



OSG industry solutions

# APPLICATION SOLUTIONS

Volume 1

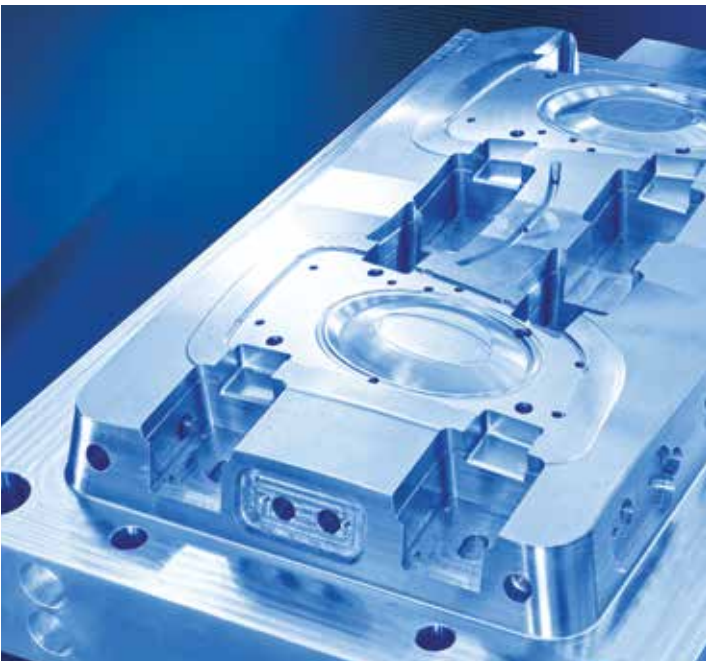


# INTRODUCTION

OSG is the world's largest manufacturer of round cutting tools. Established in 1938, OSG has a long-standing reputation as a total solution cutting tool provider throughout the manufacturing industry. Gaining the support and trust of our customers has always been OSG's commitment. Through our innovative technological know-how, exceptional services, and out-of-the-box thinking, we can offer tailored support for your specific application needs.





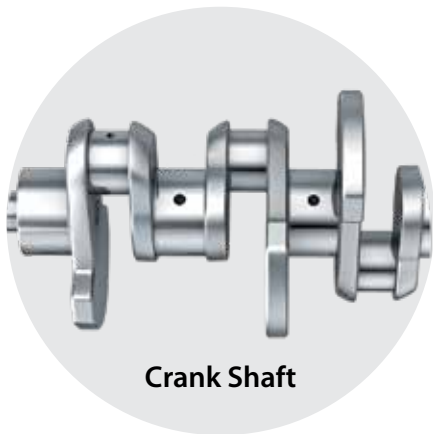
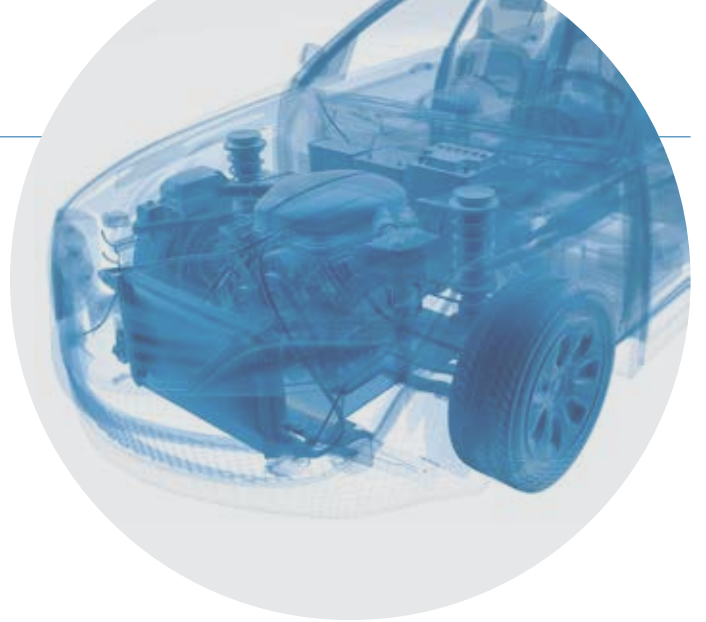




# AUTOMOTIVE



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.



