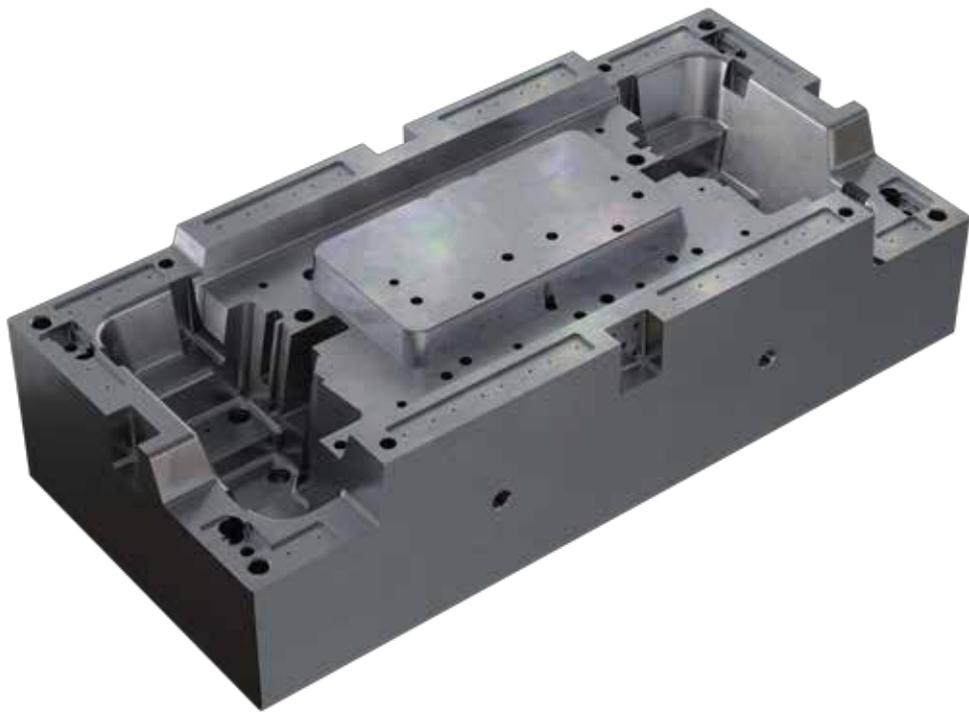




Die & Mold Machining

Tool Solution for Industries



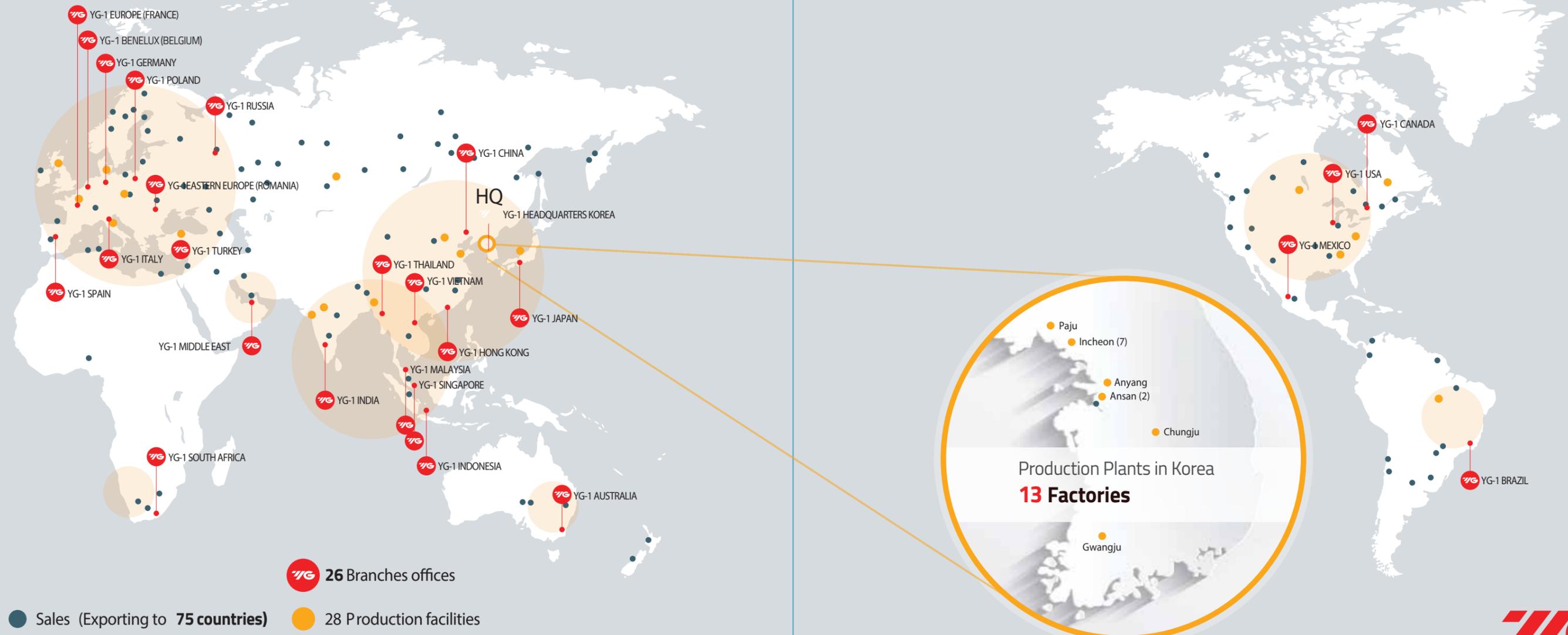
YG-1 AND THE DIE & MOLD INDUSTRY

Currently, die & mold activities are fully part of the mass production industry, to support the demand of sectors such as automotive, aerospace, electronic, packaging and more.
 The new available technology, such as sophisticated CAM software and new generation machine tools, always faster and with better performance, for the D&M customers, are the ideal and necessary tools to achieve targets such as high quality finished products, longer life of the molds and even faster machining with greater profitability.
