



Great Lakes

Custom Tool Mfg., Inc.

Your American Cutting Tool Partner

Product Catalog

Made In America

Peshtigo, Wisconsin

"Reborn from the ashes of America's most disastrous forest fire", the city of Peshtigo thrives as a monument to the human spirit, growing rapidly as one of the most industrious small cities around.

Like other communities on the northern frontier of railroad expansion, Peshtigo was a boom town in 1871. Timber was king here and the mighty spring rush of logs down the surging Peshtigo River brought the substance of life to its industries.

It was a hot, unseasonably dry spring and summer. Just two rains fell from July through September, creeks dwindled to muddy trickles, the river level dropped and even the normally impassable swamps dried to solid prairies of peat. Many of the village wells gave out and water became scarce as summer ripened into fall. The woods and grasslands were already tinder dry and grew more dangerous with each cloudless day. Fires began breaking out near the village in mid-September. For almost three weeks earlier, smoke from the smoldering peat fires

dimmed the sky, the pungent smell pervading the atmosphere.

On the evening of October 8, 1871, the worst recorded forest fire in North American history raged through Northeastern Wisconsin

and Upper Michigan, destroying millions of dollars worth of property and timberland, and taking more than 1,000 lives. A flourishing saw mill town was leveled to a desert of smoking ashes, its streets strewn with the blackened bodies of men, women and children.

Just after 8:30PM a dull roar (like the rumbling of a distant volcano) came out of the southwest. The wind had started blowing again, strong and hot. By 10:00PM the roar had thundered

to an earth shaking crescendo and the ferocious winds, now of tornado velocity, ripped through the village in blinding sheets of sand and smoke. In panic for their lives and families, the firefighters flung down their buckets and fled towards their homes... PESHTIGO COULD NOT BE SAVED.



Peshtigo Fire Facts & Trivia:

- The Peshtigo Fire occurred on the same day as the Chicago Fire – October 8, 1871.
- The Peshtigo Fire killed about 5 times more people than the Chicago Fire.
- The City of Peshtigo rebuilt and incorporated in 1903.
- The Peshtigo Fire covered about 2,400 square miles – a much larger area than just Peshtigo itself.
- The official population of Peshtigo in 1871 was 1,700.
- The memorial at the Peshtigo Fire Cemetery was the first official state historical marker authorized by the State Historical Society of Wisconsin.
- The name Peshtigo is a native Indian word believed to mean "snapping turtle" or "wild goose."

A Treasure Worth Saving





“The true source of
quality

resides with every one of our people.

*Each project, no matter the
size or **COMPLEXITY**,
is an opportunity for us to reinforce
our customers' faith in us by*

***consistently delivering**
the highest level of service and products.”*

—Russ Martin

Head Coach, GLCT

PRICE IS WHAT YOU PAY. VALUE IS WHAT YOU GET.

Made In America

More than defining who and what we're all about; Made in America is our promise of unrivaled excellence. From quality USA sourced materials to state-of-the-art tools and equipment, we bring it all together with the great American work ethic that's deeply ingrained in our GLCT DNA.

American Made Benefits

- Higher quality products, in our case exceptionally precise tools.
- Transportation costs saving – reasonable domestic shipping rates/no need for customs/duties/import taxes.
- Faster shipping means faster deliveries resulting in customer satisfaction.
- Better for the environment – domestic shipping places less of a strain on natural resources.
- Creation of jobs in America.

All-In Approach

We take your verbal description, sketch, or print and create a tool unmatched in quality. We're able to ensure this consistent end result because each employee involved in the process takes ownership of his responsibility to the project. We do whatever it takes to get the job done for each and every customer.

Total In-House Control

Everything that makes up Great Lakes Custom Tool Mfg., Inc. is housed in one well-maintained, fully equipped facility in Peshtigo. This allows us greater control of critical success factors, including design, engineering, prototyping, material selection and supply chain management. As a customer this simply means consistent quality. At the same time, you have easy access to a solutions focused integrated team – design engineers, customer service and production experts – in one location.

Great Lakes Custom Tool Mfg., Inc. is proud to be a family-owned and a veteran-owned business. Family is a link that lasts forever and the service to each other should not end when we leave the armed forces.

Testimonials

“ Since my employment at this company, I have separated from more tooling suppliers than I care to count. If any of those previous suppliers were only half as good as Great Lakes, I would still be doing business with them today. Great Lakes has always provided a consistent level of professionalism and quality that is surpassed by no one in our industry. I have found that doing business with Great Lakes is absolutely boring. Boring because there is rarely, if ever, any surprises. Boring because I always deal with a professional and knowledgeable person. Boring because you always do what you say you will do. Boring because you always deliver a high quality product. PS: Please continue to bore the hell out of me. ”

—Flooring Manufacturer

“ I want to let you know about Great Lakes. They are one of the best manufacturing facilities I have seen anywhere in the world. They are extremely knowledgeable, very smart workers and a great owner. Their standards are very high, their service is the best in the industry; this means they expect the same from their suppliers. They are very easy to work with if you do what you promise. ”

—Grinding Wheel
Distributor



Precision

Form

Excellence



Skill

Craftsmanship

Custom Quality




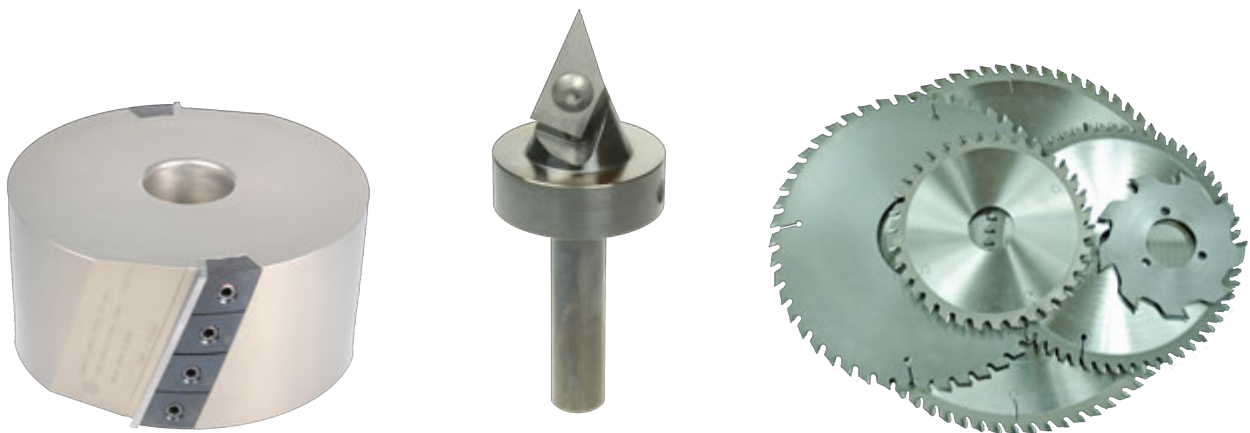
**Dependable
Employees**

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Custom Tooling Capabilities



What We Can Do For Our Customers Include:

- ✦ Manufacture custom tooling [Braze, insert, Great-Loc®, solid carbide & diamond (PCD)]
- ✦ Distributor of a full range of standard superior quality production run tooling and machine accessories
- ✦ Custom rework of tools
- ✦ Service of our products
- ✦ Sharpening and remanufacturing of tooling purchased elsewhere

GLCT is your one-stop source for the woodworking, metalworking and composite industries. Some of the industries we supply are:

Aerospace	Cabinet Making	Moulding
Agriculture	Decking	Musical Instruments
Architectural Doors	Flooring	Playgrounds
Automotive	Furniture	Signs
Boat/Shipbuilding	Medical	Window & Door

How Does GLCT Accomplish This?

Our commitment is to consistently provide customers with tooling, prompt deliveries, and service exceeding industry standards. This is possible because GLCT has a passion for excellence, the best employees, and the latest high-tech equipment available.

Customer Service

Russ and Ray Martin lead a team of knowledgeable & dedicated individuals in this highly specialized area. Our team consists of inside Customer Service and Application Specialists who divide their time in the office and at customer locations. Our well-trained, friendly staff will walk you through the process of getting the right tooling for your job. They have immediate access to our onsite engineering staff when the design of a new tool is required.

Engineering & Tool Design

Our team designs and draws tools based upon a customer's specific request. The request might be in the form of a CAD drawing, material sample, rough drawing, or a description over the telephone. Upgrades in the level of engineering software are critical to GLCT's talented staff. Currently, we are running Auto Cad Mechanical and Auto Desk Inventor. 3-D design is used on complex projects and it also helps our customers visualize the tools being made for them. Once designed and approved by the customer, the tooling is manufactured from start to finish at this location.

Manufacturing Equipment

As a forward moving company, we house the latest high-tech equipment available. Since GLCT is recognized as an innovator, machines have even been designed based upon our suggestions to the manufacturers.

Production Employees

Each employee is responsible for ensuring the quality of their parts at the point of manufacturing or service process, reflecting GLCT's expectation of excellence philosophy. Our machinists and craftsmen are encouraged to offer their input in the making of our tools. Cross-training is a critical component in the plant since it allows employees to continue learning as well as promoting a team atmosphere.



Router



Moulder

Onsite Learning Tools

- ✦ GLCT's application lab is available for demonstrating our tooling capabilities to customers as well as aiding in research and development for our tool designs.
- ✦ An education room with the latest media equipment provides an environment for employees and customers to keep skills and product knowledge current.
- ✦ Our technology center includes a six-spindle Weinig moulder and a C.R. Onsrud CNC router. This gives GLCT the unique ability to run our tooling in a non-production situation. This technology allows us to do research and development as well as run test tooling in a controlled environment without production scheduling restraints. We're able to educate our customers and our employees regarding the proper operating and maintenance procedures to ensure the tooling works properly for their particular business.

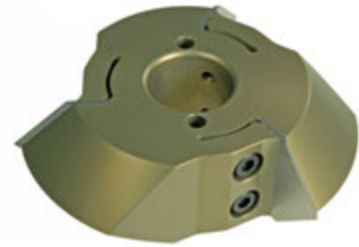
Great-Loc[®] Dedicated Cutters



**Router bit
with edge profile**



**Shaper cutter with stick
profile for cabinet door**



**90° V-Groove profile
for aggregate head**

Custom Dedicated Insert Tooling

The Great-Loc System is the **safest, most accurate and easy** to use system in the market for replacing inserts, achieved through integral clamping that features a positive registration tab. The cutter body insert pocket is EDM'd. The inserts are precision ground and optically inspected under high power magnification.



Moulder cutter with crown profile

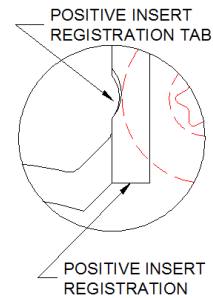
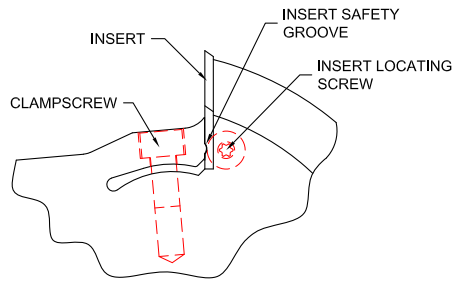


**Shaper cutter with stick
profile for passage door**

U.S. Patent No.: 7,517,178 B2
Canadian Patent No.: 2,541,207

Location. Location. Location.

Great Lakes Custom Tool Mfg. has made the location of its Positive Registration Tab on the Great-Loc Insert System something you need to consider when buying your insert tooling. Each insert is located against a stopscrew and held down against the flat bottom of the cutter body slot. As the clampscrews are tightened, the positive insert registration tab draws and clamps the insert securely into position. Positive clamping is important for today's higher RPM spindles to maintain insert position.



U.S. Patent No.: 7,517,178 B2
Canadian Patent No.: 2,541,207

Designed with High Speed Spindles in Mind

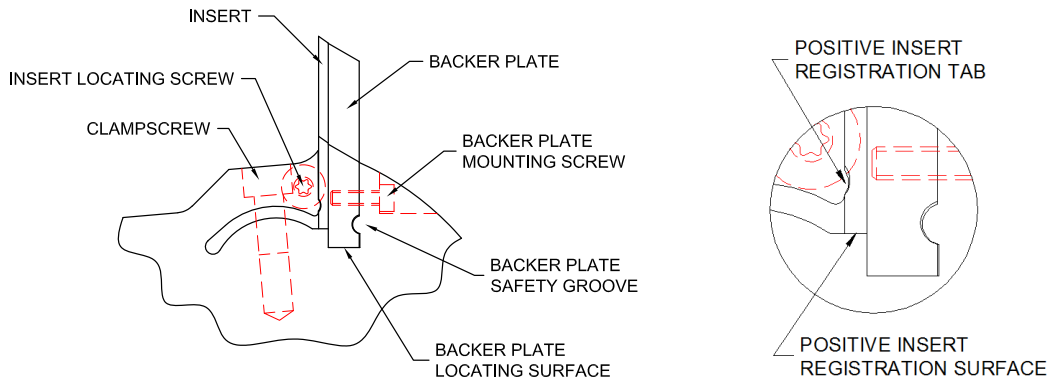
Benefits

- ✦ Safest system with integral clamping and safety groove (eliminating loose components)
- ✦ Insert positive registration
- ✦ Resists centrifugal force
- ✦ Precise balance
- ✦ Fast and efficient set-up
- ✦ Superior performance
- ✦ Certified metal bodies
- ✦ Made in the U.S.A.

Custom Tooling

- ✦ Cabinet Doors
- ✦ Casements
- ✦ Flooring
- ✦ Furniture
- ✦ Panel Doors
- ✦ Millwork
- ✦ Paneling
- ✦ Passage Doors
- ✦ Windows
- ✦ Or any other custom application

Great-Loc® SG Universal Tool System



U.S. Patent No.: 7,517,178 B2
Canadian Patent No.: 2,541,207

Advantages/Benefits of the Great-Loc SG Universal Tool System

- ✦ **Universality:** Inserts and backers are interchangeable between router and cutter bodies manufactured with the same cutting width and hook angle
- ✦ **Designed** for both short and long production runs
- ✦ **Fast and Efficient** set-up
- ✦ **Eliminates** the need for dedicated tool bodies
- ✦ **Able to run** multiple profiles in the same cutter
- ✦ **Optically** inspected precision ground inserts

Recommended Speeds and Feeds:

Note: Charts below are a guideline. Feeds and speeds can vary depending on specific material and finish required.

Router Bit Small Diameter	No. of Wings	Cutter Width	Material	RPM	IPM
63.5mm (2.500")	2	30, 35, 40, 50, 60, 70 & 85mm	Hard & Softwoods	12,000- 16,000	320-480

Cutter Small Diameter	No. of Wings	Cutter Width	Material	RPM	FPM
125mm (4.921")	2	30, 35, 40, 50, 60, 70, 85, 105, 120 & 150mm	Hard & Softwoods	6,000-8,000	20-40
125mm (4.921")	3	30, 35, 40, 50, 60, 70, 85, 105, 120 & 150mm	Hard & Softwoods	6,000-8,000	30-60

Weinig PowerLock Small Diameter	No. of Wings	Cutter Width	Material	RPM	FPM
135mm (5.315")	2	30, 35, 40, 50, 60, 70, 85, 105, 120 & 150mm	Hard & Softwoods	12,000	60

Great-Loc[®] SG Universal Router Bits



GLCT will grind inserts and backers to cut your desired profiles.

Standard sizes listed below.

Custom sizes made available based on your specific requirements.

Shank Sizes	"S"
3/4"	750
1"	1000
25mm	25mm

R = Rotation

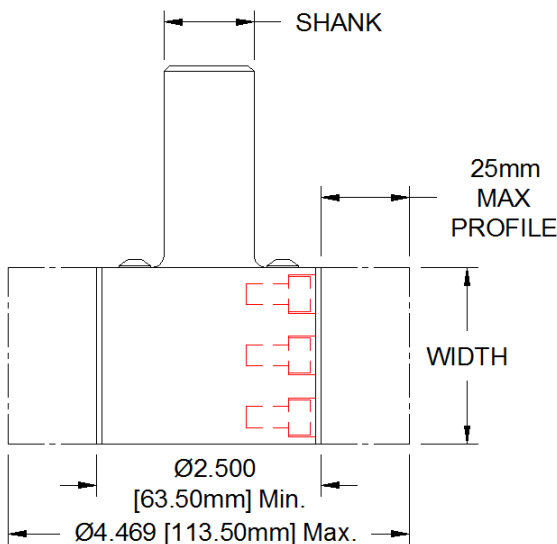
CW—Clockwise (Right Hand) Rotation

CCW—Counterclockwise (Left Hand) Rotation

Router Bit Part Number Example:

SGR-30-750-CCW

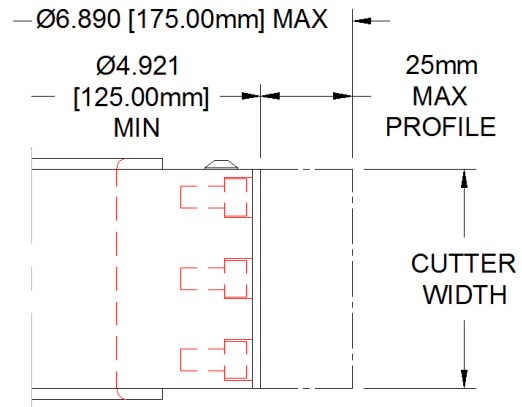
All standard router bits are manufactured with 15° hook only.



Part Number	Cutter Width
SGR-30-S-R	30mm
SGR-35-S-R	35mm
SGR-40-S-R	40mm
SGR-50-S-R	50mm
SGR-60-S-R	60mm
SGR-70-S-R*	70mm
SGR-85-S-R*	85mm

*Only available in 1" & 25mm shank

Great-Loc® SG Universal Cutters



GLCT will grind inserts and backers to cut your desired profiles.

Cutters can be flipped over and run CW or CCW in rotation.
 Custom sizes made available based on your specific requirements.

H = Hook Angle Degree
 5, 10 or 15

Bore Sizes	"B"
1-1/4"	1250
1-1/2"	1500
1-13/16"	1813
40mm	40mm
50mm	50mm

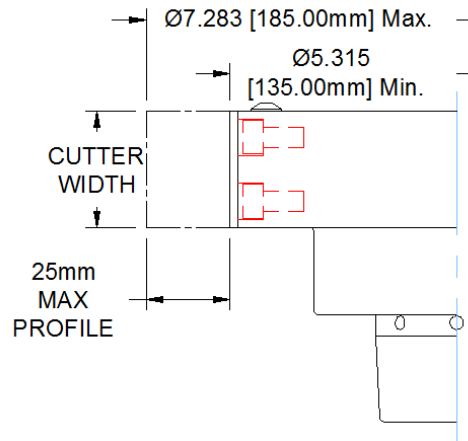
Cutter Part Number Example:
 SGC-30-2-10-1250

Cutter Width	No. of Wings	Part Number
30mm	2	SGC-30-2-H-B
	3	SGC-30-3-H-B
35mm	2	SGC-35-2-H-B
	3	SGC-35-3-H-B
40mm	2	SGC-40-2-H-B
	3	SGC-40-3-H-B
50mm	2	SGC-50-2-H-B
	3	SGC-50-3-H-B
60mm	2	SGC-60-2-H-B
	3	SGC-60-3-H-B
70mm	2	SGC-70-2-H-B
	3	SGC-70-3-H-B
85mm	2	SGC-85-2-H-B
	3	SGC-85-3-H-B
105mm	2	SGC-105-2-H-B
	3	SGC-105-3-H-B
120mm*	2	SGC-120-2-H-B
	3	SGC-120-3-H-B
150mm*	2	SGC-150-2-H-B
	3	SGC-150-3-H-B



* The 120mm & 150mm wide cutters utilize 3mm thick carbide inserts. The inserts can be face ground to resharpen. This will give additional cutting life before replacing the inserts.

Great-Loc[®] SG Universal Weinig PowerLock Cutters



GLCT will grind inserts and backers to cut your desired profiles.

The Great-Loc SG Universal PowerLock Cutters feature an integral body and holder. The body is manufactured from steel with the HSK tool holding end hardened.

H = Hook Angle Degree
5, 10 or 15

S = Spindle Use
RT = Right or Top Head (CCW)
LB = Left or Bottom Head (CW)

Cutter Part Number Example:
SGPL-30-2-10-RT

Cutter Width	No. of Wings	Part Number
30mm	2	SGPL-30-2- H-S
	3	SGPL-30-3- H-S
35mm	2	SGPL-35-2- H-S
	3	SGPL-35-3- H-S
40mm	2	SGPL-40-2- H-S
	3	SGPL-40-3- H-S
50mm	2	SGPL-50-2- H-S
	3	SGPL-50-3- H-S
60mm	2	SGPL-60-2- H-S
	3	SGPL-60-3- H-S
70mm	2	SGPL-70-2- H-S
	3	SGPL-70-3- H-S
85mm	2	SGPL-85-2- H-S
	3	SGPL-85-3- H-S
105mm	2	SGPL-105-2- H-S
	3	SGPL-105-3- H-S
120mm*	2	SGPL-120-2- H-S
	3	SGPL-120-3- H-S
150mm*	2	SGPL-150-2- H-S
	3	SGPL-150-3- H-S



*The 120mm & 150mm wide cutters utilize 3mm thick carbide inserts. The inserts can be face ground to resharpen. This will give additional cutting life before replacing the inserts.

Great-Loc[®] SG Universal
Tool System

Great-Loc® SG Universal HSK63F Integral Routers/Tenoners



GLCT will grind inserts and backers to cut your desired profiles.

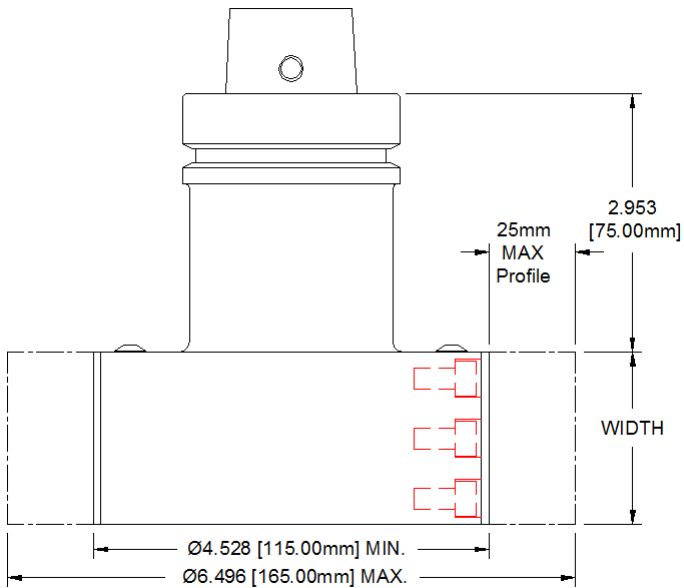
GLCT has available Great-Loc SG Universal HSK63F Integral Tool System that mounts directly to your CNC spindle. This ensures an even better and more accurate finish due to the elimination of the collet and toolholder.

These tools are dynamically balanced to a **maximum RPM of 9,000.**

Recommended Speeds and Feeds:

Note: Charts below are a guideline. Feeds and speeds can vary depending on specific material and finish required.