**Crank Shaft**



**ADO-30D**



**ADO-5D**



**A-OIL-SFT**



**PSE**



**FILLET ROLLERS**



**Turbo**



**ADO-SUS**



**WX-MS-GDS**



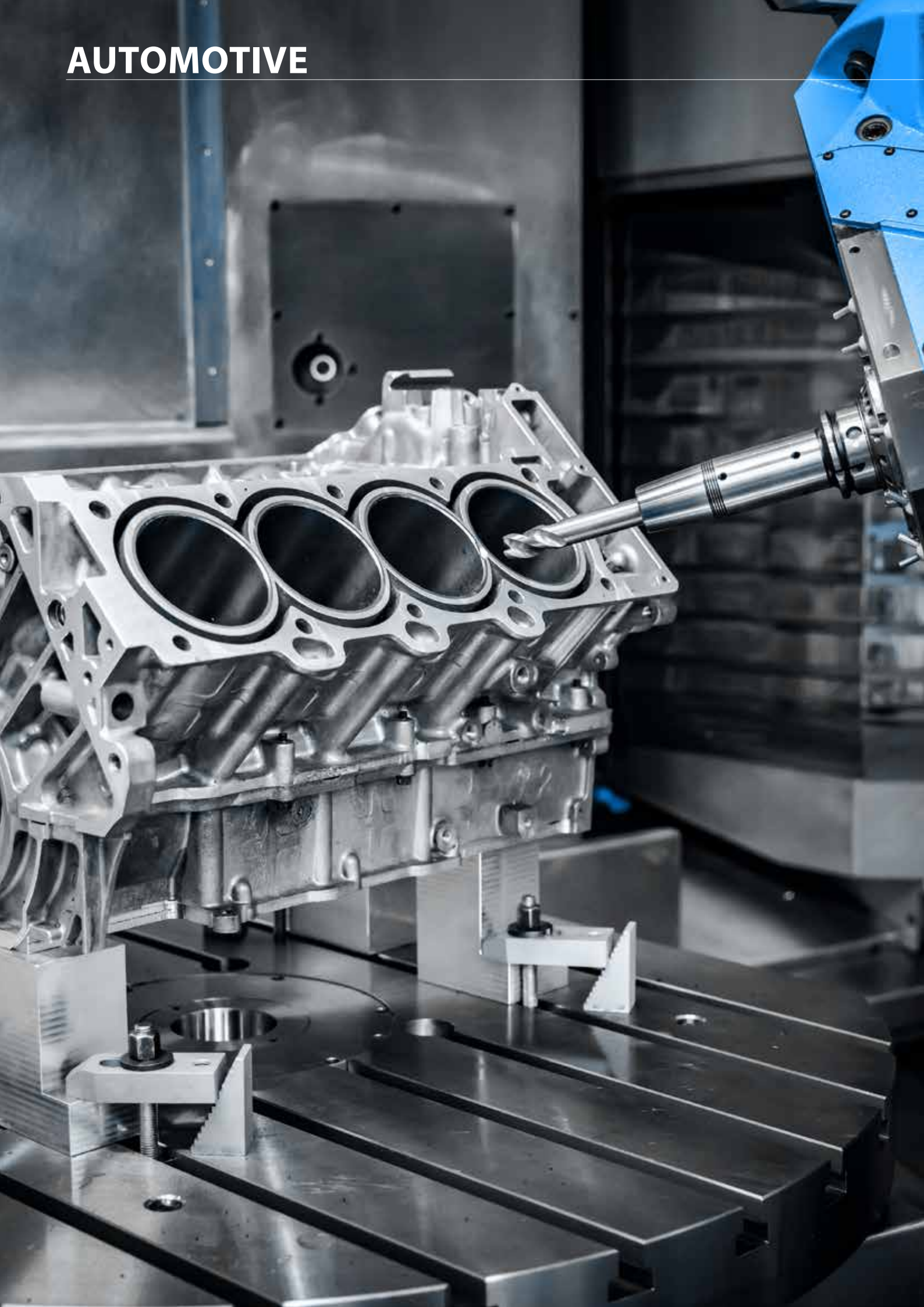
**A-SFT**

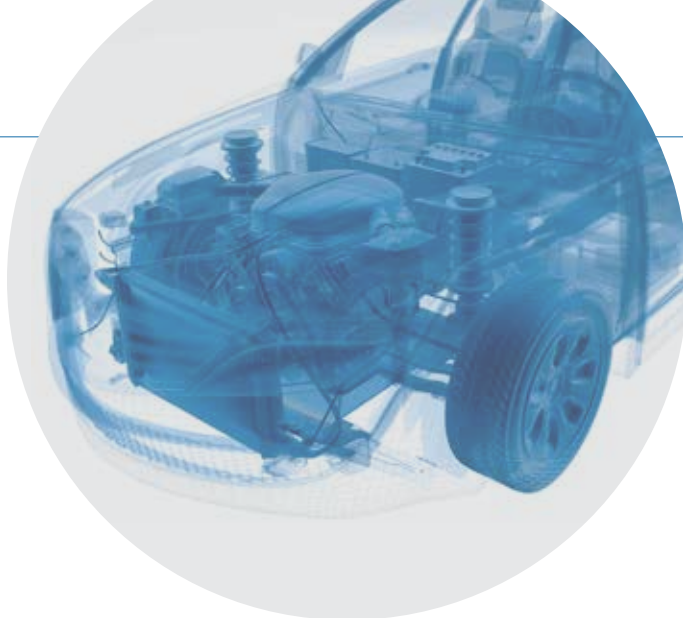


**GAUGES**



# AUTOMOTIVE





**Common Rail**



**ADO-SUS**



**ADO-3D**



**WX-MS-GDS**



**WX-PNC**



**Connecting Rod**



**ADO-10D**



**UVM**



**S-XPf**



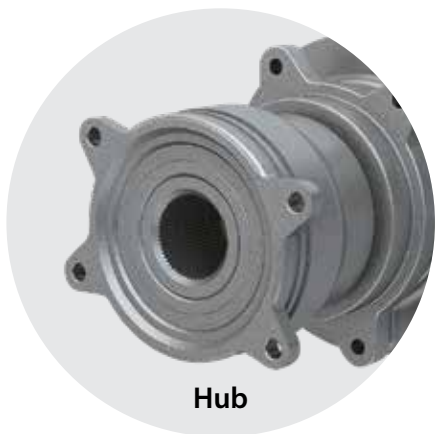
**CRM**



**PSE**



**Step Drills**



**Hub**



**AD-4D**



**PXD**



**A-POT**



**PSE**



# AEROSPACE





Tooling innovations designed to excel in difficult-to-machine aerospace materials. The aerospace industry's mission is to manufacture 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.



