



INDUSTRIAL QUALITY
Woodworking Cutting Tools



www.fstoolcorp.com

QUALITY • SERVICE • PRIDE • TRADITION • INNOVATION

FS TOOL CORPORATION [CANADA]

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FS TOOL CORPORATION [U.S.A.]

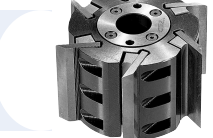
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C O N T E N T


<p>TECHNICAL INFORMATION</p>		<p>A</p>
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<p>CUTTERS & CUTTER COMBINATIONS Carbide, Stellite or HSS Tipped</p>		<p>B</p>
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<p>CUTTER BLOCKS Knives HSS & Carbide Tipped</p>		<p>C</p>
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<p>TCT ROUTER BITS Standard & Solid Surface</p>		<p>F</p>
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<p>PRECISION TOOLING for CNC MACHINES Spiral Router Bits, Insert Router Bits and Tool Holders</p>		<p>FC</p>
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40 Years of Industry Leadership

FS Tool is a leader in carbide and diamond tooling solutions for the woodworking, plastics and non-ferrous industries. Today, we provide our customers with a solution driven approach to their tooling needs. Backed by a continuous investment in leading edge CNC technology with integrated 3D design and a dedication to quality, our team is ready to provide you with a cost saving solution for your tooling needs.

What We Offer

This catalog has been designed to profile the more than 6,000 stock items offered by FS Tool. We are North America's most complete source of industrial cutting tool solutions offering high performance, industrial quality, cost effective tooling for your needs. If you don't find what you are looking for in the nine sections of this catalog, remember, if we don't stock it, we will custom design and build it for you. Our sales and engineering departments are always available for tool design consultation.

What's New

In this edition, Precision Tooling for CNC Routers (FC) has been expanded to include many more application specific solutions such as Solid Carbide Dovetails, Ballnose, specially designed spiral router bits for Phenolic materials and a greater focus on solid wood machining and cabinet production. FS Cruing's revolutionary Aerotech that provides dust free nesting and routing (FC21) is also featured and represents a new standard in CNC technology. Another renowned product line, SpeedMaster, has rapidly grown. As well, every other category such as XL4000 Industrial Saw Blades (E), has continued it's development and expansion to offer you the best solution for your application.

Technical & Product Support

In addition to our standard and custom tooling lines, we offer training and education support services, inventory management programs and tooling consultancy. These services are available to our customers as part of our partnered approach.

A Partnership Approach

FS Tool products are only sold through knowledgeable distributors who can provide the technical expertise and after sales support and service that is demanded by today's leading manufacturers. Our sales and engineering advisors work closely with our distributors to provide value added services such as on-site customer training and trouble shooting, special stocking programs, and ongoing research and development to provide new tooling solutions.

Diamond Tooling

Today, with our diamond subsidiary—FS Cruing Diamond Corporation, we manufacture a complete line of PCD Router Bits, Panel and Scoring Saws and Cutters. In addition, we can service any PCD tool, providing a 5 day turn-around in North America. For more information visit our website at www.fscruing.com or call our FS Cruing design and sales department at 1-800-461-5319.

Our Commitment

We are committed to providing you with cost efficient, quality products. If you can't find your tooling requirement in this catalog, call us at 1-800-387-9723. Our team of advisors will be happy to assist you with your tooling requirements or put you in contact with a distributor in your area.

To learn more about FS Tool or to view and download this catalog digitally...
Visit our web site at www.fstoolcorp.com

Engineered to outperform.



Tools offered from stock are subject to availability. Buyer agrees to partial deliveries which will be considered separate transactions. Cancellation or alteration of orders are subject to our written consent. Returns only upon approval. Tools made to special order are not returnable.

Delivery time is based on our present commitments and starts from the date of order confirmation. Although every effort will be made to maintain delivery times, we will not be liable for any loss or damage due to delays, however occasioned.

Guarantee

All our tools are manufactured according to specifications described in this catalogue, which includes guarantee of quality and workmanship. Tools returned for inspection are to be sent shipping prepaid. We will replace only tools which prove, upon examination, to have been defective, and which have not been misused or carelessly handled. We decline any responsibility for mistakes caused by improper application, handling, or inappropriate sharpening/service. Tools may be altered in design from tools illustrated due to progress or changes in production methods.



