



Empire's Original Cut-Off Tooling

Empire manufactures a complete line of cut-off systems, including our original hollow ground high-speed and carbide

tipped cut-off blades. When used properly, they are still the most cost-effective cut-off tools available. Blades

are available from stock in a wide range of sizes in both high-speed steel and carbide tipped versions.

In 2009 is Empire Manufacturing in de USA gestopt met zijn activiteiten maar Anda Machinebouw bvba kan nog al hun tooling leveren tot en met hun houders voor de tooling. Als je snijgereedschappen nodig hebt van Empire vraag dan zeker bij ons eens prijzen op.



Twin-Tip™ Tooling

It's a new concept in "throw away" cut-off tooling – the strong, rigid, multi-purpose, high-performance **Twin-Tip™** cutting tool – exclusively from **Empire Tool**. Designed specifically for the higher speeds and feeds achieved with CNC turning centers, **Twin-Tip™** tools can also be used on automatic screw

machines. Either way, they're stronger and more productive than any other system, and they are more versatile. **Twin-Tip™** tools excel at cut-off and grooving, and will face, turn, profile and chamfer. That's *Six Tools-in-One!* **Twin-Tip™** tools and holders are available for all screw machines and CNC turning centers including Swiss-type machines. It's the dawn of a new age in cut-off tooling.

E2000™ and E3000™ Tooling

Empire's new **E2000™** grade **Twin-Tip™** tool. Exceptionally strong and rigid, the **E2000™** has a premium TiN coating over a tough micro-grain substrate. It provides outstanding performance on automatic screw machines, as well as the higher speeds and feeds found on CNC bar-fed machines. Also available in E2025 (Tin honed), E2050 (TiAlN honed) and E2075 (TiCN honed).

E3000™ is a parallel geometry designed for screw machine applications. It produces superior flatness and finishes on most materials. It can be supplied in Tin, TiCN, TiAlN, and AlTiN Coatings.





Boring Bars and Inserts

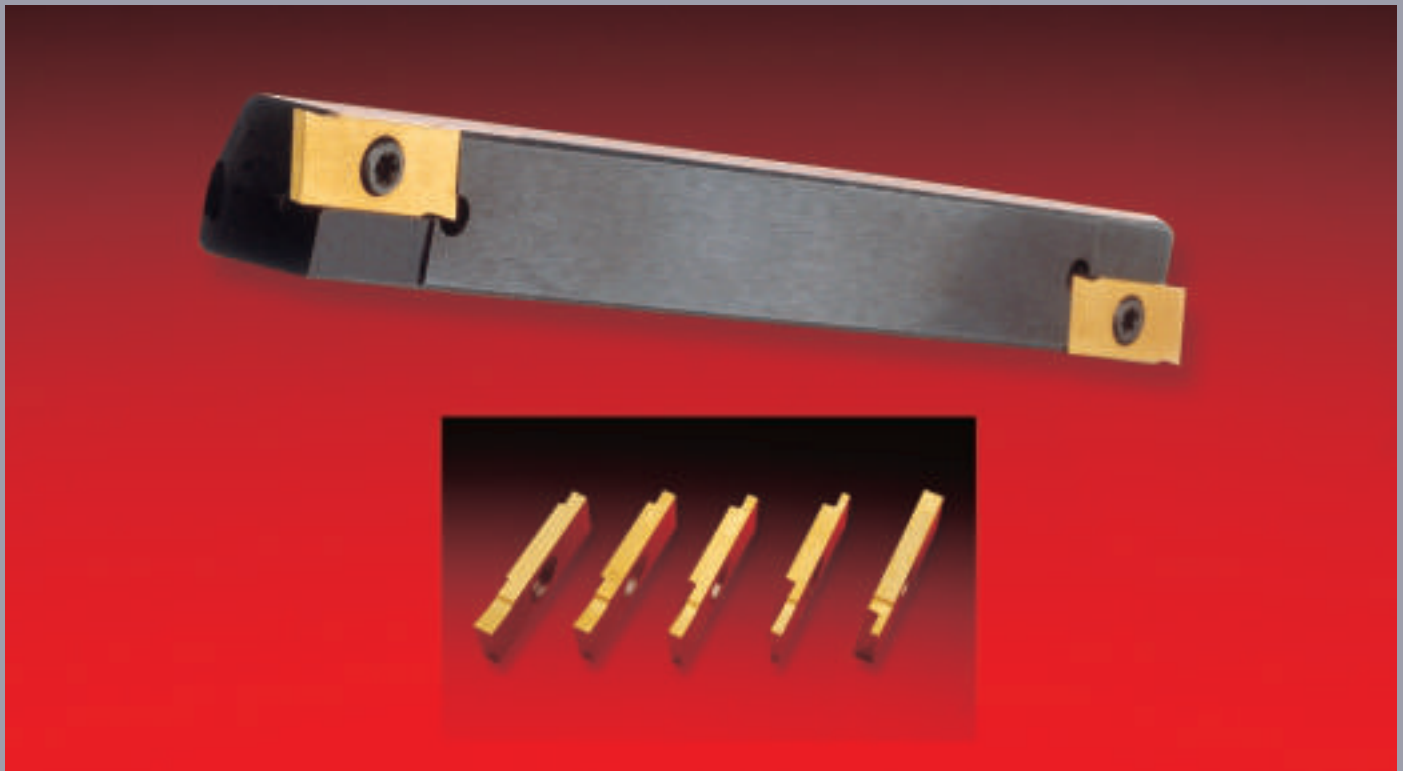
Empire's boring bars are designed for high precision applications where hole uniformity is absolutely essential.