Cutter Small Diameter	No. of Wings	Cutter Width	Material	RPM	IPM
115mm (4.528")	2	30, 35, 40, 50, 60, 70 & 85mm	Hard & Softwoods	6,000-8,000	240-300
115mm (4.528")	3	30, 35, 40, 50, 60, 70 & 85mm	Hard & Softwoods	6,000-8,000	360-450



15° Hook Angle

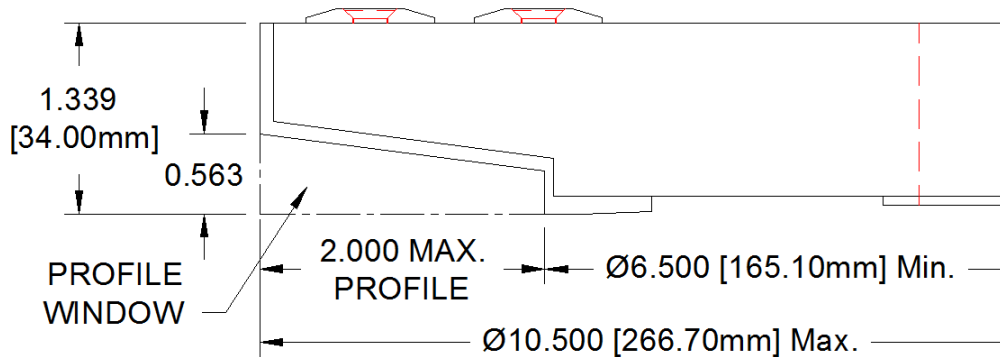
R = Rotation

CW—Clockwise (Right Hand) Rotation

CCW—Counterclockwise (Left Hand) Rotation

Cutter Width	No. of Wings	Part Number Clockwise Rotation	Part Number Counterclockwise Rotation
30mm	2	SGHSK-30-2-15-CW	SGHSK-30-2-15-CCW
	3	SGHSK-30-3-15-CW	SGHSK-30-3-15-CCW
35mm	2	SGHSK-35-2-15-CW	SGHSK-35-2-15-CCW
	3	SGHSK-35-3-15-CW	SGHSK-35-3-15-CCW
40mm	2	SGHSK-40-2-15-CW	SGHSK-40-2-15-CCW
	3	SGHSK-40-3-15-CW	SGHSK-40-3-15-CCW
50mm	2	SGHSK-50-2-15-CW	SGHSK-50-2-15-CCW
	3	SGHSK-50-3-15-CW	SGHSK-50-3-15-CCW
60mm	2	SGHSK-60-2-15-CW	SGHSK-60-2-15-CCW
	3	SGHSK-60-3-15-CW	SGHSK-60-3-15-CCW
70mm	2	SGHSK-70-2-15-CW	SGHSK-70-2-15-CCW
	3	SGHSK-70-3-15-CW	SGHSK-70-3-15-CCW
85mm	2	SGHSK-85-2-15-CW	SGHSK-85-2-15-CCW
	3	SGHSK-85-3-15-CW	SGHSK-85-3-15-CCW

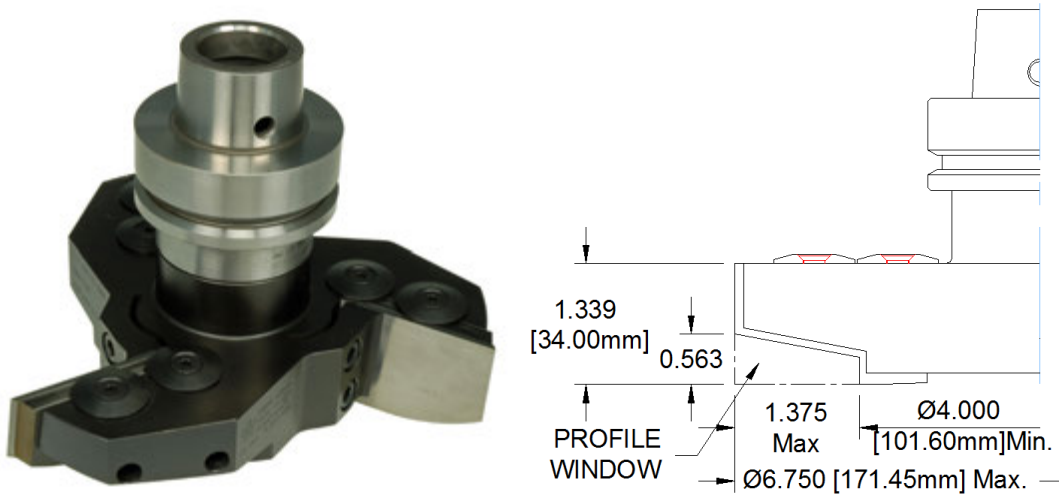
Great-Loc[®] SG Universal Raised Panel Cutters



GLCT will grind inserts and backers to cut your desired profiles.

“ Thank you for responding to my request as quickly as you did. I always speak highly of Great Lakes because of your responsiveness, your quality of work (which in my opinion is second to none), and your staff who are always very courteous, helpful and knowledgeable. You guys are a pleasure to work with. I know exactly what I’m buying and what to expect from Great Lakes. Thanks again! ”

—Furniture
Manufacturing Buyer

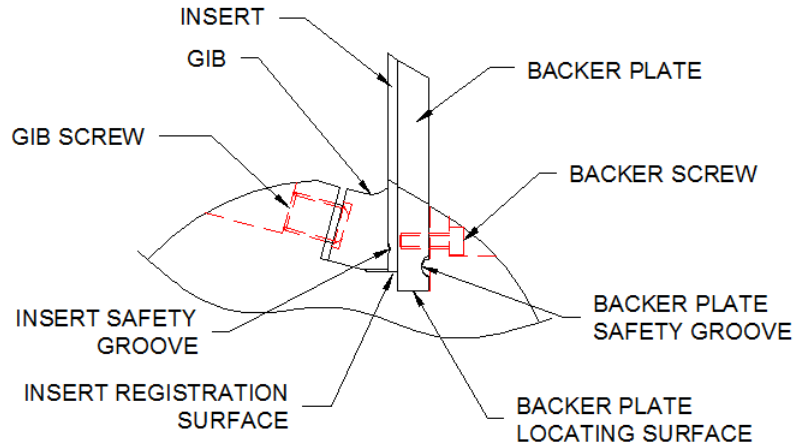


GLCT will grind inserts and backers to cut your desired profiles.



The cutters on this and the facing page are examples of SG Universal Raised Panel Cutters. GLCT can design and manufacture to your required cutter size and desired profiles. Cutters shown are 3 wing cutters with 10° hook and 10° shear.

SG Universal Gib Style Tool System



Advantages/Benefits of the SG Universal Gib Style Tool System

- ✦ **Economical**
- ✦ **Small diameter**, lighter weight
- ✦ **Universatility:** Inserts and backers are interchangeable between router and cutter bodies
- ✦ **Designed for short or long** production runs
- ✦ **Able to run multiple profiles** in the same cutter
- ✦ **Optically inspected** precision ground inserts

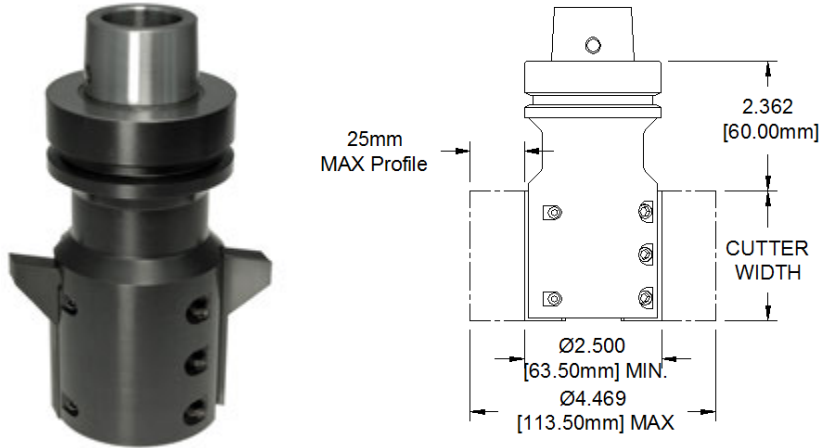
Recommended Speeds and Feeds:

Note: Charts below are a guideline. Feeds and speeds can vary depending on specific material and finish required.

HSK63F Router Bit Small Diameter	No. of Wings	Cutter Width	Material	RPM	IPM
63.5mm (2.500")	2	35 & 60mm	Hard & Softwoods	12,000-16,000	320-480

Weinig PowerLock Small Diameter	No. of Wings	Cutter Width	Material	RPM	FPM
100mm (3.937")	2	35 & 60mm	Hard & Softwoods	8,000	60

SG Universal HSK63F Integral Gib Style CNC Tool



***GLCT will grind inserts and backers
to cut your desired profiles.***

Gib Style cutters listed below are
manufactured with **15° hook** only.

Standard sizes listed below. Max. 18,000 rpm

Custom sizes made available based on your specific requirements.

Part Number	Cutter Width	No. of Wings	Rotation	Hook Angle
HSKGSG-35-2-CW	35mm	2	CW	15°
HSKGSG-35-2-CCW	35mm	2	CCW	15°
HSKGSG-60-2-CW	60mm	2	CW	15°
HSKGSG-60-2-CCW	60mm	2	CCW	15°

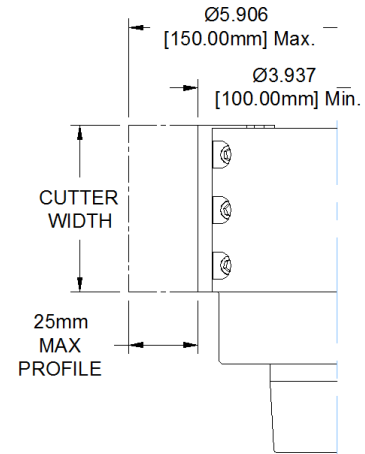
SG Universal Weinig PowerLock Gib Style Cutter



***GLCT will grind inserts and backers
to cut your desired profiles.***

Gib Style cutters listed below are
manufactured with **15° hook** only.

**Custom sizes made available based
on your specific requirements.**

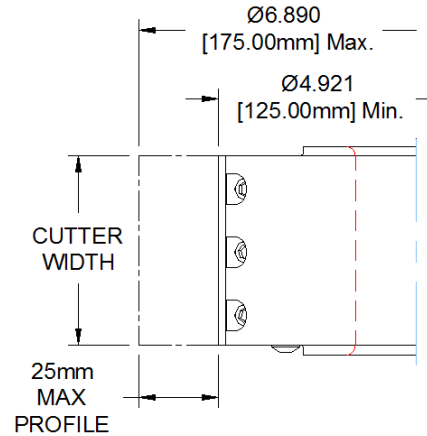


Maximum 12,000 RPM for cutter widths through 85mm.

Maximum 8,000 RPM for cutter widths 105mm through 150mm.

Part Number	Cutter Width	No. of Wings	Rotation	Hook Angle
PLGSG-35-2-CW	35mm	2	CW	15
PLGSG-35-2-CCW	35mm	2	CCW	15
PLGSG-35-3-CW	35mm	3	CW	15
PLGSG-35-3-CCW	35mm	3	CCW	15
PLGSG-50-2-CW	50mm	2	CW	15
PLGSG-50-2-CCW	50mm	2	CCW	15
PLGSG-50-3-CW	50mm	3	CW	15
PLGSG-50-3-CCW	50mm	3	CCW	15
PLGSG-60-2-CW	60mm	2	CW	15
PLGSG-60-2-CCW	60mm	2	CCW	15
PLGSG-60-3-CW	60mm	3	CW	15
PLGSG-60-3-CCW	60mm	3	CCW	15
PLGSG-70-2-CW	70mm	2	CW	15
PLGSG-70-2-CCW	70mm	2	CCW	15
PLGSG-70-3-CW	70mm	3	CW	15
PLGSG-70-3-CCW	70mm	3	CCW	15
PLGSG-85-2-CW	85mm	2	CW	15
PLGSG-85-2-CCW	85mm	2	CCW	15
PLGSG-85-3-CW	85mm	3	CW	15
PLGSG-85-3-CCW	85mm	3	CCW	15
PLGSG-105-2-CW	105mm	2	CW	15
PLGSG-105-2-CCW	105mm	2	CCW	15
PLGSG-105-3-CW	105mm	3	CW	15
PLGSG-105-3-CCW	105mm	3	CCW	15
PLGSG-150-2-CW	150mm	2	CW	15
PLGSG-150-2-CCW	150mm	2	CCW	15
PLGSG-150-3-CW	150mm	3	CW	15
PLGSG-150-3-CCW	150mm	3	CCW	15

SG Universal Straight Bore Gib Style Cutter



GLCT will grind inserts and backers to cut your desired profiles.

Gib Style cutters listed below are manufactured with **15° hook** only.

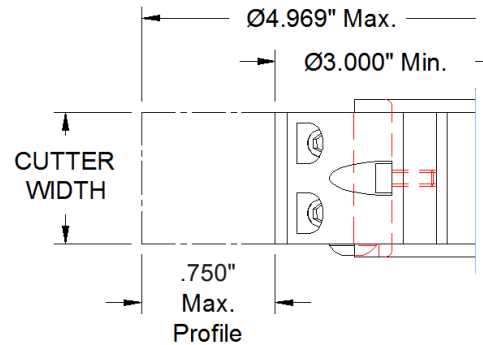
Bore Sizes	"B"
1-1/4"	1250
1-1/2"	1500
1-13/16"	1813
40mm	40mm

Cutter Part Number Example:
GSG-35-2-**1250**

Cutters can be flipped over and run CW or CCW in rotation.
Custom sizes made available based on your specific requirements.

Part Number	Cutter Width	No. of Wings	Hook Angle
GSG-35-2- B	35mm	2	15°
GSG-35-3- B	35mm	3	15°
GSG-60-2- B	60mm	2	15°
GSG-60-3- B	60mm	3	15°

Gib Style SG Mini Cutter – 3" Minor Diameter



GLCT will grind inserts and backers to cut your desired profiles.

The Gib Style Mini Cutter listed below is manufactured with **20° hook** only.

*** Inserts & Backers for this series are not interchangeable with other SG Cutters (other than the Gib Style SG Mini Cutter with the 3.5" minor diameter found on page 27).**

This smaller diameter cutter is commonly used on small shapers & door production machines (i.e., Unique Machine and Tool Co. and others).

Bore Sizes	"B"
1-1/4"	1250
30mm	30mm

Cutter Part Number Example:
GSGM-25-3-**1250**

Cutter can be flipped over and run CW or CCW in rotation.

Part Number	Cutter Width	No. of Wings	Hook Angle
GSGM-25-3- B	25mm	3	20°
GSGM-30-3- B	30mm	3	20°
GSGM-35-3- B	35mm	3	20°
GSGM-50-3- B	50mm	3	20°
GSGM-60-3- B	60mm	3	20°

T-Bushings for Gib SG Mini Cutter

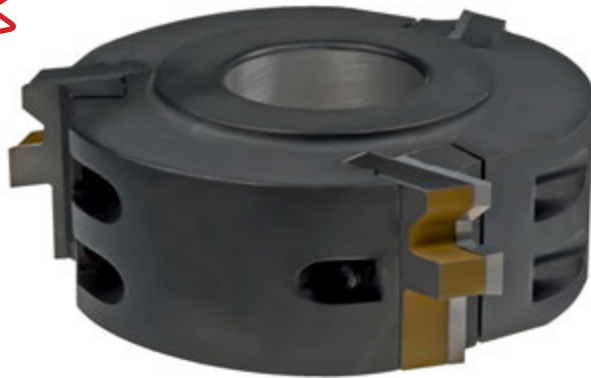
T-Bushings can be used to change the bore from 1-1/4" down to either 1" or 3/4".

Note: (2) T-Bushings are required per cutter.

Part Number	Description	O.D.	Bore
920-13879-0100	T-Bushing	1-1/4"	1"
920-13879-0700	T-Bushing	1-1/4"	3/4"

Gib Style SG Mini Cutter – 3.5" Minor Diameter

New



GLCT will grind inserts and backers to cut your desired profiles.

The Gib Style Mini Cutter listed below is manufactured with **20° hook** only.

* Inserts & Backers for this series are not interchangeable with other SG Cutters (other than the Gib Style SG Mini Cutter with the 3.0" minor diameter found on page 26).

This smaller diameter cutter is commonly used on small shapers & door production machines (i.e., PMK machines and others).

Cutter can be flipped over and run CW or CCW in rotation.

Part Number	Cutter Width	No. of Wings	Bore	Hook Angle
GSGM-3500-25-3-1250	25mm	3	1-1/4"	20°
GSGM-3500-30-3-1250	30mm	3	1-1/4"	20°

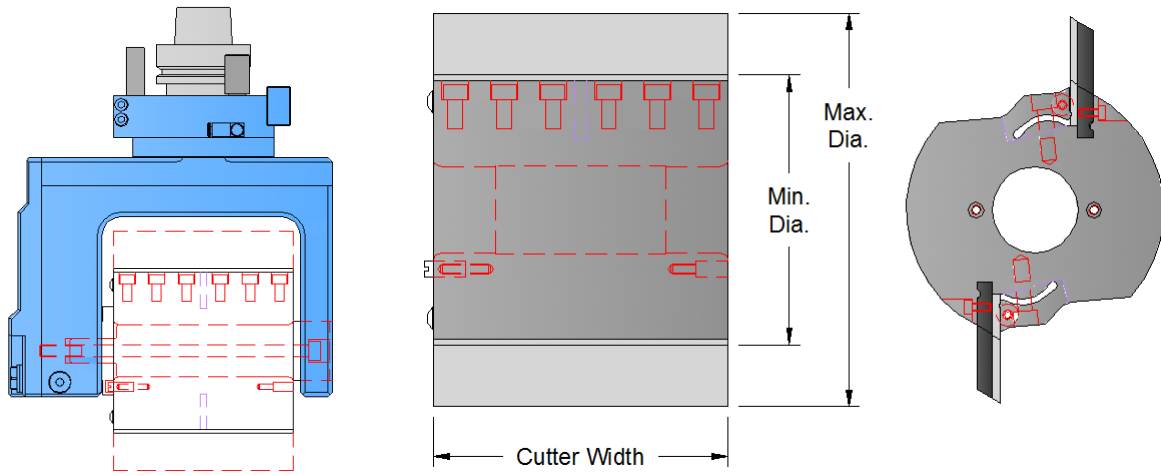
T-Bushings for Gib SG Mini Cutter

T-Bushings can be used to change the bore from 1-1/4" down to either 1" or 3/4".

Note: (2) T-Bushings are required per cutter.

Part Number	Description	Outside Diameter	Bore
920-13879-0100	T-Bushing	1-1/4"	1"
920-13879-0700	T-Bushing	1-1/4"	3/4"






Great-Loc® SG Universal Aggregate & Corrugated Cutters



Aggregate cutters can be flipped over and run CW or CCW in rotation. Cutter bodies are made of aluminum and have 35mm diameter bores. Corrugated bodies are designed to use 16-60° corrugated 5/16" thick knife stock.

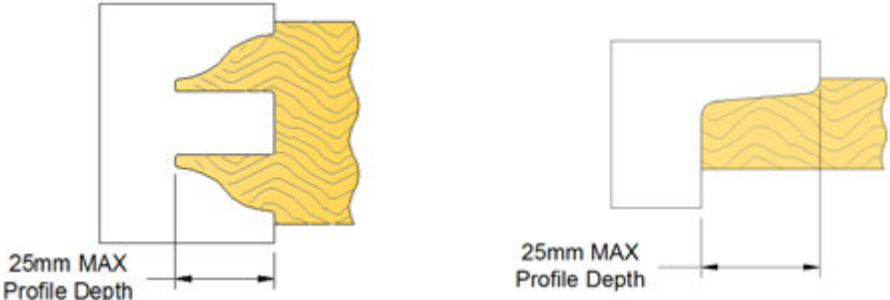
Part Number	Type of Cutter	Cutter Width	Min. Dia.	Max. Dia.	No. of Wings
216-29668-0000	SG	120 mm	110 mm	160 mm	2
360-16408-0000	Corrugated	120 mm	100 mm	146 mm	2
360-08935-0000	Corrugated	100 mm	100 mm	146 mm	2
360-42782-0000	Corrugated	170 mm	100 mm	146 mm	2

Replacement Parts for Great-Loc SG Universal Cutters

Replacement Parts	Part Number	Description	Where Used
	93G-1185	M6 x 1 x 12mm Socket Head Cap Screw	Clampscrew
	93G-1129	M4 x .7 x 4mm x 9mm Special Button Head Screw	Stop Screw
	Requires Cutter No.	Requires cutter part no. to determine proper size	Backer Screw 93G-1094 or 93G-1104
	93G-1244	M8 x 1.25 x 25mm Low Socket Head Cap Screw	Adjust Screw (Router Bit)
	93G-1216	M8 x 1.25 Hex Jam Nut	Jam Nut (Router Bit)

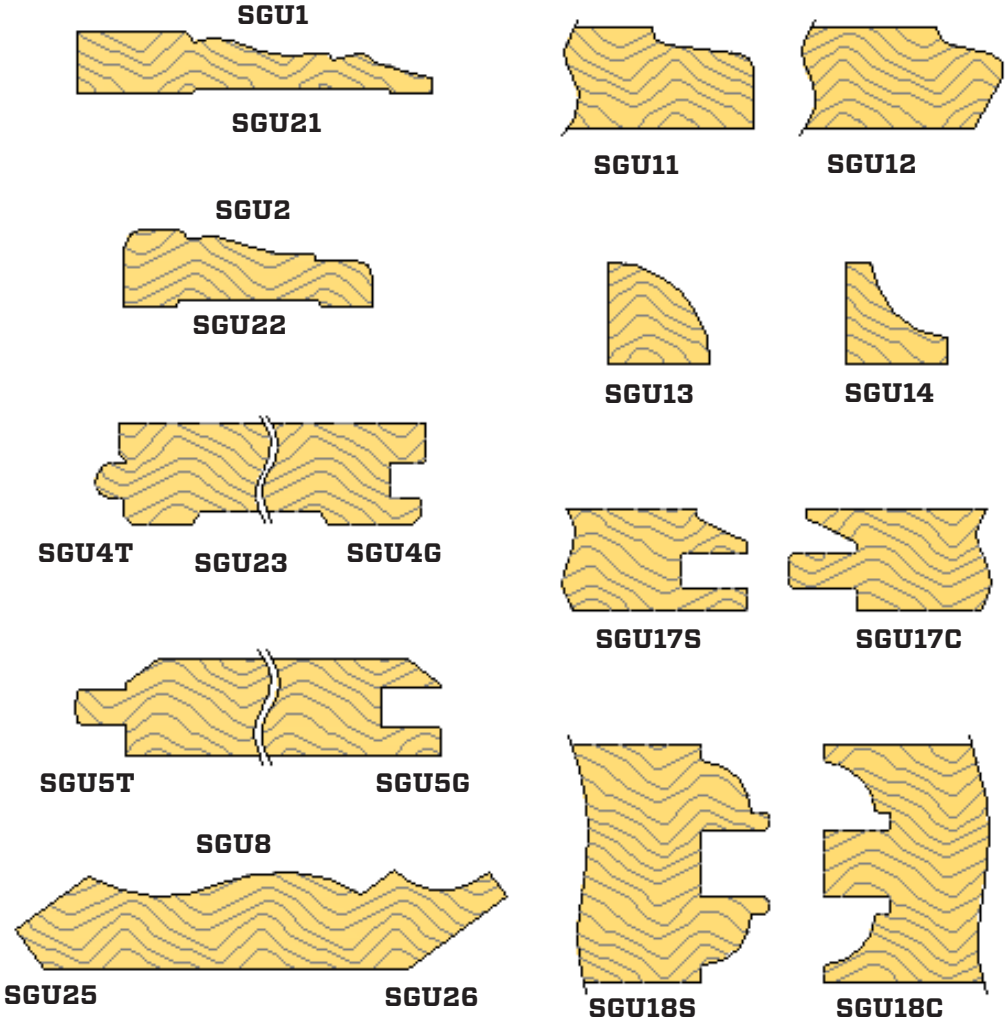
Custom and Standard SG Inserts

GLCT will custom grind inserts and make backers to match your profile. Profiles can be made up to a maximum profile depth of 25mm (See diagrams below). Inserts are available in carbide or G-alloy.



Standard SG Profiles

Examples of profiles manufactured for SG tooling.



