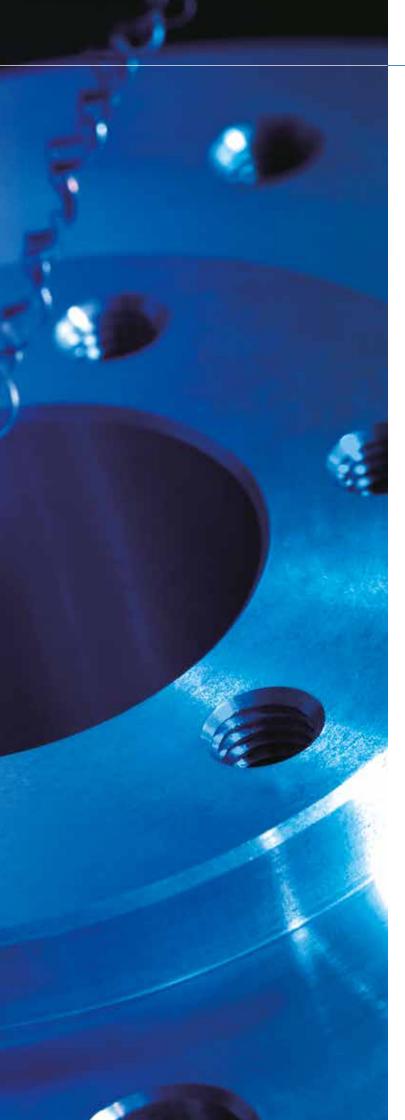


OSG EUROPE



shaping your dreams



OSG CORPORATION

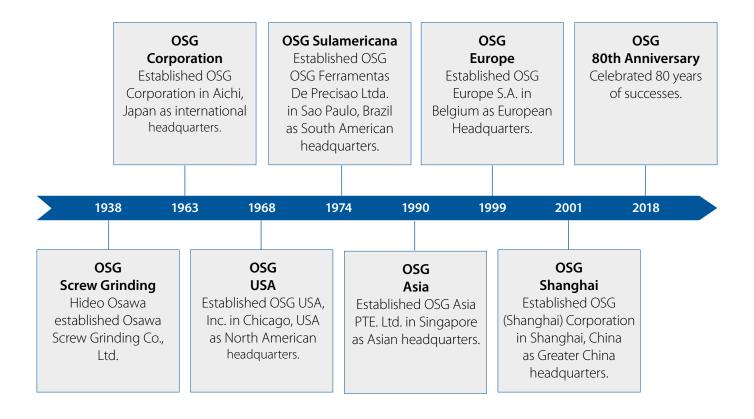
We listen to our customers, think from our customers' perspective, develop products that meet customers' needs and get them to the market first. In addition, we offer fine-tuned after-sales service, while providing information feedback to customers. OSG derives its strengths from a business model that integrates the sales of products, technology development and manufacturing, and makes active use of know-how gained through close communication with customers.

OSG's Corporate Philosophy: Global Presence

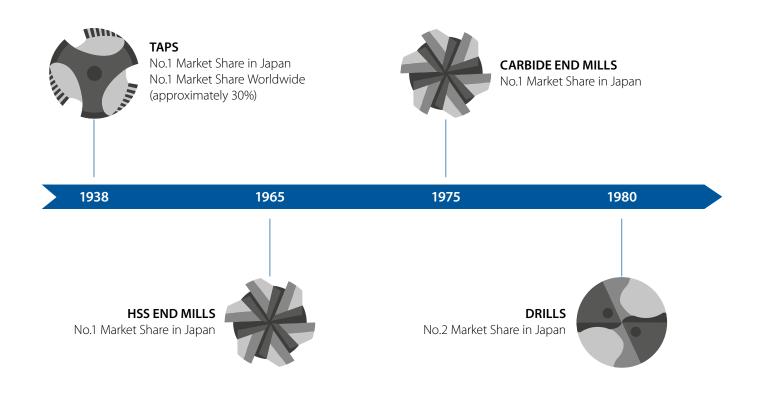
As a comprehensive cutting tool manufacturer, we make products that at a fundamental level contribute to enhancing people's quality of life. Through continuous growth, we have established a production, sales and technical support network spanning 33 countries.

Our corporate aim is to continue to expand our operations globally and strengthen our contribution to the manufacturing industries in the world.