 For the D&M industry, there is a need to be able to count on a cutting tools company with reliable tools to deal with the processing of free form shapes.

YG-1, a global leader in the manufacture and application of cutting tools, brings you these innovations in the form of superior tooling, expert support and world-class international delivery.

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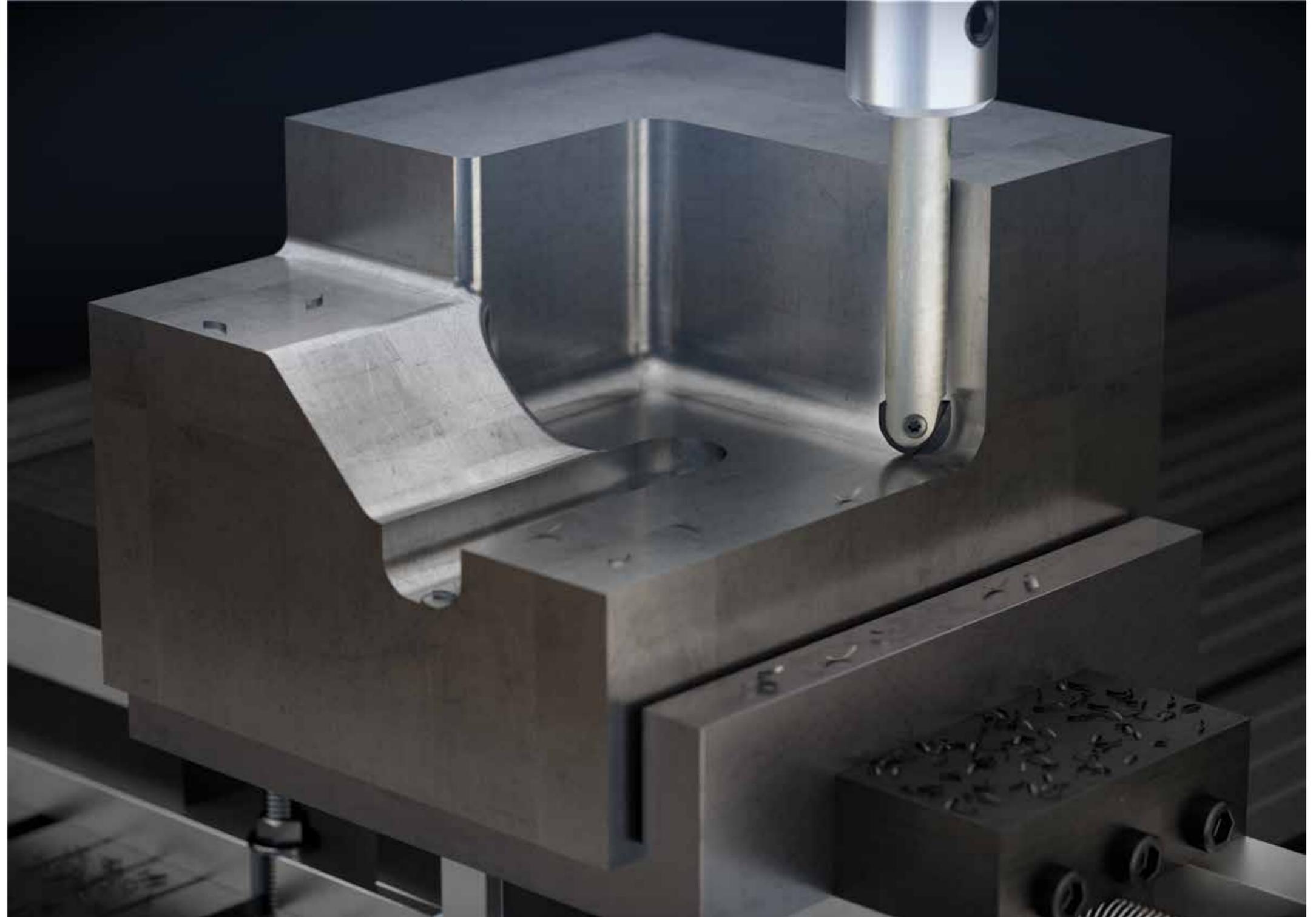
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DIE & MOLD MACHINING

