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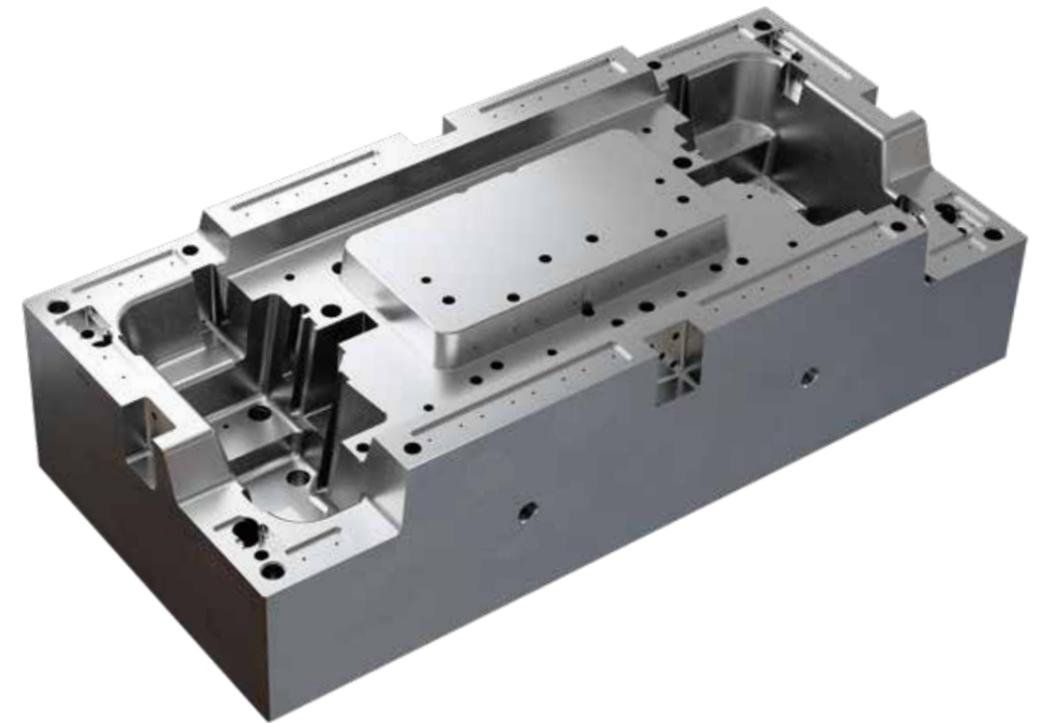


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DIE & MOLD MACHINING

TOOL SOLUTIONS FOR INDUSTRIES



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Note The new address above has currently been updated to the new Korean postal standard valid since 2014.
Notice that the physical Head Office location did NOT change.



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Tool specifications are subject to change without prior notice.

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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 newest available technology, such as sophisticated CAM software and new generation machine tools, always faster and with better performance, for Die & Mold customers, are the ideal and necessary tools to achieve targets such as high quality niche products, longer life of the molds and even faster machining with greater profitability.

For the Die & Mold 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, as a global leader in the manufacture and application of cutting tools, brings you these innovations worldwide in the form of superior tooling, expert support and world class delivery.

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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 steels 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 Die & Mold customers, whatever the material to be processed and the application to be implemented.

STEEL & PRE-HARDENED STEEL

The Die & Mold 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 & Mold industry needs a right partner to machine a wide range of different pre-hardened materials YG-1 can cover that demand, whatever the material, application or machine

FACING / ROUGHING / PRE-FINISHING

YG MILL [General & -TR Chipbreaker]

90°, 45°, High Feed and Round Inserts

YG Mill Line is our line of premium indexable milling tools.

With 90, 45 degrees, High Feed Milling and round inserts, shell and shank cutters, these tools are invaluable for Die & Mold machining.



