

SHAPE it

OSG GLOBAL TOOLING MAGAZINE | SUMMER 2023

FEATURE: REGRIND, REUSE, REDUCE

Enhancing sustainability by tool
reconditioning and recycling services



TECHNICAL INSIGHT

AE-VTSS Anti-vibration
Carbide End Mill Compatible
with Sliding Head Lathes

GLOBAL REPORTS

- Denmark
- Mexico
- USA
- China
- Brazil

OSG NEWS

- OSG China Celebrates
20th Anniversary
- Recaps from
JIMTOF 2022

EMPLOYEE INTERVIEW

in Germany

Striving for carbon-neutral products and production systems

A Message from the President

As awareness of climate change and disaster risk increases, movements toward carbon neutrality and decarbonization have accelerated. Environmental efforts are not only taking place in industrial sectors, but are also highly visible in our daily life. Energy and resource conservation has become today's norm, with rapid spread of eco-friendly cars such as electric vehicles, the shift to LED lighting and energy-saving home appliances, the use of reusable bottles and bags, etc.

OSG has begun climate change scenario analysis based on the TCFD (Task Force on Climate-related Financial Disclosures) recommendations, which the company endorsed in October 2021. In the medium-term management plan "Beyond the Limit 2024" announced in January 2022, OSG declared carbon neutrality, established a goal of achieving carbon neutrality in FY2050, and set a 30 percent reduction rate in FY2030 versus FY2019. In addition, we plan to calculate and evaluate Scope 3, which encompasses emissions that are not produced by the company itself but by those that it is indirectly responsible for, by fiscal 2030, and have begun efforts to contribute to the creation of a sustainable society by working to reduce CO2 emissions throughout the supply chain.

As a first step, we will install solar power generation equipment inside and outside the company premises and utilize CO2-free electricity to reduce energy consumption and expand the use of renewable energy. In December 2022, we signed a power purchase agreement to implement an agriculture type off-site solar sharing service where electricity will be procured from OSG's dedicated solar power plant (total panel output: approximately 4,500 kW) installed in the city, and the generated electricity will be supplied to four factories, including the Oike Factory, for 20 years from February 2023 onward. Utilization of CO2-free electricity derived from a dedicated solar power plant will reduce CO2 emissions by approximately 2,000 tons annually.

Last year, we responded to the questionnaire on climate change by CDP, an international non-profit organization that manages the global environment disclosure system, and received a B score at the management level based on an 8-score evaluation system (A, B, B-, C, C-, D, D- and F). Aiming to reach the A score leadership level, the momentum for environmental activities is increasing within the company. In April 2023, we issued green bonds to finance the renovation of the Oike Factory. In addition to maximizing the production capacity of carbide end mills, we will rebuild the factory to incorporate renewable energy and energy conservation.

We are also focusing on the development of environmentally friendly products, mainly revolving forming taps. Forming taps form threads by plastic deformation of the work material. Therefore, no chips are generated during tapping. Machine downtime due to sudden tool changes caused by chips and removal of accumulated chips can be minimized, making operations more efficient and reduces power consumption. In addition, chip removal work, which often relies on manual labor, is reduced, and an "improvement in the work environment" can be expected. We place importance on responding to work materials and cutting conditions that match our customers' machining environment, and are proceeding with further development.

In this fiscal year, through organizational reforms, we have taken a drastic review of production efficiency and put in place a system to strengthen production technology. The entire group will work coherently to conserve energy, reduce costs, enhance quality and shorten delivery time to improve both OSG's business value and the realization of a sustainable society.



A handwritten signature in black ink, appearing to read "N. Osawa".

Nobuaki Osawa
President & COO of OSG Corporation

CONTENTS

SHAPE IT
SUMMER 2023

Feature

3 Regrind, Reuse, Reduce

Technical Insight

9 AE-VTSS Anti-vibration Carbide End Mill Compatible with Sliding Head Lathes

Customer Report

13 Triple Productivity

17 The Total Package

19 Thread Milling in One Pass

21 Stepping Up Performance

23 Stable and Durable

Product Pickup

25 A-XPF Forming Tap, OSG Phoenix Indexable Flat Drill

26 ADO-MICRO Small Diameter Coolant-through Carbide Drill, AE-VTFE-N Carbide End Mill

OSG News

27 OSG China Celebrates 20th Anniversary

28 JIMTOF 2022

Meet OSG

29 Employee Interview in Germany

SHAPE IT is a global cutting tool magazine published by OSG Corporation.

Publication Date: July 2023

Rights: Reproduction of the articles and photographs without permission is strictly prohibited.

OSG Corporation International Headquarters

3-22 Honnogahara, Toyokawa, Aichi 442-8543, Japan Tel: (81) 533-82-1111 Fax: (81) 533-82-1131 www.osg.co.jp

Regrind, Reuse, Reduce

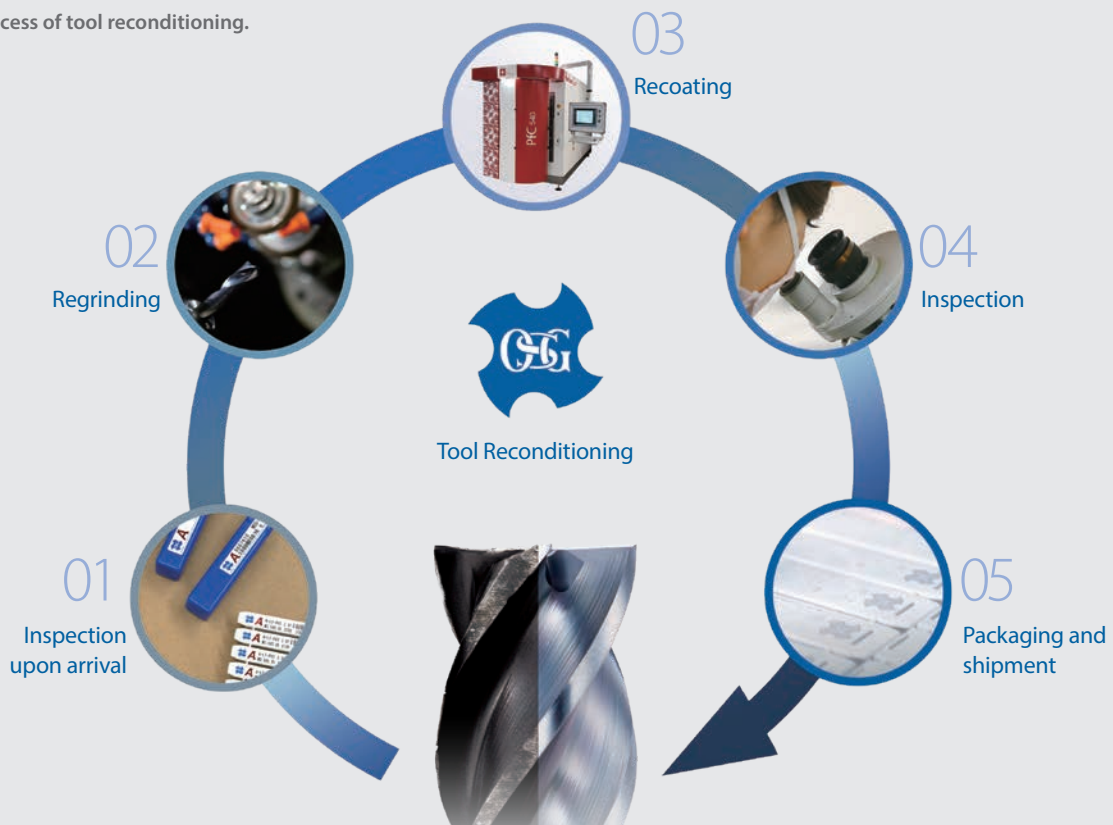
Enhancing sustainability by tool reconditioning and recycling services

Masatoshi Kageyama
OSG Corporation

As a global company manufacturing responsible products, OSG is committed to a healthy planet and society. In order to reduce environmental impact, OSG actively implements initiatives relating to resource and energy conservation, waste reduction, prevention of pollution, and material recycling in various processes throughout the OSG Group.

OSG's tool reconditioning program is a part of the company's commitment to promote resource conservation and to improve energy efficiency in its business activities.

Figure 1. Process of tool reconditioning.