Great-Loc® SG Universal
Tool System

Weinig Combination Planing/ Profiling Cutters



New



674014



674018



674025



674045



674128



674129



674124

Advantages and features

- ✦ A grinder is no longer required to produce "S45" material for multiple applications.
- ✦ The CombiHead provides versatility and cost effectiveness with reversible carbide planer knives.
- ✦ Maximum speed of 8,000 RPM.
- ✦ Single-style gibs for all profile knives.
- ✦ Features replaceable profile carbide inserts that can be exchanged in minutes and standard Centrolock planer knives.
- ✦ Standard Inserts: Profile Width 3/4" & Maximum Profile Depth 1/2"

NOTE:

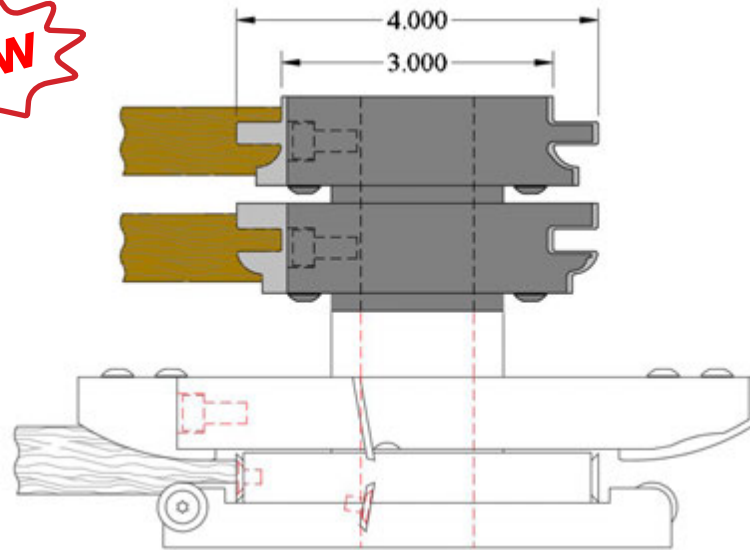
- (1) Each CombiHead includes a pair of HSS planer knives.
- (2) Profile inserts and gibs are sold separately.
- (3) Custom profile inserts available upon request.
- (4) Custom inserts and gibs for 2" wide x 1/4" deep profiles also available upon request.

Part Number	Overall Width	Usable Profile Width (Approx.)	Outside Diameter	Number of Pockets	Bore Diameter
672255	230mm (9-1/16")	200mm (7-7/8")	125mm	2 + 2	1-1/2"
672405	230mm (9-1/16")	200mm (7-7/8")	140mm	2 + 2	1-13/16"

Straight Knife & Profile Knife Part Number	Description
507-920100	HSS Planer Knives (100mm)
507-921100	Carbide Planer Knives (100mm)
507-920230	HSS Planer Knives (230mm)
507-921230	Carbide Planer Knives (230mm)
674014	Carbide 1/4" Radius Insert
674018	Carbide 1/8" Radius Insert
674025	Carbide Bead Insert
674045	Carbide 45 Degree Bevel Insert
674128	Carbide Flooring Standard Relief Cut Insert
674129	Carbide Flooring Round Relief Cut Insert
674124	Carbide 1/4" x 1/2" Groove Insert
675000	Gib for Profile Knives

Unique Machine & Tool Co. Machine Model 250/250GT2 Cope & Stick Cutters

New



Profile Cross Reference Guide (Not limited to part numbers below.)

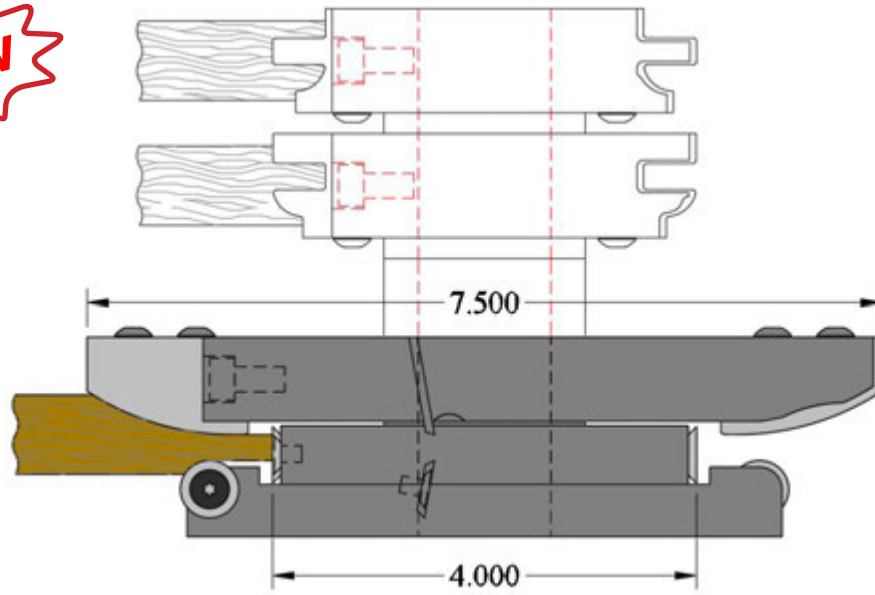
Unique Profile (Cross Reference)	Unique Part Number (Cross Reference)	GLCT Profile	GLCT Part Number	GLCT Gib Style Part Number For Cutter GSGM-25-3-1250
U-336 Cope	810-09803-1000/-2000	G-336 Cope	810-30803-1000/-2000	816-47003-1000/-2000
U-336 Stick	810-09802-1000/-2000	G-336 Stick	810-30802-1000/-2000	816-47002-1000/-2000
U-410 Cope	810-09801-1000/-2000	G-410 Cope	810-30801-1000/-2000	816-47001-1000/-2000
U-410 Stick	810-09800-1000/-2000	G-410 Stick	810-30800-1000/-2000	816-47000-1000/-2000
U-430 Cope	810-09801-1100/-2100	G-430 Cope	810-30801-1100/-2100	816-47001-1100/-2100
U-430 Stick	810-09800-1100/-2100	G-430 Stick	810-30800-1100/-2100	816-47000-1100/-2100
U-465 Cope	810-09805-1000/-2000	G-465 Cope	810-30805-1000/-2000	816-47005-1000/-2000
U-465 Stick	810-09804-1000/-2000	G-465 Stick	810-30804-1000/-2000	816-47004-1000/-2000
U-600 Cope	810-09803-1100/-2100	G-600 Cope	810-30803-1100/-2100	816-47003-1100/-2100
U-600 Stick	810-09802-1100/-2100	G-600 Stick	810-30802-1100/-2100	816-47002-1100/-2100
Shaker Cope (1 Bevel)	810-09807-1000/-2000	Shaker Cope (1 Bevel)	810-30807-1000/-2000	816-47007-1000/-2000
Shaker Stick (1 Bevel)	810-09806-1000-2000	Shaker Stick (1 Bevel)	810-30806-1000/-2000	816-47006-1000/-2000
Shaker Cope (2 Bevel)	810-09807-1100/-2100	Shaker Cope (2 Bevel)	810-30807-1100/-2100	816-47007-1100/-2100
Shaker Stick (2 Bevel)	810-09806-1100/-2100	Shaker Stick (2 Bevel)	810-30806-1100/-2100	816-47006-1100/-2100
Shaker Cope (No Bevel)	810-09807-1200/-2200	Shaker Cope (No Bevel)	810-30807-1200/-2200	816-47007-1200/-2200
Shaker Stick (No Bevel)	810-09806-1200/-2200	Shaker Stick (No Bevel)	810-30806-1200/-2200	816-47006-1200/-2200

Unique Machine & Tool Co.

Machine Model 250/250GT2

Raised Panel, Sizing & Back Relief Cutters

New



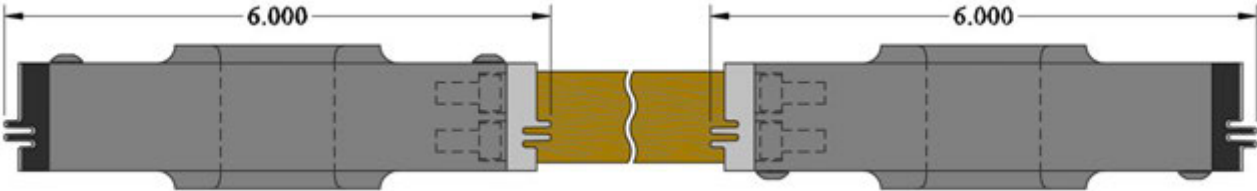
Profile Cross Reference Guide (Not limited to part numbers below.)

Unique Profile (Cross Reference)	Unique Part Number (Cross Reference)	GLCT Profile	GLCT Part Number	GLCT Gib Style Part Number For Cutter GSGM-25-3-1250
U-264	810-09808-1400/-2400	G-264	810-30808-1400/-2400	N/A
U-303	810-09808-1700/-2700	G-303	810-30808-1700/-2700	N/A
U-339	810-09808-1200/-2200	G-339	810-30808-1200/-2200	N/A
U-339G	810-09808-1900/-2900	G-339G	810-30808-1900/-2900	N/A
U-349	810-09808-1800/-2800	G-349	810-30808-1800/-2800	N/A
U-416	810-09808-1600/-2600	G-416	810-30808-1600/-2600	N/A
U-429	810-09808-1100/-2100	G-429	810-30808-1100/-2100	N/A
U-429S	810-09808-1110/-2110	G-429S	810-30808-1110/-2110	N/A
U-460	810-09808-1500/-2500	G-460	810-30808-1500/-2500	N/A
U-479	810-09808-1300/-2300	G-479	810-30808-1300/-2300	N/A
U-763	810-09808-1000/-2000	G-763	810-30808-1000/-2000	N/A
U-763G	810-09808-1120/-2120	G-763G	810-30808-1120/-2120	N/A

	Unique Cutter Number	GLCT Cutter No.	Insert No.
Panel Cutter	210-09808-1000/-2000	210-30808-1000/-2000	See Above
Sizing Cutter	230-09809-2000	230-30809-0000	80239418
Back Relief Cutter	230-09810-2000/-2100	230-30810-2000/-2100	810-09085-0000

Unique Machine & Tool Co. Machine Model 313/313GT2 Finger Joint

New



Finger Joint Insert Cross Reference Guide

Unique Profile (Cross Reference)	Unique Part Number (Cross Reference) For Cutter 216-21830-0000	GLCT Profile	GLCT Part Number For Cutter 216-30811-0000	GLCT Backer Part Number
Finger Joint	816-11011-1100	Finger Joint	816-30812-1100	850-30812-1100
Finger Joint	816-11011-1200	Finger Joint	816-30812-1200	850-30812-1100
Finger Joint	816-11011-2000	Finger Joint	816-30812-2000	850-30812-2000

Helicarb® Moulder Cutters



Patent No. 7,390,151



Great Lakes Custom Tool (GLCT) manufactures the patented and registered trademarked Helicarb cutters for the woodworking industry. Helicarb cutters feature a continuous one piece replaceable helical carbide blade for cutters up to 235mm in width. Cutters wider than 235mm (up to 310mm) have 2-piece carbide blades that come in cutter blade sets.

The advantages/benefits of this technology include:

- ✦ The blade in the Helicarb cutter **produces a smooth shearing action**. This action reduces tear-out in hardwoods, softwoods, irregular grain and laminated veneer lumber.
- ✦ Helicarb cutters give a **superior smooth finish** on all woods, MDF & plastics.
- ✦ The Helicarb cutter can accept blades of various hook angles.
- ✦ The **helical blades are replaceable**, keeping downtime to a minimum.
- ✦ Blades are **easily resharpened** to a high degree of accuracy with proper grinding equipment.
- ✦ The Helicarb cutter consumes up to **16% less electrical power** than a straight knife cutter reducing operating costs.
- ✦ Helicarb cutters run **8 decibels quieter** than a straight knife.
- ✦ Manufactured in conventional straight bore, hydro bore, HSK System and PowerLock cutters.

Recommended Speeds and Feeds:

Note: Charts below are a guideline. Feeds and speeds can vary depending on specific material and finish required.

Cutter Diameter	Wings	Material	RPM	FPM	Chip Load
100 mm	2	Hard & Softwoods	12,000	60	.030"
100 mm	3	Hard & Softwoods	12,000	90	.030"
135 & 160 mm	2	Hard & Softwoods	6,000-8,000	30-40	.030"
135 & 160 mm	3	Hard & Softwoods	6,000-8,000	45-60	.030"
160 mm	4	Hard & Softwoods	6,000-8,000	60-80	.030"
160 mm	6	Hard & Softwoods	6,000-8,000	90-120	.030"

Helicarb® Blades



H = Hook Angle: Must specify when ordering blades

- 5° Hook** Recommended for cutting hard maple, hickory, South American exotics & MDF. This hook will reduce "tearout" that tends to be problematic.
- 10° Hook** Recommended for cutting common hardwoods (oak, ash, walnut, cherry, etc.). This hook is an excellent "all around choice" for many hardwoods.
- 15° Hook** Recommended for cutting soft hardwoods (soft maple, alder, poplar, aspen & fir). This hook is the universal choice for multiple applications.
- 20° Hook** Recommended for cutting softwoods (spruce & pine) and plastics. This hook provides a clean cut, reducing fuzzing in softwoods.

Helicarb® Moulder Cutters

135mm Diameter Aluminum* Straight Bore Helicarb Cutters

*(Also available in steel by request)

2 & 3 wing cutters listed below, up to 8 wings are available.

310mm width available in hydro bore only.



Bore Sizes	"B"
1-1/2"	1500
1-13/16"	1813
2-1/8"	2125
40mm	40mm
50mm	50mm

Cutter Part Number

Example:

135X75-RT-2-ST-1500-AL

H = Hook Angle Degree

5, 10, 15 or 20

See page 35 for recommended hook.

Right or Top Head

Straight Bore Cutters/Right Hand Helix/CCW Rotation

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm	2	135X75-RT-2-ST-B-AL	135X75-RT-H-DEG
	3	135X75-RT-3-ST-B-AL	135X75-RT-H-DEG
115mm	2	135X115-RT-2-ST-B-AL	135X115-RT-H-DEG
	3	135X115-RT-3-ST-B-AL	135X115-RT-H-DEG
170mm	2	135X170-RT-2-ST-B-AL	135X170-RT-H-DEG
	3	135X170-RT-3-ST-B-AL	135X170-RT-H-DEG
235mm	2	135X235-RT-2-ST-B-AL	135X235-RT-H-DEG
	3	135X235-RT-3-ST-B-AL	135X235-RT-H-DEG

Left or Bottom Head

Straight Bore Cutters/Left Hand Helix/CW Rotation

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm	2	135X75-LB-2-ST-B-AL	135X75-LB-H-DEG
	3	135X75-LB-3-ST-B-AL	135X75-LB-H-DEG
115mm	2	135X115-LB-2-ST-B-AL	135X115-LB-H-DEG
	3	135X115-LB-3-ST-B-AL	135X115-LB-H-DEG
170mm	2	135X170-LB-2-ST-B-AL	135X170-LB-H-DEG
	3	135X170-LB-3-ST-B-AL	135X170-LB-H-DEG
235mm	2	135X235-LB-2-ST-B-AL	135X235-LB-H-DEG
	3	135X235-LB-3-ST-B-AL	135X235-LB-H-DEG

160mm Diameter Aluminum* Straight Bore Helicarb Cutters

**(Also available in steel by request)*

2 & 3 wing cutters listed below, up to 8 wings are available.

310mm width available in hydro bore only.



Bore Sizes	"B"
1-1/2"	1500
1-13/16"	1813
2-1/8"	2125
40mm	40mm
50mm	50mm

Cutter Part Number Example:

160X75-RT-2-ST-1500-AL

H = Hook Angle Degree

5, 10, 15 or 20

See page 35 for recommended hook.

Right or Top Head

Straight Bore Cutters/Right Hand Helix/CCW Rotation

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm	2	160X75-RT-2-ST-B-AL	160X75-RT-H-DEG
	3	160X75-RT-3-ST-B-AL	160X75-RT-H-DEG
115mm	2	160X115-RT-2-ST-B-AL	160X115-RT-H-DEG
	3	160X115-RT-3-ST-B-AL	160X115-RT-H-DEG
170mm	2	160X170-RT-2-ST-B-AL	160X170-RT-H-DEG
	3	160X170-RT-3-ST-B-AL	160X170-RT-H-DEG
235mm	2	160X235-RT-2-ST-B-AL	160X235-RT-H-DEG
	3	160X235-RT-3-ST-B-AL	160X235-RT-H-DEG

Left or Bottom Head

Straight Bore Cutters/Left Hand Helix/CW Rotation

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm	2	160X75-LB-2-ST-B-AL	160X75-LB-H-DEG
	3	160X75-LB-3-ST-B-AL	160X75-LB-H-DEG
115mm	2	160X115-LB-2-ST-B-AL	160X115-LB-H-DEG
	3	160X115-LB-3-ST-B-AL	160X115-LB-H-DEG
170mm	2	160X170-LB-2-ST-B-AL	160X170-LB-H-DEG
	3	160X170-LB-3-ST-B-AL	160X170-LB-H-DEG
235mm	2	160X235-LB-2-ST-B-AL	160X235-LB-H-DEG
	3	160X235-LB-3-ST-B-AL	160X235-LB-H-DEG

Helicarb® Moulder Cutters

160mm Diameter Steel* Hydro Bore Helicarb Cutters

*235mm widths in aluminum (or steel by request)

3, 4 & 6 wing cutters listed below, up to 14 wings available.

310mm width available in hydro bore only.

H = Hook Angle Degree

5, 10, 15 or 20

See page 35 for recommended hook.



Bore Sizes	"B"
1-13/16"	1813
2-1/8"	2125
50mm	50mm

Cutter Part Number Example:

160X75-RT-3-HY-1813

Right or Top Head

Hydro Bore Cutters/Right Hand Helix/CCW Rotation

Width	No. Wings	Cutter Part Number	Blade Part Number
75mm	3	160X75-RT-3-HY-B	160X75-RT-H-DEG
	4	160X75-RT-4-HY-B	160X75-RT-H-DEG
	6	160X75-RT-6-HY-B	160X75-RT-H-DEG
115mm	3	160X115-RT-3-HY-B	160X115-RT-H-DEG
	4	160X115-RT-4-HY-B	160X115-RT-H-DEG
	6	160X115-RT-6-HY-B	160X115-RT-H-DEG
170mm	3	160X170-RT-3-HY-B	160X170-RT-H-DEG
	4	160X170-RT-4-HY-B	160X170-RT-H-DEG
	6	160X170-RT-6-HY-B	160X170-RT-H-DEG
* 235mm	3	160X235-RT-3-HY-B	160X235-RT-H-DEG
	4	160X235-RT-4-HY-B	160X235-RT-H-DEG
	6	160X235-RT-6-HY-B	160X235-RT-H-DEG

Left or Bottom Head

Hydro Bore Cutters/Left Hand Helix/CW Rotation

Width	No. Wings	Cutter Part Number	Blade Part Number
75mm	3	160X75-LB-3-HY-B	160X75-LB-H-DEG
	4	160X75-LB-4-HY-B	160X75-LB-H-DEG
	6	160X75-LB-6-HY-B	160X75-LB-H-DEG
115mm	3	160X115-LB-3-HY-B	160X115-LB-H-DEG
	4	160X115-LB-4-HY-B	160X115-LB-H-DEG
	6	160X115-LB-6-HY-B	160X115-LB-H-DEG
170mm	3	160X170-LB-3-HY-B	160X170-LB-H-DEG
	4	160X170-LB-4-HY-B	160X170-LB-H-DEG
	6	160X170-LB-6-HY-B	160X170-LB-H-DEG
* 235mm	3	160X235-LB-3-HY-B	160X235-LB-H-DEG
	4	160X235-LB-4-HY-B	160X235-LB-H-DEG
	6	160X235-LB-6-HY-B	160X235-LB-H-DEG

100mm Diameter Steel Helicarb Weing PowerLock Cutters

H = Hook Angle Degree
5, 10, 15 or 20

See page 35 for
recommended hook.



Right or Top Head

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm	2	100X75-RT-2-PL	100X75-RT-H-DEG
115mm	2	100X115-RT-2-PL	100X115-RT-H-DEG
170mm	2	100X170-RT-2-PL	100X170-RT-H-DEG
235mm	2	100X235-RT-2-PL	100X235-RT-H-DEG
235mm	3	100X235-RT-3-PL	100X235-RT-H-DEG
310mm	2	100X310-RT-2-PL	100X310-RT-2-H-DEG

Left Head (ONLY) (For better chip flow)

Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm *	2	100X75-L-2-PL	100X75-RT-H-DEG
115mm *	2	100X115-L-2-PL	100X115-RT-H-DEG

* These cutters utilize the same blades as the right or top head for corresponding length.

Left or Bottom Head






Cutter Width	No. of Wings	Cutter Part Number	Blade Part Number
75mm **	2	100X75-LB-2-PL	100X75-LB-H-DEG
115mm **	2	100X115-LB-2-PL	100X115-LB-H-DEG
170mm	2	100X170-LB-2-PL	100X170-LB-H-DEG
235mm	2	100X235-LB-2-PL	100X235-LB-H-DEG
235mm	3	100X235-LB-3-PL	100X235-LB-H-DEG
310mm	2	100X310-LB-2-PL	100X310-LB-2-H-DEG

Note: 310mm width cutter blades are 2 pieces per wing.

** To be used on bottom spindle only.

Helicarb® Moulder Cutters

Helicarb Cutter Replacement Parts

Replacement Parts	Cutter Diameter	Part Number	Description
	100mm	100-RT-W	R.H. Wedge
	135mm	135-RT-W	R.H. Wedge
	160mm	160-RT-W	R.H. Wedge
	100mm	100-LB-W	L.H. Wedge
	135mm	135-LB-W	L.H. Wedge
	160mm	160-LB-W	L.H. Wedge
	100mm	93G-1020	1/4-28 x 3/4 Differential Wedge Screw
	135mm & 160mm	93G-1235	M8x1.25 x 24mm Differential Wedge Screw
	All Diameters	HCS-KIT	(10)--.030" thick shims [.135" wide x 9.625" long]
	All Diameters	810-23426-0100	Helicarb Knife Rest for grinding helicarb blades. Used in conjunction with Weinig knife rest 930-013024

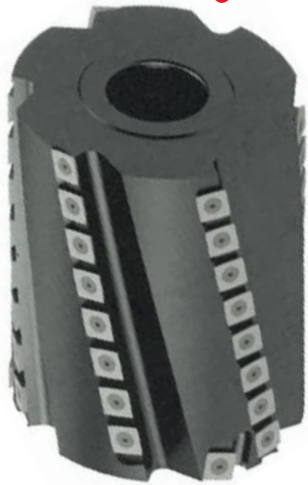


Knife rest and grinding wheel for sharpening blade in a Helicarb cutter on a Weinig Rondamat Grinder or equivalent.



Sharpening blade in Helicarb PowerLock Cutter

Straight Bore Spiral Insert Cutters



Each cutter head includes a full set of installed inserts. The inserts have 4 cutting edges, so it is possible to rotate the insert 3 times after the initial setup. Cutter assemblies can be mounted for clockwise or counterclockwise rotation by turning the cutter end for end. Spiral cutters are manufactured from aluminum or steel.

Advantages and features of the spiral head

- Noise Reduction (up to 20 decibels)
- Reduced cutting pressure
- Less severe cutting action and reduced tearing
- Less tendency to create chip dents
- Less raised grain in knotty and cross-grain material
- Indexable and replaceable inserts
- Insert knives uniquely designed with a slight convex curve on the cutting edge to prevent lines from appearing on the wood surface
- Less impact on spindle bearings
- Maximum speed of 9,000 rpm

Part Number	Dia.	Width	Bore	Wings	Body Material	Machine Position	Helix	No. of Inserts
630012*	110mm	75mm	1-1/2"	2+2	Steel	Left Only	LH	14
630013	125mm	100mm	1-1/2"	2+2	Aluminum	All	LH	20
335-50145-0100	125mm	100mm	40mm	2+2	Aluminum	All	LH	20
335-56230-0000	125mm	100mm	1-13/16"	3+3	Steel	All	LH	27
630019	125mm	170mm	1-1/2"	2+2	Aluminum	Top or bottom	LH	34
335-50146-0100	125mm	170mm	40mm	2+2	Aluminum	Top or bottom	LH	34
335-59172-0000	125mm	170mm	1-1/2"	2+2	Steel	Top or bottom	LH	32
335-59172-0100	125mm	170mm	40mm	2+2	Steel	Top or bottom	LH	32
335-52792-0000	125mm	180mm	1-1/2"	2+2	Steel	Top or bottom	LH	36
630005	125mm	230mm	1-1/2"	2+2	Aluminum	Top or bottom	LH	46
335-50147-0100	125mm	230mm	40mm	2+2	Aluminum	Top or bottom	LH	46
335-51363-0000	125mm	230mm	1-1/2"	2+2	Steel	Top or bottom	LH	46
335-51397-0000	125mm	230mm	40mm	2+2	Steel	Top or bottom	LH	46
630010	125mm	240mm	1-1/2"	2+2	Aluminum	Top or bottom	LH	48
335-50148-0100	125mm	240mm	40mm	2+2	Aluminum	Top or bottom	LH	48
630015	125mm	270mm	1-1/2"	2+2	Aluminum	Top or bottom	LH	54
630205	140mm	100mm	1-13/16"	2+2	Aluminum	All	LH	20
630214	140mm	170mm	1-13/16"	2+2	Aluminum	Top or bottom	LH	34
335-51887-0000	140mm	170mm	1-13/16"	3+3	Steel	Top or bottom	LH	51
630220	140mm	230mm	1-13/16"	2+2	Aluminum	Top or bottom	LH	46
335-59953-0000	140mm	230mm	40mm	2+2	Aluminum	Top or bottom	LH	46
630225	140mm	240mm	1-13/16"	2+2	Aluminum	Top or bottom	LH	48
335-51888-0000	140mm	60mm	1-13/16"	3+3	Steel	Top or bottom	LH	18
630230	140mm	270mm	1-13/16"	2+2	Aluminum	Top or bottom	LH	54
335-57201-0000	160mm	100mm	1-13/16"	2+2	Steel	All	LH	20
335-59593-0000	160mm	265mm	2-1/8"	3+3	Steel	Top or bottom	LH	78

*Special small diameter for use on left spindle to extend width capacity.