Remove Page. Used to shift the starting page to the LEFT.

Data for Ordering

Standard Tools in Catalogue

Part number

Dimensions

Custom Tools

Bore or shank size

Machine rpm and required feedrate

Direction of rotation

Drawing showing dimensions of cut or a workpiece sample giving orientation to machine table and fence.

Type of material to be cut including (if appropriate) wood species and moisture content.

Main Specifications

Tool Diameter x Width of Cut x Bore (or Shank) Diameter

Number of Teeth

Direction of Rotation

Maximum RPM (n max)

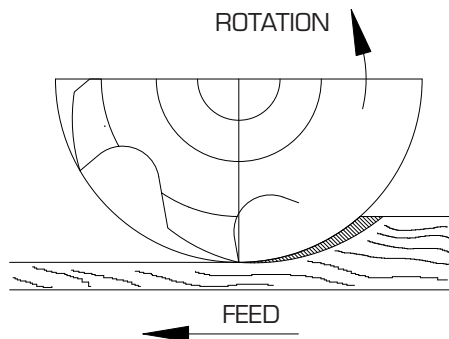
Keyway Size

Tooth Material: Tungsten Carbide, HSS, Stellite or Diamond

Working Method

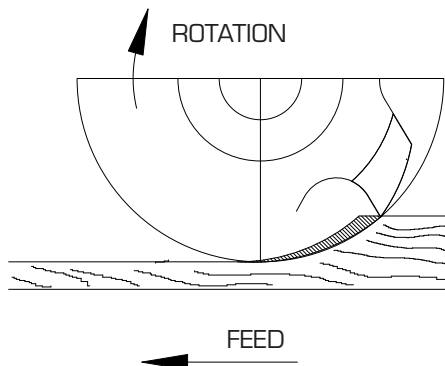
Against Feed Direction (Up Cut)

Usual method of operation. The cutting motion of the tool and the feed direction work counter to one another. The cutting force exerted on the workpiece resists the direction of feed. Only the Up Cut method is suitable for hand feeding.



With Feed Direction (Climb Cut)

The cutting motion of the tool and the feed direction are in the same direction. The cutting force exerted on the workpiece works in the same direction as the feed. The Climb Cut method is suitable only for mechanical feed.