Empire boring bars

have the tightest pocket tolerance in the industry, and have a minimum bore diameter of .172. Threading bars have a .310 minimum

thread diameter, and our profiling bars have a .625 minimum bore diameter. Carbide inserts are available with .140 to .375 I.C.

in a wide range of grades, and with tolerances that are unexcelled. All at competitive prices!



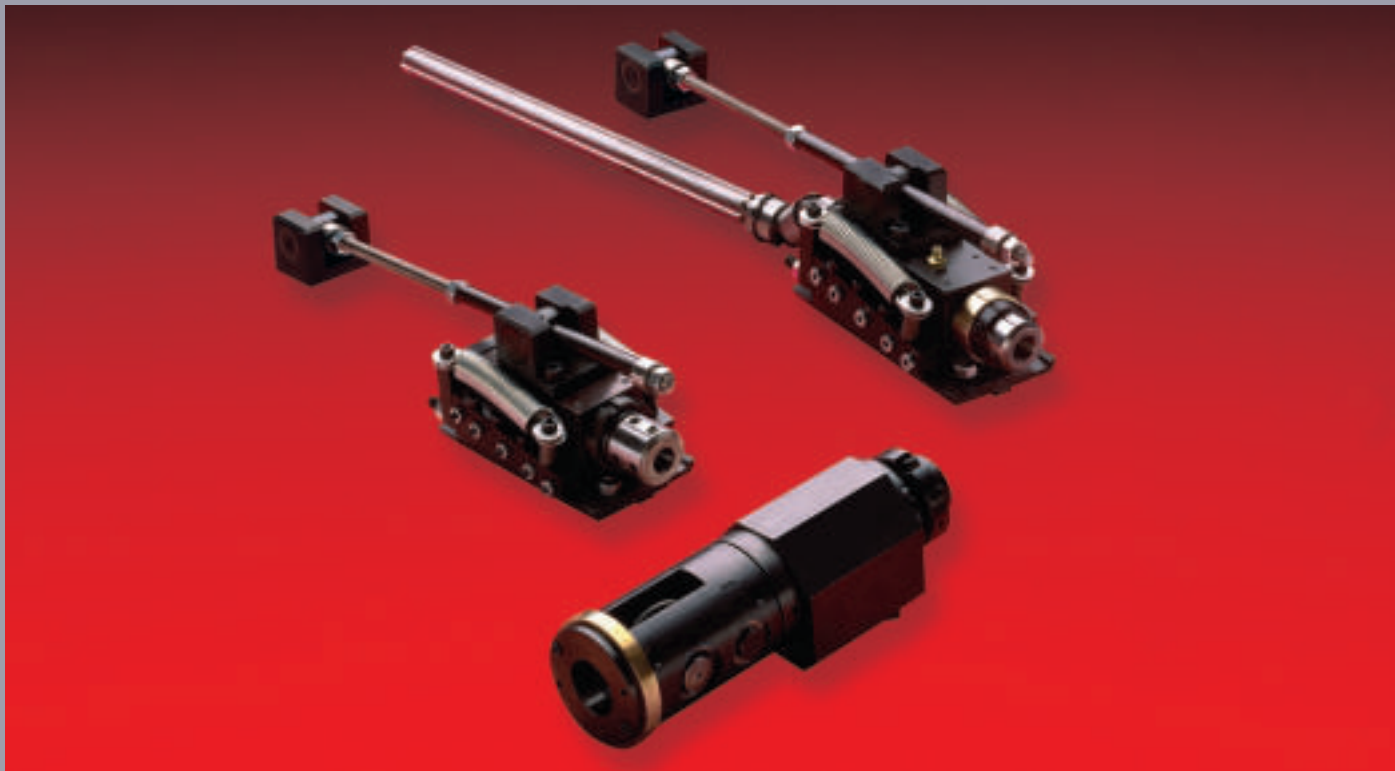
Twin-Bit™ Cutting Tool System

Empire's new Twin-Bit™ system has been designed to produce narrow grooves, thread, and

cut-off. It provides two cutting edges on one insert in narrow widths. Grooving inserts are available in widths of

.019 to .125. Cut-off inserts have 7 degree lead angles and threading inserts are available in 60 and 55

degree pitch. Square shank holders are available in sizes from 8mm to 16mm.