MILLING / HEAVY CUTTING / SEMI FINISHING / PROFILING

V7 PLUS

Solid Carbide End Mill line

Range with 4 and 6 flutes, with chamfer, ball nose and corner radius. The 6 flute type is suitable for fine side finishing and trochoidal milling as well.



MILLING / FINISHING / PROFILING / ROUGHING

4G MILL

Solid Carbide End Mill line, for high precision finishing. 2, 4 and 6 flutes, long length, straight edge and corner radius available.



COPY MILLING / PROFILING

i-Xmill

The versatile i-Xmill line, its' Corner radius and Ball Type exchangeable inserts were developed with the 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.



THREADING

PRIME TAPS | THREAD MILLS COMBO TAPS | SYNCHROTAPS

YG-1 offers a full range of threading solutions. Spiral Flute, Spiral Point, Straight Flute, Cold Forming Taps as well as Thread Mills are available and achieve excellent results by our innovative technology. YG-1 provides a solution to any threading tasks in machining Die & Mold sets.



COPY MILLING / PROFILING

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 modular head design with many geometries featuring square, corner radius and ball nose heads, making it ideal tool for Die & Mold Industry.



DRILLING

YG DRILL

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 an easy choice. Perfect for large diameters!



DRILLING

i-ONE DRILLS (3xD, 5xD, 8xD)

For drilling various hole sizes, i-ONE drills provide excellent performance with cost-effective exchangeable inserts. Thanks to new H-coated inserts and premium tool steel holders, a good quality of holes and increased productivity can be achieved.



REAMING

CARBIDE REAMERS

Precision is paramount in machining top quality for Die & Mold sets.

Our straight and spiral flute carbide reamers perform perfectly required hole sizes every time.



DRILLING and FAST DRILLING

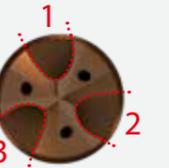
DREAM DRILLS GENERAL (3xD, 5xD, 8xD)

With Self Centering and Chip Breaking by R-Thinning, wave shape Cutting Edge will allow low thrust, stable torque and long tool life. DREAM DRILLS - GENERAL has a wide variety of sizes and flute lengths and it's the perfect choice for general purpose, with coolant hole type and without coolant hole type.



DREAM DRILLS HIGH FEED (3xD, 5xD)

YG-1's solution for fast drilling. Self-Centering and Chip Breaking by R-Thinning and Coolant Holes. Featuring 3 Flutes, it increases productivity up to 1.6 times longer tool life compared to conventional 2 flutes drills.



DRILLING

DREAM DRILLS FLAT BOTTOM (2xD, 5xD)

Die & Mold set manufacturing often requires drilling on sloped and wavy surfaces.

YG-1 DREAM DRILLS - FLAT BOTTOM has 180 Degree Point Angle and it's a perfect solution for a variety of drilling applications.



DEEP DRILLING

DREAM DRILLS MQL (10xD, 15xD, 20xD, 25xD, 30xD, 35xD, 40xD)

For very deep drilling, YG-1 provides the DREAM DRILLS - MQL line of long drills.

It also can perform drilling with the MQL (Minimum Quantity Lubrication) and general coolant for reducing the generated heat and thus greatly prolong the tool life.



DRILLING

SPADE DRILLS

Very large holes exchangeable Spade Drills low cost performer in the manufacture of small to very large holes. Optimized special point and geometry will guide you in hole making, in the most stable and effective manner.



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

HIGH-HARDENED STEEL

High-hardened steel is used widely in the Die & Mold industry to manufacture parts such as Jet Turbine Blades, as represented by the picture on this page. High-hardened steel poses significant machining challenges, requiring the toughest of tools. YG-1 has got just the solution in the form of our excellent X5070, YG Mill, i-Xmill families for milling, and Dream Drills - High Hardened line for holemaking.