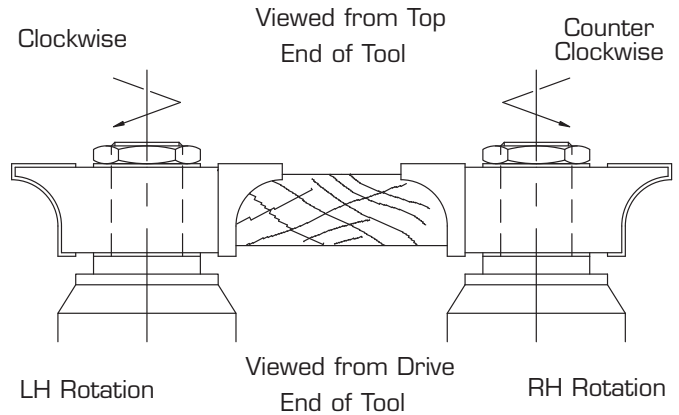


Direction of Rotation

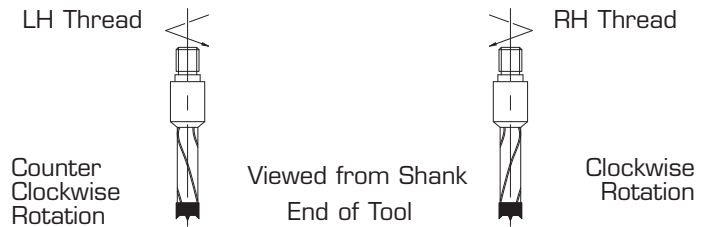
Left Hand Cutting

Right Hand Cutting

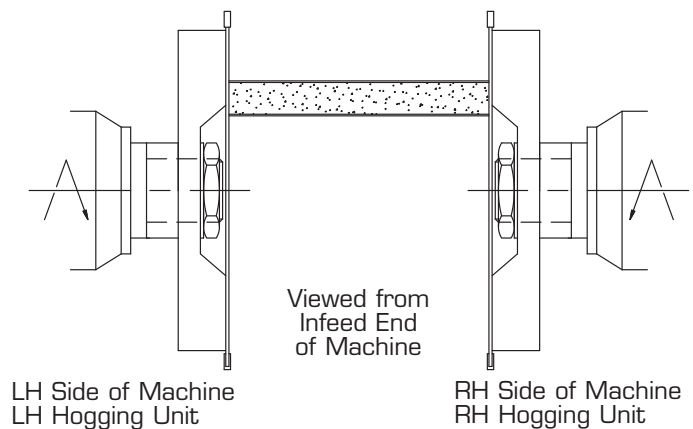
Bore Mounted Tools



Shank Mounted Tools

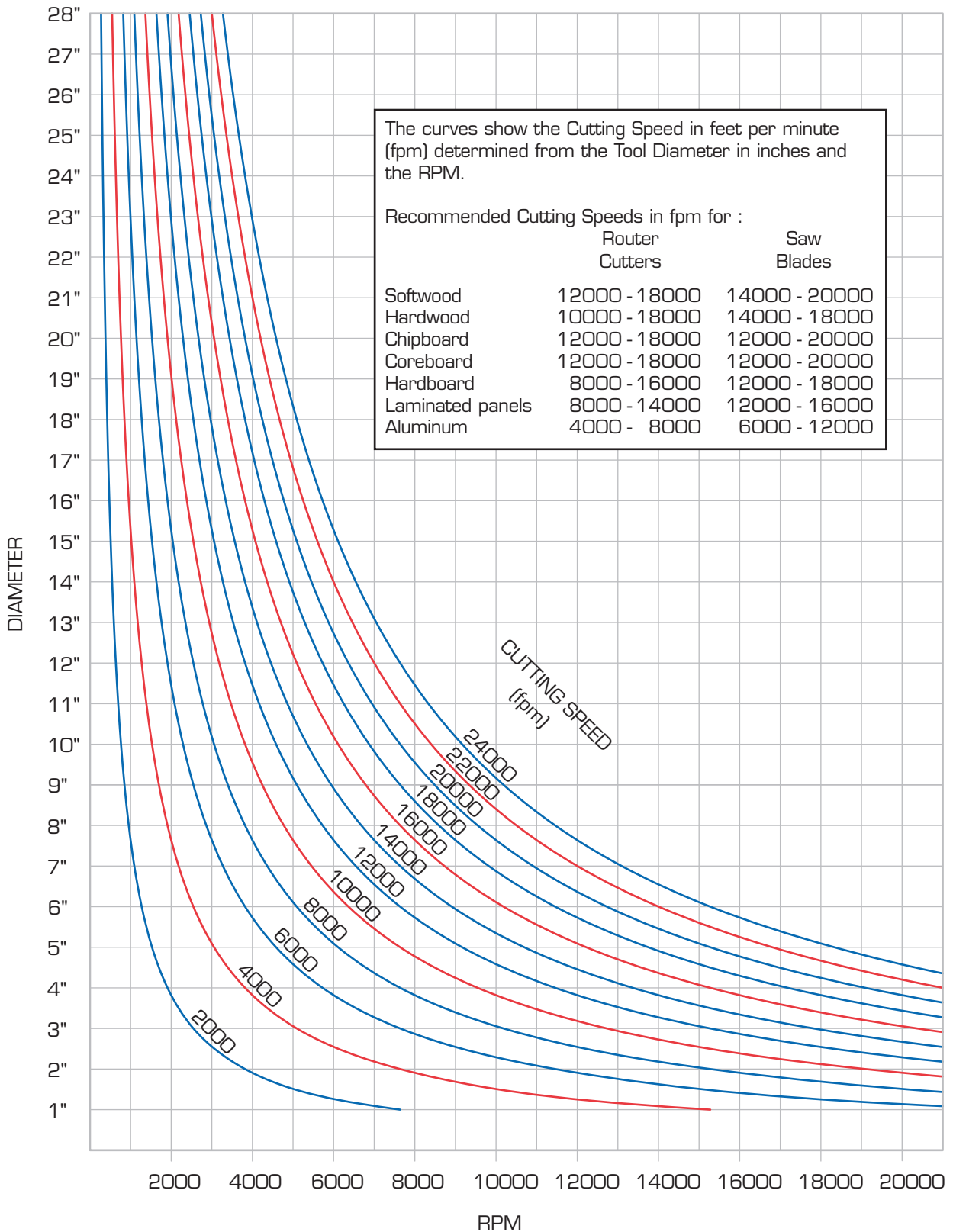