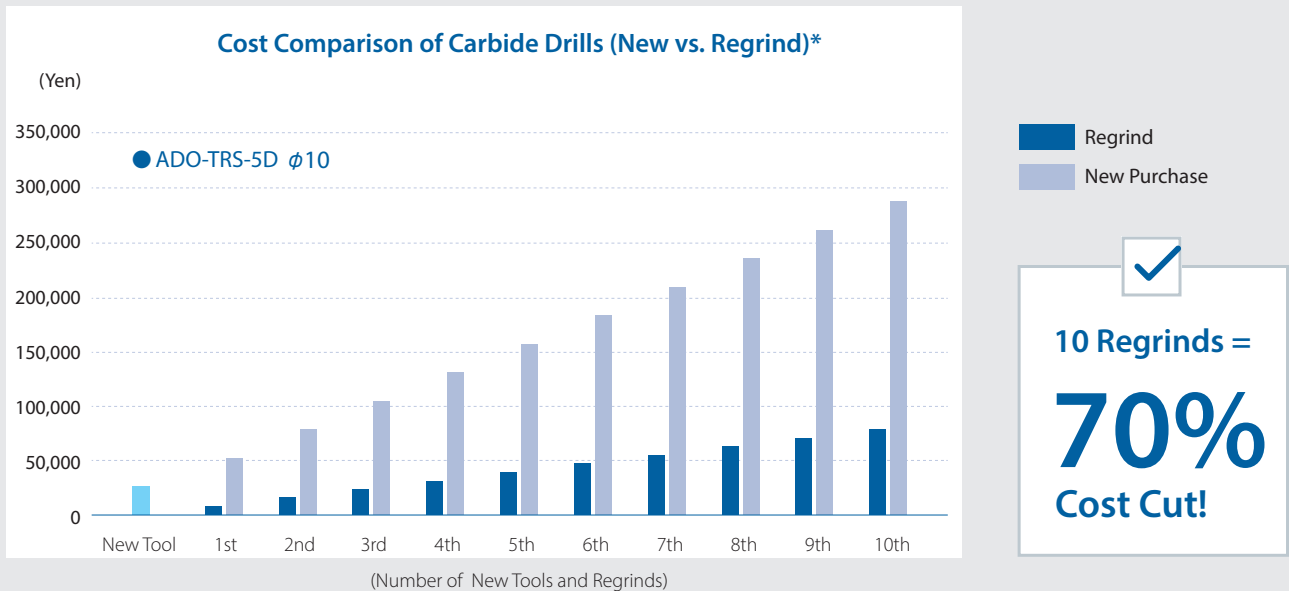


The primary benefit of tool reconditioning is obvious: reduction in overall tooling costs. Although many shops regrind their own drills, few shops have given thought to regrinding high performance cutting tools, even though substantial cost savings can be obtained. These efforts not only save customers thousands of dollars each year but are also environmentally friendly and sustainable.

Figure 2. The condition of a 3-flute drill before and after tool reconditioning. With the capability and expertise to bring worn cutting tools back to life for a fraction of the cost of a new tool, reconditioning is highly economical and environmentally friendly.



Figure 3. Significant cost reduction can be achieved by tool regrinding alone.



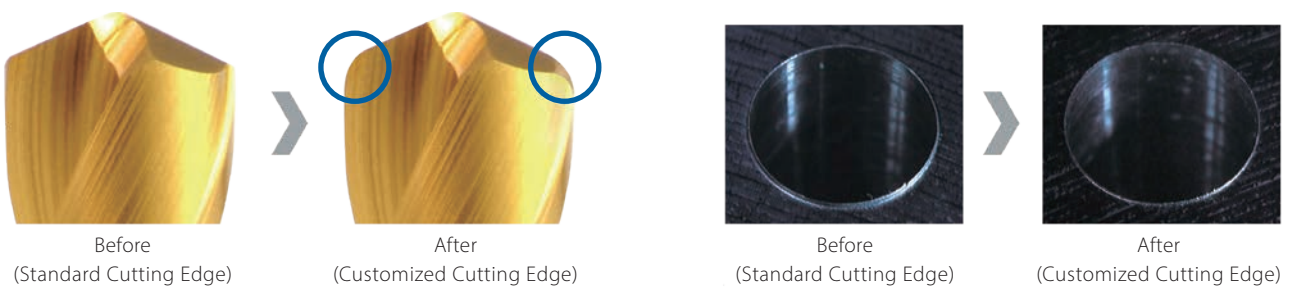
*Result may vary based on product and cutting condition.

As a comprehensive cutting tool manufacturer, OSG is capable of regrinding and recoating an array of products, such as solid carbide tools, HSS tools, PCD tools, rolling dies, specials, and more. Tool reconditioning services provided by OSG restore used tools to like-new condition. OSG’s tool reconditioning division uses original OSG manufacturing drawings for all regrinding processes. OSG Group companies also adhere to the OSG quality control manual

and use the same inspection equipment used by the manufacturing division during the inspection procedures. With tool reconditioning facilities in 14 countries, OSG can respond to customer needs worldwide.

In addition to tool reconditioning, OSG also offers customization services to help manufacturers optimize machining based on individual application needs.

Figure 4. An example of a tool modification to minimize burrs during drilling.



Furthermore, carbide tools that can no longer be reground can be recycled through OSG’s group company’s carbide recycling program. Cemented carbide materials contain a large amount of rare metals. Carbide recycling reduces material consumption and contributes to environmental preservation.





Group Company Highlight: Aoyama Seisakusho Co., Ltd.

As one of the world leaders in metalworking cutting tools, OSG has the unique ability to rejuvenate used tools to like-new condition. In Japan, OSG Corporation's group company Aoyama Seisakusho offers regrinding and recoating services for carbide and HSS tools such as taps, drills and end mills, and special tools. In addition to OSG products, Aoyama Seisakusho can restore other manufacturers' tooling to print. Tool modifications can also be fulfilled upon request.





1. Aoyama Seisakusho's headquarters is located adjacent to the OSG Academy in Toyokawa, Aichi, Japan.
2. Masahiro Oshino, president of Aoyama Seisakusho.
3. Aoyama Seisakusho's office.
4. Aoyama Seisakusho's machine operators pose for a photograph.
5. Aoyama Seisakusho's manufacturing facility.



Aoyama Seisakusho offers regrinding and recoating services for carbide and HSS tools such as taps, drills, end mills, and special tools.

Aoyama Seisakusho became a part of the OSG Group in 1986. Three years later, Aoyama Seisakusho relocated its headquarters and production facility to Toyokawa, Aichi, Japan. Today, Aoyama Seisakusho employs approximately 80 employees. In addition to tool reconditioning and custom products, Aoyama Seisakusho specializes in the manufacturing and sale of bandsaws, circular saw blades and bits.

“As a member of the OSG Group, we always strive to achieve and deliver the best possible result for our clients,” said Masahiro Oshino, president of Aoyama Seisakusho. “We will continue to support the manufacturing industry worldwide with high efficiency, high accuracy and long tool life products,” said Oshino.



From right, bandsaws and bits. In addition to tool reconditioning, Aoyama Seisakusho specializes in the manufacturing and sale of bandsaws, circular saw blades and bits.

Aoyama Seisakusho Drip Coffee Bags

Aoyama Seisakusho creates promotional items annually to give to customers during special occasions and events. One of its most famously known items is the company's original drip coffee bag.

Rather than making another orthodox approach to promotional gifts, such as pens and mugs, President Masahiro Oshino wanted to create a unique and memorable gift for clients to enjoy.

"I didn't want to make just another pen to give to our clients, which may be tossed into the trash," said Oshino. "As a responsible company, we should be mindful of every environmental impact we make."

As a coffee enthusiast, Oshino thought that drip coffee bag would make a practical and enjoyable promotional item. In March 2017, Oshino collaborated with a specialty coffee shop in Toyokawa, Aichi, where the company is headquartered at, and the first original drip coffee bag was made. Only high-ranked coffee beans from the specialty coffee category are used in Aoyama Seisakusho's drip coffee bag, which not only makes this promotional item unique, but also delicious. More than six years later, Aoyama Seisakusho now offers this unique promotional item in 12 different styles featuring coffee beans from Guatemala, Brazil, Ethiopia and Indonesia.

"Pens don't usually ignite conversations," said Oshino. "But coffee can," he says. "It brings people together and is a great conversation starter."

The OSG Group

OSG Corporation has individual production facilities for designated tooling lines including taps, HSS drills and end mills, carbide drills and end mills, rolling dies and gauges, tool coating, and machine tools. In addition to OSG's own product lineup, OSG also fulfills customer needs with its domestic group companies specialized in their respective fields. Each domestic group company manufacturers and sells the products they specialize in. Together, they offer a broad lineup of products and services, including the manufacturing of carbide materials and cutting tools, coating and regrinding services, as well as sales of machinery. They also offer various custom services, ensuring that each and every client will always receive products that suit their desired processing environment.

Internationally, OSG has a global network of over 65 business offices in 33 countries, which provides its production sites with accurate feedback about user needs so that the company can quickly design, develop, manufacture and deliver products that precisely meets those needs.



1. Aoyama Seisakusho's original drip coffee bag.

2. 3. Aoyama Seisakusho president Masahiro Oshino brews coffee for guests at the office.

AE-VTSS

Anti-vibration carbide end mill compatible with sliding head lathes

Kotaro Niimi
OSG Corporation Applications Engineer
(End Mill Development Division)

In the world of manufacturing, efforts are constantly being made to reduce costs. In addition to high efficiency and long tool life, ability to achieve unattended machining with minimal operator input has also become a highly sought quality in cutting tools in recent years.

Sliding head lathes are highly accurate multi-axis CNC machines that provide a single setup solution for complex processing. They especially excel at producing parts of the same shape with great efficiency and stability. With capabilities to finish delicate parts in one setup and quicker job cycle than traditional fixed head machines, sliding head lathes are one of the best equipment for unattended machining with little or no human intervention.

End mills used in sliding head lathes are generally used for slotting and D-cutting (frontal milling). In spring 2022, OSG has released the AE-VTSS carbide end mill with optimized specifications that contribute to unattended machining operations in sliding head lathes.



Features of AE-VTSS

1. Superior Cutting Chip Control

Even if the material removal volume per part is small, chip trouble is likely to arise as the number of work pieces increases. Figure 1 depicts long and distorted cutting chips created by an end mill with conventional (straight) cutting edge geometry from plunging in SUS304. These inconsistent chips may wrap around the spindle as the machining continues. If the cutting chips become tangled around the spindle, the machine must be stopped for chip removal, which leads to reduced productivity.