Other sizes available upon request.

Replacement Part Number	Description
101540	15 x 15 x 2.5 Carbide Insert
93G-1151	M5 x .8 x 14mm x 8.5mm Special Flat Socket Head Screw
90G-1014	T20 x 100mm Torx Screw Driver

Shear Hydro Bore Spiral Insert Cutters



Similar to straight bore spiral cutters with the following features and benefits:

- ✦ Mounted on hydro sleeves for true running accuracy
- ✦ Indexable and replaceable carbide inserts
- ✦ Higher feed rates possible
- ✦ Maximum Speed of 8,000 rpm

Each cutter head includes a full set of installed inserts.

Part Number	Dia.	Width	Bore	Wings	Body Material	Machine Position	Helix	No. of Inserts
335-58703-0000	140mm	310mm	1-13/16"	2+2	Aluminum	Top/Bottom	LH	62
335-60320-0000	160mm	100mm	1-13/16"	4+4	Steel	All	LH	40
335-53965-0000	160mm	120mm	50mm	4+4	Steel	Top/Bottom	LH	48
335-60134-0000	160mm	145mm	1-13/16"	4+4	Aluminum	Top/Bottom	LH	56
335-53966-0000	160mm	170mm	50mm	4+4	Steel	Top/Bottom	LH	68
335-57568-0000	160mm	170mm	1-13/16"	3+3	Steel	Top/Bottom	LH	51
335-59603-0000	160mm	170mm	2-1/8"	3+3	Steel	Top/Bottom	LH	51
335-58543-0000	160mm	185mm	1-13/16"	4+4	Aluminum	Top/Bottom	LH	72
335-54635-0000	160mm	210mm	2-1/8"	4+4	Steel	Top/Bottom	LH	84
335-59885-0000	160mm	230mm	40mm	3+3	Aluminum	Top/Bottom	LH	69
335-58836-0000	160mm	235mm	1-13/16"	6+6	Aluminum	Top/Bottom	LH	138
335-59590-0000	160mm	265mm	2-1/8"	3+3	Aluminum	Top/Bottom	LH	78
335-53961-0000	160mm	275mm	2-1/8"	6+6	Aluminum	Top/Bottom	LH	162
335-53967-0000	160mm	310mm	50mm	3+3	Steel	Top/Bottom	LH	93
622640	160mm	330mm	1-13/16"	3+3	Aluminum	Top/Bottom	LH	99
335-56215-0000	160mm	330mm	1-13/16"	5+5	Aluminum	Top/Bottom	LH	165
335-53434-0000	160mm	340mm	1-13/16"	4+4	Aluminum	Top/Bottom	LH	136

Other sizes available upon request.

Replacement Part Number	Description
101540	15 x 15 x 2.5 Carbide Insert
93G-1151	M5 x .8 x 14mm x 8.5mm Special Flat Socket Head Screw
90G-1014	T20 x 100mm Torx Screw Driver

Shear Weinig PowerLock Spiral Insert Cutters



Using a spiral cutter on natural wood can make the cutting process smoother when cutting material that is cross-grain or knotty.

Similar in design to standard spiral planer heads, but with the Weinig PowerLock HSK Shank.

- ✦ For exclusive use on all Weinig Powermat Moulders
- ✦ Rated for maximum speed of 12,000 rpm up to 240mm width
- ✦ Rated for maximum speed of 8,000 rpm over 240mm width
- ✦ Noise Reduction (up to 20 decibels)
- ✦ Reduced cutting pressure
- ✦ Less severe cutting action and reduced tearing
- ✦ Less tendency to create chip dents
- ✦ Less raised grain in knotty and cross grain material
- ✦ Indexable and replaceable inserts
- ✦ Insert knives uniquely designed with a slight convex curve on the cutting edge to prevent lines from appearing on the wood surface.

Each cutter includes a full set of installed inserts.

Part Number	Dia.	Width	Wings	Body Material	Machine Position	Helix	No. of Inserts
64023	110mm	120mm	2+2	Steel	Left or Bottom	LH	24
64033	110mm	120mm	2+2	Steel	Right or Top	LH	24
64026	110mm	170mm	2+2	Steel	Left or Bottom	LH	34
64036	110mm	170mm	2+2	Steel	Right or Top	LH	34
64027	110mm	240mm	2+2	Aluminum	Bottom	LH	48
64037	110mm	240mm	2+2	Aluminum	Top	LH	48
640281	110mm	270mm	2+2	Aluminum	Bottom	LH	54
640381	110mm	270mm	2+2	Aluminum	Top	LH	54
640282	110mm	330mm	2+2	Aluminum	Bottom	LH	66
640382	110mm	330mm	2+2	Aluminum	Top	LH	66
335-52458-2000*	110mm	240mm	2+2	Steel	Top	LH	48

*Max RPM = 10,000

Replacement Part Number	Description
101540	15 x 15 x 2.5 Carbide Insert
93G-1151	M5 x .8 x 14mm x 8.5mm Special Flat Socket Head Screw
90G-1014	T20 x 100mm Torx Screw Driver

Custom Designed Integral Spiral Insert Cutters

Great Lakes Custom Tool Mfg. Inc. specializes in custom tool designs.

Custom Spiral Cutters with different cutting diameters, cutting lengths, bores, and number of inserts may be special ordered. GLCT can design and manufacture the cutter that will meet your needs. Our customer service staff will help you through the specifying and ordering process. Before your tool is put into production, an approval print will be faxed, e-mailed or sent to you for your approval.

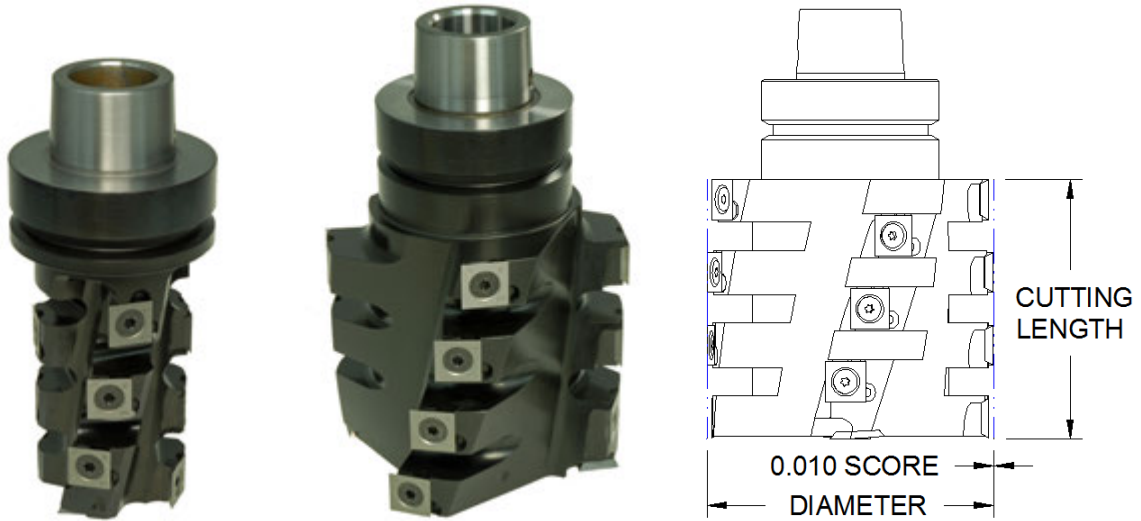


Custom Spiral Insert Moulder Cutter



Custom PowerLock Insert Planing & Hollow Back Cutter

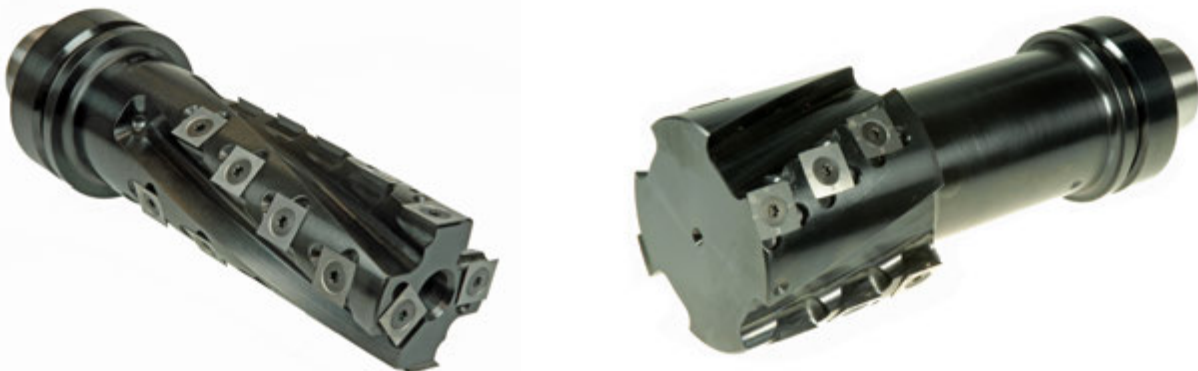
Spiral Insert HSK63F Integral Roughing/Hogging Tools



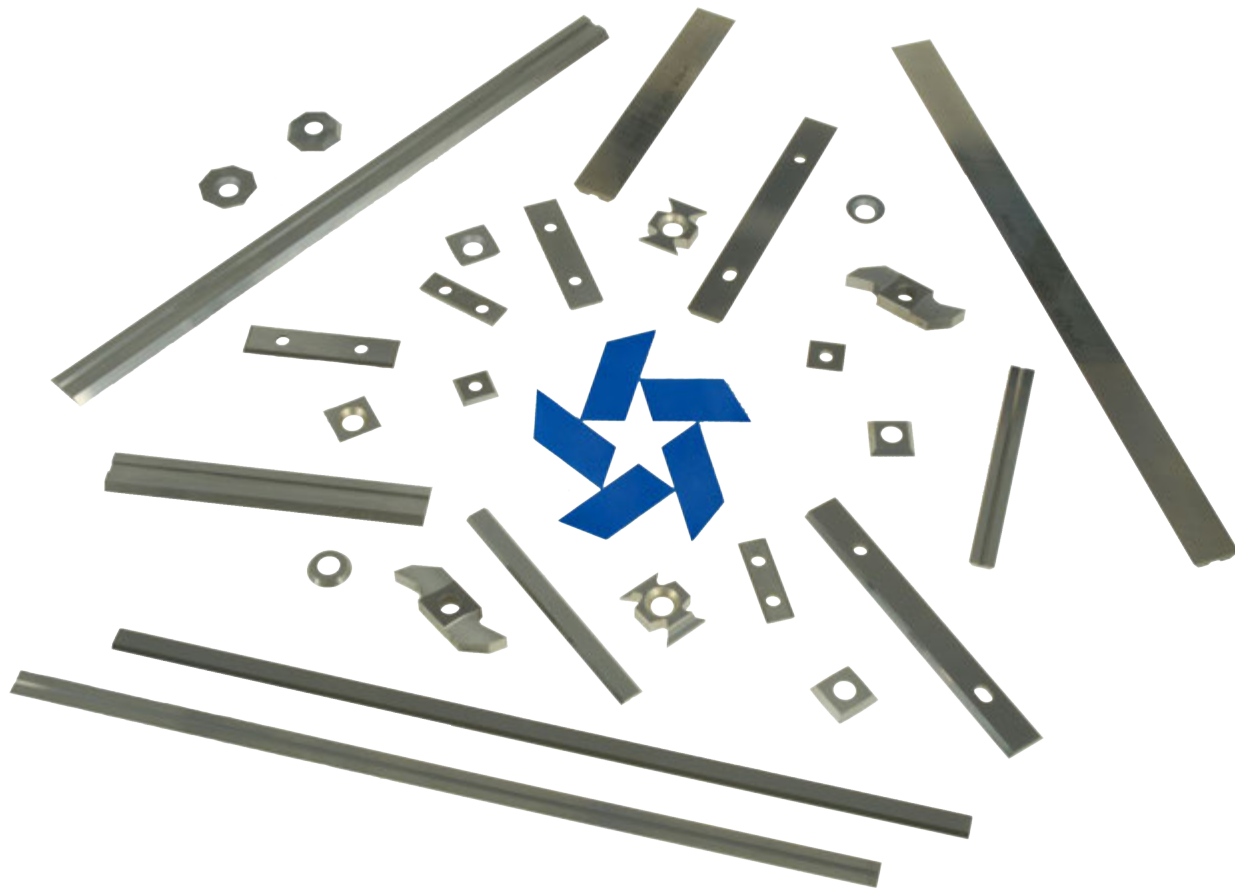
GLCT has available HSK63F Integral Insert Roughing/Hogging Tools that mount directly to your CNC router spindle. These high performance tools allow removal of large amounts of material in the form of saw dust instead of having small pieces of off-fall left to handle. The tools are dynamically balanced for use on CNC routers up to a **maximum RPM of 15,000**. **Each tool includes a full set of installed inserts.**

Part Number	Cutter Dia.	Cutting Length	Cutter Rotation	No. of Wings	No. of Inserts	Insert Part No.	Scoring Insert No.
SPR-2000X3000-2-CW	2.0"	3.0"	CW	2+2+2	14	80239418	80330882
SPR-2000X3000-2-CCW	2.0"	3.0"	CCW	2+2+2	14	80239418	80330882
SPR-4000X3625-2-CW	4.0"	3.625"	CW	2+2+2	16	80239421	80239421
SPR-4000X3625-2-CCW	4.0"	3.625"	CCW	2+2+2	16	80239421	80239421
130-29552-1000	2.0"	4.500"	CW	2+2+2	20	80239418	80239418
130-29552-2000	2.0"	4.500"	CCW	2+2+2	20	80239418	80239418
135-43342-1000	2.0"	6.000"	CW	2+2+2	26	80239418	80239418
135-43342-2000	2.0"	6.000"	CCW	2+2+2	26	80239418	80239418

Great Lakes Custom Tool can custom design and manufacture roughing/hogging tools to your specifications. (See examples below)



Carbide Inserts for Planing, Chamfering, Grooving, Etc.



GLCT has a wide variety of standard carbide inserts available for replacements.

We can help specify the proper carbide grade and manufacture the tool for all your applications.

Available are reversible knives, square indexable inserts, grooving knives, planing knives, chamfering inserts, scoring inserts, edge rounding knives, etc.

The carbide grade is defined by many variables: composition, grain size, transverse rupture strength, hardness, density, fracture toughness and wear resistance. If you are having a wear issue with the inserts you are using, a change in carbide grade may help.

GLCT can modify inserts by grinding or EDM'ing (Electrical Discharge Machining). There are "Endless Possibilities" when working with the many different configurations and materials that need to be machined.

Diamond (PCD) Router Bits

Great Lakes Custom Tool (GLCT) manufactures Polycrystalline Diamond (PCD) router bits to meet your specific needs. PCD is used in high volume production operations.

Benefits of PCD:

- ✦ Reduction in downtime
- ✦ Reduction in operating costs
- ✦ Reduction in scrap

Note: Care must be used in handling diamond tooling to avoid damaging the cutting edge. Do not use a metal knife, blade, tape measure or calipers near the cutting edge.



The compression design ensures chip free edges on the top and bottom of a part. These router bits also feature a plunge point which allows starting to route (plunging) in the middle of the material. Great for use in engineered wood products & composites.

Part Number	Cutting Diameter	Cutting Edge Length	Upcut Flute Length	Shank Dia.	Overall Length
190-43868-1000	1/2"	7/8"	3/8"	1/2"	3"
190-43869-1000	1/2"	1-7/32"	3/8"	1/2"	3"

Other size diameters and cutting edge lengths available upon request.

Recommended Speeds and Feeds:

Note: Chart below is a guideline. Feeds and speeds can vary depending on specific material.

Router Bit Part No.	Depth of Cut	Cutting Dia.	No. of Wings	RPM	IPM	Chip Load
190-43868-1000	1/2"	1/2"	2	18,000	450-600	.012-.017"
	1"		2	18,000	325-400	.009-.011"
190-43869-1000	1/2"	1/2"	2	18,000	450-600	.012-.017"
	1"		2	18,000	325-400	.009-.011"

IPM = Inches per minute

RPM = Revolutions per minute

Chip Load = Feed Rate/(RPM x # of cutting edges)

Feed Rate (IPM) = RPM x # of cutting edges x chip load

Speed (RPM) = Feed Rate/(# of cutting edges x chip load)

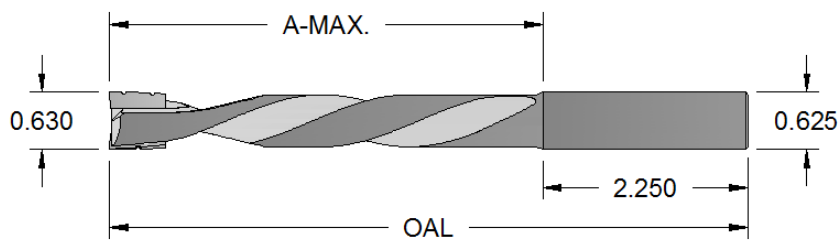
Diamond (PCD) Router Bits



PCD lock mortising router bits are used to route door lock pockets in solid wood and manufactured composite wood material.

Features:

- ✦ Design provides strength, rigidity and durability
- ✦ PCD tips with chipbreaker grooves
- ✦ Available in 3 different overall lengths for various depths of cuts
- ✦ Other sizes available upon request



Part Number	Cutting Diameter	Cutting Rotation	Shank Diameter	Overall Length	A-Max.
190-24858-1000	.630"	CW	5/8"	7"	4-1/2"
190-24858-2000	.630"	CCW	5/8"	7"	4-1/2"
190-24858-1100	.630"	CW	5/8"	6"	3-1/2"
190-24858-2100	.630"	CCW	5/8"	6"	3-1/2"
190-24858-1200	.630"	CW	5/8"	5"	2-1/2"
190-24858-2200	.630"	CCW	5/8"	5"	2-1/2"

Other size diameters and cutting edge lengths available upon request.

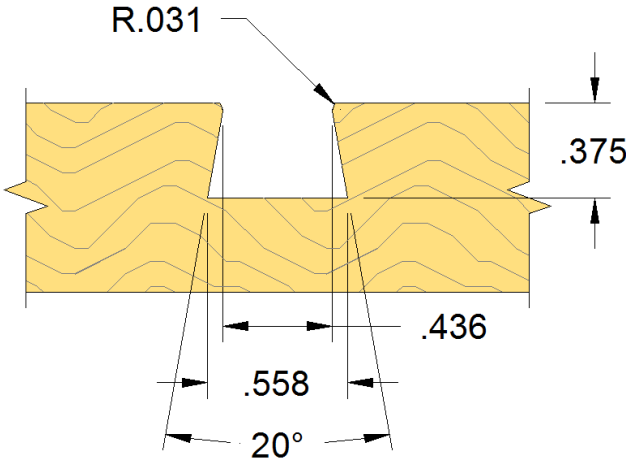
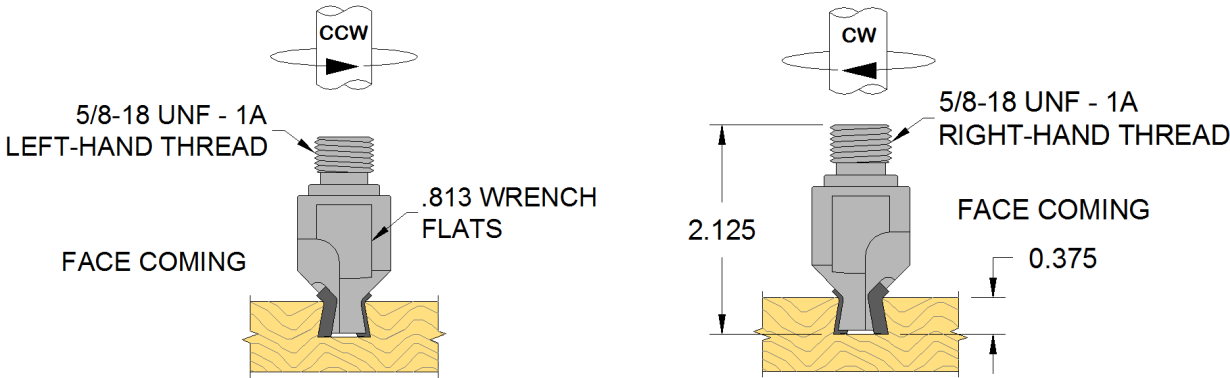
Recommended Speeds and Feeds:

Note: Chart below is a guideline. Feeds and speeds can vary depending on specific material. Always use shortest tool possible.

Router Bit Part Number	Depth of Cut	Cutting Diameter	No. of Wings	RPM	IPM	Chip Load
190-24858-xxxx	5/16"	.630"	2	17,000	150-200	.004-.006"
190-24858-xxxx	5/8"	.630"	2	17,000	100-150	.003-.004"

Diamond (PCD) Dovetail Router Bit Set

Diamond (PCD) Standard & Custom Tooling



Part No.	Description
190-32688-7000	PCD Dovetail Router Bit Set Consists of: Qty 3 – #190-32688-2000 CCW Qty 2 – #190-32688-1000 CW



Diamond (PCD) Custom Tooling

GLCT manufactures high quality, high precision Polycrystalline Diamond (PCD) tooling specific for your application. An optical inspection report is sent to each customer with new and serviced diamond tools. GLCT can also service your PCD tooling (purchased elsewhere as well).