When speaking of molds, there are different types in the world. For example: molds for plastic materials, sheet metal cutting and forming, die-casting, rubber molding, blow molds, and forging molds. Within the mold industries there are also several defined spare parts that complete the mold structure. This great variety implies the machining process on a wide range of materials, such as pre-hardened steels, hardened steels, cast iron, aluminum for prototypal molds, stainless steel for manifold and hot runner parts, graphite and copper for electro-erosion processes. The abundant tools YG-1 offers are able to support the needs of the D&M customers, whatever the material to be processed and the application to be implemented.



APPLICATIONS



STEEL & PRE-HARDENED STEEL

The D&M industry makes use of different types of steels, according to the type of mold to be made. Normally they are divided into 2 families:

Hot work steels (molds for plastic injection, rubber, forging, die-casting)

Cold work steels (dies for shearing and plate deformation)

In the latter type of molds, the use of cast iron is also frequent.

Die and Mold industry needs a right partner to machine a wide range of different pre hardened

YG-1 can cover that demand, whatever materials, application and machines

FACING / ROUGHING / PRE-FINISHING

YG MILL [General & -TR Chipbreaker]

90°, 45° and Round Inserts



YG Mill Line is our new line Premium Indexable milling tools. With 90, 45 degrees and round inserts, shell and especially shank cutters, these tools are invaluable in Mold & Die machining

COPYING / PROFILING I-XMILL



The versatile i-Xmill line, with its' Corner Radius and Ball Type changeable inserts was developed with Die & Mold industry in mind. Despite the long shank, the tool is virtually vibration free and thus provides excellent results in deep pockets - one of the most common applications in machining Die & Mold sets.

COPYING / FINISHING

4G MILL

Solid carbide end mills line, For wide range of materials. Range with 4 and 6 flutes, with chamfer, ball nose and corner radius profile



V7 PLUS

Solid carbide end mills line, For wide range of materials. Range with 4 and 6 flutes, with chamfer, ball nose and corner radius profile. The 6 flutes version is suitable for fine side finishing and trochoidal milling also



COPYING / FINISHING

I-SMART



YG-1 Delivers you great value in the form of reduced cost and universality of use, while bringing the quality and market proven reputation of 4G mills in the form of our New i-Smart tools. Featuring an exchangeable head design with many geometries featuring straight edge, corner radius and ball heads, making it ideal tool for die and mold industry.