OSG's AE-VTSS is engineered with an original bottom cutting edge hook shape (PAT. P. in Japan) that contributes to the creation of stable chip shape and improves chip evacuation. The bottom cutting edge of conventional end mills are generally straight, but the AE-VTSS is designed with a bow shape from the outer peripheral side that leads to the center as illustrated in figure 3.

During product development, cutting simulations were used extensively to determine the optimal specifications of the hook shape. Figure 1 depicts chip generation with a conventional (straight) cutting edge. In contrast, figure 2 illustrates chip generation by the hook shape design. Comparing the two, the hook shape produces chips with stronger curl. In fact, as demonstrated in figure 2, the hook shape produces curled chips in a stable manner, which minimizes chip evacuation troubles such as the tangling of chips with the cutting tool.

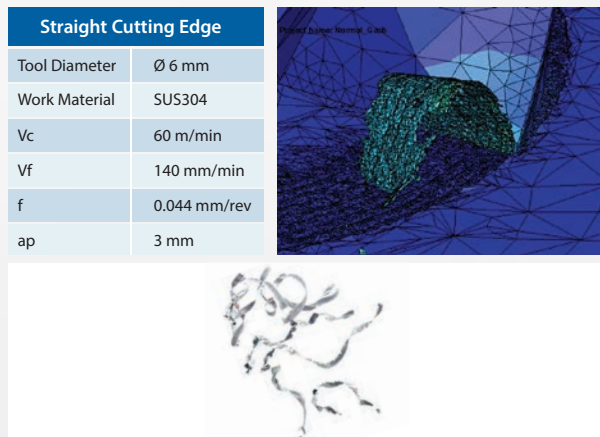


Figure 1. Cutting chips created by an end mill with conventional (straight) cutting edge from plunging in SUS304.

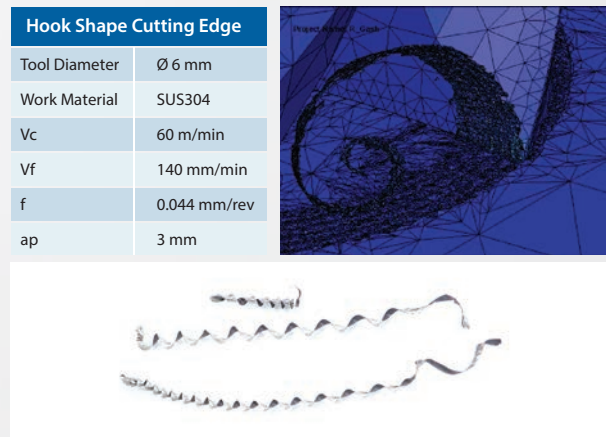


Figure 2. Cutting chips created by the AE-VTSS end mill with hook shape cutting edge from plunging in SUS304.

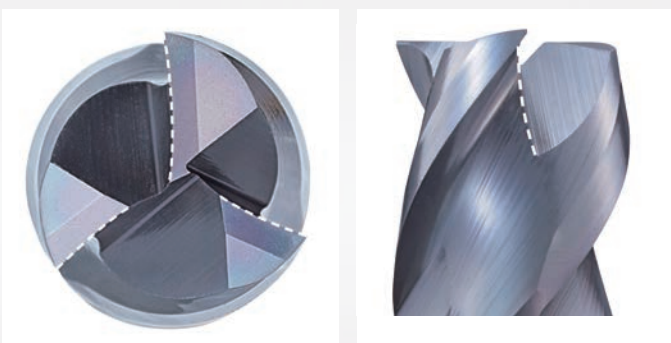


Figure 3. AE-VTSS's 3-flute specification and bottom cutting edge hook shape.

In a cutting trial, the straight cutting edge end mill and the AE-VTSS end mill with hook shape cutting edge are compared by plunging 37 holes continuously. As depicted in figure 4, cutting chips are wrapped around the straight cutting edge end mill whereas the AE-VTSS with hook shape cutting edge is chip trouble-free. As demonstrated in this cutting trial, the AE-VTSS's hook shape cutting edge effectively suppresses chip evacuation troubles to contribute to stable and uninterrupted machining.

Tool Diameter	Ø 6 mm	Straight Cutting Edge	Hook Shape Cutting Edge
Work Material	SUS304		
Processing Method	Plunging		
Vc	50 m/min		
n	2,650 min ⁻¹		
Vf	50 mm/min		
ap	3 mm		
Coolant	Non-water-soluble		
Machine	Vertical machining center (BT40)		

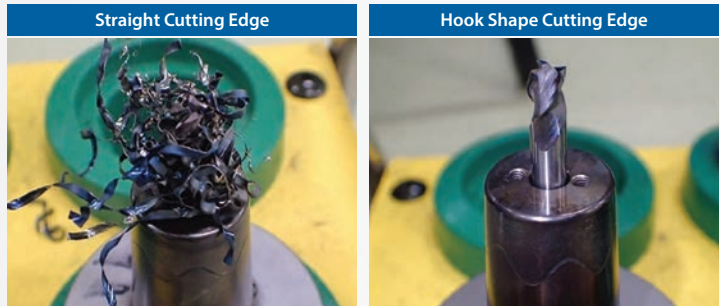


Figure 4. Condition of end mills after plunging 37 holes in SUS304. Cutting chips are wrapped around the straight cutting edge end mill whereas the AE-VTSS with hook shape cutting edge can continued to be used.

2. Multi-functional

The number of cutting tools that can be attached to a sliding head lathe is limited. Taken this characteristic in mind, the AE-VTSS is developed as a multi-functional 3-flute end mill that excels in plunging, slotting and side milling. The multi-functionality of the AE-VTSS contributes to the consolidation of machining processes, reduction of setup time, and tool change time to maximize the performance of sliding head lathes.

3. Variable Lead Geometry to Suppress Vibration

In a sliding head lathe, the workpiece is usually clamped into position by a chuck. Compared to clamping in CNC machining centers, machining with a sliding head lathe has lower rigidity and is more prone to chattering. Figure 5 illustrates a cutting trial between a conventional 2-flute end mill and the AE-VTSS. Chattering and burrs occurred after 2,000 passes with the conventional 2-flute end mill. The AE-VTSS, on the other hand, exhibits stable performance, good machined surface with no burrs even after 3,000 passes at a more aggressive cutting condition. OSG's AE-VTSS' unequal spacing of teeth and variable-lead geometry have effectively minimized chattering to enable stable and high-efficiency milling even in a setup with low rigidity.

Tool	Conventional (2-flute)	AE-VTSS (3-flute)
Size	Ø 6 mm	
Work Material	SCM435	
Processing Method	Ø 15 Bar material hexagonal processing	
Vc	75 m/min	85 m/min
n	4,000 min ⁻¹	4,500 min ⁻¹
Vf	320 mm/min	675 mm/min
fz	0.04 mm/t	0.05 mm/t
ap	1 mm	
Coolant	Non-water-soluble	
Machine	Sliding head lathe	

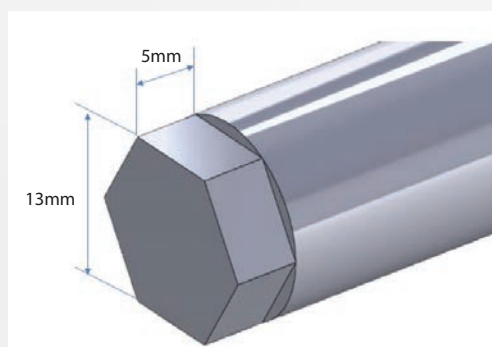


Figure 5. Cutting condition and work shape image of a cutting trial between a conventional 2-flute end mill and the AE-VTSS 3-flute end mill.

4. Tool Geometry Optimal for Sliding Head Lathes

Space inside the sliding head lathe is limited. Depending on the positioning of the tool changer and workpiece, sometimes a cutting tool cannot be used as is based on its overall length.

During the development process of the AE-VTSS, sliding head lathe manufacturers were surveyed regarding the optimum overall length of end mills. Based on these feedback, the AE-VTSS is designed to feature an overall length of 50 mm or less.

5. DUARISE Coating for Long Tool Life

The AE-VTSS end mill employs OSG's DUARISE coating with excellent lubricity, wear resistance, superior friction-resistance and high oxidation temperature qualities.

The DUARISE coating is composed of a heat resistant layer, a low friction layer, and an adhesion reinforcing layer as depicted in figure 6. Its multi-layer construction suppresses thermal cracks to prolong tool life. The surface of the coating is smoothed to remove granular irregularities called droplets to improve the quality of the machined surface as illustrated in figure 7.

Figure 8 illustrates the superior tool life of the AE-VTSS. In the cutting trial, wear wide of the peripheral cutting edge by four end mills are measured after milling 70 m in SUS304. The AE-VTSS demonstrates high durability with minimal wear whereas the other end mills exhibit significantly greater wear.

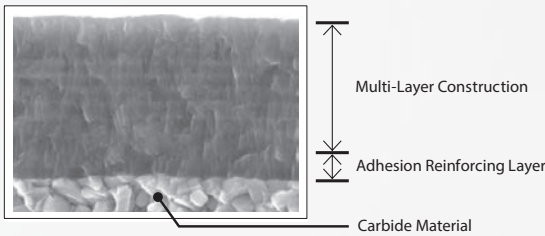


Figure 6. Composition of OSG's DUARISE coating.