MILESTONES



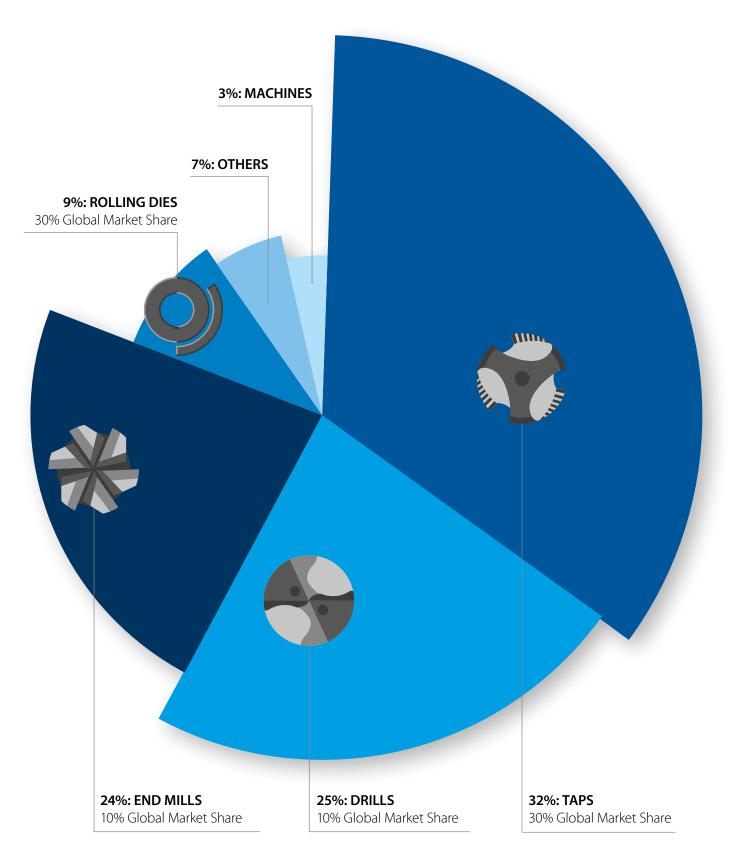
PRODUCT DEVELOPMENT TIMELINE



NET SALES BY PRODUCT

OSG enjoys high market share globally in four of its core product offering - taps, rolling dies drills and end mills.

FY2016 Consolidated Results Internal Data



OSG ACADEMY



In 2013 a new production facility and administration building with over 5000 m² was opened in Göppingen, Germany. Additionally a new complex opened in December 2016 next to the OSG Germany office and facility, the OSG Academy. The OSG Academy features a technology center for demonstrations including 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 equipment of the OSG Academy contains of a state-of-the-art multi-media systems, as well as an auditorium with 60 seats. The machine hall houses a horizontal G 350 5-axis machining center from GROB and a high-speed HSC 600 cutting center from EXERON. OSG also sees further use of the technology

center in tests for customers. OSG will test newly produced tools and geometries. The OSG Academy and the technology center have created a central contact point for OSG Europe. OSG branches from Italy, France, Spain, Scandinavia and the Benelux countries will be continually visiting.





NEW WEBSITE

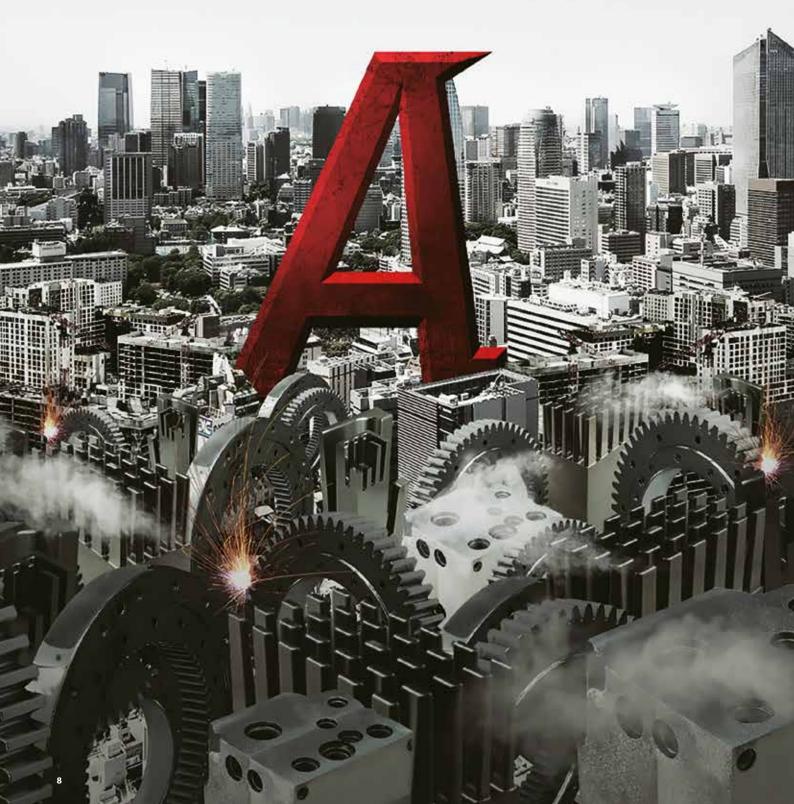
OSG Europe has redesigned its website by streamlining menus, simplifying navigation, building a responsive layout for all platforms. The new site has been crafted to be faster than ever and to be more user friendly. Shop online 24/7 and get your OSG tools delivered the next business day. In the near future we will expand our product offering with products from our group companies, such as SOMTA tools and NEXAM tools.