DRILLING

YG DRILL



YG-Drill is one of YG-1's newest products, and is a part of our ever-growing selection of indexable tools. Experience the tremendous cost reduction and high standard of quality that our indexable drills provide. Our selection of chipbreaker geometries is ever growing and our carbide grades are providing you a wide selection of choice. Perfect for large diameters!

DRILLING I-ONE



For drilling larger holes, try our new line of cost-effective exchangeable head I-One drills, made to exact standards and using premium grade materials. The heads are H-coated carbide, while the holders are made from premium steel.

HOLEMAKING

CARBIDE REAMERS



Precision is paramount in machining top quality die and mold sets. Our line of straight and helical flute carbide reamers deliver perfectly sized holes each time.

DEEP DRILLING

DREAMDRILLS - MQL



For very deep holemaking YG-1 provides the DreamDrills-MQL line of long drills. tough and durable these tools can also make use of the MQL technology and normal cooling method to reduce the heat generated and thus greatly prolong the tool life

DRILLING

DREAMDRILLS - FLAT BOTTOM



Die and Mold set manufacturing often require drilling on sloped and uneven surfaces. YG-1 DreamDrills- Flat Bottom feature a flat point angle, is a perfect solution

DRILLING AND FAST DRILLING

DREAMDRILLS - GENERAL



Dream Drills - General are our true and tested workhorse. Featuring a wide variety of sizes and flute length, it's the perfect choice

DREAMDRILLS - HIGH FEED



One of YG-1's newest additions to your arsenal of holemaking tools. Featuring a 3-Flute design it provides an increase in productivity of up to 1.6 times compared to conventional 2 flute designs!

We can propose our full line for every Die & Mold application, for milling, drilling and tapping

APPLICATIONS HIGH HARDENED STEEL



High hardened steel is used widely in the die and mold industry to manufacture parts that require high wear resistance.

The machining applications for these kinds of materials and the ever-increasing tool life for productivity, give D&M customers the right to demand an excellent and suitable cutting tools partner.

YG-1 has every solution to achieve these demands, in the form of our excellent X5070, YG Mill, i-Xmill families for milling, and DREAMDRILLS-hardened steel for drilling process.



MILLING
X5070

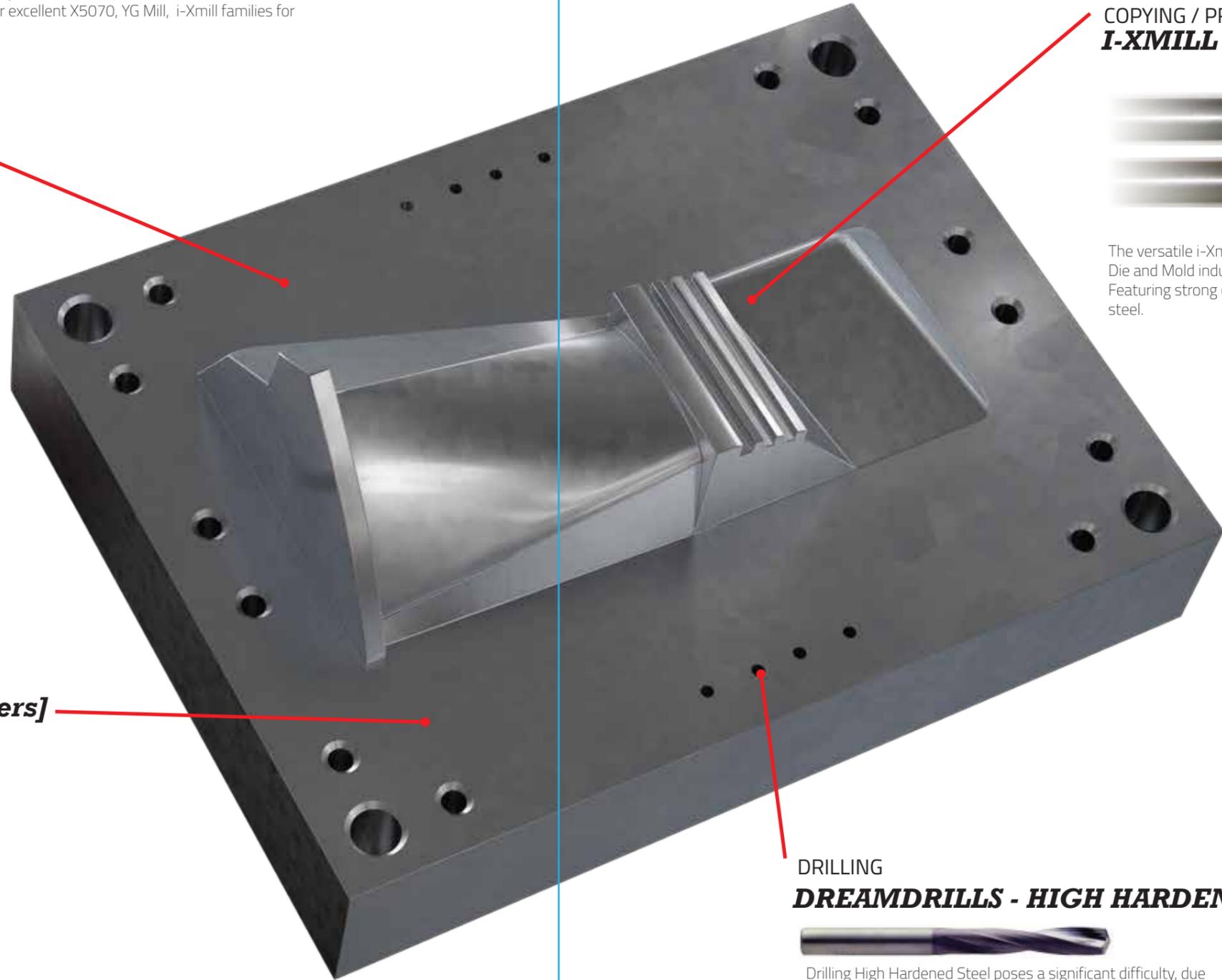
X5070 is an excellent product that made a name for itself in the market. Featuring the "Blue Coating" it is especially made to cover the Hrc50-70 ranges of hardened steel. Featuring a variety of geometries, flute numbers and sizes, it is a perfect solution for a multitude of machining applications.