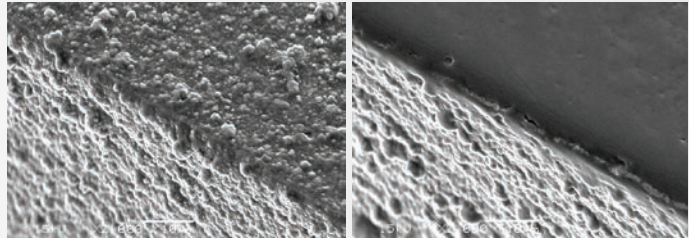


Figure 7. From left, conventional coating and the DUARISE coating.

Tool Diameter	Ø 12 mm
Work Material	SUS304
Processing Method	Slotting
Vc	50 m/min
n	1,330 min ⁻¹
Vf	160 mm/min
ap	2.4 mm
Coolant	Water-soluble
Machine	Vertical machining center (BT40)

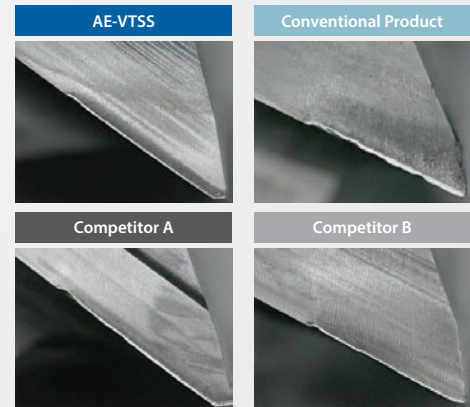
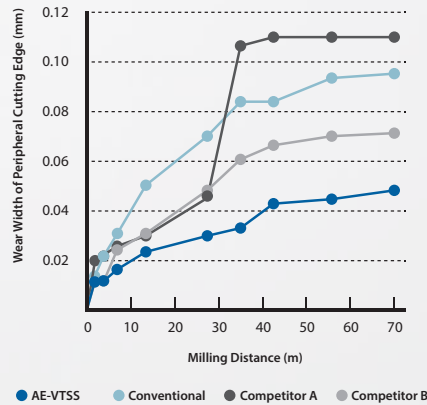


Figure 8. Wear resistance comparison

The AE-VTSS is one of OSG's latest milling innovations optimally designed for sliding head lathes to achieve efficient, precise, and repeatable stable cutting of unattended machining over long periods to reduce production costs. The AE-VTSS is designed to support a wide range of milling operations in stainless steel, cast iron, carbon steel, alloy steel and hardened steel (up to 40 HRC). The new offering is available from diameter 3 mm up to 12 mm, with a total of seven items, and will continued be expanded to better fulfill evolving needs.



Scan for details



From left, OSG Scandinavia sales engineer Morten Larsen and ECM Industries apprentice Asker Jaedicke Christiansen pose for a photograph at the ECM Industries production facility in Egtved, Denmark.

Triple Productivity

ADO-TRS 3-flute coolant-through carbide drill triples feed rate and doubles tool life in wind turbine part production

Peter Cramer Jensen
OSG Scandinavia

OSG products contribute to an array of manufacturing industries to drive better results and productivity. In addition to the automotive, die and mold and aerospace industries, OSG also supports power generation metal cutting of large parts and difficult-to-machine materials with precision cutting tools and optimal solutions.

ECM Industries A/S, a metalworking supplier, has recently leveraged OSG's drilling solution in its production of cone bracket, which is a mounting part in wind turbine. Established since 1977, ECM Industries is located in Øster Starup near Egtved in Denmark. With decades of experience, ECM Industries has grown from



Established since 1977, ECM Industries A/S is located in Øster Starup near Egtved in Denmark. With decades of experience in metalworking, ECM Industries has grown from a small forging company to a medium-sized company with approximately 100 employees, and continuously invests in the development of production to provide optimum solutions for its clients to fulfill evolving needs.

a small forging company to a medium-sized company with approximately 100 employees, and continuously invests in the development of production to provide optimum solutions for its clients to fulfill evolving needs.

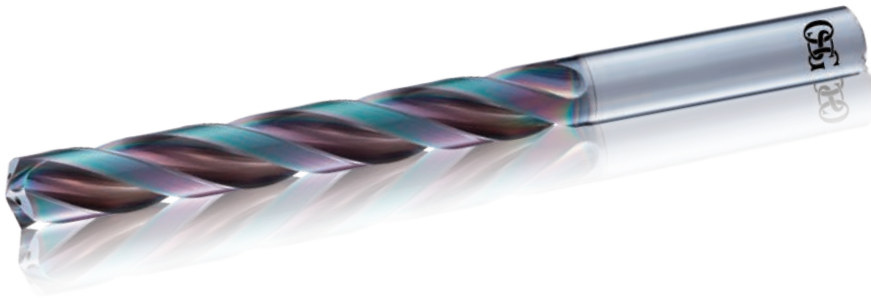
A little over a year ago, ECM Industries underwent a significant expansion. Among the changes, a new Zoller tool presetter was installed to ensure that all tool solutions are measured and controlled. The ongoing optimization with the Zoller solution has given the company improved insights into its tooling usage, which is significant when it comes to large series production. OSG Scandinavia is long time business partner of ECM Industries, and dialogues pertaining tool performance optimization are frequently exchanged.

With the recent major order of cone brackets and increased parts to be machined, Kasper Sørensen, who is in charge of ECM Industries' tool purchases, consulted with OSG Scandinavia's sales engineer Morten Larsen to further accelerate productivity. The cone brackets are made of ST52-3 (SS490 JIS) low carbon steel. The annual production volume is estimated to be around 5,000 pieces per part. Each workpiece requires the drilling of five 18 mm diameter through holes at a depth of 25 mm. The workpieces are

machined using a Doosan VC510 vertical machining center (BT40) with 7.5-percent water-soluble coolant. ECM Industries was originally using a competitor 2-flute coolant-through carbide drill for the job. Upon a detail evaluation of the application, Larsen recommended OSG's 18 mm diameter ADO-TRS-3D (EDP# 8721800) 3-flute coolant-through carbide drill.



The cone brackets are made of ST52-3 (SS490 JIS) low carbon steel. The annual production volume is estimated to be around 5,000 pieces per part. Each workpiece requires the drilling of five 18 mm diameter through holes at a depth of 25 mm.



The ADO-TRS 3-flute coolant-through carbide drill is one of OSG's latest drilling innovations for ultra-machining efficiency in a wide range of materials. The ADO-TRS is available from diameter 3 mm up to 20 mm, in processing depth of 3xD and 5xD, and is suitable for applications in carbon steels, alloy steels, mild steels, cast iron and hardened steels.

The ADO-TRS 3-flute coolant-through carbide drill is one of OSG's latest drilling innovations for ultra-machining efficiency in a wide range of materials. With capabilities to resolve common challenges of 3-flute drills such as high thrust force and poor chip evacuation, the ADO-TRS has been nicknamed as the 'Triple Revolution' drill, setting a new standard for 3-flute drills with reliable performance never witnessed before in the cutting tool sector.

The ADO-TRS' 3-flute specification offers greater balance than 2-flute drills, which are more prone to chattering. Moreover, the ADO-TRS enables superior roundness and improved positioning in terms of hole precision. With capability to excel under high-feed condition, the ADO-TRS is able to minimize contact time with the workpiece material, which reduces the probability of work hardening. The ADO-TRS is available from diameter 3 mm up to 20 mm, in processing depth of 3xD and 5xD, and is suitable for applications in carbon steels, alloy steels, mild steels, cast iron and hardened steels.

The competitor 2-flute drill was used at a cutting speed of 120 m/min (2,122 min⁻¹) and a feed of 460 mm/min (0.22 mm/rev). The ADO-TRS 3-flute drill, in comparison, can run at more than three times the feed, at a cutting speed of 120 m/min (2,122 min⁻¹) and a feed of 1,485 mm/min (0.7 mm/rev). Moreover, the tool life has more than doubled.

"For mass production, the ADO-TRS 3-flute carbide drill is a good choice, as it has tripled the previous drill's feed rate and more than doubled the tool life," said Sørensen. "It is a much more productive solution, so it pays to pay a little more for the tool solution," Sørensen adds.

After drilling a total distance of more than 100 meters, the ADO-TRS drill is sent for reconditioning. Sørensen is particularly enthusiastic about the precision regrinding services that OSG offers, where users can have the regrinding done at OSG's plant in Japan over and over, with the used carbide drill being able to maintain the same geometry and coating to ensure consistent optimal performance over time.

"In addition to a significant reduction in downtime, there is also a quality increase, which our customer has also noticed," Sørensen emphasizes.

ECM Industries' client is a foreign producer of windmills, who previously had the parts manufactured elsewhere. After ECM Industries became involved, the client noticed an increase in quality. In addition, due to the increase in productivity by the ADO-TRS drill, ECM Industries is also able to take in additional jobs, enabling the client to reduce the number of subcontractors. What started as three possible parts has so far grown to 12 different parts and sizes, each in a fairly large number of pieces. ECM Industries expects the number of jobs to further increase in the future.



OSG's ADO-TRS 3-flute carbide drill is being presetted at a Zoller tool presetter.

New tooling solution for enhancing productivity is highly crucial to ECM Industries. OSG Scandinavia provided ECM Industries with in-house training courses in drilling in fall 2021, which involved cutting demos on one of ECM Industries' machines.

"This will enable our employees to evaluate the tool and cutting condition on the spot, and learn to optimize the drilling process first-hand," said Sørensen. "New innovations from OSG are important to us and we highly value our partnership," said Sørensen.



