2501
03272854	XOMX120424TR-ME08, MP2501
03272855	XOMX120431TR-ME08, MP2501
03272856	XOMX120440TR-ME08, MP2501
03272860	XOMX180604TR-ME13, MP2501
03272864	XOMX180608R-M10, MP2501
03272872	XOMX180608TR-D16, MP1501
03272865	XOMX180608TR-D16, MP2501
03272873	XOMX180608TR-M14, MP1501
03272861	XOMX180608TR-M14, MP2501
03272874	XOMX180608TR-MD15, MP1501
03272863	XOMX180608TR-MD15, MP2501
03272862	XOMX180608TR-ME13, MP2501
03272879	XOMX180612TR-M14, MP1501
03272876	XOMX180612TR-M14, MP2501
03272880	XOMX180612TR-MD15, MP1501
03272866	XOMX180616TR-M14, MP2501
03272867	XOMX180616TR-ME13, MP2501
03272868	XOMX180620TR-M14, MP2501
03272869	XOMX180620TR-ME13, MP2501
03272877	XOMX180624TR-M14, MP2501
03272875	XOMX180631TR-D16, MP1501
03272870	XOMX180631TR-M14, MP2501
03272871	XOMX180631TR-ME13, MP2501
03272878	XOMX180640TR-ME13, MP2501

Please check availability in current price and stock list.
For more information please take a look into the Seco Milling Navigator or visit My Pages on secotools.com.

335.19 DISC MILLING CUTTERS (METRIC)

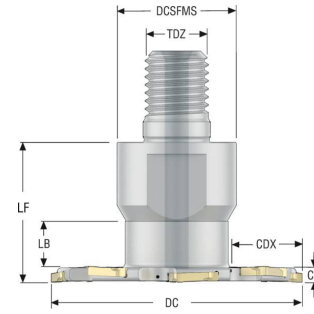
DISC MILLING CUTTERS CUTTER 335.19 - INSERT SNHQ COMBIMASTER (RE)



PRODUCT NUMBER	DESIGNATION	TYPE OF MOUNTING	DIMENSIONS IN MM								ZNP	ZEFP	KG	RPMX	INSERT TYPE	
			CW	DC	CDX	DCSFMS	TDZ	LF	LB	SNHQ..R					SNHQ..L	
03277857	R335.19-1040.RE-04.2NA	RE	4,0	40	11,6	18,5	M10	23,0	8,26	4	2	0,1	21500	1102	1102	
03277859	R335.19-1250.RE-04.3NA	RE	4,0	50	14,9	23,0	M12	28,0	10,26	6	3	0,2	19100	1102	1102	
03277862	R335.19-1663.RE-04.4NA	RE	4,0	63	17,7	30,0	M16	35,0	11,26	8	4	0,3	17100	1102	1102	
03277866	R335.19-1680.RE-04.5NA	RE	4,0	80	26,2	30,0	M16	35,0	11,26	10	5	0,3	15200	1102	1102	
03277870	R335.19-20100.RE-04.7NA	RE	4,0	100	32,7	36,5	M20	35,0	13,432	14	7	0,5	13500	1102	1102	
03277873	R335.19-20125.RE-04.8NA	RE	4,0	125	45,2	36,5	M20	35,0	13,432	16	8	0,6	12200	1102	1102	
03277858	R335.19-1040.RE-05.2NA	RE	5,0	40	11,6	18,5	M10	23,0	7,275	4	2	0,1	18700	1103	1103	
03277860	R335.19-1250.RE-05.3NA	RE	5,0	50	14,9	23,0	M12	28,0	9,275	6	3	0,2	16800	1103	1103	
03277863	R335.19-1663.RE-05.4NA	RE	5,0	63	17,6	30,0	M16	35,0	10,275	8	4	0,3	14900	1103	1103	
03277867	R335.19-1680.RE-05.5NA	RE	5,0	80	26,1	30,0	M16	35,0	10,275	10	5	0,3	13200	1103	1103	
03277871	R335.19-20100.RE-05.7NA	RE	5,0	100	32,6	36,5	M20	35,0	12,447	14	7	0,5	11800	1103	1103	
03277874	R335.19-20125.RE-05.8NA	RE	5,0	125	45,1	36,5	M20	35,0	12,447	16	8	0,7	10700	1103	1103	
03277861	R335.19-1250.RE-06.2NA	RE	6,0	50	14,9	23,0	M12	28,0	8,285	4	2	0,2	12300	1203	1203	
03277864	R335.19-1663.RE-06.3NA	RE	6,0	63	17,6	30,0	M16	35,0	9,285	6	3	0,3	10900	1203	1203	
03277868	R335.19-1680.RE-06.4NA	RE	6,0	80	26,3	30,0	M16	35,0	9,285	8	4	0,4	9700	1203	1203	
03277872	R335.19-20100.RE-06.6NA	RE	6,0	100	32,8	36,5	M20	35,0	11,457	12	6	0,5	8700	1203	1203	
03277865	R335.19-1663.RE-07.3NA	RE	7,0	63	17,6	30,0	M16	35,0	8,285	6	3	0,3	9400	1204/12045*	1204/12045*	
03277869	R335.19-1680.RE-07.4NA	RE	7,0	80	26,3	30,0	M16	35,0	8,285	8	4	0,4	8400	1204/12045*	1204/12045*	