FACING AND PROFILING

YG MILL [-TR Chipbreakers] 90° and Round Inserts



YG Mill Line is our new line Premium Indexable milling tools. With 90 degrees and round inserts, utilizing the TR- tough material chipbreaker geometry our Indexable tools are the perfect choice.



COPYING / PROFILING **I-XMILL [for high hardened]**



The versatile i-Xmill line, which is specifically developed with Die and Mold industries in mind is once again up to the challenge. Featuring strong carbide inserts that can easily machine hardened steel.

THREADING **CARBIDE TAP THREAD MILL**



YG-1 offers an extensive catalog of threading solutions. Helical Point, Helical and Straight Flute, Cold forming Taps as well as Thread-milling tools are available, featuring some truly innovative technologies. YG-1 provides a solution to any threading task in machining die and mold sets

DRILLING **DREAMDRILLS - HIGH HARDENED**



Drilling High Hardened Steel poses a significant difficulty, due of the tremendous forces generated, forces that very few drills can withstand. "DREAM DRILLS - High Hardened" is specifically designed to handle the task with ease

We can propose our full line for every Die & Mold application, for milling, drilling and tapping

GENERAL
APPLICATIONS
 STAINLESS STEEL



The molds are more and more a complete production systems and, at the same time, complexes that imply different characteristics in their components, among which the corrosion resistance (for example for hot runner and manifolds). Hence the use of stainless steels. Thanks to the characteristics of its products, YG-1 is able to support D & M Customers also for the processing of these specific materials