Volkswagen de México's manufacturing facility in Silao, Guanajuato, Mexico, which opened in 2013.

The Total Package

V-CPM-OIL-POT eliminates tap breakage in crankshaft production

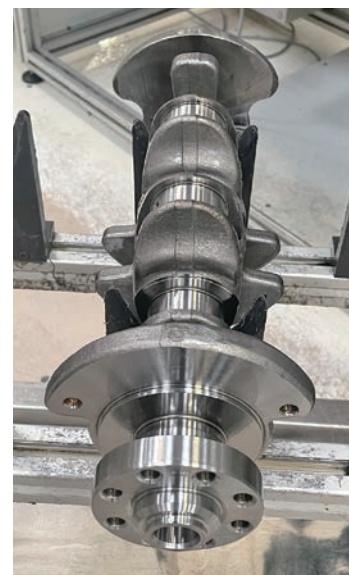
Vanesa Aguilera, Francisco Arteaga and Mario Castro

OSG Royco

Founded in 1964, Volkswagen de México is the Mexican subsidiary of the German motor vehicle manufacturer Volkswagen Group. In January 2013, a Volkswagen engine plant was opened in Silao in the central Mexican state of Guanajuato. This factory has a total area of 60 hectares and an annual capacity of 420,000 engines, according to Volkswagen's official press release.

Recently, Volkswagen de México was encountering threading problems in its production of crankshaft used in six of its car models at the Silao plant. The crankshaft is made of steel (TL1438, ASTM 1040) and has a production volume of approximately 37,000 pieces per month. Volkswagen de México has been making this part since 2013. Each crankshaft requires the threading of eight M10 x 1 through holes. The drill hole size is dia. 9 mm and 15 mm deep. Unior's AF series crankshaft machines are used for the machining. The 3-axis unit with work tool revolvers and a NC swivel table allows the machine to simultaneously process two workpieces.

Volkswagen de México was encountering threading problems in its production of crankshaft used in six of its car models. The crankshaft is made of steel (TL1438, ASTM 1040) and has a production volume of approximately 37,000 pieces per month.



Volkswagen de México was originally using three other cutting tool brands for the application. The competitor taps required long processing time due to frequent tool breakage, which affected the overall production cost as more taps had to be purchased and replaced. More importantly, the machine does not detect when the tool breaks and would continue processing with a new crankshaft with the broken tool, which leads to multiple scraps.

Volkswagen de México was aware of the OSG brand because OSG Royco's representatives Francisco Arteaga and Mario Alberto Castro frequently visit the factory. An opportunity to test cut arise soon after OSG Royco made a commercial alliance with DECA (tool management for Volkswagen), which is optimum for monitoring tooling tests.



The M10 x 1 competitor taps were used at a cutting speed of 20 m/min (636 min⁻¹). Oil was used for the lubricant. Upon a detail evaluation of the application, Arteaga and Castro recommended OSG Royco's spiral point tap V-CPM-OIL-POT M10x1 (6HX VC10 TiCN). Under identical cutting condition, OSG Royco's point tap is able to improve tool life by 25 percent. Furthermore, it has completely eliminated the issue of tool breakage, enabling Volkswagen de México to improve cost per unit.

"One of the competitive advantages that OSG offers is fast delivery time since it has a factory in Guanajuato," said José Ivanoé Robles Barrón, who is responsible for the crankshaft application. "Additionally, OSG has a wide variety of high-quality products and services including regrinding and recoating," Barrón adds.

OSG Royco was established in 1994. Its sales office and manufacturing facility are located in Mexico City and Toluca respectively. In 2016, OSG Royco's Guanajuato Tech Center (GTO Tech Center) was completed to accelerate product development as well as to provide training for the local tooling community.

"I really appreciate OSG's attention and ability to solve our problems," said Barrón. "OSG's presence here is invaluable as it gives me a lot of confidence knowing that they are never going to leave me without a tool," said Barrón.



OSG Royco's original spiral point tap V-CPM-OIL-POT M10x1 (6HX VC10 TiCN).



1. Each crankshaft requires the threading of eight M10 x 1 through holes. The drill hole size is dia. 9 mm and 15 mm deep.



2. From left, OSG Royco sales coordinator Francisco Arteaga, Volkswagen de México tool engineer José Ivanoé Robles Barrón and OSG Royco sales representative Mario Alberto Castro pose for a photograph at Volkswagen's manufacturing facility in Silao, Guanajuato, Mexico.



The AT-1 is a revolutionary 1-pass thread mill engineered for high-quality threading. Conventional thread mills often require several passes to generate a thread. The AT-1's capability to generate threads in one pass lies in its unique tool geometry.

Thread Milling in One Pass

AT-1 thread mill slashes machining time in artificial lift system component production

Bob Kress
OSG USA

Founded in 2014, Flowco Production Solutions is an artificial lift solution provider for the oil and gas industry. The company specializes in the design, manufacturing, and installation of artificial lift systems. Headquartered in Houston, Texas, USA, Flowco Production Solutions currently has 30 locations across North America.

Flowco Production Solutions is committed to achieving the highest standards of manufacturing quality. The company always strives to safely maximize the lifespan and efficiency of oil and gas wells by using high-performance parts and components in all of its artificial lift systems.

Recently, Flowco Production Solutions in Fort Worth, Texas, was seeking to resolve a threading issue on its production of flanges and blocks made of AISI 4130 L80 material. The application requires the threading of blind holes that are 7/8-9 UNC in size at a depth of 1.1-inch (27.94 mm). A Hass VF-5/40 vertical machining center and a YCM TV188B vertical machining center are used for the processing.

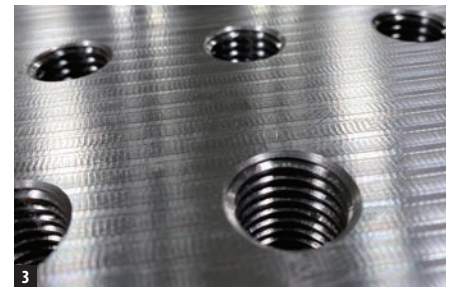
Flowco Production Solutions was originally using a competitor thread mill for the application but was troubled by slow cycle

time and tool breakage. Seeking to improve machining performance, Flowco Production Solutions contacted its tool distributor Kenny McClure, MSC Industrial Supply's senior metalworking specialist, who reached out to OSG for tooling recommendations. Upon a detail evaluation of the application, OSG recommended the A Brand AT-1 thread mill.

The A Brand AT-1 is a revolutionary 1-pass thread mill engineered for high-quality threading. Conventional thread mills often require several passes to generate a thread. With two registered patented technologies, the AT-1's capability to generate threads in one pass lies in its unique tool geometry. The first patented technology is the AT-1's left-hand helix geometry. Conventional right-hand helix thread mill is vulnerable to deflection as the cutting process begins from the tip. In contrast, the AT-1's right-hand cut and left-hand helix geometry begins the cutting process from the shank side, thereby minimizing deflection. The second patented technology is the unequal spacing and variable lead flute geometry, which is commonly applied in end mills. The unequal spacing and variable lead flute geometry minimizes chatter.



1. From left, Flowco Production Solutions machinist Mark Lopez, OSG applications engineer Daniel Dominski, OSG district sales manager Bob Kress, MSC senior metal working specialist Kenny McClure, Flowco Production Solutions senior manufacturing engineer Robert Jackson and Flowco Production Solutions NC programmer Dustyn Boyd pose for a photograph during a cutting trial with the AT-1 thread mill.



2. A photograph of Flowco Production Solutions' 67,000 square foot Fort Worth, Texas location. Founded in 2014, Flowco Production Solutions is an artificial lift solution provider for the oil and gas industry. Photo courtesy of Flowco Production Solutions.

3. By leveraging OSG's AT-1 1-pass thread mill, Flowco Production Solutions is able to significantly reduce machining time in its artificial lift system component production.

The competitor 7/8-9 thread mill was used at 2,315 rpm and 3.1 ipm. Three passes were needed, requiring a total of six minutes to process a hole. A 7/8-9 (0.539-inch cutter diameter, 2-inch length of cut, 5-flute) AT-1 thread mill (EDP# 1662502417) was brought in for the test run. OSG's AT-1 ran at 2,122 rpm (91 m/min) and 10.61 ipm (270 mm/min) in a single pass, completing a hole in 30 seconds, which is 12 times the efficiency versus the competitor thread mill. This application has an annual part production of only 120 pieces. However, the boost in efficiency has generated a cost savings of \$10,984 USD versus the competitor tool.

This success led to additional trials of the AT-1 in different thread sizes. Flowco Production Solutions was troubled by tool breakage issues with the original competitor tool in their 3/4-10 UNC application, which has an annual production volume of 3,600 parts. The competitor tool was used at 2,315 rpm and 3.148 ipm. Four passes were needed, requiring a total of two minutes to thread a hole. A 3/4-10 (0.461-inch cutter diameter, 1.7-inch length of cut, 5-flute) AT-1 thread mill (EDP# 1662502117) was brought in for the test run. Both the competitor tool and the AT-1 had issues of breakage during initial testing. To resolve the challenge,

OSG applications engineer Daniel Dominski was dispatched to inspect the cutting condition on-site. After conducting a few tests, it was determined that compensation was needed on the feed rate to prevent over engagement of the thread mill. With the adjustment, the AT-1 was able to slash machining time from two minutes to 54 seconds, running at 1,864 rpm (68.5 m/min), 1.8 ipm (45.72 mm/min) and completing a thread in just one pass. An estimated cost savings of \$50,635.41 USD will be achieved by switching to the AT-1 thread mill.