Please check availability in current price and stock list.
*To generate CW=8mm use insert SNHQ12045..., LF=35,5mm

DISC MILLING CUTTERS CUTTER 335.19 - INSERT SNHQ COMBIMASTER (RE)



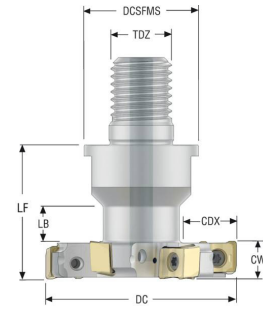
PRODUCT NUMBER	DESIGNATION	TYPE OF MOUNTING	DIMENSIONS IN INCH								ZNP	ZEFP	LBS	RPMX	INSERT TYPE	
			CW	DC	CDX	DCSFMS	TDZ	LF	LB	SNHQ..R					SNHQ..L	
03277875	R335.19-01.50.RE-0.15-2NA	RE	0.156	1.50	0.44	0.73	M10	0.91	0.33	4	2	0.2	22000	1102	1102	
03277877	R335.19-02.00.RE-0.15-3NA	RE	0.156	2.00	0.60	0.91	M12	1.10	0.41	6	3	0.4	19100	1102	1102	
03277880	R335.19-02.50.RE-0.15-4NA	RE	0.156	2.50	0.70	1.18	M16	1.38	0.44	8	4	0.7	17100	1102	1102	
03277883	R335.19-03.00.RE-0.15-5NA	RE	0.156	3.00	0.96	1.18	M16	1.38	0.44	10	5	0.7	15200	1102	1102	
03277886	R335.19-04.00.RE-0.15-7NA	RE	0.156	4.00	1.32	1.44	M20	1.38	0.44	14	7	1.1	13500	1102	1102	
03277876	R335.19-01.50.RE-0.18-2NA	RE	0.187	1.50	0.44	0.73	M10	0.91	0.30	4	2	0.2	19100	1103	1103	
03277878	R335.19-02.00.RE-0.18-3NA	RE	0.187	2.00	0.60	0.91	M12	1.10	0.37	6	3	0.4	16800	1103	1103	
03277881	R335.19-02.50.RE-0.18-4NA	RE	0.187	2.50	0.70	1.18	M16	1.38	0.41	8	4	0.7	14900	1103	1103	
03277884	R335.19-03.00.RE-0.18-5NA	RE	0.187	3.00	0.95	1.18	M16	1.38	0.41	10	5	0.7	13200	1103	1103	
03277887	R335.19-04.00.RE-0.18-7NA	RE	0.187	4.00	1.31	1.44	M20	1.38	0.41	14	7	1.1	11800	1103	1103	
03277879	R335.19-02.00.RE-0.25-2NA	RE	0.250	2.00	0.60	0.91	M12	1.10	0.31	4	2	0.4	12300	1204	1204	
03277882	R335.19-02.50.RE-0.25-3NA	RE	0.250	2.50	0.70	1.18	M16	1.38	0.35	6	3	0.7	9400	1204	1204	
03277885	R335.19-03.00.RE-0.25-4NA	RE	0.250	3.00	0.96	1.18	M16	1.38	0.35	8	4	0.7	8400	1204	1204	
03277888	R335.19-04.00.RE-0.25-6NA	RE	0.250	4.00	1.32	1.44	M20	1.38	0.35	12	6	1.3	7500	1204	1204	

Please check availability in current price and stock list.