Recess and Custom Attachments

Empire's heavy-duty recessing attachments are available in stationary, adjustable type, and milling type to fit most multi-spindle automatics. The flat ways are hardened and precision

ground to provide smooth slide action. Positive chatter control with a hardened gib and external springs eliminates binding and chip clogging. **Empire's** custom

attachments eliminate secondary operations without a spindle stopper. The synchronous milling attachment produces one slot or two flats while the part is rotating, and the synchronous

drilling attachment (not pictured) produces one hole or multiple holes offset to center while the part is turning. Both attachments mount on the end tool slide.



Shave and Form Tool Holders

Empire's form tool holders and bridges are top-of-the-line in the industry. They are precise and durable, yet simple to use. The dovetail design provides reduced set-up time

and minimizes scrap. Available in all dovetail sizes for all automatic screw machines.

Empire's shave tool holders are available in both standard type (universal base) and

shank type. Both types are available with conventional roll rest or dovetail adjustable roll rest assemblies. All shave tool holders feature faster set-up, quick

elimination of taper, positive chatter control, and simple in-house reconditioning.



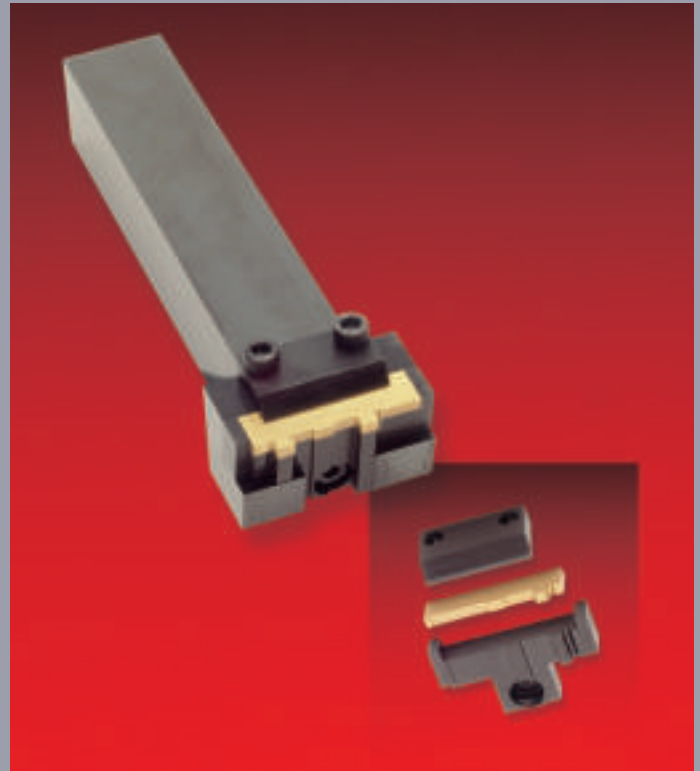
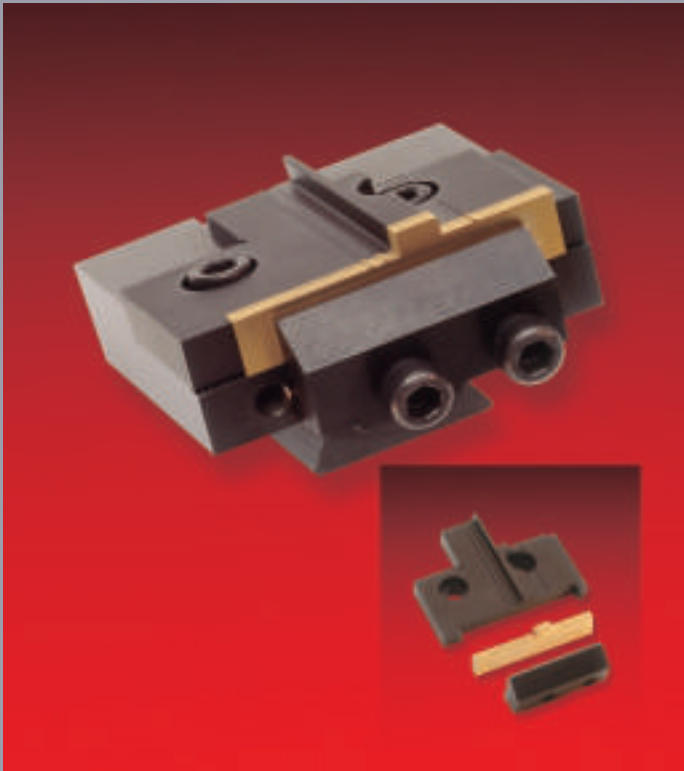
Indexable Center Cutting Tools

Empire's ATV2000™ tools are the *All-Terrain-Vehicles* in tooling. They are *indexable* center cutting tools, and are

excellent at rough and finish milling of slots, ends and pockets. They are particularly adept in plunge cutting, slot facing

and counter boring applications. **ATV2000™** tools are N/C qualified for all index positions, and do not require

pre-setting. High precision, indexable carbide inserts are available for both roughing and finishing.