MILLING
X5070



X5070 is an excellent product that made a name for it self in the market. Featuring our "Blue Coating", it is specifically made to cover the HRC50-70 ranges of High - hardened steels. Featuring a variety of geometries, flute count and sizes, it is a perfect solution for a multitude of machining applications.

FACING and PROFILING
YG MILL [-TR Chipbreaker and ...W type]



90°, High Feed and Round Inserts

YG Mill Line is our line of premium indexable milling tools. With 90 degrees, high feed milling and round inserts, utilizing the -TR reinforced chipbreaker and ...W type geometry, our Indexable tools are the perfect choice.

COPY MILLING / PROFILING
i-Xmill [for HIGH HARDENED STEELS]



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

THREADING
**CARBIDE TAPS
THREAD MILLS**



YG-1 offers an full range of threading solutions. Spiral Flute and Straight Flute as well as Thread Mills are available and achieve excellent results by our innovative technology. YG-1 provides a solution to any threading tasks in machining Die & Mold sets.

DRILLING
DREAM DRILLS HIGH HARDENED

Drilling High Hardened Steel is a significant challenge due to the tremendous forces, very few drills can withstand it. "DREAM DRILLS - HIGH HARDENED" features special geometry design for drilling the hardened steels with minimum of cutting load through a special thinning. Drilling for High Hardened Steels, Quenched Steels, Tempered Steels (Under HRC 70) Performing good chip removal and powerful drilling.



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

STAINLESS STEEL

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

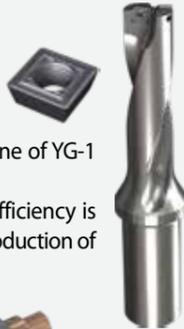
DRILLING
DREAM DRILLS INOX (3xD, 5xD, 8xD)

The tool has the special flute shape and geometry for suitable machining of stainless steels. Excellent chip evacuation due to better surface treatment and point R-thinning makes superior centering and chip curling. It achieves a better surface finish and a longer tool life.



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

Covering as much materials as possible is one of YG-1 goals in the field of indexable drills. Now larger diameters and improved cost-efficiency is made it's way to stainless steels, with the introduction of the -ST chipbreaker.



FACING and PROFILING
YG MILL [-ST Chipbreaker]



90°, High Feed and Round Inserts

YG Mill Line is our line of premium indexable milling tools. With 90°, 45 degrees, high feed milling and round inserts, featuring the positive -ST chipbreaker for stainless steel, shell and shank cutters, these tools are invaluable for Die & Mold machining.

REAMING
CARBIDE REAMERS

Precision is paramount in machining top quality Die & Mold sets. Our straight and spiral flute carbide reamers perform perfectly every time.



COPY MILLING / PROFILING
i-Xmill [for STAINLESS STEELS]

The versatile i-Xmill line, which is specifically developed with Die & Mold industries in mind is once again up to the challenge. Stainless steel applications covered as well.



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



YG-1 offers a full range of threading solutions. Spiral Flute, Spiral Point, Cold Forming Taps as well as Thread Mills are available and achieve excellent results by our innovative technology. YG-1 provides a solution to any threading tasks in machining Die & Mold sets.

DRILLING
SPADE DRILLS

Very large holes exchangeable Spade Drills low cost performer in the manufacture of small to very large holes. Optimized special point and geometry will guide you in hole making, in the most stable and effective manner.



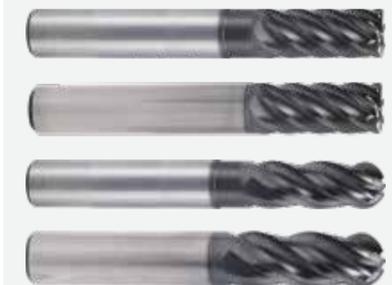
MILLING
TITANOX POWER

Solid carbide End Mills line, for Titanium, Stainless Steels and difficult to cut materials. Available with 4 flute double core technology, 5 flutes and rougher profile for both full slotting and side high performance milling.