335.19 DISC MILLING CUTTERS (INCH)

335.18 DISC MILLING CUTTERS (METRIC)

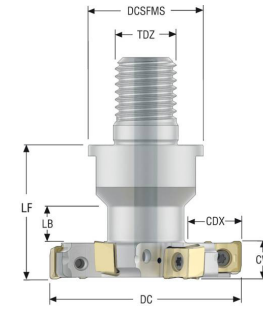
DISC MILLING CUTTERS CUTTER 335.18 - INSERT LNK. COMBIMASTER (RE)



PRODUCT NUMBER	DESIGNATION	TYPE OF MOUNTING	DIMENSIONS IN MM								ZNP	ZEFP	KG	RPMX	INSERT TYPE
			CW	DC	CDX	DCSFMS	TDZ	LF	LB						
03277891	R335.18-1032.RE-08.2NA	RE	8,0	32,0	8,4	18,5	M10	28,0	8,89	4	2	0,1	17300	LNK.05..	
03277893	R335.18-1240.RE-08.2NA	RE	8,0	40,0	11,2	23,0	M12	30,0	8,39	4	2	0,2	15400	LNK.05..	
03277895	R335.18-1650.RE-08.3NA	RE	8,0	50,0	14,2	30,0	M16	35,0	10,59	6	3	0,2	13800	LNK.05..	
03277897	R335.18-2063.RE-08.4NA	RE	8,0	63,0	15,0	36,5	M20	40,0	14,89	8	4	0,4	12300	LNK.05..	
03277892	R335.18-1032.RE-10.2NA	RE	10,0	32,0	8,5	18,5	M10	28,0	6,89	4	2	0,1	17300	LNK.05..	
03277894	R335.18-1240.RE-10.2NA	RE	10,0	40,0	11,5	23,0	M12	30,0	6,39	4	2	0,2	15400	LNK.05..	
03279026	R335.18-1650.RE-10.3NA	RE	10,0	50,0	14,4	30,0	M16	35,0	8,59	6	3	0,3	13400	LNK.06..	
03277898	R335.18-2063.RE-10.4NA	RE	10,0	63,0	15,1	36,5	M20	40,0	12,89	8	4	0,4	11900	LNK.06..	
03277896	R335.18-1650.RE-12.3NA	RE	12,0	50,0	14,5	30,0	M16	35,0	6,59	6	3	0,3	13400	LNK.06..	
03277899	R335.18-2063.RE-12.4NA	RE	12,0	63,0	14,9	36,5	M20	40,0	10,47	8	4	0,5	11900	LNK.06..	

Please check availability in current price and stock list.

DISC MILLING CUTTERS CUTTER 335.18 - INSERT LNK. COMBIMASTER (RE)



PRODUCT NUMBER	DESIGNATION	TYPE OF MOUNTING	DIMENSIONS IN INCH								ZNP	ZEFP	LBS	RPMX	INSERT TYPE
			CW	DC	CDX	DCSFMS	TDZ	LF	LB						
03277900	R335.18-01.25-RE-0.31F-2NA	RE	0.312	1.25	0.32	0.73	M10	1.10	0.35	4	2	0.2	17300	LNK.05..	
03277902	R335.18-01.50-RE-0.31F-2NA	RE	0.312	1.50	0.41	0.91	M12	1.18	0.33	4	2	0.4	15400	LNK.05..	
03277904	R335.18-02.00-RE-0.31F-3NA	RE	0.312	2.00	0.57	1.18	M16	1.38	0.42	6	3	0.4	13800	LNK.05..	
03277901	R335.18-01.25-RE-0.37F-2NA	RE	0.375	1.25	0.33	0.73	M10	1.10	0.29	4	2	0.2	17300	LNK.05..	
03277903	R335.18-01.50-RE-0.37F-2NA	RE	0.375	1.50	0.41	0.91	M12	1.18	0.27	4	2	0.4	15400	LNK.05..	
03277905	R335.18-02.00-RE-0.37F-3NA	RE	0.375	2.00	0.59	1.18	M16	1.38	0.36	6	3	0.4	13800	LNK.05..	
03277906	R335.18-02.00-RE-0.5F-3NA	RE	0.500	2.00	0.59	1.18	M16	1.38	0.23	6	3	0.7	13400	LNK.08..	

Please check availability in current price and stock list.

335.18 DISC MILLING CUTTERS (INCH)

SECOMAX™ CW100 INSERT GRADE

PRODUCT NUMBER	DESIGNATION
02932463	RCGX060600E (RCGX24E)
03260406	RCGX060600T-01020 (RCGX24T-00420)
02936230	RCGX090700E (RCGX35E)
03008957	RCGX090700T-01020 (RCGX35T-00420)
03260405	RCGX120700E (RCGX45E)
03260404	RCGX120700T-01020 (RCGX45T-00420)
02936233	RNGN120700E (RNGN45E)
03260403	RNGN120700T-01020 (RNGN45T-00420)

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For more information please take a look into the Seco Turning Navigator or visit My Pages on secotools.com.