Reasons for using PCD

- ✦ High volume production operations with few setups
- ✦ Reduction in downtime
- ✦ Reduction in operating costs
- ✦ Proper abrasion resistance characteristics to handle manufactured wood as well as man-made materials
- ✦ Extended tool life in natural wood



Stacked Cutter Assembly



Cutters Mounted on HSK63F Arbor



Flooring Moulder Cutter with Hydro-Sleeve



Router Bit

“ Thanks for all your help on this project.
As always, you came through again. ”

**—Custom Wood Products
Manufacturer**



Coping Assembly



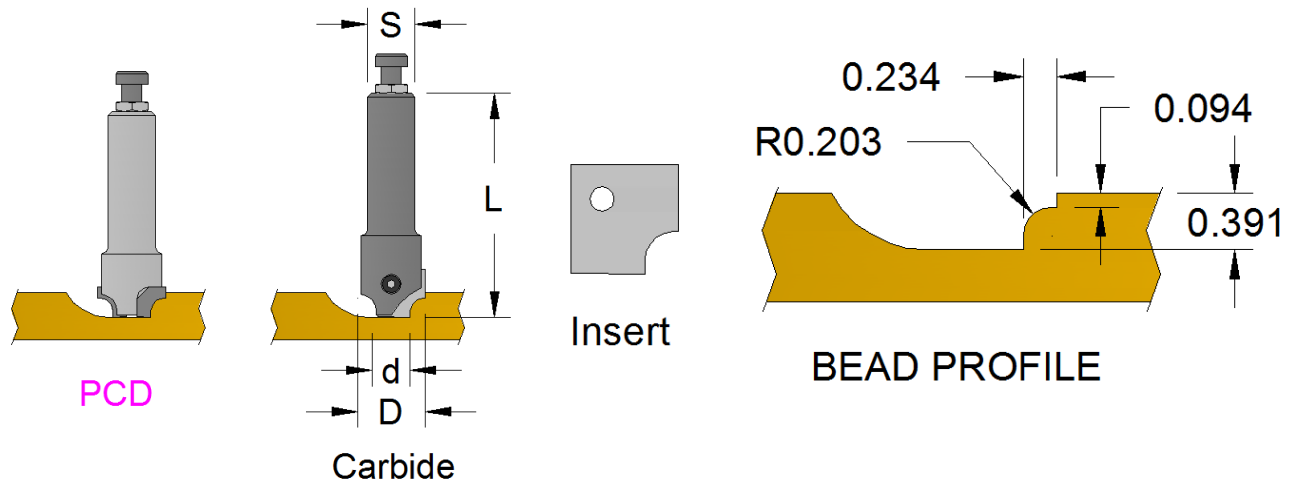
PCD Tipped Saw Blade

MDF Door Carbide Insert & PCD Router Bits

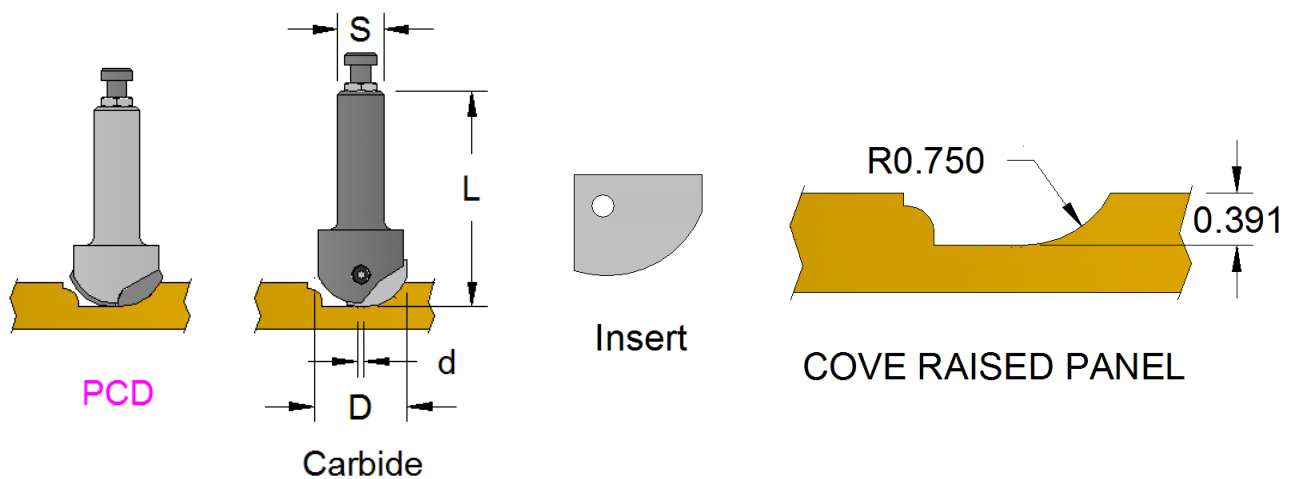
*All tools sold with inserts installed.
PCD inserts quoted upon request.*

Inside Profile

Use to route the inside profiles on MDF doors. Insert router bits are single flute Great-Loc® which provides accurate insert positioning and positive clamping. Brazed PCD router bits have 2 wings. All router bits have 3/4" shanks.



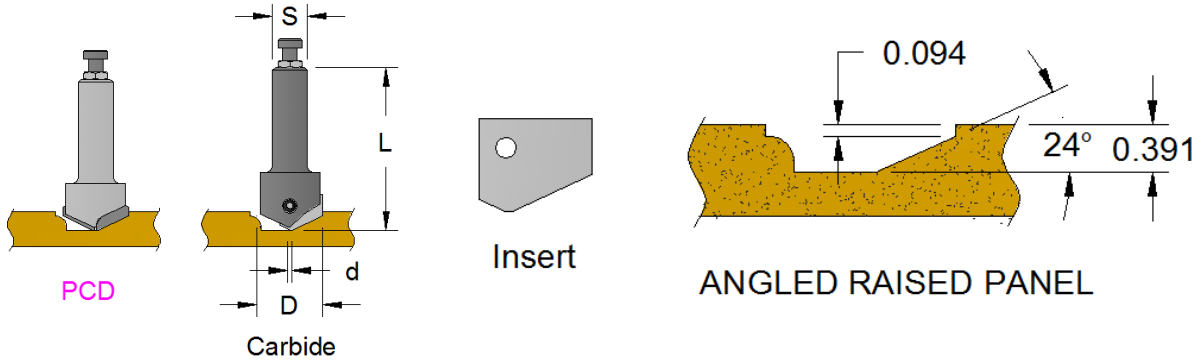
Part Number	Description	Flutes	d	D	L	S
110-08681-1000	Insert Router Bit-Bead Profile	1	.600	1.069	3.531	0.75
810-08681-1000	Carbide Insert					
190-22846-1000	PCD Router Bit-Bead Profile	2	.600	1.069	3.250	0.75



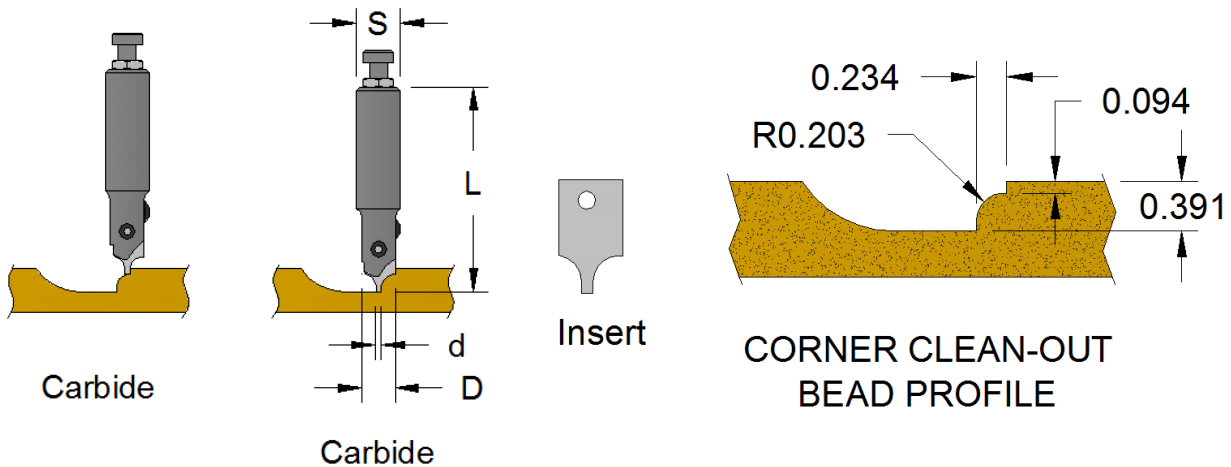
Part Number	Description	Flutes	d	D	L	S
110-08680-1000	Insert Router Bit-Cove Profile	1	.100	1.500	3.500	0.75
810-08680-1000	Carbide Insert					
190-22847-1000	PCD Router Bit-Cove Profile	2	.100	1.500	3.250	0.75

Inside Profile (continued)




*All tools sold with inserts installed.
PCD inserts quoted upon request
(except for 110-11788-1000).*



Part Number	Description	Flutes	d	D	L	S
110-08990-1000	Insert Router Bit-Angle Profile	1	.100	1.417	3.500	0.75
810-08990-1000	Carbide Insert					
190-22848-1000	PCD Router Bit-Angle Profile	2	.100	1.417	3.250	0.75



Part Number	Description	Flutes	d	D	L	S
110-11788-1000	Insert Corner Clean-Out/Bead Profile	1	.100	0.568	3.500	0.75
810-11788-1000	Carbide Insert					

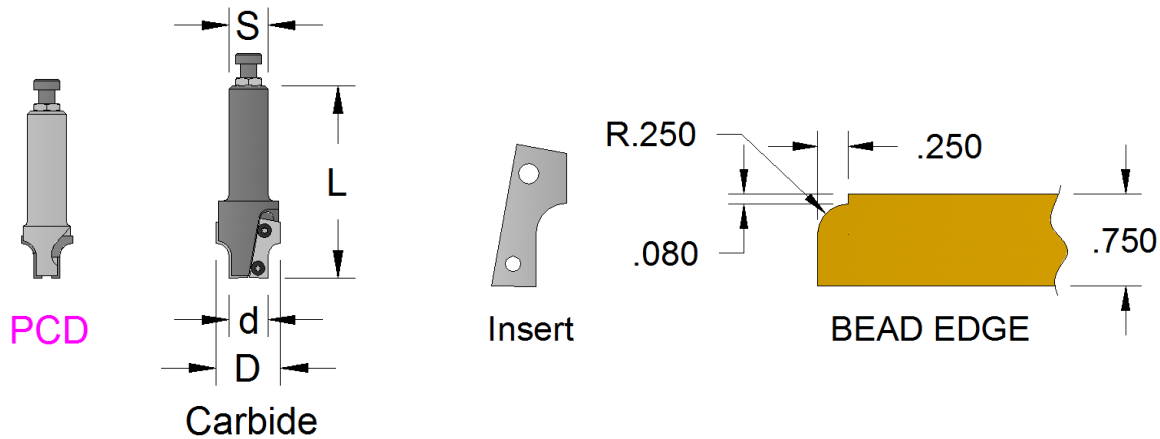
Replacement Screws	Part Number	Old Part Number	Description	Where Used
	93G-1119	M4X15SHCS	M4 x .7 x 15mm Socket Head Cap Screw	Clampscrew
	93G-1117	M4X12SHCS	M4 x .7 x 12mm Socket Head Cap Screw	Clampscrew (Corner Clean-Out)
	93G-1129	M4X4X9BHSPECIAL	M4 x .7 x 4mm x 9mm Special Button Head	Stop Screw

MDF Door Carbide Insert & PCD Router Bits

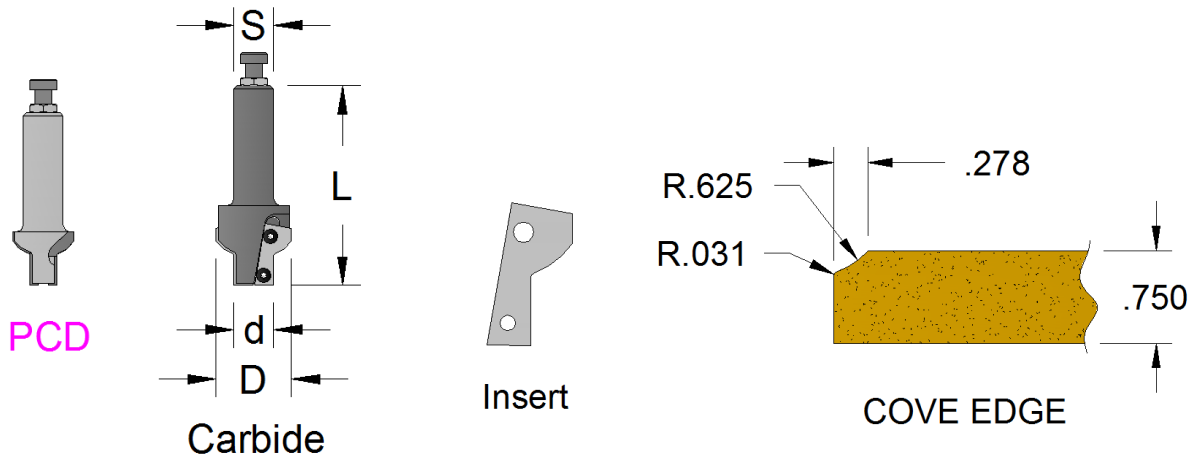
*All tools sold with inserts installed.
PCD inserts quoted upon request.*

Outside Edge Profile

Use to route the outside edges on MDF doors. All insert router bits have 2 flutes with 2 screws per insert. Brazed PCD are 2+2 wing router bits. All router bits have 3/4" shanks. Router bits are designed to cut into the spoilboard .010" when cutting .75" thick MDF.



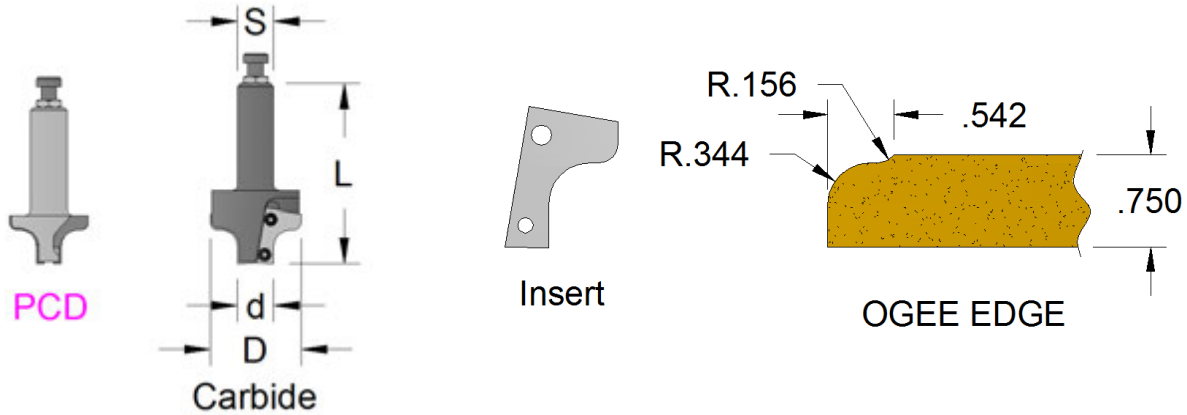
Part Number	Description	Flutes	d	D	L	S
130-08956-1000	Insert Router Bit-Bead Profile	2	.750	1.250	3.750	0.75
810-08956-1000	Carbide Insert					
190-22849-1000	PCD Router Bit-Bead Profile	2+2	.500	1.000	3.250	0.75





Part Number	Description	Flutes	d	D	L	S
130-08958-1000	Insert Router Bit-Cove Profile	2	.750	1.415	3.750	0.75
810-08958-1000	Carbide Insert					
190-22851-1000	PCD Router Bit-Cove Profile	2+2	.500	1.154	3.250	0.75

Outside Edge Profile (continued)

*All tools sold with inserts installed.
PCD inserts quoted upon request.*



Part Number	Description	Flutes	d	D	L	S
130-08957-1000	Insert Router Bit-Ogee Profile	2	0.75	1.896	3.750	0.75
810-08957-1000	Carbide Insert					
190-22850-1000	PCD Router Bit-Ogee Profile	2+2	0.50	1.640	3.250	0.75

Replacement Screws	Part Number	Old Part Number	Description
	93G-1136	M4X6X9BHSPECIAL	M4 x .7 x 6mm x 9mm Special Button Head Screw
	93G-1102	M3X5X5.5BHSPECIAL	M3 x .5 x 5mm x 5.5mm Special Button Head Screw

Recommended Speeds and Feeds--Inside Profile Router Bits

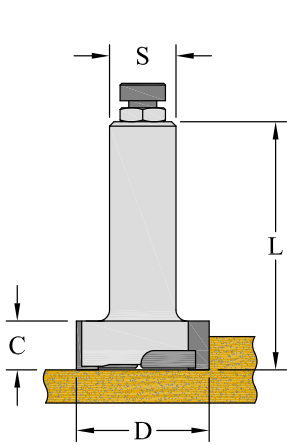
Cutter Description	RPM	Feed Rate-IPM
PCD Double Flute	18,000-24,000	600-800
Insert Single Flute	16,000-18,000	250-300

Recommended Speeds and Feeds--Outside Edge Profile Router Bits

Cutter Description	RPM	Feed Rate--IPM
PCD Double Flute	18,000-24,000	1,000-1,500
Insert Double Flute	16,000-18,000	800-1,000

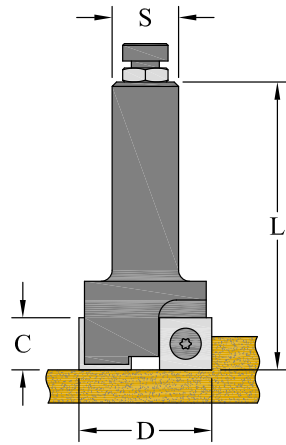
MDF Shaker Door Carbide Insert, Solid Carbide & PCD Router Bits

New



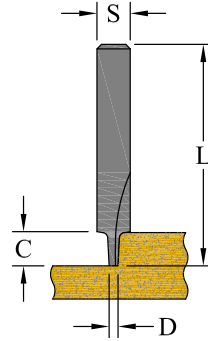
PCD

190-58081-1000



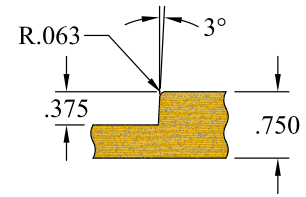
Carbide Insert

136-51878-1000



Solid Carbide

160-58222-1000



SHAKER PROFILE

Part Number	Description	Flutes	d	D	C	S	L
136-51878-1000	Insert Router Bit - Shaker Profile	2	-	1.5	0.588	0.75	3.25
160-58222-1000	Radius Solid Carbide Corner Clean-Out Router Bit	2	0.1	0.375	0.386	0.375	2.50
190-58081-1000	PCD Router Bit - Shaker Profile	2+1+1	-	1.5	0.551	0.75	2.80

Surfacing Straight Shank Cutters

*All tools sold with inserts installed.
PCD inserts quoted upon request.*

Surfacing cutters are designed for surfacing MDF, particle board and balsa core spoilboards. Can also be used to surface other materials.



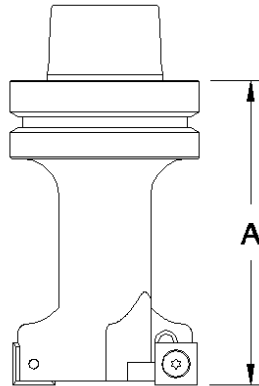
Part Number	Spoilboard Cutter	Cutting Dia.	Shank Dia.	Shank Length	No. Wings
SB-250-ST	Straight	2-1/2	1/2	2.0	2
SB-250-ST-750		2-1/2	3/4	2.0	2
SB-400-ST		4	3/4	2.25	3
80332394	14 x 14 x 2 Carbide Insert HC05				
SB-250-SH	Up-Shear	2-1/2	1/2	2.0	2
SB-250-SH-750		2-1/2	3/4	2.0	2
SB-400-SH		4	3/4	2.25	3
80332394	14 x 14 x 2 Carbide Insert HC05				
SB-250-RADIUS	Up-Shear Radius	2-1/2	1/2	2.0	2
SB-250-RADIUS-750		2-1/2	3/4	2.0	2
SB-400-RADIUS		4	3/4	2.25	3
G15	15 x 15 x 2.5 Carbide Insert T10MG				

Recommendations

Spoilboard Type	Suggestions/Comments
Straight	MDF & Particle Board
Up-Shear	Balsa Core (Cleaner cutting action)
Radius	Slight radius ensures a good blend for a smooth, flat cut
HSK63F	Better surface finish due to elimination of collet & tool holder

Surfacing Integral HSK63F Cutters

*All tools sold with inserts installed.
PCD inserts quoted upon request.*







Part Number	Integral Spoilboard Cutter	Cutting Dia.	Dim A	No. Wings
SB-HSK63F-250-ST	Straight	2-1/2	4.0	2
SB-HSK63F-250-ST-L	Straight	2-1/2	4.75	2
SB-HSK63F-400-ST	Straight	4	4.0	3
SB-HSK63F-400-ST-L	Straight	4	4.75	3
80332394	14 x 14 x 2 Carbide Insert HC05			
SB-HSK63F-250-SH	Up-Shear	2-1/2	4.0	2
SB-HSK63F-250-SH-L	Up-Shear	2-1/2	4.75	2
SB-HSK63F-400-SH	Up-Shear	4	4.0	3
SB-HSK63F-400-SH-L	Up-Shear	4	4.75	3
80332394	14 x 14 x 2 Carbide Insert HC05			
SB-HSK63F-250-RADIUS	Up-Shear Radius	2-1/2	4.0	2
SB-HSK63F-250-RADIUS-L	Up-Shear Radius	2-1/2	4.75	2
SB-HSK63F-400-RADIUS	Up-Shear Radius	4	4.0	3
SB-HSK63F-400-RADIUS-L	Up-Shear Radius	4	4.75	3
G15	15 x 15 x 2.5 Carbide Insert T10MG			

Recommended Speeds, Feeds and Depth of Cut

Dynamically Balanced to 18,000 rpm

Cutter Diameter	RPM	Feed Rate--IPM	Depth of Cut
2-1/2"	12,000-16,000	600-800	.015" (1/8" Max.)
4"	12,000-14,000	900-1,050	.015" (1/8" Max.)

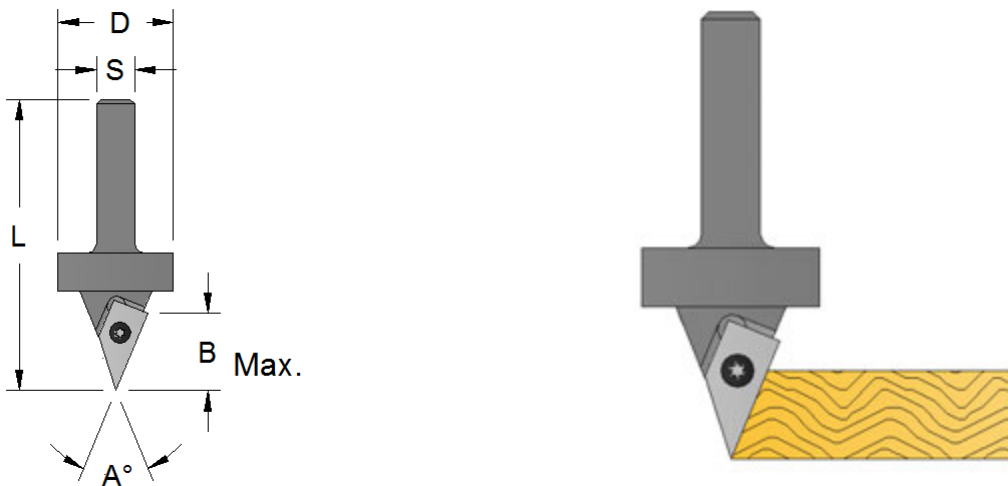
Replacement Parts	Part Number	Description
	80332394	14 x 14 x 2 Carbide Insert HC05
	G15	15 x 15 x 2.5 Carbide Insert T10MG
	93G-1131	M4 x .7 x 6.7mm x 8.9mm Special Flat Socket Head Screw
	90G-1014	T-20 x 100 Torx Screw Driver

45° V-Groove Insert Router Bits



All tools sold with inserts installed.



These tools offer an economical solution for beveling, V-grooving or "miter folding" wood and a variety of other materials such as melamine, formica and plastics. These cutters are designed to be run on CNC Routers.



Part Number	Description	Angle	B	D	S	L
130-04461-1000	45° V-Groove Insert Router Bit	45°	1.0	1.5	0.5	3.788
810-04461-1000	Carbide Insert (V-Groove 45°)		1.0			
810-04461-1100	Carbide Insert (1/16" Radius Pt.)		0.89			
810-04461-1200	Carbide Insert (1/32" Radius Pt.)		0.95			

Replacement Parts	Part Number	Description
	93G-1092	M3.5 x .6 x 6mm x 9mm Special Button Head Screw
	90G-1013	T-15 x 80 Torx Screw Driver

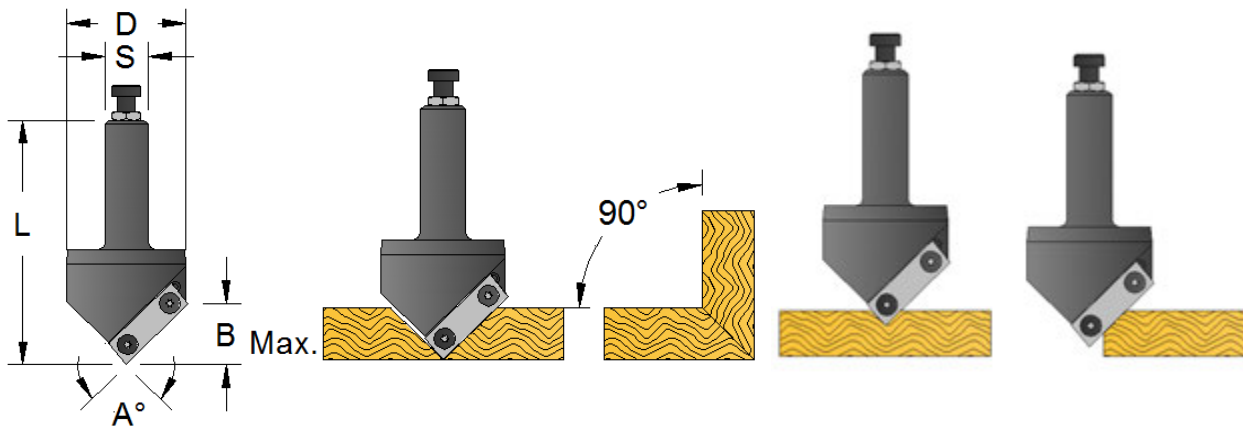
Recommended Speeds and Feeds

Dynamically Balanced to 18,000 rpm



Material	RPM	Feed Rate-IPM
Solid Woods, MDF & Particle Board	14,000-16,000	80-250
Plastics & Solid Surface	14,000-16,000	50-150

90° & 91° V-Groove Insert Router Bits

All tools sold with inserts installed.