With the significant processing improvements made by the OSG A Brand AT-1, Flowco Production Solutions is currently testing additional applications throughout the shop to maximize productivity. Five cost savings have already been completed, ranging from \$2,407 USD to \$50,635 USD, totaling to \$96,547 USD.

"OSG's thread mills are by far the best in the market," said Robert Jackson, senior manufacturing engineer at Flowco Production Solutions. "For one of our most time-consuming applications, we are able to reduce machining time from nine minutes per hole to 30 seconds per hole," said Jackson. "It's an unbelievable cost savings for our company."



Fuyan Plastics' facility in Fujian Province, China.

Stepping Up Performance

WXL-SBD end mill improves tool life and machining stability in shoe mold production

Puhua Xu

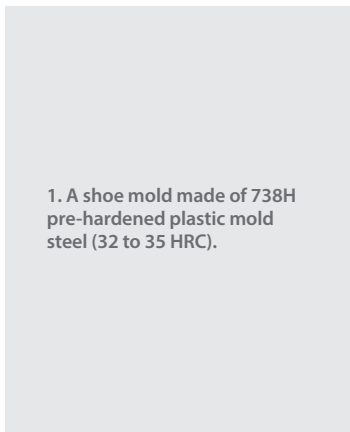
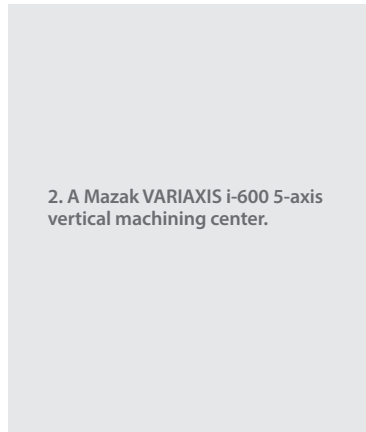
OSG Shanghai

Injection molding is a manufacturing process of producing plastic parts by injecting molten material into a mold, where it cools and hardens to the configuration of the cavity. Molds used in injection molding are commonly constructed from hardened steel, pre-hardened steel, aluminum, and beryllium-copper alloy.

Footwear, such as rubber shoes, flip-flops, and shoe soles, are commonly made by injection molding. Recently, Fuyan Plastics Co., Ltd. in Fujian Province, China, was seeking for productivity improvement in its shoe mold production. Founded in 2012, Fuyan Plastics specializes in the manufacturing of plastics molds, a majority of which are shoe molding. Currently, Fuyan Plastics employs approximately 170 staff in its 6,000-square-meter factory. About 1,500-square-meter of space is dedicated to mold manufacturing. As the company continues to grow, Fuyan Plastics' management team looks to increase capacity and have recently ordered 30 additional machining centers.

Fuyan Plastics processes at least 50 sets of molds per month. Each mold is made for a specific product and is not mass produced. The output of each mold also varies. Fuyan Plastics was troubled by one of its shoe mold applications made of 738H pre-hardened plastic mold steel (equivalent to AISI P20) with a hardness of around 32 to 35 HRC. The tolerance for surface finish is Ra 1.6. The parts are processed using vertical machining centers.

Fuyan Plastics originally used a R3 end mill from a Chinese cutting tool manufacturer and experienced poor quality surface finish and short tool life. After about 10 hours of machining, the tool would wear out and the surface finish of the machined part would no longer meet the client's requirement. There were also cases where the tool would break during machining, affecting the surface of the workpiece and requiring it to be reworked. Fuyan Plastics was highly dissatisfied with the performance of the existing end mill and was in search for a new tooling solution for better performance, tool life and stability.



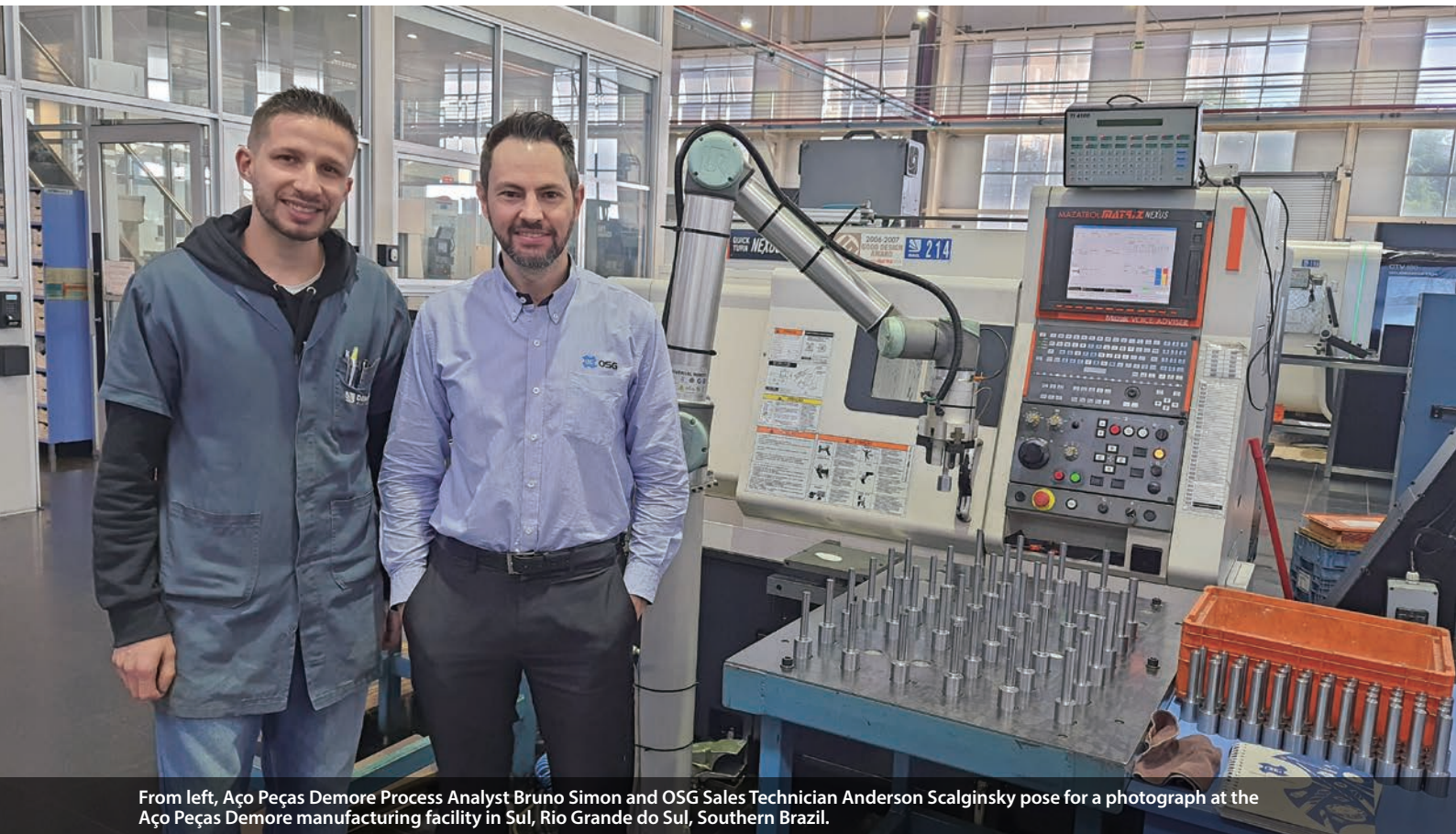
Fuyan Plastics contacted OSG for technical assistance through a distributor. After visiting the manufacturing facility to evaluate the application and actual machining environment, OSG recommended a R3 WXL-SBD (EDP# 30190158) 2-flute premium high performance ball nose carbide end mill for the job. The WXL-SBD is a standard item at OSG Shanghai and is uniquely designed to excel in high-speed machining of pre-hardened and hardened steels. The WXL end mill series features OSG's WXL nanocoating technology for superior durability.

Fuyan Plastics' management team set a requirement of 22 hours of tool life for the cutting trial. The test tool was used at a cutting speed of 283 m/min (15,000 min⁻¹), a feed rate of 3,000 mm/min, a radial depth of cut of 0.1 mm, and an axial depth of cut of 0.07 mm. Water-soluble coolant was applied. OSG's WXL-SBD was able to easily achieve the tool life requirement on the premise of ensuring the specified machined surface finish quality. After 22 hours of machining, the WXL-SBD exhibited minimal wear and could continue to be used. Fuyan Plastics tested the WXL-SBD on both 3-axis and 5-axis machining centers to verify the performance and stability of the tool. The WXL-SBD was able to demonstrate consistent performance far exceeding Fuyan Plastic's expectation.

Ultimately, OSG's WXL-SBD has stepped up performance by greatly improving tool life, reducing the number of tool changes, avoiding rework caused by rough machining surfaces due to tool wear, and ensuring smooth machining for subsequent processes.



A R3 WXL-SBD (EDP# 30190158) 2-flute premium high performance ball nose carbide end mill. The WXL-SBD is a standard item at OSG Shanghai and is uniquely designed to excel in high-speed machining of pre-hardened and hardened steels. The WXL end mill series features OSG's WXL nanocoating technology for superior durability.