CW100 – ROUGHING INCONEL 718

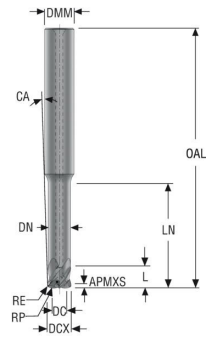
MATERIAL		INCONEL 718, 39 – 45 HRC, SMG S3				COMPONENT	SPOOL
APPLICATION		OD TURNING					
INSERT		RCGX090700T-01020, CS100 (RCGX35T-00420) RCGX090700E, CW100 (RCGX35E)					
COOLANT		170 BAR					
CUTTING DATA	METRIC (INCH)	v_c 250 m/min (820 feet/min)	f 0.20 mm/rev (0.008 in/rev)	a_p Ramping 0,5 – 1,5 mm (0.02 – 0.06")	TOOL LIFE Insert after T.I.C. = 5 minutes		
	METRIC (INCH)	v_c 300 m/min (984 feet/min)	f 0.25 mm/rev (0.010 in/rev)	a_p Ramping 0,5 – 1,5 mm (0.02 – 0.06")	TOOL LIFE Insert after T.I.C. = 6,5 minutes		
							
						CW100	

CW100 – ROUGHING INCONEL 718 TR

MATERIAL		INCONEL 718 TR, 34 – 45 HRC, SMG S3				COMPONENT	TURBIN CASE
APPLICATION		OD & ID TURNING					
INSERT		RNGN120700T-01020, CS100 (RNGN45T-00420)					
COOLANT		FLOOD					
CUTTING DATA	METRIC (INCH)	v_c 240 m/min (787 feet/min)	f 0.25 mm/rev (0.010 in/rev)	a_p 4.0 mm (0.16")	TOOL LIFE Max 1 minute		
	METRIC (INCH)	v_c 240 m/min (787 feet/min)	f 0.25 mm/rev (0.010 in/rev)	a_p 4.0 mm (0.16")	TOOL LIFE Up to 6 minutes		
							
						CW100	

JC898

JC898 – HIGH FEED – STACKED MATERIALS – CORNER RADIUS – 4 FLUTES – CYLINDRICAL

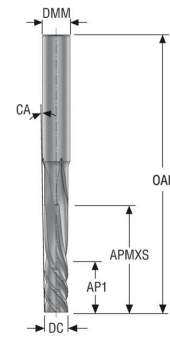


Tolerances:
 DMM=h5
 Dc=e7
 RE±0.1 mm
 CA= collision angle

PRODUCT NUMBER	DESIGNATION	LENGTH INDEX	TOOL SHAPE	ICC	DIMENSIONS IN MM											PCEDC	CYLINDRICAL
					DC	DCX	DMM	APMXS	L	OAL	LN	DN	RE	RP	CA		
03245308	JC898080G3HZ4A.0-M64	3	G	■	4,0	8,0	10	0,75	6	88	35	7,6	0,5	0,9	1,5	4	■
03245309	JC898150G3HZ4A.0-M64	3	G	■	7,5	15,0	16	1,35	12	125	70	14,3	0,9	1,6	0,4	4	■

Please check availability in current price and stock list.

JC899 – HIGH PERFORMANCE – STACKED MATERIALS – SQUARE – 4 FLUTES – CYLINDRICAL



Tolerances:
 DMM=h5
 DC= ±0,02 mm
 CA= collision angle

PRODUCT NUMBER	DESIGNATION	LENGTH INDEX	TOOL SHAPE	DIMENSIONS IN MM						PCEDC	CYLINDRICAL
				DC	DMM	APMXS	AP1	OAL	CA		
03245482	JC899085F3S.0Z4-STAX	3	F	8,5	10	38	19	100	0,8	4	■
03245480	JC899148F3S.0Z4-STAX	3	F	14,8	16	55	30	150	0,53	4	■
03245481	JC899148F4S.0Z4-STAX	4	F	14,8	16	62	37	150	0,48	4	■

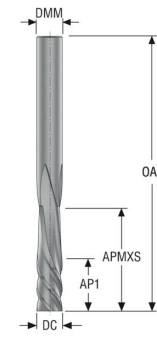
PRODUCT NUMBER	DESIGNATION	LENGTH INDEX	TOOL SHAPE	DIMENSIONS IN INCH						PCEDC	CYLINDRICAL
				DC	DMM	APMXS	AP1	OAL	CA		
03245483	JC8990375D4S.0Z4-STAX	4	D	.373	.375	1.500	.625	4.000	–	4	■

Please check availability in current price and stock list.

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JC899

JC899 – HIGH PERFORMANCE – STACKED MATERIALS – SQUARE – 4 FLUTES – CYLINDRICAL – INCH



Tolerances:
 DMM=h5
 DC= ±0,0008 Inch
 CA= collision angle



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