**Actuator**



**ADO-SUS 3D**

Coolant-through carbide Drill series for stainless steels and titanium alloy



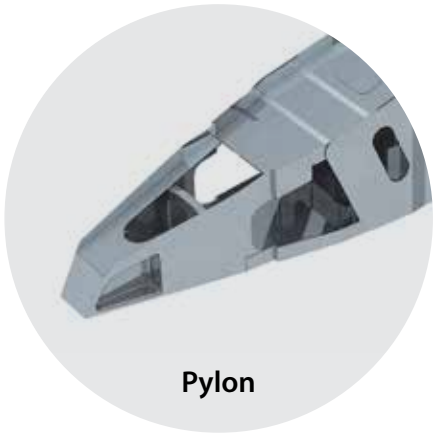
**A-SFT-HL**

High efficiency multi-purpose tap series for Helicoil/EG/STI



**UVX-NI-5FL**

Multiple length, 5 flutes corner radius endmill for Ni-based superalloy



**Pylon**



**ADO-SUS 3D**

Coolant-through carbide drill series for stainless steels and titanium alloy



**Landing Gear**



**OSG Phoenix Roughing**  
OSG Phoenix

# AEROSPACE STRUCTURAL PARTS



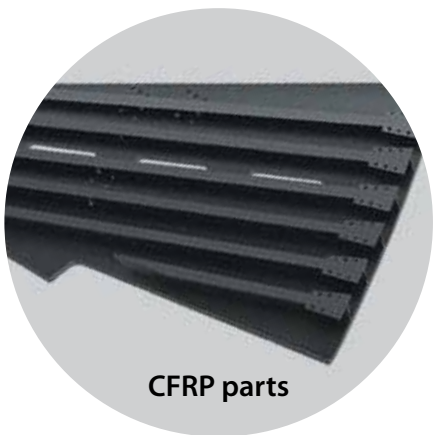




**AERO-ETS**  
**Short flute rougher**  
3FL carbide endmill with corner radius  
and short length of cut



**AERO-EXTL**  
**Long flute wall finisher**  
3FL carbide endmill with corner radius  
and long length of cut



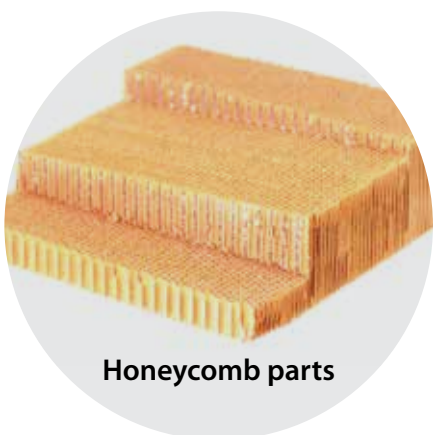
**DIA-BNC**  
**Nick router**  
Diamond coated fine nick rougher



**DIA-REC**  
**Roughing router**  
Diamond coated roughing router



**PSEL + XC5040**  
**OSG Phoenix roughing endmill**  
OSG Phoenix



**HBC60**  
60 degree helix compression router

# AEROSPACE ENGINE







**Drilling and Threading**



**WX-PNC**  
Thread mill for non-ferrous metal  
and heat-resistant alloy



**WHO55-3D**  
Coolant-through carbide drills for  
high hardness steels



**Drilling and Threading**



**WHR-NI-POT**  
Spiral point tap for Ni-based superalloy



**Milling**



**PRC + XC5040**  
OSG Phoenix radius cutter  
OSG Phoenix



**UVW-NI-5FL**  
Multiple length, 5 flutes corner radius  
endmill for Ni-based superalloy

**ENERGY**

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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.