Part Number	Description	A°	B	D	S	L
130-07486-1000	90° V-Groove Insert Router Bit	90°	1.070	2.075	0.75	4.25
130-06981-1000	91° V-Groove Insert Router Bit	91°	1.061	2.075	0.75	4.25
810-06981-1000	Carbide Insert (Pointed Bottom)		1.061			
810-06981-1100	Carbide Insert (1/16" Flat Bottom)		1.030			
810-06981-1200	Carbide Insert (0.020" Flat Bottom)		1.051			
810-06981-1300	Carbide Insert (0.030" Flat Bottom)		1.046			
810-06981-1400	Carbide Insert (0.040" Flat Bottom)		1.041			

Replacement Parts	Part Number	Description
	93G-1092	M3.5 x .6 x 6mm x 9mm Special Button Head Screw
	90G-1013	T-15 x 80 Torx Screw Driver

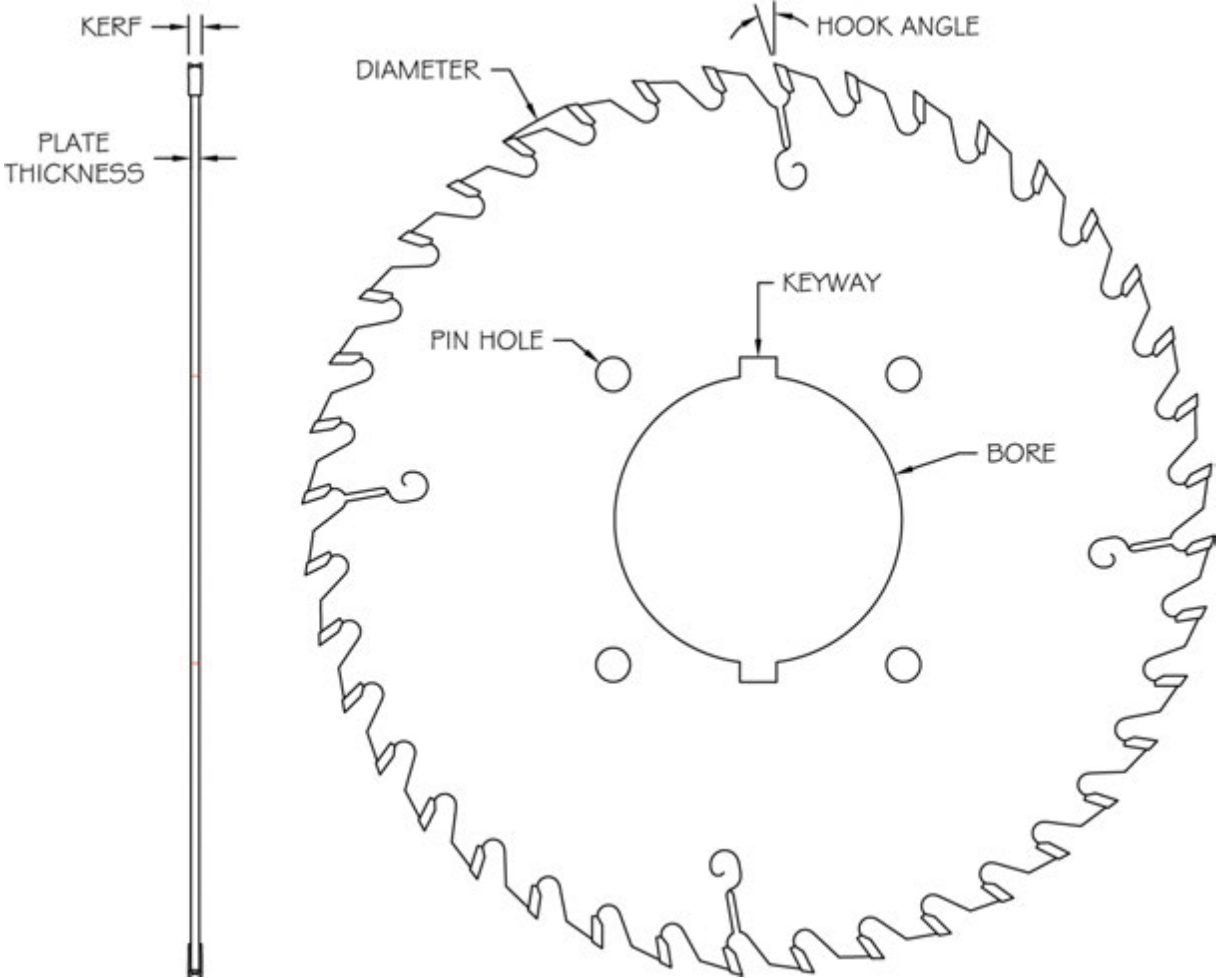
Recommended Speeds and Feeds

Dynamically Balanced to 18,000 rpm

Material	RPM	Feed Rate-IPM
Solid Woods, MDF & Particle Board	14,000-16,000	80-250
Plastics & Solid Surface	14,000-16,000	50-150

Custom Saw Blades

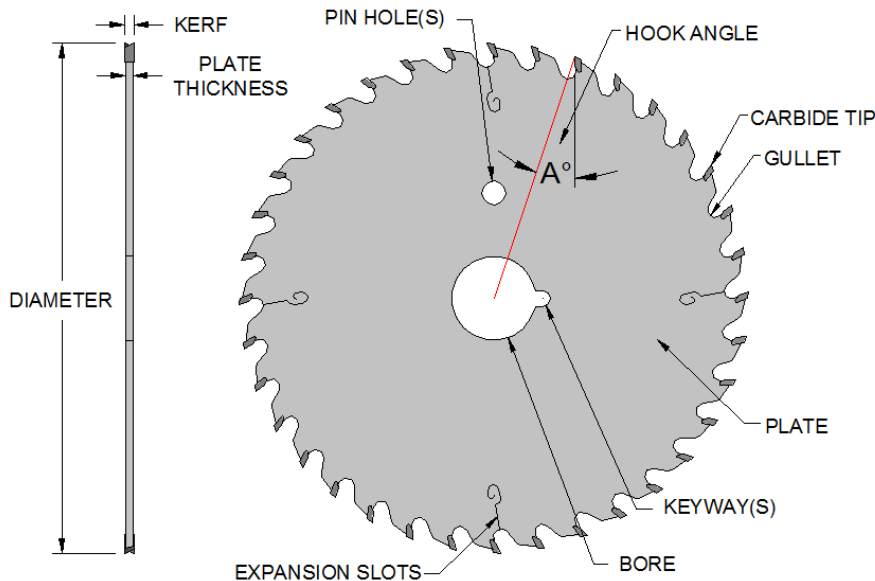
Great Lakes Custom Tool (GLCT) is prepared to manufacture any blade to your specifications. GLCT has many years of experience and may make recommendations to help improve your saw. The specifications and information required include:



SAW BLADE SPECS		APPLICATION INFORMATION	
DIAMETER		APPLICATION	
GRIND TYPE		MATERIAL BEING CUT	
KERF		MATERIAL THICKNESS	
PLATE THICKNESS		MACHINE TYPE	
BORE		RPM	
NUMBER OF TEETH		FEEDRATE	
HOOK ANGLE		CARBIDE TIPPED <input type="checkbox"/> PCD TIPPED <input type="checkbox"/>	
PIN HOLES			
KEYWAY			

Custom Saw Blades

Saw Terminology and Technical Information



Diameter (O.D.): Measurement of a saw blade from the point of one tooth to the point of another tooth which is located directly opposite.

Kerf: Measurement of the width of the saw cut.

Bore: Center hole in saw used to mount blade on machine arbor.

Carbide Tip: Extremely hard and brittle man-made material that makes contact with the material being cut.

Plate: Circular body of saw in which teeth are machined in and carbide tips are inserted usually using silver solder as a bonding agent.

Hook or Rake Angle: Angle formed between face of cutting tooth and line drawn from the tip of tooth to the centerline of the saw. (*Angle "A" shown above*)

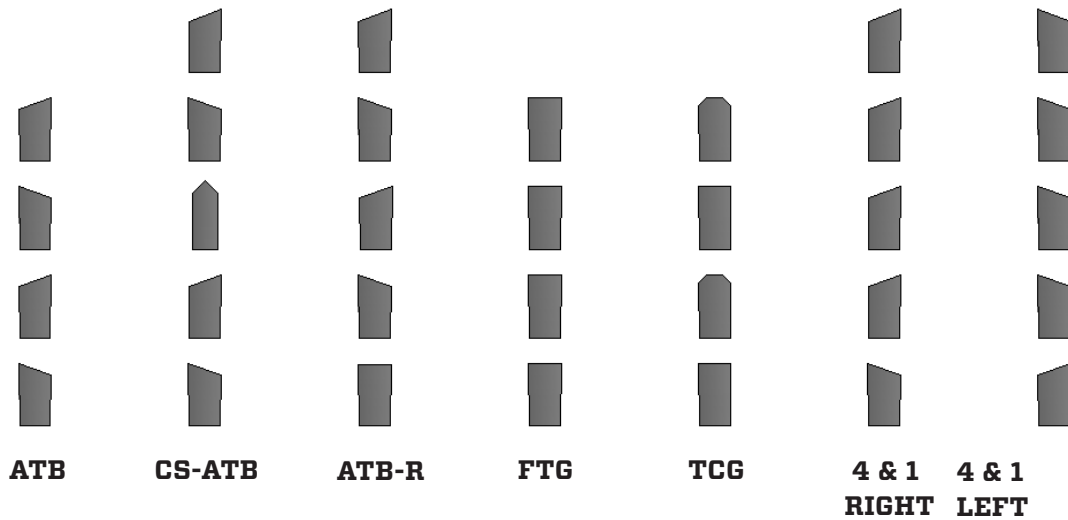
Gullet: Circular shape at bottom of a carbide tip which allows for continuous flow of chips during cutting operations.

Expansion Slots: Allows for heat expansion of steel during cutting operation to avoid possible saw blade warpage and cracking.

Keyway(s): Used on certain machines normally involving multiple blades on one arbor with automatic feeds to ensure positive drive of saws during cutting.

Pin Hole(s): Used to positively drive the saw blade.

Standard Top Grind Examples



ATB - Alternate Top Bevel: One tooth is beveled to the right, the next tooth is beveled to the left, this repeats around the saw. Used to crosscut solid woods and veneered materials.

CS-ATB - Center Score Alternate Top Bevel: The first tooth is beveled to the right, the next tooth is beveled to the left and the third tooth is longer in length and beveled to the center. This pattern repeats around the saw. Used in grooving and to reduce blow out in cross-grain.

ATB-R - Alternate Top Bevel w/Raker: This combination grind is excellent for woodworking shops and cabinet shops where one saw is used for many different types of cutting. It can be used for ripping or cross cutting in solid woods, particle board, plywood or laminated panels. With the proper hook angle, this grind can also be used on miter saws and veneer saws.

FTG - Flat Top Grind: Tooth form is flat across the top. Used to rip solid woods.

TCG - Triple Chip Grind: Uses triple chip grind and flat top grind form alternately around the saw blade. Gaining acceptance in a wide range of materials and processes, primarily ripping.

4 & 1 Right: As the saw rotates with the face of the tooth coming towards you, there will be 4 teeth points to the right side, then one to the left, this repeats around the saw. Commonly called Tenon Grind. Other combinations of teeth such as 3 & 1, 5 & 1, 9 & 1 are also common.

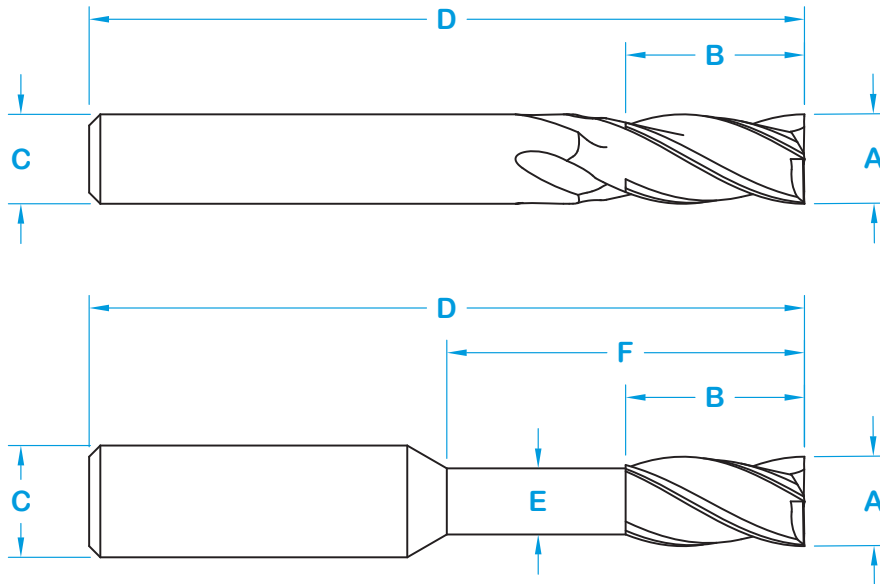
4 & 1 Left: As the saw rotates with the face of the tooth coming towards you, there will be 4 teeth points to the left side, then one to the right, this repeats around the saw. Commonly called Tenon Grind. Other combinations of teeth such as 3 & 1, 5 & 1, 9 & 1 are also common.

Note: There are many other saw tooth profiles and combinations of profiles that GLCT can use to custom make a saw blade for a specific need. Contact us for help in your cutting needs.

Custom Solid Carbide Router Bits

Great Lakes Custom Tool (GLCT) is prepared to manufacture any custom solid carbide router bit to your specifications. GLCT has many years of experience and may make recommendations to help your routing application.

The specifications and information required include:



ROUTER BIT SPECS

Cutting Edge Diameter (A)	
Cutting Edge Length (B)	
Shank Diameter (C)	
Overall Length (D)	
Neck Diameter (E)	(If Needed)
Length of Reach (F)	(If Needed)
Number of Flutes	
Rotation	Right-Hand <input type="checkbox"/> Left-Hand <input type="checkbox"/>
Spiral	Upcut <input type="checkbox"/> Downcut <input type="checkbox"/> Straight <input type="checkbox"/> Compression <input type="checkbox"/>
Depth of Cut	
Plunge	Yes <input type="checkbox"/> No <input type="checkbox"/>

APPLICATION INFORMATION

Material Being Cut	
Material Thickness	
RPM	
Feedrate	

NOTES:

Heavy Duty Face Frame Trimmers (Paso Robles)

Cutters mounted on heat treated 1/2" shank with ball bearing guide.

Recommended for use only on 2.5 HP (or greater) routers.



**1000-S-2126-2100
(Right Hand Helix)**



**1000-S-2126D-2200
(Left Hand Helix)**



**1000-FFT-2126-9100
Up Spiral Trimmer
(Right Hand Helix)**



**1000-FFT-2126D-9200
Down Spiral Trimmer
(Left Hand Helix)**

Part Number	Features/Description	Cutting Diameter	Trim Length	Shank/Bore
1000-FFT-2126-9100 consists of: (1) 1000-S-2126-2100 (1) 950-FFT-2126-7000	Up Spiral Trimmer: Assembly can be assembled 2 ways. (1) Bearing mounted on the outboard end next to nut, or (2) Bearing mounted on top next to the shank, above the cutter.	1-1/8"	2-1/2"	1/2"
1000-FFT-2126D-9200 consists of: (1) 1000-S-2126D-2200 (1) 950-FFT-2126-7000	Down Spiral Trimmer: Assembly can be assembled 2 ways. (1) Bearing mounted on the outboard end next to nut, or (2) Bearing mounted on top next to the shank, above the cutter.	1-1/8"	2-1/2"	1/2"
950-FFT-2126-7000 consists of: (1) 950-FFT-2126-0000 (1) 990-FFT-2126-0000	Arbor assembly includes 1/2" arbor, bearing and lock nut.	—	—	1/2"
1000-S-2126D-2200	Carbide Tipped Face Frame Trimmer (Left Hand Helix)	1-1/8"	2-1/2"	1/2" Bore
1000-S-2126-2100	Carbide Tipped Face Frame Trimmer (Right Hand Helix)	1-1/8"	2-1/2"	1/2" Bore

Power Plane Cutters (Paso Robles)



1000-S-2126-2100
(Right Hand Helix)



1000-S-2653-2200
(Left Hand Helix)

Spiral fluted plane cutters produce uniform smooth-finish cuts under rigorous commercial use. For use on plywood, masonite-covered doors, and similar abrasive materials.

Power Plane Cutters fit Porter-Cable/Rockwell electric planers.

Part Number	Planer Model	Cutting Diameter	Trim Length	Bore Diameter
1000-S-2126D-2200 (Ref. No. 43263)	126 Rockwell/Porter Cable (Left Hand Helix)	1-1/8"	2-1/2"	1/2"
1000-S-2126-2100	Cutter has opposite spiral of above cutter (Right Hand Helix)	1-1/8"	2-1/2"	1/2"
1000-S-2167-2200	167 Rockwell/Porter Cable (Left Hand Helix)	1-1/4"	1-27/32"	7/16"
1000-S-2653-2200 (Ref. No. 43291)	653 Porter Cable (Left Hand Helix)	2-1/4"	3"	5/8"

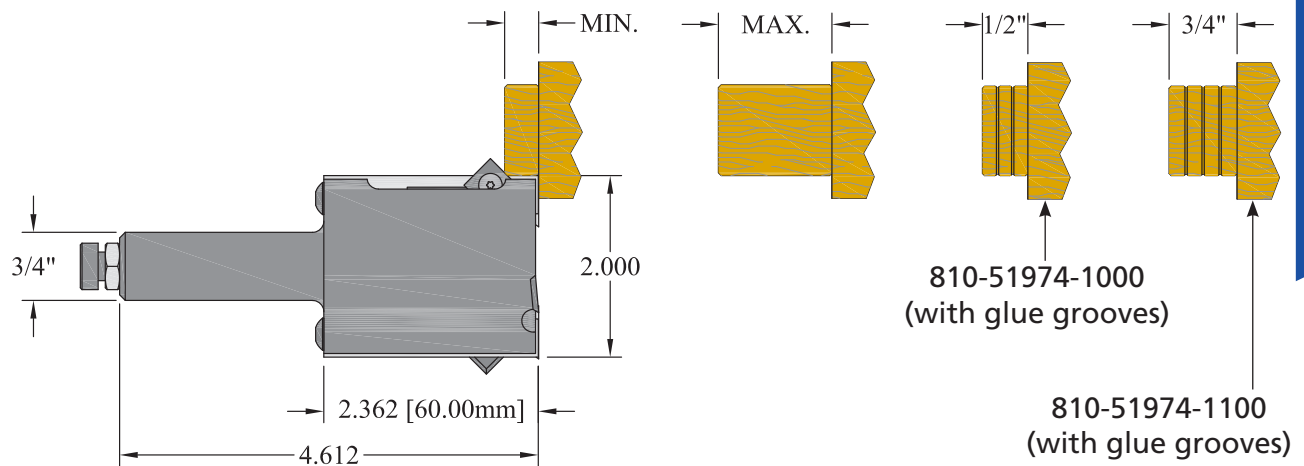
“ The tooling knowledge and good business practices make GLCT a key player for us. In this day, it is hard to find businesses that do any more than provide basic service. You guys go beyond that and this is what makes you rise to the top. ”

**—Wood Products
Manufacturer**

Tenon Router Bits



Adjustable tenon insert router bits used in making mitered mortise and tenon joints for cabinet doors, frames, etc. Router bit features adjustable cutter block for making different cut lengths for the tenon cut. The cutter block adds a 45° bevel on the end of the cut.



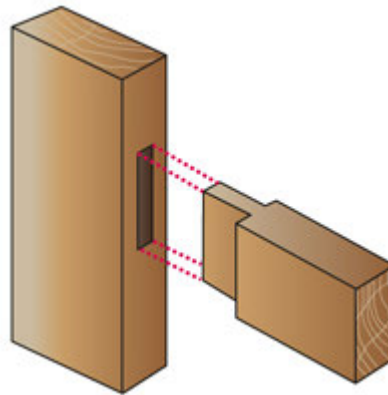
Part Number	Description	Rotation	Length of Cut	
			Min.	Max.
130-37328-9000	Tenon Router Bit	CW	3/8"	1-1/4"
130-37328-8000	Tenon Router Bit	CCW	3/8"	1-1/4"
130-37328-9100	Tenon Router Bit	CW	1/2"	1-19/32"
130-37328-8100	Tenon Router Bit	CCW	1/2"	1-19/32"
130-37328-9200	Tenon Router Bit	CW	3/8"	1-1/8"
130-37328-8200	Tenon Router Bit	CCW	3/8"	1-1/8"

NOTE: Router bit includes 1 set of inserts #80330644 & 80330882 (without groove lines) & the appropriate cutter blocks.

Groove line inserts are sold separately.

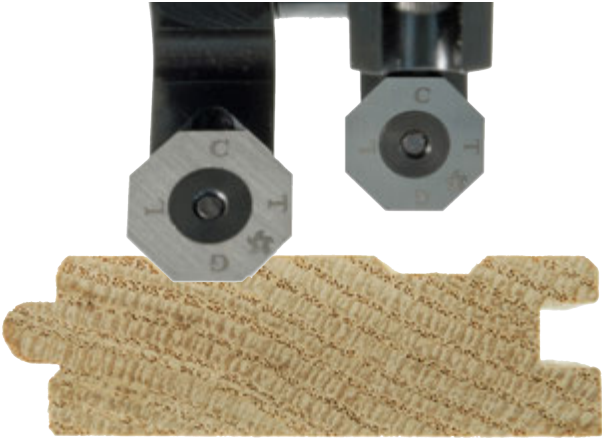
Tenon Router Bits

Replacement Parts



Part Number	Description
80330644	60 x 12 x 1.5 Carbide Insert (without glue grooves)
810-51974-1000	60 x 12 x 1.5 Carbide Insert (.500" tenon with glue grooves)
810-51974-1100	60 x 12 x 1.5 Carbide Insert (.750" tenon with glue grooves)
80330882	10.5 x 10.5 x 1.55mm Carbide Insert with 1 Hole
93G-1100	M3 x .5 x 5.5mm x 6mm Flat Socket Head Cap Screw (Insert screw)
130-37328-0100	Cutter Block for 130-37328-9000 (Includes 1 insert) - CW Rotation
130-37328-0200	Cutter Block for 130-37328-8000 (Includes 1 insert) - CCW Rotation
130-37328-0300	Cutter Block for 130-37328-8100 & 130-37328-9100 (Includes 1 insert) - CW Rotation & CCW Rotation
130-31525-0100	Cutter Block for 130-37328-9200 (Includes 1 insert) - CW Rotation
130-31525-0200	Cutter Block for 130-37328-8200 (Includes 1 insert) - CCW Rotation
93G-1175	M6 x 1 x 10mm Flat Point Set Screw (Cutter Block)
995-37328-0000	Gib (2 pc. minimum)
93G-1183	M6 x 1 x 12mm Flat Point Set Screw (Gib Screw)
90G-1012	T-9 x 60mm Torx Screw Driver (For 93G-1100)
90G-1002	M3 x 60mm T-Handle Hex Wrench (For 93G-1175 & 93G-1183)

Insert Hollow Back Flooring Cutters



Patent #7,040,843 B1

GLCT has a patented insert hollow back cutter that features an indexable octagon insert for cutting the groove in the bottom side of flooring. The cutters can be spaced as required to position the hollow back grooves.

Advantages and Benefits:

- ✦ **Reduces Tool Inventory**
Eliminates the need to send out brazed tooling for sharpening/retipping
- ✦ **Decreases Set-up Time**
Constant diameter tooling with insert that is indexable
- ✦ **Increases Flexibility**
Manufactures both strip and plank flooring with multiple cutters
- ✦ **Reduced Decibel Readings**

Contact GLCT for all your Flooring Cutter requirements.