MILLING / HEAVY CUTTING / SEMI FINISHING / PROFILING
V7 PLUS

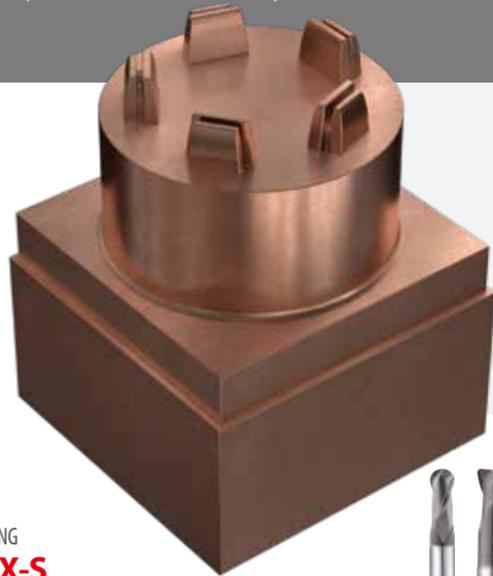
Solid carbide End Mill line, for wide range of materials. Range with 4 and 6 flutes, with chamfer, ball nose and corner radius. The 6 flute type is suitable for fine side finishing and trochoidal milling as well.



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

COPPER

Although we try to make the forms mostly by milling, 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



MILLING CRX-S

Solid carbide End Mill line, specifically designed for Copper machining. The geometry and DLC coating result in fine milling and long tool life. Range of diameters from 0.5 mm.



REAMING CARBIDE REAMERS

Precision is paramount in machining top quality Die & Mold sets. Our straight and spiral flute carbide reamers perform perfectly every time.

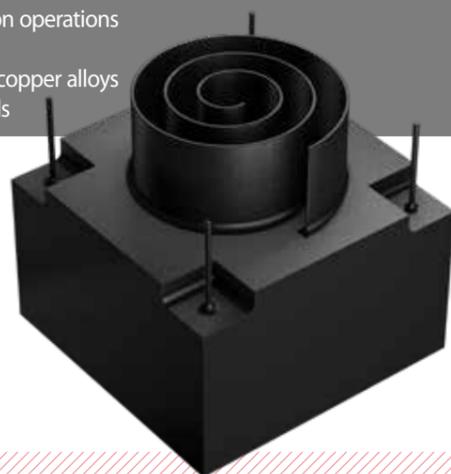


GRAPHITE

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

MILLING D-POWER GRAPHITE

Solid Carbide End Mill line, specific designed for graphite machining. The geometry and diamond coating result in fine milling and long tool life. Range of diameters from 0.2 mm.



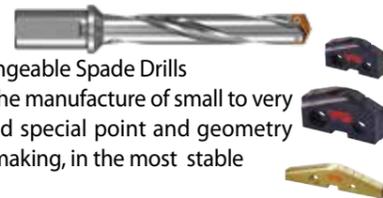
DRILLING DREAM DRILLS INOX (3xD, 5xD, 8xD)

The tool has the special flute shape and geometry for suitable machining of copper as well as stainless steels. Excellent chip evacuation due to better surface treatment and point R-thinning makes superior centering and chip curling. It achieves a better surface finish and a longer tool life.



DRILLING SPADE DRILLS

Very large holes exchangeable Spade Drills low cost performer in the manufacture of small to very larger holes. Optimized special point and geometry will guide you in hole making, in the most stable and effective manner.