From left, Aço Peças Demore Process Analyst Bruno Simon and OSG Sales Technician Anderson Scalginsky pose for a photograph at the Aço Peças Demore manufacturing facility in Sul, Rio Grande do Sul, Southern Brazil.

Stable and Durable

ADO-SUS coolant-through carbide drill stabilizes machining process and doubles tool life in pistol barrel production

Lucas Sousa do Nascimento

OSG Sulamericana

Founded in 1974, Aço Peças Demore Ltda. is a manufacturer of metal-mechanic components for a wide range of industries including automotive, aerospace, agricultural, military, energy, shipbuilding, and more. Employing 250 staff, Aço Peças Demore's manufacturing plant is located in the city of Caxias do Sul, Rio Grande do Sul, Southern Brazil, with an estimate plant area of 20,000-square-meter.

Recently, Aço Peças Demore was looking to improve the machining of its pistol barrel production for the military industry, which the company has been making for about three years. The pistol barrels are made of ASTM 410 stainless steel (JIS SUS410) and has an annual estimate production volume of 244,000 pieces. One blind hole at a depth of 55 mm is required to be drilled and reamed per part. The pistol barrels are machined using a Mazak Nexus 150-II CNC turning center. Soluble oil at 10 percent concentration is used for the machining.



1. A pistol barrel made of ASTM 410 stainless steel (JIS SUS410).



2. The ASTM 410 stainless steel pistol barrels are machined using a Mazak Nexus 150-II CNC turning center. One blind hole at a depth of 55 mm is required to be drilled and reamed per part.



3. 4. Founded in 1974, Aço Peças Demore Ltda. is a manufacturer of metal-mechanic components for a wide range of industries including automotive, aerospace, agricultural, military, energy, shipbuilding, and more. Employing 250 staff, Aço Peças Demore's manufacturing plant is located in the city of Caxias do Sul, Rio Grande do Sul, Southern Brazil, with an estimate plant area of 20,000-square-meter. Photos courtesy of Aço Peças Demore Ltda.

Aço Peças Demore was originally using a competitor coolant-through carbide drill with multi-layer coating for the application. However, the machining was highly unstable, with deviations in the straightness of hole and low tool life. With the occurrence of deviations in the drilling process, the reamer in the secondary operation could not guarantee the dimensional requirement of the part.

Troubled by the poor performance, Aço Peças Demore reached out to OSG Sulamericana, a longtime partner of the company, for technical support. As a pre-hole for a subsequent reaming operation, the most important matter to Aço Peças Demore is to maintain a low deviation of less than 0.05 mm during the drilling process. Upon a detail evaluation of the machining environment, OSG recommended an 8.4 mm diameter ADO-SUS-5D coolant-through carbide drill (EDP# 8682840) for the application.

OSG's ADO-SUS series has adopted a tool geometry that emphasizes sharpness to reduce work hardening, thereby prolonging tool life for post-processing including reaming and tapping. Its unique flute form encourages the creation of small cutting chips, which is essential for trouble-free chip evacuation. Furthermore, the ADO-SUS has employed a unique oil hole design "MEGA COOLER" for diameter sizes above 6 mm to suppress heat generation and to facilitate smooth chip evacuation. With the addition of OSG's WXL coating, which has strong adhesion strength, high

resistance against welding can be achieved. Utilizing OSG's latest cutting tool technology, the ADO-SUS series is capable of drilling stainless steel and titanium alloy with predictable and consistent tool life, making efficient machining of difficult-to-machine materials a reality.

The competitor drill and the ADO-SUS carbide drill were tested at the same cutting speed of 80 m/min (3,033 rpm) and a feed rate of 0.07 mm/rev. The competitor drill achieved a tool life of 400 pieces whereas the ADO-SUS was able to complete 1,070 pieces before retiring due to wear. With the increase in tool life, Aço Peças Demore is able to achieve a cost reduction in the manufacturing process from R\$1.81 per piece to R\$0.94 per piece, which is equivalent to a cost savings of R\$0.87 per piece. With an annual production volume of 244,000 pieces, an annual savings of R\$212,280 can be obtained. Moreover, scrapped parts caused by quality issues have been eliminated.

"Before switching to the ADO-SUS, we had a high percentage of scrapped parts caused by deviations from the drilling operation," said Aço Peças Demore Process Analyst Bruno Simon.

After implementing the ADO-SUS drill, we are able to stabilize the machining, meet the dimensional requirement and double the tool life, which resulted in significant savings in the manufacturing process, said Simon.



The ADO-SUS drill retired after processing 1,070 holes in stainless steel, more than doubled the tool life of the competitor drill.



OSG's ADO-SUS series has adopted a tool geometry that emphasizes sharpness to reduce work hardening, thereby prolonging tool life for post-processing including reaming and tapping. Its unique flute form encourages the creation of small cutting chips, which is essential for trouble-free chip evacuation. Furthermore, the ADO-SUS has employed a unique oil hole design "MEGA COOLER" for diameter sizes above 6 mm to suppress heat generation and to facilitate smooth chip evacuation.



A-XPF

Forming Tap

The A-XPF is OSG's latest high-efficiency and multi-purpose forming tap. The A-XPF forms threads by plastic deformation of the work material and does not generate cutting chips. The A-XPF enables the reduction of tool change time caused by cutting chip troubles and machine downtime required for removing accumulated cutting chips. The A-XPF features a special chamfer specification (pat. in Japan) for achieving low thrust. Its special thread configuration (pat. in Japan) improves cutting edge rigidity, making it less prone to chipping. The A-XPF is made of powder metallurgy HSS (CPM) with high wear resistance. With the

addition of a special coating (pat. pending in Japan), tool life can be further enhanced.

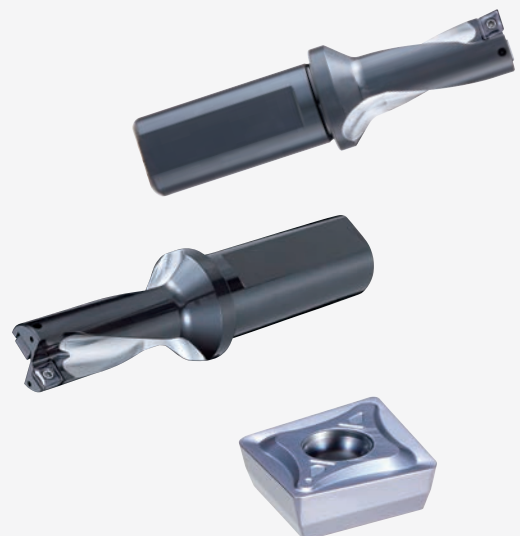
The A-XPF is a revolutionary product that excels in a wide range of work materials and cutting conditions with improved productivity, such as small-diameter threading in stainless steel and high-speed threading in high-hardness material of 30 HRC.



Phoenix PDZ

Indexable Flat Drill

The OSG Phoenix PDZ indexable flat drill is engineered to accommodate a wide range of applications including drilling, counterboring, inclined surface drilling, half-hole drilling, and more. Excellent chip evacuation is achieved by the PDZ's high precision finishing on the flutes, which improves rigidity, chip ejection and reduces cutting forces. Moreover, the PDZ's designated insert features an enhanced muscle breaker with superior chip breaking ability that enables the tool to excel in drilling, counterboring and turning applications.





ADO-MICRO

Small Diameter Coolant-through Carbide Drill

The ADO-MICRO small diameter coolant-through carbide drill series is engineered for stable and high efficiency drilling in small diameter deep-hole applications. Poor chip evacuation is a common complication in small diameter deep-hole drilling. Micro sludges can be easily accumulated around the outer periphery of the cutting tool, which is a key cause of abrupt tool breakage. The ADO-MICRO features a unique double margin geometry with an extended flute and shortened end margin to enhance chip evacuation capability. In addition to the outstanding chip ejection performance, the double margin configuration supports the straightness stability of the tool and reduces rifle marks on the inner surface of holes. Furthermore, the ADO-MICRO features a pair of large oil holes and employs a hollow shank design to allow large coolant flow volume for trouble-free chip evacuation.

The ADO-MICRO is coated with OSG's original IchAda coating that provides excellent surface smoothness in conjunction with high abrasion resistance and heat resistance to enable small diameter tools to achieve long tool life. The ADO-MICRO is suitable for mild steel, carbon steel, alloy steel, stainless steel, cast iron, ductile cast iron, aluminum alloy, titanium alloy and heat resistant alloy.

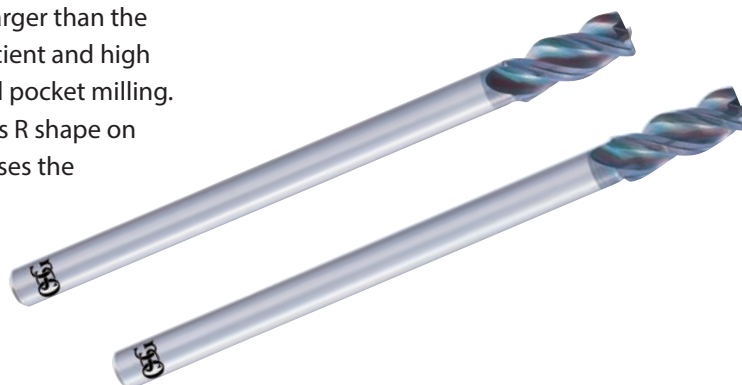


AE-VTFE-N

Carbide End Mill for Deep Side Milling in Non-ferrous Materials

The high performance AE-VTFE-N DLC coated carbide end mill is designed for highly efficient and highly accurate deep side milling at L/D of 5 or more. Its 2.5 x D length of cut specification allows efficient deep side milling with large step milling of up to 2 x D. The AE-VTFE-N's long length reduced shank design, where its outer diameter is larger than the shank diameter, enables efficient and high quality deep side milling and pocket milling. Furthermore, the AE-VTFE-N's R shape on the shank side edge suppresses the

generation of streaks due to step milling, enabling high milling quality. With the addition of OSG's DLC-IGUSS coating, long tool life can be achieved in non-ferrous metals such as aluminum alloys that require welding resistance and lubricity.