Benz Solidfix® Aggregate Head

Quick Change System



The Benz Solidfix® Quick Change System will save you time and money. With the Solidfix® System you have a common aggregate body that can have different outputs. Saw blade, nut and collet, arbor, Weldon drill holder and closing plug, are all interchangeable. The tools always register in the body perfectly so you can have all your tool parameters stored in your tool library. When you change out the aggregate, you assign it the appropriate tool number and you are ready to go. So you can change the aggregate configuration in less than a minute!



GLCT will help spec out the aggregate head and tooling needed for your application.

Benz Reciprocating Knife Cutter - RKC1



Benz Reciprocating Knife Cutter - RKC1

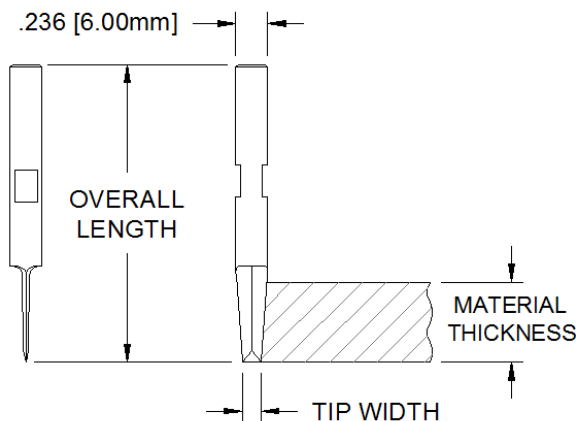
Cut carpets to size - easier than ever!

The Reciprocating Knife Cutter is designed to add a new level of versatility to a "C"-axis equipped CNC machine.

It utilizes a standard spoilboard to hold material. During cutting with the oscillating knife cutter the spring-loaded floating ring ensures optimum contact of the material with the surface underneath. Similar to a jigsaw, very small radiuses can be cut.

The very high reciprocating speed of up to 6,000 strokes per minutes ensures very effective machining with high feed rate speeds.

Reciprocating Knife Cutters



Part No.	Tip Width	Overall Length	Max. Material Thickness	Min. Material Thickness
RKC-6	1.2mm	50mm	6mm	--
RKC-12	3mm	56mm	12mm	--
RKC-18	3.5mm	62mm	18mm	6mm
RKC-28	3mm	72mm	28mm	16mm
RKC-54	3mm	98mm	54mm	42mm

Applications at a glance

The RKC1 is designed to cut cloth, fabric, leather, veneers, rubber, carpet, cork, vinyl, fiberglass mat, cardboard, linoleum and other similar products.

Technical data

Maximum rpm input $N_{max} = 5000 \text{ min}^{-1}$
 Maximum rpm output $N_{max} = 6000 \text{ min}^{-1}$
 Gear ratio $i = 1:1,2$
 Allowable operating temperature 85°C
 Max. angle acceleration $A_{max} = 120 \text{ 1/s}^2$
 Cutting stroke = 5 mm
 Weight of the unit: ca. 3 lb

Benz Solidfix® Aggregate Head (Quick Change System)

Toolholder & Accessories

SINO-R HSK63F



SINO-R HSK63F toolholder. Use for quick and accurate router bit change. A SINOclamp or SINO "C" spanner is used to change tools.

Part Number	Description	Bore /Shank size
0209662	.500" SINO-R Holder HSK63F	1/2"
0209664	.750" SINO-R Holder HSK63F	3/4"
0209665	1.000" SINO-R Holder HSK63F	1"



Intermediate sleeves are used to fit additional router bit sizes. The 1/2" SINO-R Toolholder has sleeves for 1/4" & 3/8" dia. router bits. The 3/4" SINO-R Toolholder has sleeves for 1/4", 3/8", 1/2" & 5/8" dia. router bits. Additional sleeves available upon request.

Part Number	Description	Large Dia.	Bore/Shank Dia.
0224378	GZB-S 1/2"-1/4" Intermediate Sleeve	1/2"	1/4"
0224380	GZB-S 1/2"-3/8" Intermediate Sleeve	1/2"	3/8"
0224388	GZB-S 3/4"-1/4" Intermediate Sleeve	3/4"	1/4"
0224390	GZB-S 3/4"-3/8" Intermediate Sleeve	3/4"	3/8"
0224392	GZB-S 3/4"-1/2" Intermediate Sleeve	3/4"	1/2"
0224394	GZB-S 3/4"-5/8" Intermediate Sleeve	3/4"	5/8"



The SINOclamp spanner wrench has ratcheting convenience for fast and easy clamping.

Part Number	Description	For clamping SINO-R Holder	Max. Tool Dial
0210640	SINOclamp	.500" SINO-R Holder HSK63F	1/2"
0210641	SINOclamp	.750" & 1.00" SINO-R Holder HSK63F	1"



The SINO "C" spanner wrench used for changing tooling in the SINO-R HSK63 Toolholders.

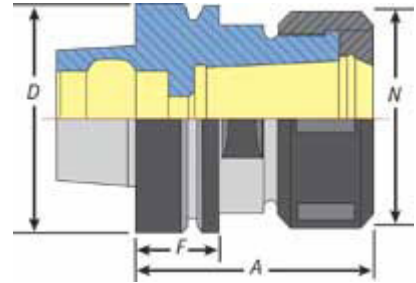
Part Number	Description	For clamping SINO-R Holder
0208877	SIN HSK 45-50	.500", .750" & 1.00" SINO-R Holder HSK63F

CNC Router Toolholders



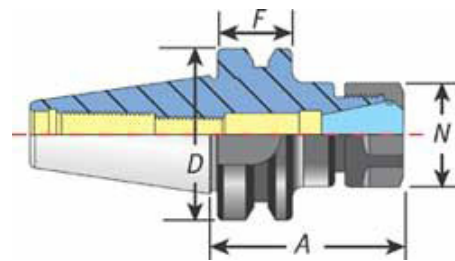
Features

- Balanced to 25,000 RPM at G2.5
- T.I.R. 0.0001" or better from taper to collet pocket
- Power Coat nut included for 75% more clamping power



HSK63F, ER Collet Chuck Toolholders for CNC Routers

Part No.	Description	D	A	F	N	Collet Nut	Wrench
30000	HSK63F x ER32 - 70mm	63mm	70mm	26mm	50mm	46132	04616
30001	HSK63F x ER40 - 76mm	63mm	76mm	26mm	63mm	46140	04617
31025F	HSK63F x SYOZ25 - 80mm	63mm	80mm	26mm	60mm	83632	03691



BT30, ER32 Toolholder (Komo CNC Routers)

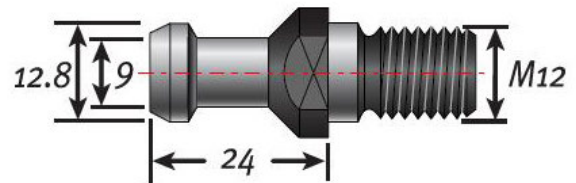
Part No.	Description	D	A	F	N	Collet Nut	Wrench
16121	BT30 x ER32 - 60, 41mm flats	46mm	60mm	20mm	50mm	46132	04616

RETENTION KNOB

Features



- All mating surfaces precision ground
- Manufactured to the highest standard for maximum safety and long life
- Hardened for maximum longevity



Please make sure that the retention knob you order is the correct one for your machine. Using the wrong retention knob can cause damage to your machine spindle, the toolholder, and may cause a safety hazard.

Part No.	Description	D1	D2	L1	Thread
750-19	BT30 KOMO	12.8	9	24	M12

ER Inch and Metric Collet Sets, “Power Coat” Ultra High-Speed Nuts



ER Inch Collet Sets

Part No.	Size	Pieces	Collets Included	Fits Shank Sizes
04210IS	ER20	12	5/32 - 1/2" by 32nds	1/8 - 1/2"
04211IS	ER25	16	5/32 - 5/8" by 32nds	1/8 - 5/8"
04212IS	ER32	18	7/32 - 3/4" by 32nds	3/16 - 3/4"
04213IS	ER40	13	1/8 - 1.0" by 16ths	1/8 - 1.0"

ER Metric Collet Sets

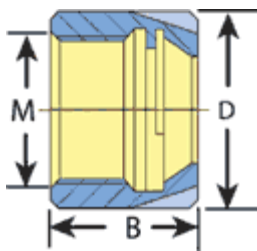
Part No.	Size	Pieces	Collets Included	Fits Shank Sizes
04203MS	ER20	12	2 - 13mm by 1mm	1.0 - 13mm
04204MS	ER25	15	2 - 16mm by 1mm	1.0 - 16mm
04205MS	ER32	18	3 - 20mm by 1mm	2.0 - 20mm
04206MS	ER40	23	4 - 26mm by 1mm	3.0 - 26mm

“Power Coat” Ultra High-Speed Nuts (For speeds above 15,000 RPM)



“Power Coat” Nut Features

- Increase holding power up to 75%
- Reduces T.I.R., extends tool life up to 20%
- Balanced for high speeds



“Power Coat” is an innovative, permanent coating that increases clamping pressure of the nut up to 75% compared to standard ER nuts. More holding power reduces the chance of spinning the shank of the tool inside the collet, which can cause premature failure of the collet.

Snap collet into nut before assembly. For best performance use a torque wrench and tighten nut to the proper torque specification.

Part No.	Description	D	B	M	Wrench	Recommended Torque
46120	ER20 High Speed Slot Nut	35mm	19.5mm	M25 x 1.5	04614	59 ft/lbs
46125	ER25 High Speed Slot Nut	42mm	20.5mm	M32 x 1.5	04615	77 ft/lbs
46132	ER32 High Speed Slot Nut	50mm	23.0mm	M40 x 1.5	04616	100 ft/lbs
46140	ER40 High Speed Slot Nut	63mm	26.0mm	M50 x 1.5	04617	130 ft/lbs

Inch Size Precision ER Collets



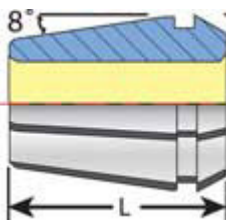
Inch Size ER Collet Features

- Average .0002" T.I.R.
- Clamping Range: .039"
- Use with Power Coat nut for best holding power and cutting tool life.

ER20 Inch Size		ER25 Inch Size		ER32 Inch Size		ER40 Inch Size	
Part No.	Shank	Part No.	Shank	Part No.	Shank	Part No.	Shank
04220-1/16	1/16"	04225-3/32	3/32"	04232-1/16	1/16"	04240-1/8	1/8"
04220-3/32	3/32"	04225-1/8	1/8"	04232-3/32	3/32"	04240-5/32	5/32"
04220-1/8	1/8"	04225-5/32	5/32"	04232-1/8	1/8"	04240-3/16	3/16"
04220-5/32	5/32"	04225-3/16	3/16"	04232-5/32	5/32"	04240-7/32	7/32"
04220-3/16	3/16"	04225-7/32	7/32"	04232-3/16	3/16"	04240-1/4	1/4"
04220-7/32	7/32"	04225-1/4	1/4"	04232-7/32	7/32"	04240-9/32	9/32"
04220-1/4	1/4"	04225-9/32	9/32"	04232-1/4	1/4"	04240-5/16	5/16"
04220-9/32	9/32"	04225-5/16	5/16"	04232-9/32	9/32"	04240-11/32	11/32"
04220-5/16	5/16"	04225-11/32	11/32"	04232-5/16	5/16"	04240-3/8	3/8"
04220-11/32	11/32"	04225-3/8	3/8"	04232-11/32	11/32"	04240-13/32	13/32"
04220-3/8	3/8"	04225-13/32	13/32"	04232-3/8	3/8"	04240-7/16	7/16"
04220-13/32	13/32"	04225-7/16	7/16"	04232-13/32	13/32"	04240-15/32	15/32"
04220-7/16	7/16"	04225-15/32	15/32"	04232-7/16	7/16"	04240-1/2	1/2"
04220-15/32	15/32"	04225-1/2	1/2"	04232-15/32	15/32"	04240-17/32	17/32"
04220-1/2	1/2"	04225-17/32	17/32"	04232-1/2	1/2"	04240-9/16	9/16"
		04225-9/16	9/16"	04232-17/32	17/32"	04240-19/32	19/32"
		04225-19/32	19/32"	04232-9/16	9/16"	04240-5/8	5/8"
		04225-5/8	5/8"	04232-19/32	19/32"	04240-21/32	21/32"
		04225-3/4	3/4"	04232-5/8	5/8"	04240-11/16	11/16"
				04232-21/32	21/32"	04240-23/32	23/32"
				04232-11/16	11/16"	04240-3/4	3/4"
				04232-23/32	23/32"	04240-25/32	25/32"
				04232-3/4	3/4"	04240-13/16	13/16"
						04240-27/32	27/32"
						04240-7/8	7/8"
						04240-29/32	29/32"
						04240-15/16	15/16"
						04240-31/32	31/32"
						04240-1	1.0"

Use the table below for selecting your replacement collets.

ER Collets all have a unique length and diameter measurement for each size.



ER Size	L	D
ER20	31.5mm (1.24")	21mm (.83")
ER25	34mm (1.34")	26mm (1.02")
ER32	40mm (1.57")	33mm (1.3")
ER40	46mm (1.81")	41mm (1.61")

Metric Size Precision ER Collets

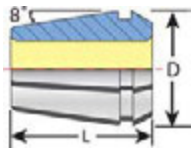


Metric Size ER Collet Features

- Average .0002" T.I.R.
- Clamping Range: .039"
- Use with Power Coat nut for best holding power and cutting tool life.

ER20 Metric Collets		ER25 Metric Collets		ER32 Metric Collets		ER40 Metric Collets	
Part No.	Shank	Part No.	Shank	Part No.	Shank	Part No.	Shank
04220-01	0.5-1.0	04225-02	1.5-2	04232-03	2-3	04240-04	3-4
04220-01.5	1.0-1.5	04225-02.5	2-2.5	04232-03.5	2.5-3.5	04240-05	4-5
04220-02	1.5-2	04225-03	2-3	04232-04	3-4	04240-06	5-6
04220-02.5	1.5-2.5	04225-03.5	2.5-3.5	04232-04.5	3.5-4.5	04240-07	6-7
04220-03	2-3	04225-04	3-4	04232-05	4-5	04240-08	7-8
04220-03.5	2.5-3.5	04225-05	4-5	04232-05.5	4.5-5.5	04240-09	8-9
04220-04	3-4	04225-06	5-6	04232-06	5-6	04240-10	9-10
04220-04.5	3.5-4.5	04225-07	6-7	04232-06.5	5.5-6.5	04240-11	10-11
04220-05	4-5	04225-08	7-8	04232-07	6-7	04240-12	11-12
04220-05.5	4.5-5.5	04225-09	8-9	04232-07.5	6.5-7.5	04240-13	12-13
04220-06	5-6	04225-10	9-10	04232-08	7-8	04240-14	13-14
04220-06.5	5.5-6.5	04225-11	10-11	04232-08.5	7.5-8.5	04240-15	14-15
04220-07	6-7	04225-12	11-12	04232-09	8-9	04240-16	15-16
04220-07.5	6.5-7.5	04225-13	12-13	04232-09.5	8.5-9.5	04240-17	16-17
04220-08	7-8	04225-14	13-14	04232-10	9-10	04240-18	17-18
04220-08.5	7.5-8.5	04225-15	14-15	04232-10.5	9.5-10.5	04240-19	18-19
04220-09	8-9	04225-16	15-16	04232-11	10-11	04240-20	19-20
04220-09.5	8.5-9.5	04225-17	16-17	04232-11.5	10.5-11.5	04240-21	20-21
04220-10	9-10			04232-12	11-12	04240-22	21-22
04220-10.5	9.5-10.5			04232-12.5	11.5-12.5	04240-23	22-23
04220-11	10-11			04232-13	12-13	04240-24	23-24
04220-11.5	10.5-11.5			04232-13.5	12.5-13.5	04240-25	24-25
04220-12	11-12			04232-14	13-14	04240-26	25-26
04220-12.5	11.5-12.5			04232-14.5	13.5-14.5		
04220-13	12-13			04232-15	14-15		
04220-13.5	12.5-13.5			04232-15.5	14.5-15.5		
04220-14	13-14			04232-16	15-16		
				04232-16.5	15.5-16.5		
				04232-17	16-17		
				04232-17.5	16.5-17.5		
				04232-18	17-18		
				04232-18.5	17.5-18.5		
				04232-19	18-19		
				04232-19.5	18.5-19.5		
				04232-20	19-20		
				04232-21	20-21		

Use the table below for selecting your replacement collets. ER Collets all have a unique length and diameter measurement for each size.

	Size	L	D
	ER20	31.5mm (1.24")	21mm (.83")
	ER25	34mm (1.34")	26mm (1.02")
	ER32	40mm (1.57")	33mm (1.3")
	ER40	46mm (1.81")	41mm (1.61")

SYOZ/EOC (DIN 6388) Perske Style Collets and Nuts



Features

- T.I.R. (runout) .0004"
- Collapse range: 1/64"
- Made from high carbon steel
- Precision ground and hand inspected

These collets and collet nuts conform to DIN 6388 standards.

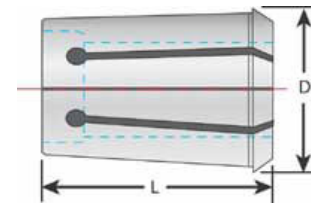
Snap collet into the nut before screwing the nut onto the spindle or holder.

SYOZ20 / EOC12 Collets (Replaces RDO20)

Part No.	Shank Size
83512-1/8	1/8"
83512-3/16	3/16"
83512-1/4	1/4"
83512-5/16	5/16"
83512-3/8	3/8"
83512-7/16	7/16"
83512-1/2	1/2"
83512-10	10mm

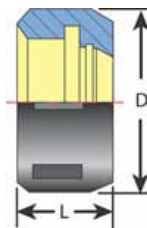
SYOZ25 Collets (Replaces RDO35)

Part No.	Shank Size
83868-1/8	1/8"
83868-3/16	3/16"
83868-1/4	1/4"
83868-5/16	5/16"
83868-3/8	3/8"
83868-7/16	7/16"
83868-1/2	1/2"
83868-9/16	9/16"
83868-5/8	5/8"
83868-3/4	3/4"
83868-7/8	7/8"
83868-1	1.0"
83868-10	10mm
83868-16	16mm
83868-20	20mm
83868-25	25mm



SYOZ / EOC Collet Dimensions

Part No.	L	D
SYOZ20	34mm	20mm
SYOZ25	52mm	35mm



SYOZ/EOC (DIN 6388) Collet Nuts

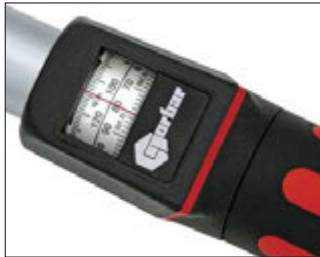
Part No.	Description	L	D	Wrench
83634	SYOZ20/EOC 12 nut (RDO20)	20	35	22220
83632	SYOZ25 Power Coat nut (RDO35)	30	60	03691

Adjustable Torque Wrenches and Collet Key Adapters



Features:

- Makes setting correct torque fast & easy
- Extends life of cutting tools, collets, & nuts



Adjustable Torque Wrench

Part No.	Range	Length	Weight	Spigot
200TH	30-150 ft/lbs	16.5"	1.75 lbs	16mm round
300TH	46-228 ft/lbs	21.5"	2.5 lbs	16mm round

Just twist handle to set dial to desired torque.
Tighten nut until wrench "clicks".

ER Slotted Collet Key Adapters



Part No.	Size	Type	Torque
04580-20	ER20 slotted	slotted	59 ft/lbs
04603-25	ER25 slotted	slotted	77 ft/lbs
04604-32	ER32 slotted	slotted	100 ft/lbs
04605-40	ER40 slotted	slotted	130 ft/lbs

Hook Collet Key Adapters



Part No.	Size	Type	Torque
03690-25	TG 100/SYOZ 25	hook	90 ft/lbs
SYOZ20-TWA	SYOZ-20	hook	40 ft/lbs

Hand Wrenches for Collet Nuts



ER slotted wrench



TG hook wrench

Part No.	Description	Nut Type	Length (mm)	Width (mm)
04614	ER20-E Wrench	slotted	180	60
04615	ER25-E Wrench	slotted	206	65
04616	ER32-E Wrench	slotted	253	75
04617	ER40-E Wrench	slotted	289	90
03691	TG 100 / SYOZ 25 Wrench (RDO35)	hook	260	46
22220	SYOZ 20 Wrench (RDO20)	hook	260	34

Spindle Taper Wipers



Real lambskin provides the best cleaning. Use with any type of machine with a taper of 7/24 CAT, BT or DIN 69871.

Spindle Taper Wipers

- For CAT, BT, HSK spindles
- Remove contaminants to improve T.I.R.
- Keep spindles and toolholders clean

Part Number	Taper
17706	30
17707	40
38032	HSK63F

Rust & Stain Removers

RUST FREE™ – Rust & Stain Remover plus Waterproof Lubricant



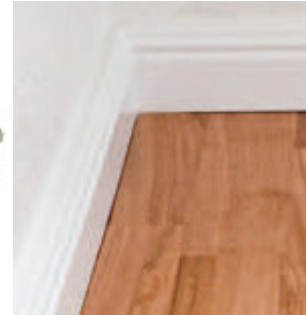
RUST FREE is a cleaner designed to provide a simple solution to your collet cleaning needs. Use T-9™ to protect parts from rust and corrosion. Designed to be used after RUST FREE – use on collets and tool holders.

Part Number	Description
33-21	Rust Free 8.45 oz. and T9 4oz. drip

“ Your professionalism and positive attitude while working through several changes that affected both our production schedules were very much appreciated. Through the years, you have provided only top of the line quality tooling as well as great customer service. We look forward to working with Great Lakes on many more projects in the future. ”

—Major U.S. Manufacturer

ETP Hydro-Grip Products



Get a grip and fit your tools quickly, simply and precisely. It takes just a few seconds to get perfect centering and fastening of your tools. Thanks to the double walled construction, the HYDRO-GRIP expands uniformly against the tool and around the machine spindle. The tool and HYDRO-GRIP then form a perfectly centered unit, mounted and ready to go on the machine. This saves you a considerable amount of adjustment time. And saving time saves you money.

ETP HYDRO-GRIP A®

Sleeve for permanent tool assembly. Made in short lengths to allow for a light press fit. The tool and sleeve should be bolted together. Pressurizing is carried out with a high pressure grease pump.

Part No.	Description
49902	Release Nipple
49901	Filler Nipple



Sizes:

- 1-1/4"/40-55
- 1-13/16"/60-55
- 1-13/16"/65-55
- 2-1/8"/65-55



Sizes:

- 1-1/2"/50-85
- 1-13/16"/60-75
- 1-13/16"/65-85

ETP HYDRO-GRIP B®

Sleeve for interchangeable tool assembly, the same basic construction as the BI with a thread and locking nut. This means the sleeve can be easily switched between different tools. Several tools can be mounted to the same sleeve. Pressurizing is carried out with a high pressure grease pump. This allows the use of longer sleeves.

Size:

- 1-13/16"/65-85

ETP HYDRO-GRIP C®

Sleeve for interchangeable tool assembly which can easily be switched between different tools. The tool is fastened to the sleeve by bolts through the collar. Several tools can be mounted simultaneously on the same sleeve. Pressurizing is carried out with a high pressure grease pump. This allows the use of longer sleeves.



More sizes available - please contact Great Lakes Custom Tool

ETP Hydro-Grip Products



ETP HYDRO-GRIP EI2®

The new generation of the traditional EI type has a new design and additional features such as a practical stop pin preventing the pressurizing screw from being unintentionally removed. Each product is carefully balanced and individually tested. In short, you will get excellent performance and great value for your money.



Size:
40/60-92

HYDRO-GRIP G3

This hydraulic chuck is equipped with a safety device that prevents the tool from falling out when the chuck is not pressurized. Pressurizing is carried out with an allen T-wrench. The G3 chuck allows quick, safe and easy tool changes with perfect runout and repeatability.

ETP HYDRO-GRIP EIS®

Similar to the EI sleeve but with an internal hexagonal profile in its open side.