DRILLING
DREAMDRILLS - INOX

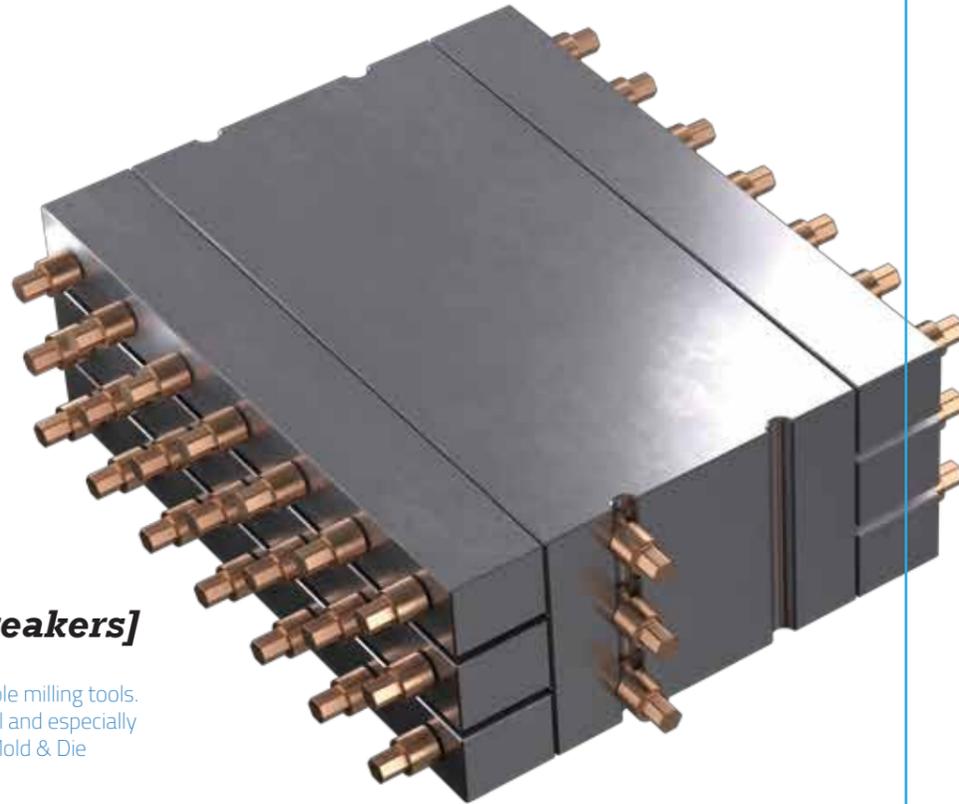
Dream Drills - Inox are our range of drills for stainless steel. Featuring channels for cooling fluid, these drills make working with stainless steel an easy task



DRILLING
YG DRILL [ST-Chipbreaker]
 square insert with sharp ST chipbreakers



YG-Drill is one of YG-1's newest products, and is a part of our ever-growing selection of indexable tools. Covering as much materials as possible is one of YG-1 goals in the field. Now larger diameters and improved cost-efficiency is made its way to stainless steel, with the introduction of the ST chipbreakers



FACING AND PROFILING
YG MILL [-ST Chipbreakers]
 90° and Round Inserts

YG Mill Line is our new line Premium Indexable milling tools. With 90°, 45 degrees and round inserts, shell and especially shank cutters, these tools are invaluable in Mold & Die machining



HOLEMAKING
CARBIDE REAMERS



Precision is paramount in machining top quality die and mold sets. Our line of straight and helical flute carbide reamers deliver perfectly sized holes each time.



TITANOX POWER

Solid carbide end mills line, for Titanium, difficult to cut materials and Stainless steel also. Available with 4 flutes double core technology, 5 flutes end mills and rougher profile. For full slotting and side high performance milling

THREADING
PRIME TAP
COMBO TAP [for SUS]
COLD FORMING TAP



YG-1 offers an extensive catalog of threading solutions. Helical Point, Helical and Straight Flute, Cold forming Taps as well as Thread-milling tools are available, featuring some truly innovative technologies. YG-1 provides a solution to any threading task in machining die and mold sets



I-XMILL

Stainless steel is also covered



V7PLUS

Solid carbide end mills line, For wide range of materials. Range with 4 and 6 flutes, with chamfer, ball nose and corner radius profile. The 6 flutes version is suitable for fine side finishing and trochoidal milling also



We can propose our full line for every Die & Mold application, for milling, drilling and tapping

COPPER

Although we try to make the forms on the mainly milling molds, the electro-erosion operations are still very much used when the shapes are difficult to mill. EDM implies for the printer the need to make precise electrodes by working with copper alloys and graphite. YG-1, attentive to these needs, offers tools dedicated to these materials



THREADING
PRIME TAP
COMBO TAP
THREAD MILL
SYNCHRO TA

YG-1 offers an extensive catalog of threading solutions. Helical Point, Helical and Straight Flute, Cold forming Taps as well as Thread-milling tools are available, featuring some truly innovative technologies. YG-1 provides a solution to any threading task in machining die and mold sets



DRILLING
DREAMDRILLS - INOX

Dream Drills - Inox - although designed for Stainless Steel in mind, are perfect for copper as well, since these materials share the same characteristics. Featuring cooling fluid channels



HOLEMAKING
CARBIDE REAMERS



Precision is paramount in machining top quality die and mold sets. Our line of straight and helical flute carbide reamers deliver perfectly sized holes each time.