**Turbine blade**



**PRC**



**PFB**



**PXM**



**NEO-CR-PHS**



**Slewing bearing**



**PD**



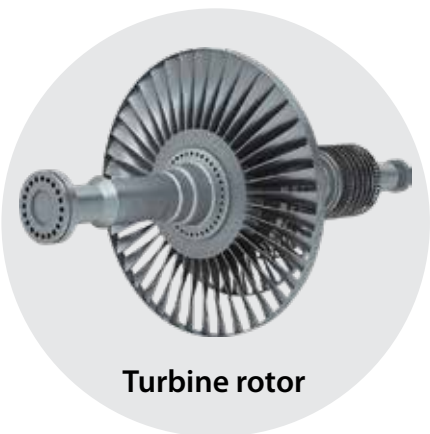
**A-SFT**



**PHP**



**VXL-SFT**



**Turbine rotor**

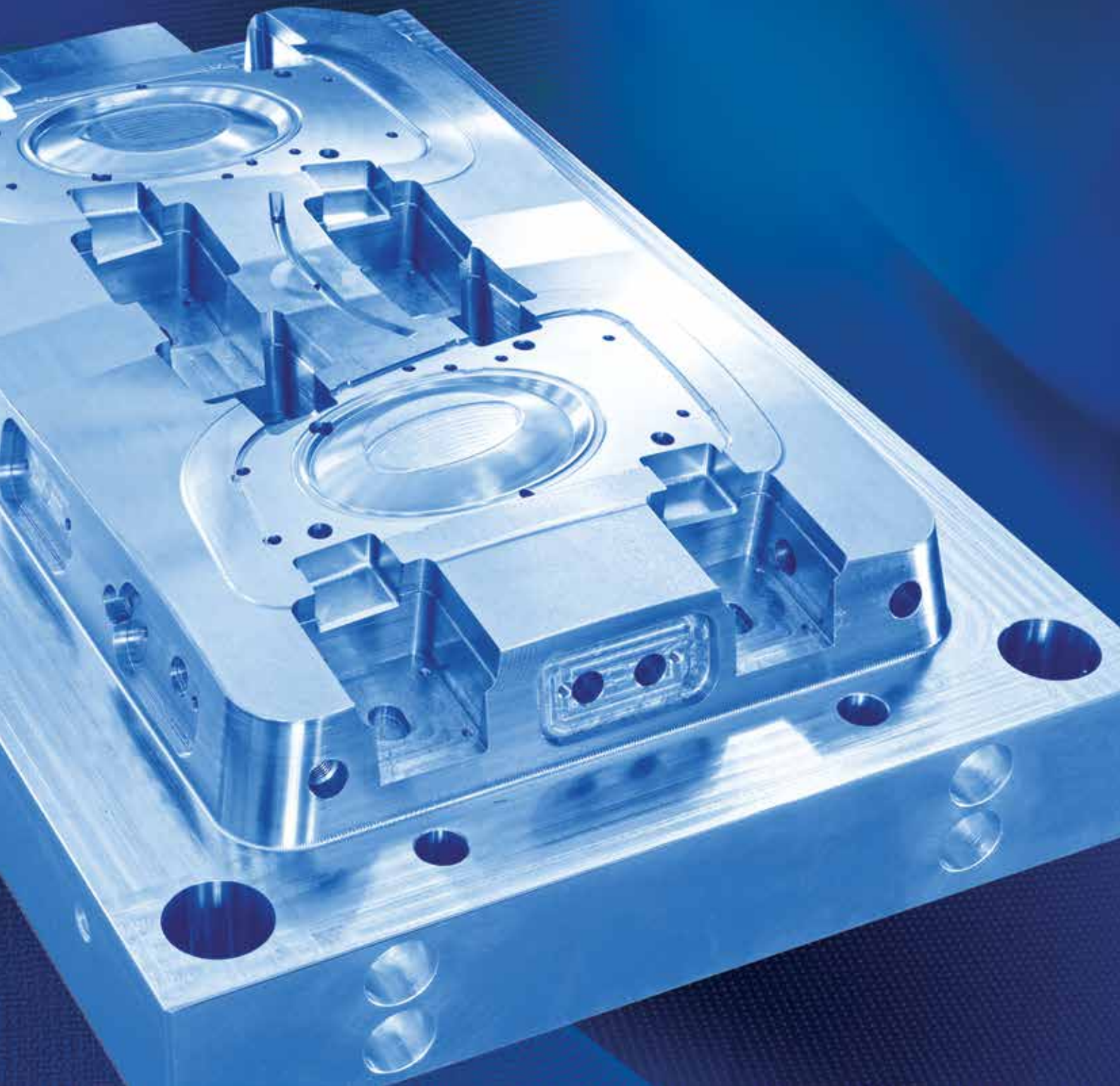


**Christmas cutters**



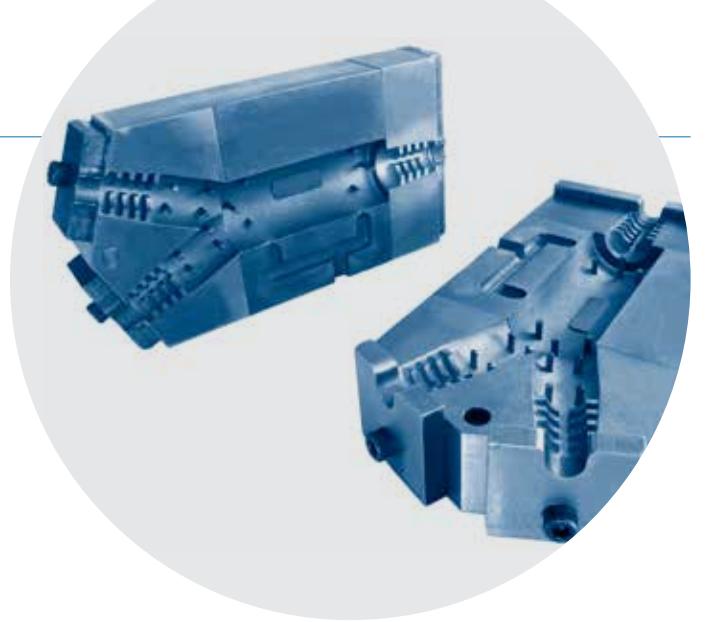
**Dovetail cutter endmills**

# 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.