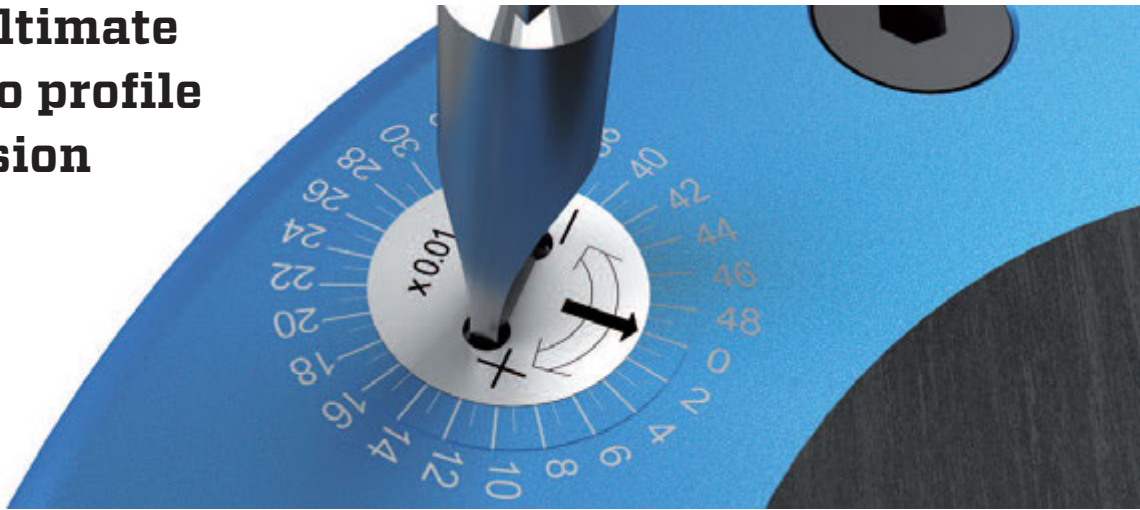
HYDRO-GRIP GE2®

The new generation of the high performance GE2 will let you reach your goals even faster with higher feeds and cutter speeds to achieve superior finish and maximum productivity. The HYDRO-GRIP hydraulic arbor has been a best seller for a number of years and the new generation GE2 is now ready to meet the future demands.

ETP HYDRO-GRIP GEW2®

The ETP HYDRO-GRIP type GEW2 is our new generation of hydraulic precision arbors for the PowerLock system. This combination will give you all the benefits from both the hydraulic centering function and the PowerLock system. The GEW2 arbor expands uniformly and is the ultimate centering and fastening solution for your tools.

The ultimate way to profile precision



ETP CUBIT

The ultimate way to profile precision within flooring

The new patented ETP CUBIT is a new complete concept for adjustable systems. Profiling of the tongue and groove in the flooring industry can now efficiently be done with extreme precision and repeatability. Innovative and user-friendly design together with an extraordinary performance let you reach profile success in just three easy steps.



ETP CUBIT INT

Maximum Productivity

The new model CUBIT INT is developed and specially designed for combination tools placed on a horizontal or tilted motor spindle. CUBIT INT has an extremely high precision and unrivalled repeatability. The adjustment is easily accessible through the dust cover adapter, (DCA). There is no need to dismount or open the DCA. CUBIT INT brings the set-up and downtime down to an absolute minimum and assures maximum productivity.



ETP CUBIT MINI

Save time. Save money. No more trial and error!

It is quick, precise and easy to use in a vast number of woodworking applications. By using the ETP CUBIT MINI you save both time and money by not using shims. The adjustment of a tool set can be made in seconds, either directly on the woodworking machine or at the grinding operation. You always get the desired adjustment due to the unrivalled repeatability. No more trial and error operations!

The CUBIT range of products include units for the most frequent size of machine shafts and versions for axially or radially pressurizing and adjustment. Please contact GLCT for more information.



Safety Locking Collars

Locking Collars are used on cutters that use ETP sleeves or hydro sleeves as an extra precaution to ensure that the cutters do not move on the arbor. The collars have protruding pins that fit into the pockets of the ETP sleeves or any hydro tool. The collars clamp firmly to the arbor by tightening the hex socket clampscrew in the locking collar. Order safety locking collar with proper bore to fit the arbor.

All locking collars are precision balanced.

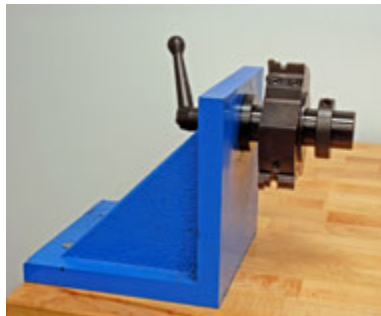


Part Number	Bore	Pins Center Distance	Pin Dia.
980-10805-0000	1-1/4"	2.165 (55mm)	5/16"
980-10806-0000	1-1/2"	2.520 (64mm)	5/16"
980-10807-0000	1-3/4"	3.150 (80mm)	5/16"
WNW-101719	1-13/16"	3.150 (80mm)	5/16"
WNW-101720	2-1/8"	3.150 (80mm)	5/16"
980-10810-0000	2-3/16"	3.150 (80mm)	5/16"
980-10811-0000	30mm	2.756 (70mm)	5/16"
980-10812-0000	35mm	2.756 (70mm)	5/16"
980-10813-0000	40mm	2.756 (70mm)	5/16"
980-10814-0000	45mm	2.756 (70mm)	5/16"
980-10815-0000	50mm	2.756 (70mm)	5/16"
980-10816-0000	60mm	4.724 (120mm)	5/16"
980-10816-0100	60mm	3.155 (80mm)	5/16"
980-10816-0200	60mm	3.661 (93mm)	5/16"

Set-Up Stand & Tool Changing Fixtures

Set-Up Stand

The Set-up Stand is designed to make changing of Great-Loc® inserts, Helicarb® blades and cleaning of router bits, shaper cutters, moulder cutters, etc. easy. The set-up stand is bolted down to a workbench which allows for rotating the cutting tool to change each insert conveniently and safely. See examples below:



Set-Up Stand shown with arbor and Great-Loc shaper cutter.



Set-Up Stand shown with collet holder and router bit.



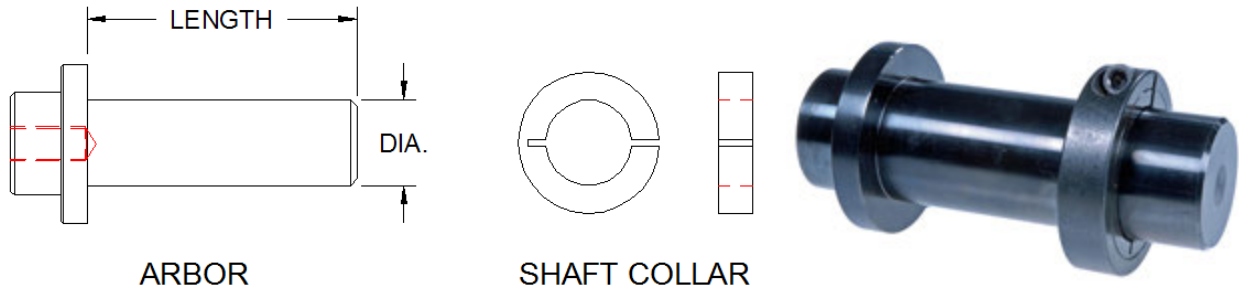
Set-Up Stand shown with changing fixture for PowerLock cutters. A Helicarb cutter is shown.



Set-Up Stand Assembly includes 8" x 8" x 8" stand, collar, and handle.

Part Number	Description
955-07584-0000	Set-Up Stand Assembly

Arbor Assemblies

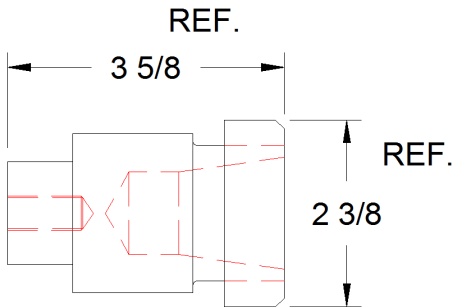


Arbor assemblies mount to set-up stand and are used to hold shaper cutters, moulder cutters, etc. for changing inserts. Arbor assemblies include arbor and shaft collar.

Part Number	Arbor Diameter	Arbor Length
950-07584-0000	3/4"	100mm
950-07584-0100	1"	100mm
950-07584-0200	1-1/4"	100mm
950-07584-0250	1-1/4"	265mm
950-07584-0300	1-1/2"	100mm
950-07584-0350	1-1/2"	265mm
950-07584-0360	1-3/4"	125mm
950-07584-0380	1-3/4"	265mm
950-07584-0400	1-13/16"	100mm
950-07584-0450	1-13/16"	265mm
950-07584-0500	2-1/8"	100mm
950-07584-0550	2-1/8"	265mm
950-07584-0600	30mm	100mm
950-07584-0650	35mm	100mm
950-07584-0660	35mm	265mm
950-07584-0700	40mm	100mm
950-07584-0750	40mm	265mm
950-07584-0800	50mm	100mm
950-07584-0850	50mm	265mm
950-07584-0900	60mm	100mm
950-07584-0950	60mm	265mm

Set-Up Stands & Tool Changing Fixtures

Arbor For ER40 Collets

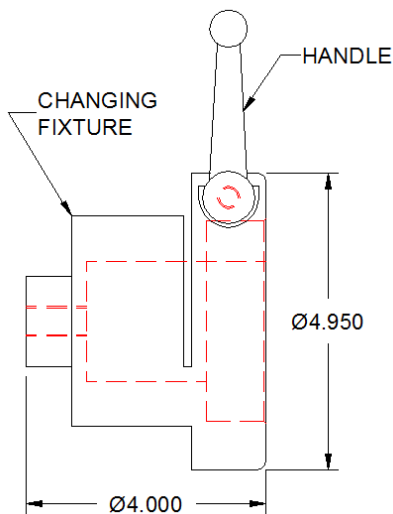


Arbor for ER40 Collets mounts to set-up stand and is used to hold router bits for changing inserts. Arbor for ER40 collets includes the collet nut. Order proper size collet to match router bit shank.

Part Number	Description
950-07584-0990	ER40 Collet Holder

Collet Part Number	Router Bit Shank Dia.
04240-1	1"
04240-3/4	3/4"
04240-5/8	5/8"
04240-1/2	1/2"

Changing Fixtures for PowerLock & HSK63F Tooling

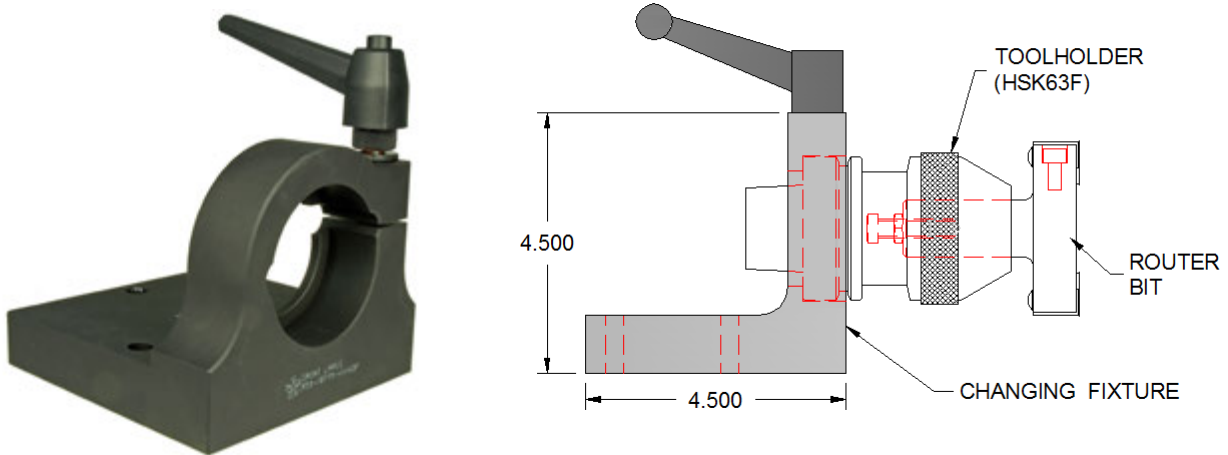


Changing Fixture mounts to set-up stand and is used to hold PowerLock Tooling for changing inserts or blades.

Part Number	Description
950-07584-PL00	Changing Fixture for PowerLock Tooling
950-07584-HSK63F	Changing Fixture for HSK63F Tooling

Tool Changing Fixtures

The tool changing fixtures are designed to hold the tapered toolholders BT30, ISO30, and HSK63F when mounting router bits. They are bolted down to a work bench and include an adjustable handle which is used to clamp the tapered toolholders. Listed below are GLCT part numbers from which to select a tool changing fixture.



Changing Fixture shown with toolholder and cutter

Part Number	Description
955-10775-BT30	Tool Changing Fixture for BT30 Tool Holder
955-10775-ISO30	Tool Changing Fixture for ISO30 Tool Holder
955-10775-HSK63F	Tool Changing Fixture for HSK63F Tool Holder
XFGF-H000	Adjustable Handle (Included with changing fixture)



The IMS Tooling Clamper cam locks HSK63F tool holders or tools for fast and easy setup or maintenance. Bidirectional roller bearings lock toolholder in place.

Part Number	Description
VE340	IMS Tooling Clamper 90° for HSK63F
VE330	IMS Tooling Clamper 90° for ISO30
VE3291	IMS Tooling Clamper 90° for BT30

Wrenches & Accessories

Torque Wrench & Hex Bits

Use to properly torque screws in cutter heads. Follow torque tightening procedures in the instructions that come with your cutter. Always torque screws to the value listed.



Torque Wrench with 3/8" Drive - (Inch/Metric)

Part Number	Description
90G-1008	Torque wrench, 3/8" drive, 50-250 in-lbs
90G-1009	Torque wrench, 3/8" drive, 10-100 ft-lbs



Hex Bit



Hex Bit Holder

(Note: Sold individually)

Hex Bit Part Number Sold Individually	Hex Bit & Holder Part Number Sold as a Set*	Hex Bit Size	Screw Size
90G-1024	90G-1017	1/8"	1/4"-28NF Differential Screw
90G-1025	90G-1018	1/4"	5/16" Cap Screw
90G-1026	90G-1019	M3	4mm Cap Screw
90G-1027	90G-1020	M4	5mm Cap Screw & 8mm Differential Screw
90G-1028	90G-1021	M5	6mm Cap Screw
90G-1029	90G-1022	M6	8mm Cap Screw

*Set includes hex bit holder (90G-1023) and corresponding hex bit size above.

Hex bit holder (90G-1023) is 3/8" square drive and can be sold separately.

Note: The hex bit holder fits above wrench part numbers 90G-1008 & 90G-1009.

Torque wrenches can be recalibrated and repaired. One company that provides this service is:

Angle Repair & Calibration Service, Inc.
 175 Angle Drive
 Beckley, West Virginia 25801
 Phone: 304-253-5729 Fax: 304-252-0481 Website: www.anglerepair.com

Torque Control Screwdriver Set

Interchangeable bit set used to properly torque screws with Torx socket head.

Torque adjustable from 10 to 50 in/lbs.
14-piece set with canvas pouch



Set consists of:

- 6-Torx: T7, T8, T9, T10, T15, T20
- 6-Torx Plus: IP7, IP8, IP9, IP10, IP15, IP20
- 1-Torque Handle: 10-50 in/lb capacity
- 1-Adjustment Tool



Part Number	Description
90G-1010	Torque Control Screwdriver Set, 10-50 in/lbs.

Recommended Torque Values

Screw Size	Hex Key Size	Torque Value		
		Newton Meters	Inch Pounds	Foot Pounds
4mm	3mm	4.3-4.7	38-42	–
5mm	4mm	9.3-9.8	82-87	–
1/4" Differential	1/8"	12.4	110	–
6mm	5mm	15.8-16.4	140-145	–
8mm Differential	4mm	16.9	150	–
8mm	6mm	47-48	–	25
5mm	T20	5.6-6.2	50-55	–

Grease Gun

Use grease gun with pressure gauge to properly pressurize ETP sleeves and hydro bore tools to lock the tools to the machine spindle.



Part Number	Description
59800	M08 Grease Gun
98DN01	14 oz. Mobilux EP2 Grease Cartridge (10 cartridges to a case)

GLCT Business Awards



The IWF Challengers Distinguished Achievement Award® has become known throughout the world for recognizing outstanding companies who have distinguished themselves by developing innovative technology in products, services, or manufacturing techniques that will advance the industry.

GLCT won the Award by featuring our patented Great-Loc® Custom Dedicated Insert Tooling which is the safest, most accurate and easy to use system in the market for replacing inserts.

GLCT has a work force that takes ownership of their responsibilities to complete the projects. We do whatever it takes to get the job done for each and every customer. We want all of our customers to be successful. The above awards are a tribute to our dedicated employees.



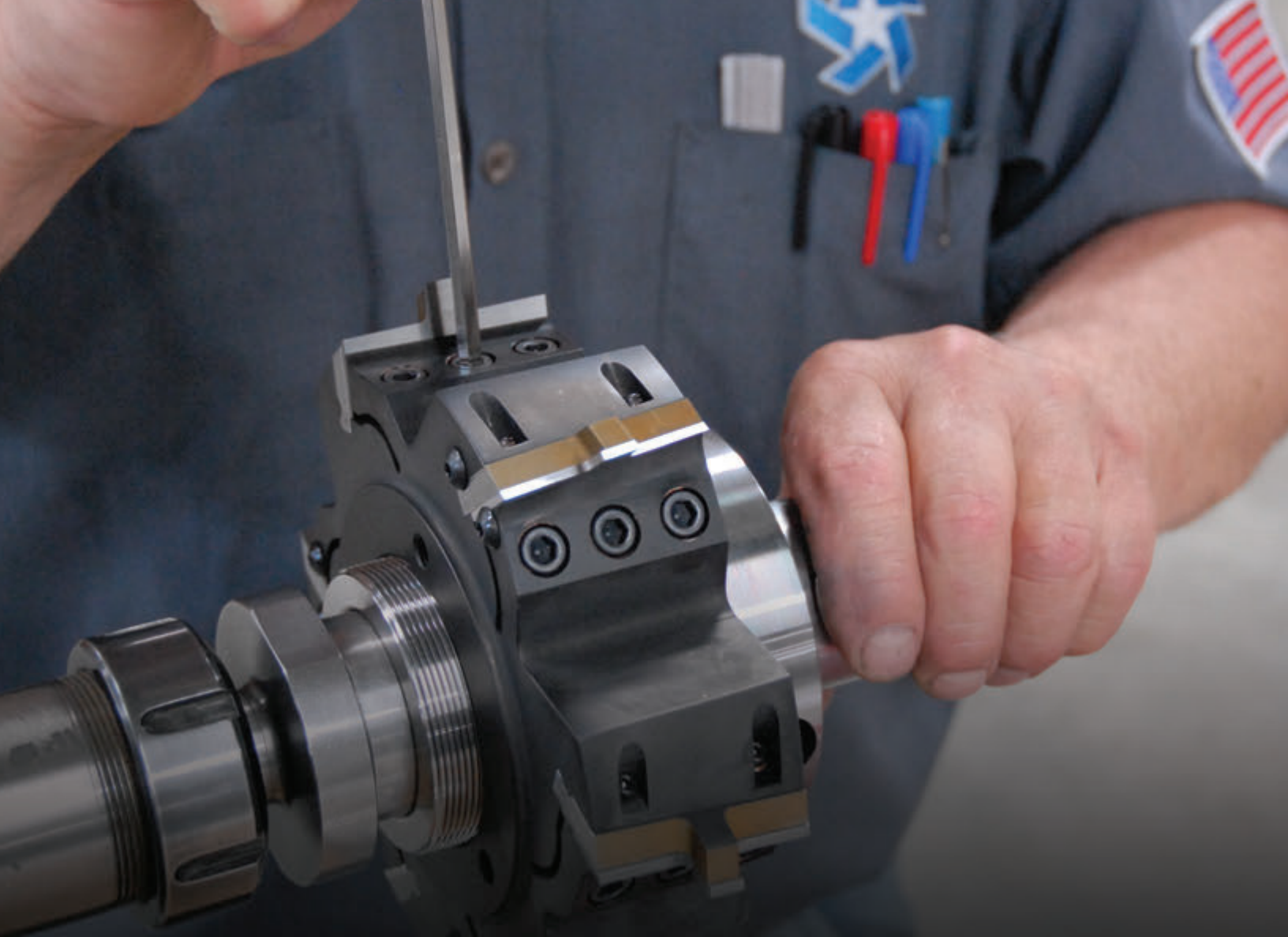
The Wisconsin Family Business of the Year Award celebrates the accomplishments and the impact that family-owned businesses have on our country.

GLCT won the Award in the Medium (50-99 employees) category. The GLCT employees are all treated like extended family. We share the family values and concerns in the business. GLCT has been in business since 1979. The employees are active in many community activities that include youth coaching, local clubs, and community events.



The Manufacturing Award of Distinction honors companies that have achieved excellence in manufacturing in North-eastern Wisconsin.

GLCT won the Award in the Small Company Category. GLCT utilizes many CNC (Computer Numerical Controlled) machines in the manufacturing and servicing of Woodworking and Metalworking Cutting Tools. The CNC Machines are used in Turning, Milling, EDM'ing (Electrical Discharge Machining) and Grinding. We also use CMM (Coordinate Measuring Machines) for quality control inspection.



“ In my job, I have the opportunity to visit many companies throughout North America. Some are run well, some are not as you would expect. In every one of the well run businesses, it takes the entire organization to accept the vision that is set forth. Every time I visit, and every time I leave Great Lakes, I am impressed with what a quality group of people work there and it is truly a class organization. ”

—Machine Manufacturer

Additional GLCT Capabilities

- ✦ Saw sharpening/retipping/hammering & tensioning
- ✦ Face grinding and reprofiling inserts
- ✦ Solid carbide router bit sharpening, remanufacturing, fluting & O.D. grinding, etc.
- ✦ Sharpening & retipping of brazed carbide tooling
- ✦ Sharpening & retipping of diamond (PCD) tooling
- ✦ Tool modification/custom rework of tools
- ✦ Sharpening/remanufacturing tooling purchased elsewhere
- ✦ Offer technical support by our Application Specialists
- ✦ Dynamic tool balancing
- ✦ Resleeve cutters
- ✦ Provide tool inspection reports
- ✦ Perform test cuts





One Mission, With You In Mind

At Great Lakes Custom Tool Mfg., Inc., our people are committed to providing customers with the **highest quality tooling** by exceeding industry standards. Our customers are "Industry Leaders" with tooling from GLCT. We provide the competitive edge through innovative technology and precision, assuring customer satisfaction.



Contact Us

Phone: 1-800-873-4528
Fax: 1-715-582-4373
info@glct.com

Phone: 1-715-582-3884
www.glct.com

AAA Precision Tool



AAA Precision Tool
1185 Riverside Ave.
Orofino, ID 83544



In June 2013, Great Lakes Custom Tool Mfg., Inc. (GLCT) purchased AAA Precision Cutter Grinding. AAA operates out of a brand new 10,000 square foot facility in Orofino, Idaho.

Since 1955, AAA focused on designing and manufacturing the perfect tool necessary to meet their customers' needs. They have qualified toolmakers with over 80 years of combined experience and pride themselves on precision, quality and customer satisfaction. A wide range of custom cutting tools is produced at AAA such as: HSS and solid carbide form drills, end mills, reamers, circular form tools and cutters, carbide or diamond tipped tools, inserts, broaches, punches, boring bars, saws, etc.



Why AAA Precision Tool?

- Micro tooling to large diameter
- Multi-inspectional quality control
- High precision and high tolerance
- 5-7 day turnaround with in-stock materials
- In-stock standard and metric blanks
- In-stock coolant and non-coolant blanks
- Custom coatings available





AAA Precision Tool



PRECISELY. IT'S A WORD WE USE EVERYDAY ...



Contact Us

Phone: 1-844-873-2221

Fax: 1-208-476-4102

info@AAAPrecisionTool.com

Phone: 1-208-476-4004

www.AAAPrecisionTool.com



Great Lakes
Custom Tool Mfg., Inc.

Your American Cutting Tool Partner

www.GLCT.com

101 North Old Peshtigo Road

Peshtigo, WI 54157-0152

Phone: 1-800-873-4528 or 1-715-582-3884

Fax: 1-715-582-4373

info@glct.com

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