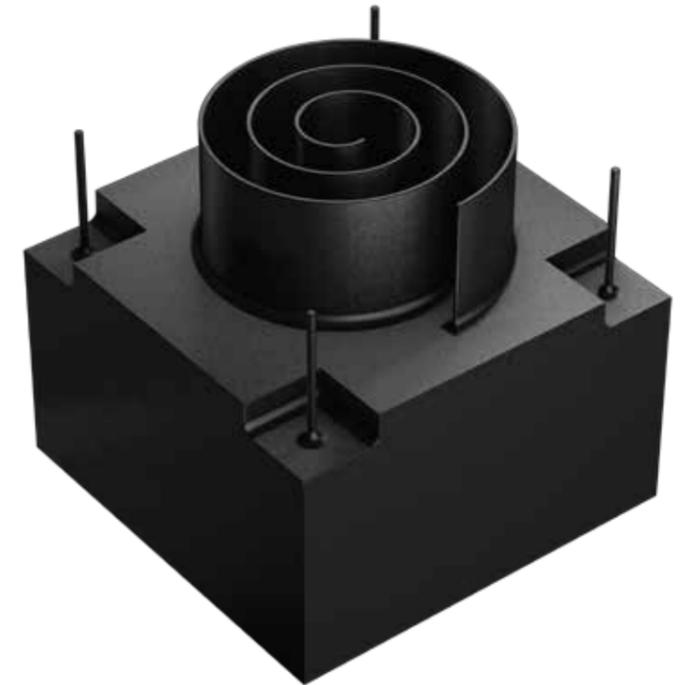
CRX-S

Solid carbide end mills line, specific designed for Copper machining. The geometry and diamond coating achieve results of fine milling and long tool life. Range of diameters from 0,5 mm



GRAPHITE

Although we try to make the forms on the mainly milling molds, the electro-erosion operations are still very much used when the shapes are difficult to mill. EDM implies for the printer the need to make precise electrodes by working with copper alloys and graphite. YG-1, attentive to these needs, offers tools dedicated to these materials



D-POWER - GRAPHITE

Solid carbide end mills line, specific designed for graphite machining. The geometry and diamond coating achieve results of fine milling and long tool life. Range of diameters from 0,2 mm



ALUMINUM

Aluminum alloys are frequent to find in the production of propotype molds, molds for low production and some accessory parts.

The characteristics of these alloys lead to a specific attention to the need for adequate preparation of the tools, in order to avoid gluing and to allow adequate and high cutting speeds. Thanks to the specific ranges for aluminum alloys, with suitable geometries and coatings, YG-1 is able to offer high performance tools even for these materials



FACING

● **YG MILL [-AL chipbreaker]**

90° and 45° Inserts

YG Mill Line of indexable tools is truly versatile. YG-1 provides an excellent solution even for cutting aluminum. Experience the increase in productivity that our inserts with AL chipbreakers and new YG100 and YG10 grades provide you with.



**HOLEMAKING
CARBIDE REAMERS**



Precision is paramount in machining top quality die and mold sets. Our line of straight and helical flute carbide reamers deliver perfectly sized holes each time.

DREAMDRILLS - ALU



Utilizing the same technologies that make our Alupower Endmills such an excellent product, we made the perfect holemaking solution for you - the DREAMDRILLS - ALU. Yet another welcome addition to your DREAM DRILLS line of tools



**THREADING
SYNCHRO TAP
THREAD MILL**

YG-1 offers an extensive catalog of threading solutions. Helical Point, Helical and Straight Flute, Cold forming Taps as well as Threadmilling tools are available, featuring some truly innovative technologies. Excellent choice for threading aluminum as well as other materials.