**Processing Case 1**



**PHX-LN-DFR**



**PHX-PC-DFR**

**Processing Case 2**



**PHX-PC-DFR**



**PHX-PC-DBT**



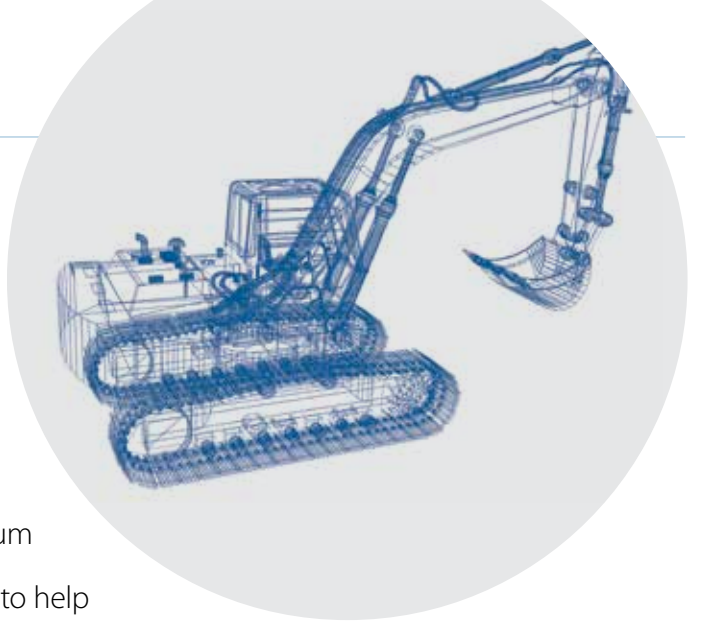
**WXS-LN-EBD**

**HEAVY INDUSTRY**





Heavy's industry tough materials and large production require strong tools designed for performance. OSG offers large diameter tooling for 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.