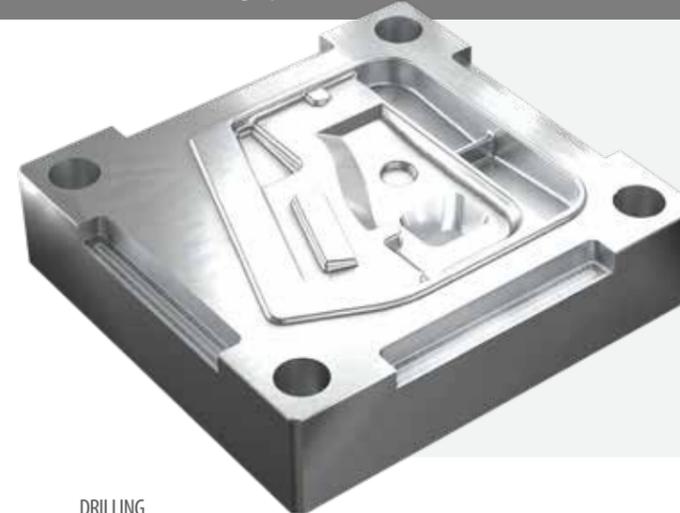
THREADING PRIME TAPS | THREAD MILLS COMBO TAPS | SYNCHROTAPS

YG-1 offers an full range of threading solutions. Spiral Flute, Spiral Point, Straight Flute, Cold Forming Taps as well as Thread Mills are available and achieve excellent results by our innovative technology. YG-1 provides a solution to any threading tasks in machining Die & Mold sets.



ALUMINUM

Aluminum alloys are frequent to find in the production of prototype molds, molds for low production and some accessory parts. The characteristics of these alloys require a specific attention to be given 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 and PROFILING YG MILL [-AL Chipbreaker]

45°, 90° 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 chipbreaker and new YG500 grade provide you with.



DRILLING DREAM DRILLS ALU (3xD, 5xD, 8xD)

Good chip evacuation due to flute geometry & chip space. Better finish & built-up edge prevention. Suitable for fast, efficient drilling in aluminum and aluminum alloys. Optimized thinning for aluminum and aluminum alloys to prevent any clogging caused by chip welding.



DRILLING SPADE DRILLS

Very large holes exchangeable Spade Drills low cost performer in the manufacture of small to very large holes. Optimized special point and geometry will guide you in hole making, in the most stable and effective manner.



THREADING PRIME TAPS | THREAD MILLS COMBO TAPS | SYNCHROTAPS

YG-1 offers an full range of threading solutions. Spiral Flute, Spiral Point, Straight Flute, Cold Forming Taps as well as Thread Mills are available and achieve excellent results by our innovative technology. YG-1 provides a solution to any threading tasks in machining Die & Mold sets.



REAMING CARBIDE REAMERS

Precision is paramount in machining top quality Die & Mold sets. Our straight and spiral flute carbide reamers perform perfectly every time.



HIGH PRECISION / MILLING / PROFILING / FINISHING ALU-POWER

HIGH PRODUCTIVITY / MILLING / PROFILING / FINISHING ALU-POWER HPC

Solid Carbide End Mill line, specifically designed to cut aluminum alloy. Excellent for preparing prototype Die & Mold sets. Suitable for a variety of applications-side cutting, slotting, ramping etc. Comes in a variety of geometries-square, corner radius and ball type are available.

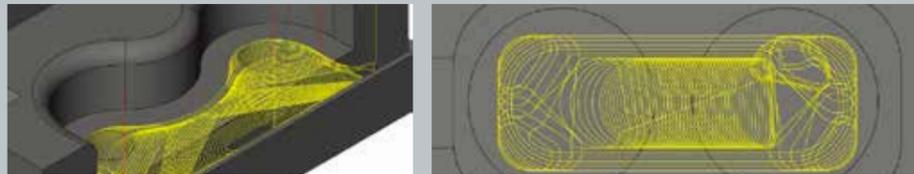


The YG-1 Group has two major cross-business research centers that serve all global composite machining activities, thus optimizing synergies between them. These research centers maintain and develop the highest level of skills and key technologies for the YG-1 Group. Their size and multi-disciplinary 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

- 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 have 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

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YG-1 CO., LTD.

* For the more information on sales network, please contact the head office as below;

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