**ALU-POWER HIGH PRECISION
ALU-POWER HPC HIGH PRODUCTIVITY**

Solid carbide end mills line, Specifically designed to cut aluminum, Excellent for preparing prototype die and mold sets. Suitable for a variety of applications - side cutting, slotting, ramping. Comes in a variety of geometries - straight, corner radius and ball are available.

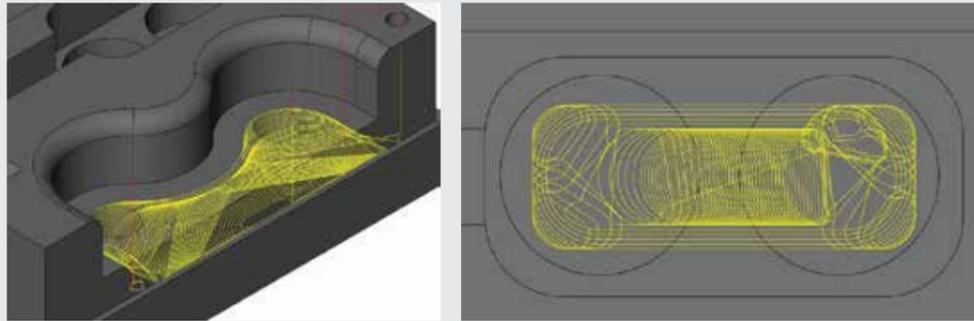


The YG-1 Group has two major cross-business research centers that serve all global composite machining activities, thus optimizing synergies between them. These research centers maintain and develop the highest level of skills and key technologies for the YG-1 Group. Their size and multi-disciplinary focus facilitate effective interaction with the industry world, early notice of scientific advances, and the recruiting of talents. YG-1 has also more development units around the world, facilitating research into new products more closely tailored to customer needs and market requirements.



DESIGN, SIMULATE, PRODUCE AND TEST IN THE INDUSTRY'S MOST ADVANCED FACILITY

INTRODUCING THE ULTIMATE SOLUTION IN TOOL-MAKING TECHNOLOGY



DESIGN

- Advanced CAD/CAM assisted application simulation to assure precise design integrity
- On-site R & D specialists for advanced high-production solutions
- Expertise & problem solving for the Die & Mold industry as well as other industries
- Designing our products to meet the needs of the client each time

SIMULATE

- Computer aided simulation to assure cost-effective manufacturing
- Machining solutions for steel, stainless steel, hard metals and non-ferrous materials utilized in Die & Mold making.
- We can help you optimize paths for your YG-1 tools , with the help of our experts , insuring that you can get the best productivity rates.

PRODUCE

- Twenty-five 5-axis CNC grinding machines for rapid production
- World-class sub micron carbide blanks to assure increased tool life
- Latest generation in PVD and CVD coatings for enhanced wear resistance and edge protection



HIGH QUALITY PRODUCTS AND ON TIME DELIVERY FOR WORLD-WIDE CUSTOMERS

Since 1982, YG-1 has been committed to Quality, Innovation and the unique customer experience. Our performance and experience has granted YG-1 the Global impression of one of the leading manufacturers of high quality cutting tool solutions. This Global footprint expands over 75 countries, with international logistic centers, pledging to our customers to give the best service available today - and tomorrow.

• EUROPE

- BELGIUM
- CROATIA
- CZECH REPUBLIC
- DENMARK
- FINLAND
- FRANCE
- GERMANY
- HUNGARY
- ITALY
- LITHUANIA
- NORWAY
- POLAND
- PORTUGAL
- ROMANIA
- RUSSIA
- SERBIA
- SLOVENIA
- SPAIN
- SWEDEN
- SWISS
- THE NETHERLANDS
- TURKEY
- UNITED KINGDOM

• ASIA PACIFIC

- AUSTRALIA
- CHINA
- HONG KONG
- INDIA
- INDONESIA
- IRAN
- ISRAEL
- JAPAN
- KINGDOM OF SAUDI ARABIA
- MALAYSIA
- PAKISTAN
- PHILIPPINES
- SINGAPORE
- SOUTH KOREA
- TAIWAN
- THAILAND
- UNITED ARAB EMIRATES
- VIETNAM

• AMERICAS

- BRAZIL
- CANADA
- COLOMBIA
- MEXICO
- UNITED STATES

• AFRICA

- EGYPT
- SOUTH AFRICA

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