**Slewing bearing**



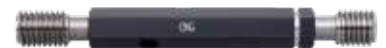
**ADO-5D**



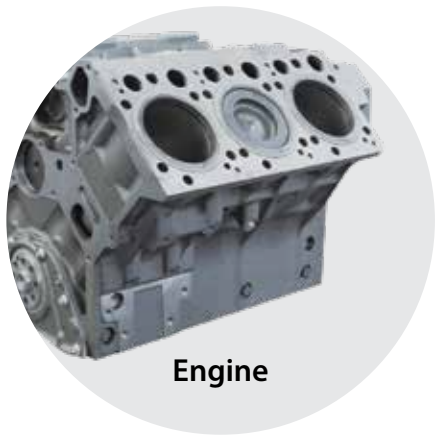
**A-SFT**



**PHP**



**GAUGES**



**Engine**



**ADO-10D**



**TRS**



**PAO**



**A-CHT**



**Hydraulic Control Valve**



**ADO-5D**



**TRS**



**PAO**



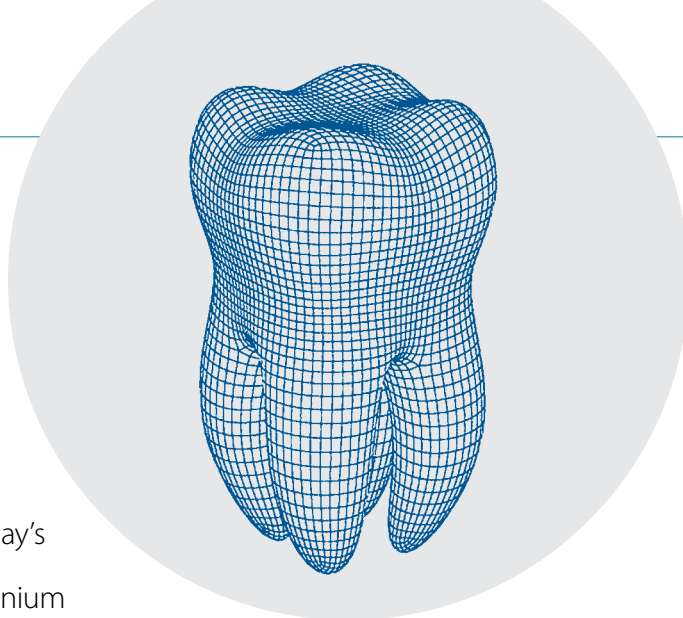
**PXD**

# 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.



**DG**



**WX-MS-GDS**



**WXS**



**MRS-GDL**



**WXL**



**WH-VM-PNC**



**FX-LDS**



**ED-BS**



**COBALT CHROME**



**TITANIUM**



**ZIRCONIUM**



**WAX**



**PMMA**



**HYBRID RESIN**



**GLASS CERAMICS**

# THE OSG ADVANTAGE



## Tailored Solution

OSG's marketing, development and manufacturing organizations work closely together to offer processing methods optimized for each customer's cutting environment. Our capabilities as a provider of total solutions for cutting tasks, including our own regrinding and coating operations, allow us to help customers to improve their productivity and reduce costs.



## Advanced Technology

OSG strives to provide total solutions for the pressing needs of its customers by supplying high added-value products and services based on its advanced technology. Already the global leader in taps, end mills and rolling dies, our goal is to become the world's number-one manufacturer of hole-making cutting tools. OSG will continue to use its proven technological capabilities to build customer confidence and enhance its reputation by creating tools that provide world-class quality and performance.



## Gauge Calibration System

OSG offers over 8,000 high precision and quality gauges to support our clients' threading operation and inspection. We also offer a calibration service for thread gauges and plain gauges with calibration certificate / traceable certificate (additional fee applies).



## Tooling Reconditioning Services

Tool reconditioning services provided by the OSG Group restore used tools to the same sharpness as new products. Because even worn cutting tools and rolling dies can be restored to new condition, reconditioning is more economical for customers than the purchase of new tools. With regrinding facilities in 14 overseas countries, the OSG Group can respond to customer needs worldwide.

## OSG Academy

The so-called "OSG's brains," where designing, testing, producing, and evaluating of the latest cutting tool technology take place, are located at the OSG Academy. Housing over 40 of the latest CNC machining centers, along with OSG rapid prototype grinding machines, our engineering team strives to offer clients the best possible solution for their individual application needs.



**Design Center**



**Global Technology Center**



# GLOBAL NETWORK

With production facilities located in 15 countries around the world, OSG has established a stable and efficient product supply system for the global market. In addition, our global network of sales offices in 30 countries is structured to both monitor customer needs in each country and also to supply products with the shortest possible delivery lead time.

We will continue to expand and enhance our services in support of our core products, such as regrinding and recoating, while working as closely as possible with our customers to provide comprehensive after-sales services and new cutting edge solutions.





*shaping your dreams*

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