OSG China Celebrates 20th Anniversary



1. OSG China celebrates its 20th anniversary with a crowd of approximately 200 guests at the Xijiao State Guest Hotel in Shanghai, China on October 17, 2022. The celebration was delayed by a year due to the COVID-19 pandemic.
2. OSG China President Hitoshi Masuoka makes a speech during the company's 20th anniversary celebration.
3. OSG China Vice President Toshiyuki Morinishi poses for a photograph at the company's 20th anniversary celebration. “大道同行,” which can be translated as “Journey Together,” is a key theme of the celebration.

OSG (Shanghai) Co., Ltd. (OSG China), OSG Corporation’s subsidiary in China, celebrated its 20th anniversary with a crowd of approximately 200 guests at the Xijiao State Guest Hotel in Shanghai, China on October 17, 2022. In addition to OSG employees, clients and business partners who have contributed to the company’s tremendous growth over the years were also invited to celebrate OSG China’s special milestone. The celebration centralized on the theme of “Journey Together” – a path of growth that is made possible by the support of employees and business partners over time that continues to the future.

Headquartered in Shanghai, OSG China was established in the Shanghai Waigaoqiao Free Trade Zone in 2001. Under the leadership of President Hitoshi Masuoka, OSG China has expanded from a team of seven to today’s 146 employees, with more than 20 branches and offices throughout the country.

A commitment to quality and customer communication has always been a core value of OSG. For the past 20 years, OSG China has actively developed new products, expanded new industries and markets to promote sales in China. OSG China has listened, anticipated, and actively reacted to customer needs with optimal solutions. In recent years, rapid industrial transformations caused by digitalization and advanced manufacturing technologies have accelerated productivity and quality control with lower costs. “Made in China” has gradually shifted to “made intelligently in China” by smart manufacturing with an upgraded industrial production sector.

In addition to business sustainability, environmental sustainability has become a top priority nationwide.

China has vowed to achieve carbon neutrality by 2060. To reduce carbon footprint and CO2 emissions, the development of new power systems with clean energy sources has become a major trend. Working in synergy with the OSG global network and nearly 85 years of expertise, OSG China actively cooperates to fulfill the needs of new energy enterprises to provide solutions for wind turbine and photovoltaic industries to contribute to energy regeneration.

OSG China is not only committed to providing optimum tooling solutions to drive greater results, but has also integrated the environment protection concept into its production and operation to fulfill its social commitment. As OSG China celebrates 20 years of success and the beginning of a new chapter, the company will strive to continue its role to contribute to a brighter future.



4. Some of OSG’s latest cutting tool innovations are displayed at OSG China’s 20th anniversary celebration.



5. OSG China’s employees and distributors pose for a group photo at the Xijiao State Guest Hotel in Shanghai, China.

OSG Participates at JIMTOF 2022

OSG participated at the 31st Japan International Machine Tool Fair (JIMTOF) from November 8 to 13, 2022 at the Tokyo Big Sight. JIMTOF is the largest industrial trade show in Japan and is held every even-numbered year in Tokyo. According to official data, more than 110,000 visitors and 1,000 exhibitors from 22 countries participated at JIMTOF 2022.

At the show, OSG announced the release of the A-XPF forming tap and showcased its latest A Brand product lineup in combination with workpieces related to micro-precision processing, automotive, aerospace, die and mold, robotics, and more. In order to meet the diverse needs of today's manufacturing, OSG has introduced specialized tools optimized for materials such as high-hardness steels and non-ferrous metals. Furthermore, 6C x OSG, a new brand of PCD tools, has made it possible to reduce processing costs for brittle materials such as cemented carbide and ceramics.

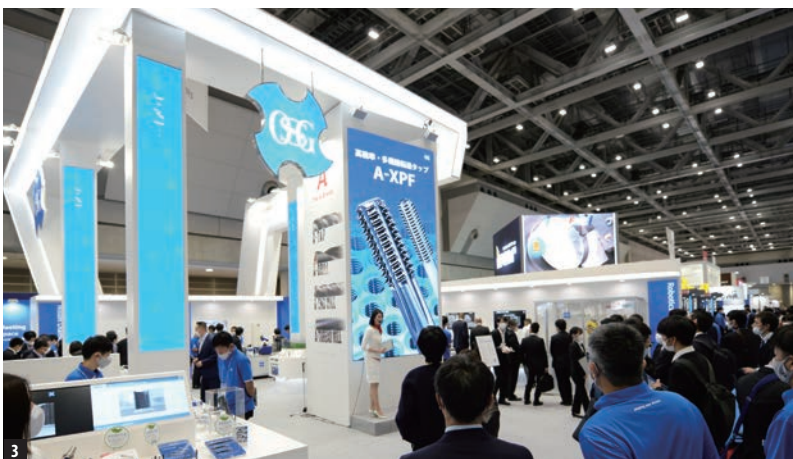


OSG staff gather for a group photograph before the start of JIMTOF at the Tokyo Big Sight.



1. OSG reception staff welcomes a visitor at the OSG booth.

2. A high-speed robotic deburring system is displayed at the OSG booth during JIMTOF. Collaboration by Yutaka, Nakanishi Inc., and OSG.



3. Presentation took place every 15 minutes each day at the OSG booth.



4. OSG sales representative explains a product to a visitor at JIMTOF 2022.

OSG Around the World

Employee Interview with **Sabine Esslinger**

Tell us about your background.

I received my training as an industrial business management assistant at a machine builder company in Germany through the dual education system, which combines apprenticeship and vocational education in one course. After the 4-year training, I went abroad for a few months to New York in the United States to attend language school to improve my English proficiency. This experience has enabled me to better communicate with clients, partners, and OSG employees all over the world today. After New York, I returned to Germany to start working at Hans Esslinger GmbH while studying for my bachelor's degree in management for industry (CCI).



Profile

Location: Germany

Position: Marketing Coordinator at OSG GmbH

Joined OSG: 2006

Motto: "Nothing is more constant than change. You can't control the wind, but you can adjust your sails."

Tell us about your experience at OSG and your daily routine.

I joined OSG through the company's acquisition of Hans Esslinger GmbH. Initially, I began my career as a customer service representative and was later promoted to my current position as marketing coordinator. Working in a small family business and working in a global group are totally different. The change has given me new opportunities to grow and learn.

As the company's marketing coordinator, I am responsible for the organization of exhibitions, sales promotions, internal and external meetings, communications with customers and partners, some parts of product management, and more. Every project is unique, and my tasks would vary daily.

The marketing department has a close working relationship with other departments like sales, management, human resources and IT. Communication is especially crucial in my work. It is not always easy to provide clear and correct information at the right time, in the right way, to the right person.



From right, Esslinger takes a selfie with her colleagues after a successful show at the AMB – the international exhibition for metalworking, held in Stuttgart, Germany from September 13 to 17, 2022.



1. Esslinger at Ogunquit, Maine, USA.



2. Esslinger at Soma Bay in Egypt. No matter if it is winter or summer, Esslinger loves to spend time at the beach.



3. Esslinger poses for a photograph in Rome, Italy during a weekend trip.

What is most challenging about your work?

Having to deal with different tasks every day is challenging. However, it is also what I love about my job. I get to be involved with a lot of different projects and people. The variety of tasks makes the job exciting, diversified and educational. Although tasks in marketing concerning exhibitions and workshops have been affected by the coronavirus pandemic in the past few years, there are still plenty of projects to work on, especially with the rise of digitalization.



What is unique about OSG Germany?

OSG in Germany grew in a very short period of time - from a small family company to a medium-sized industry company. In 2016, we established the OSG Academy for the development of new products and to serve as a training center for Germany and the European Market.

The OSG Academy was established next to the OSG Germany office in December 2016. The OSG Academy features a technology center for demonstrations as well as research and development for the German and European market. The primary goal is to provide customers, employees and academia a modern platform for training and testing. The OSG Academy in Germany serves as a central contact point for OSG Europe, providing support to regions including Italy, France, Spain, Scandinavia and the Benelux countries.

What is your favorite OSG tool?

The most impressive tool for me is a custom 60 x D deep-hole coolant-through carbide drill that OSG GmbH and OSG Corporation developed together for a German automobile manufacturer. To witness the tremendous effort by all the different departments worldwide in fulfilling the customer's needs was incredible.



ADO coolant-through carbide long drill.

How do you spend time on your day off?

Personally, everything is better as close as possible to water. I love almost all activities in and around water. I am also passionate about traveling, no matter if the location is in the city or countryside. Last but not least, nothing beats spending time with friends, enjoying good food and drinks. To stay healthy, I have been practicing Pilates for many years, which is a system of exercises intended to strengthen the human mind and body.



shaping your dreams

For additive manufacturing applications

AM-EBT • AM-CRE • AM-HFC • PXHF-AM

Carbide End Mills and Exchangeable Head End Mill



scan for details