www.osgeurope.com

THE TOOLING MASTERCLASS

The A-Brand

The A Brand is OSG's premium tooling brand. With a commitment to only the best, the A Brand emanates innovations essential for shaping the future of global manufacturing.





A-TAP SERIES



A-SFT & A-POT High efficient multi-purpose tap

> A-CSF & A-CHT Carbide tap

XPF X performer forming tap

A-DRILL SERIES

ADF Carbide flat drill

> **AD & ADO** Carbide drill

ADO-SUS

Carbide drill for stainless steel & Titanium alloy

TRS 3-flute carbide drill

A-END MILL SERIES



AE-VMS Anti-vibration carbide end mill

PRODUCT GROUP

OSG strives to support the growth of the manufacturing industry worldwide with highly accurate and efficient products through its advanced technological know-how.

We provide specific solutions to our customers' problems by supplying highly competitive products manufactured to world-class quality standards.



Taps are used to cut screw threads on the inside surfaces of holes, creating the "female" half (nut) of the screw. High precision is of vital importance, particularly in areas such as automobile engines, which require precision screws. We offer a lineup of taps with diameters ranging from small to large and with specifications suitable for a wide variety of uses. We have the top market share for taps not just in Japan but also in the world. Drills are used to make holes in a wide range of surfaces. We have received high acclaim for our development of high-precision, high-value-added products for use in automotive and aircraft part manufacture, which demands advanced processing techniques and zero margin of error. End mills are used to cut and contour molds for plastic parts, for instance for electric home appliances, as well as diecasting dies for automotive parts and stamping molds. To meet today's demanding requirements, such as smaller size, lower weight and reduced cost, we see growing demand for carbide end mills that are excellent in both processing accuracy and durability. In this area, we are currently focusing on developing new products that utilize our advanced proprietary coating technique.

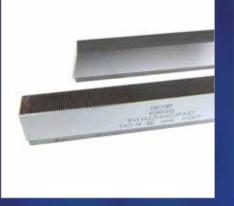


ROLLING DIES





GAUGES



Thread rolling dies are used to copy threading onto "male" screws (bolts); the process consists of rolling a metal bar between two thread rolling dies tightly pressed to each side. OSG manufactures cylindrical and flat rolling dies for screws, worms and serrations, thread rolling planetary dies and counter-flow rolling dies, in accordance with their intended use.



Indexable tools are used to shape metal molds and machine parts. While end mills are used for finishing, indexable tools are intended for rough cutting and contouring, and use disposable inserts attached to the tool body.



Gauges are used to check the final dimensions of screw threads and holes. OSG was an early adopter of changes in the Japan Industrial Standards (JIS), and today we offer a range of screw gauges based on ISO standards. Precision checking is an extremely important process because of the trends toward increasing product precision and compliance with international standards.

INDUSTRIES SERVED

Automotive

Cutting tool solutions that can correspond to the changing needs of the automotive industry. The automotive industry has been evolving rapidly in recent years through the new discovery of materials and technologies, prompting the need of sophisticated cutting tools capable of accommodating these new requirements. OSG is continuing to evolve and responding to changing needs through new innovations. OSG not only supplies powerful cutting tools for the automotive industry, but also provides tailored application solutions to facilitate better processing with higher efficiency and longer durability.

Aerospace

Tooling innovations designed to excel in difficult-to-machine aerospace materials. The aerospace industry's mission is to manufture more environmentally progressive, longer-range and faster aircrafts that require lower operating costs OSG's aerospace tooling shares the same mission. With over 75 years of experience and knowhow, our cutting tools are the industry standard for tough materials like CFRP.

Energy

Precision tooling solutions for large component manufacturing common in the energy industry. The energy industry provides fuel necessary for our daily lives and requires precision machining of large parts and difficult-to-machine materials that can withstand various hostile conditions. OSG offers optimized cutting tool solutions for the most demanding requirements of power generation metal cutting.





INDUSTRIES SERVED

Die & Mold

Comprehensive lineup of high precision, high quality end mills designed to fulfill every die In die / mold manufacturing, a part's quality is highly correlated to the performance of the overall product. OSG's end mills supply speed with size variations and unrivaled quality even for the most complicated mold production.