Empire is proud to introduce a new line of throwaway insert tooling. Our experienced tool designers can help set-up your automatic screw machine or CNC lathe jobs or we will build the tools to your blueprints.

We offer a range of options for insert-style tooling, which include, but are not limited to:

- **Carbide or high-speed steel materials**

- **EDM, surface ground, or lapped finishes**
- **Back taper, side clearance, or chip breakers for better tool life**
- **Variety of coatings and treatments**

Our holders are designed to be efficient and user friendly. It consists of a body, anvil, and clamp. Holders can be manufactured in standard or special dovetail and shank sizes. We have 5/8" and 1" dovetail

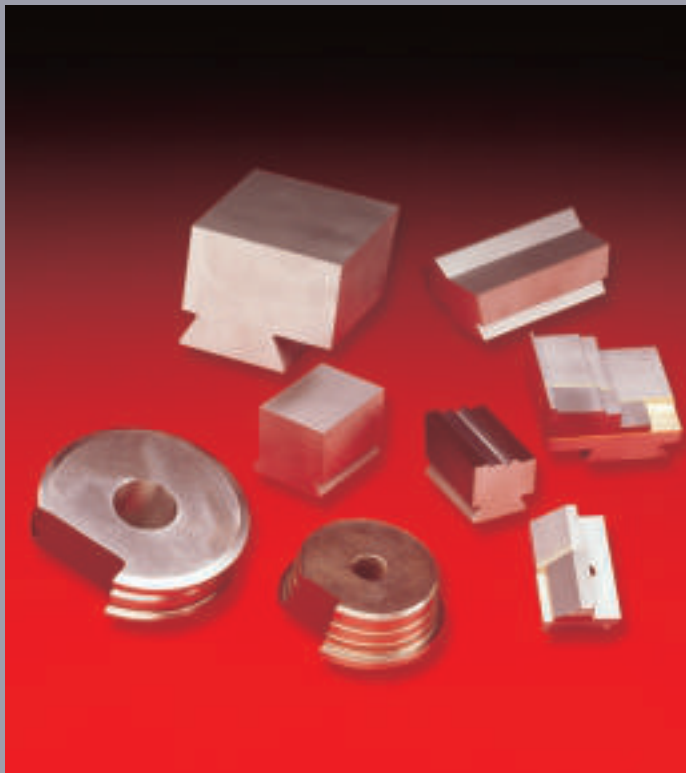
form and 1" dovetail shave holder bodies in stock for quick turn-around time on your orders.

Utilizing the replaceable anvil, a **datum point system** can be implemented for a family of similar parts. A machine can be changed over to a different part by simply replacing the anvil and insert. Only minor adjustments, if any, are needed since the holder body and

clamp remain constant for the entire family of parts.

The benefits of **Empire's** new throwaway insert system include:

- **Reduced down time from elimination of re-sharpening**
- **Faster tool change**
- **Reduced set-up time**
- **Easier to use and more cost-effective**



Dovetail, Circular & Flat Form Tools

Empire dovetail, circular and flat form tools are available as blanks and as finished tools built to customer print specifications. Forms are laid out using

CAD/CAM systems, and can be manufactured using wire EDM and/or precision grinding equipment. Tolerances are held to within .0002.

Milling Cutters

Empire milling cutters are manufactured to suit a multitude of uses, and are in use today in many industries including aircraft and aerospace, automotive, off-

highway and agriculture. All milling cutters can be made from high speed steel and tungsten carbide-tipped material.



Form Relief Tooling

Empire's form relief tooling is available in high speed steel, and tungsten carbide-tipped, with coatings as required. Tools made

from high speed steel can be ground or unground form relieved. Tungsten carbide-tipped tools are ground, cam-relieved only.

Reamers, Recessing, Specialty Tooling

Empire also manufactures a wide variety of high speed steel and tungsten carbide-tipped reamers, recessing tools, counterbores, end mills, spot facers and trepan tools. A variety of data

may be used to make the tool including customer prints, part drawings and existing tooling. Re-tip and re-sharpening services are also available for tooling manufactured at **Empire Specialty Tools.**