Heavy industry

Heavy's industry tough materials and large production require strong tools designed for performance. OSG offers large diameter tooling fot the machining of big components, common in the heavy industry such as shipbuilding and construction machinery. OSG has developed a spectrum of products designated for various materials and sizes to help manufacturers achieve the best possible result.

Dental industry

Precision tooling solutions for minimum component manufacturing common in the dental industry. OSG is pleased to offer a wide variety of milling and drilling solutions optimized for dental prosthetics manufacturing. OSG's dental line features proprietary coating and tool geometry engineered to excel in today's dental materials such as cobalt chrome, titanium, zirconium oxide, wax, PMMA and glass ceramics.





SMOC INDUSTRIES

SMOC Industries was founded in 1946. Its major activity consisted in trading cutting tools. During the 60's, the company went on specializing into this type of tools. In 1969, the factory started manufacturing broaching tools.

In 2016 turnover reached 10,5 M€ with 90 employees. SMOC products are considered from the highest technology & purchased worldwide (France, Germany, Italy, Japan, China, India...

Due to high demand in aeronautic & gas turbine business, SMOC opened a new facility 1600m2 dedicated to aeronautic and tool management in March 2017.

Thanks to its Engineering Dept, SMOC Industries is able to design in 3D on its own, tools based on customers' requirements/specifications. Besides manufacturing brand new tools, SMOC Industries disposes of other abilities, such as tool re-sharpening operations (without interruption, 7 days/a week), tool repair, management of tools (resharpening, life control, replacement, etc..) for some of its customers, technical assistance on their sites. Furthermore, the production at SMOC Industries is split into sectors, each one oriented on a kind of tool, according to our customers' wishes for interlocutors more specifically specialized in their ranges of tools (i.e. internal broaching tools, surface broaching tools and racks, fir-tree broaching tools, re-sharpening and repairing operations).



NEW FAMILY MEMBER

BRUNSWICK TOOLING

Brunswick Tooling was formed in 1948, and since that time have been specialised in the design and manufacture of high quality cutting tools. All Brunswick Tooling is designed and manufactured in-house with the only exceptions being heat treatment and coating processes. There is a rigourous inspection process to ensure quality standards are maintained.

As well as designing and manufacturing new cutting tools Brunswick Tooling has extensive skills in regrinding and servicing on almost any type of cutting tool, from a standard twist drill to some of the most complex form cutters and high performance drills.

Brunswick Tooling has a policy of continuous development through investment in new machine tools and equipment, product improvement and employee training. This ensures continuity of manufacture of high specification tooling.







SOMTA TOOLS



Somta Tools specialises in the design and manufacture of standard and custom tools for the industrial and "do it yourself" markets. Product categories can be summarised as drills, cutters, reamers, threading tools and toolbits, which are made in a wide range of sizes, using various materials (HSS and Solid Carbide) and Balzers PVD surface coatings to extend wear life. The factory in Pietermaritzburg manufactures 7000 standard items and a further 3000 madeto-order items to serve local markets and export markets in over 70 countries worldwide. From humble beginnings in 1954 with 20 employees, Somta has grown into one of the largest cutting tool manufacturers in the southern hemisphere, operating from offices and modern manufacturing facilities laid out over 3 hectares with a complement of over 400 employees. The company's vision of "To manufacture and supply superior cutting tools, driven by a culture of service excellence, to global and domestic markets" is supported by ISO 9002 which was achieved in 1991 and ISO 9001 in 2003 and 2008.

NEXAM CUTTING TOOLS

Over half a century of expertise

Since 1946, Desgranges has continually developed with the aim of offering its customers the most innovative solutions. Focusing on high performance and optimum quality, we have developed an across-the-board range of standard cutting tools, as well as tailor-made products created by our design office.

For more than a decade, our group has been working hand-in-hand with Desgranges Cutting Tools, Affût Rapid and Desgranges Aero to offer you an unprecedented synergy of skills. This enables us to keep track of our cutting tools throughout their life cycle, from design through sharpening to recycling, so that we can offer a full range of adapted and customized solutions. In tune with our most demanding customers, and always seeking a competitive edge, the Desgranges Group focuses on its excellent product offering that enables it to develop solutions ranging from machining sequence specification to tool management.

NEXAM



OSG SMART VENDING

With OSG Smart Vending you will take control on your cutting tools inventory. It reduces your material handling cost by up to 40%.

- High security
- Accountability
- Control
- Increased productivity
- 24/7 availability
- Advanced software







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Tool specifications subject to change without notice.

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