Hogging Units



Determination of Cutting Speed

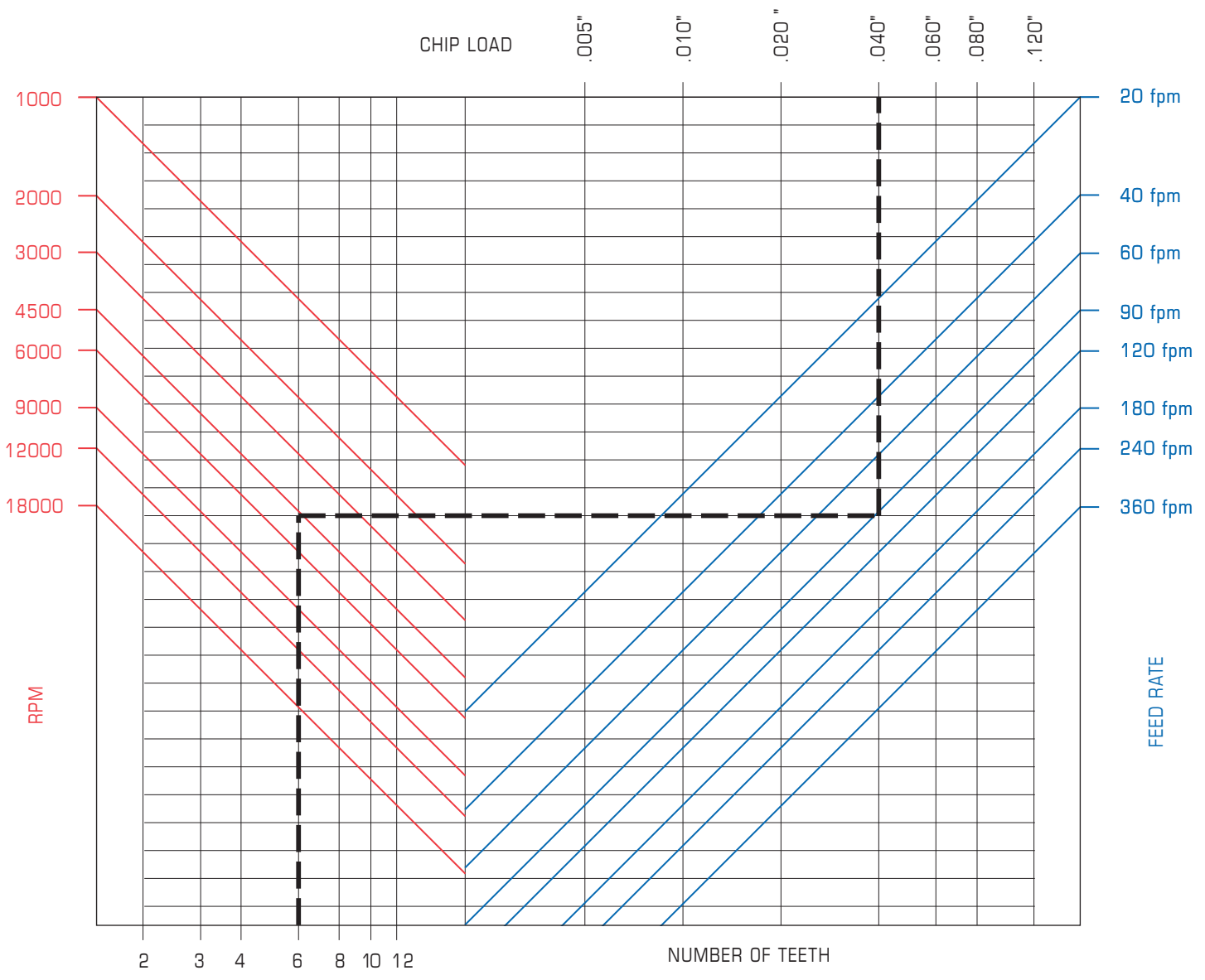
In relation to rpm and tool diameter



Technical Information

Determination of Operation Parameters for Cutters

Chipload, Feed Rate, R.P.M., Number of Teeth



Recommended Chiploads (inch / tooth)

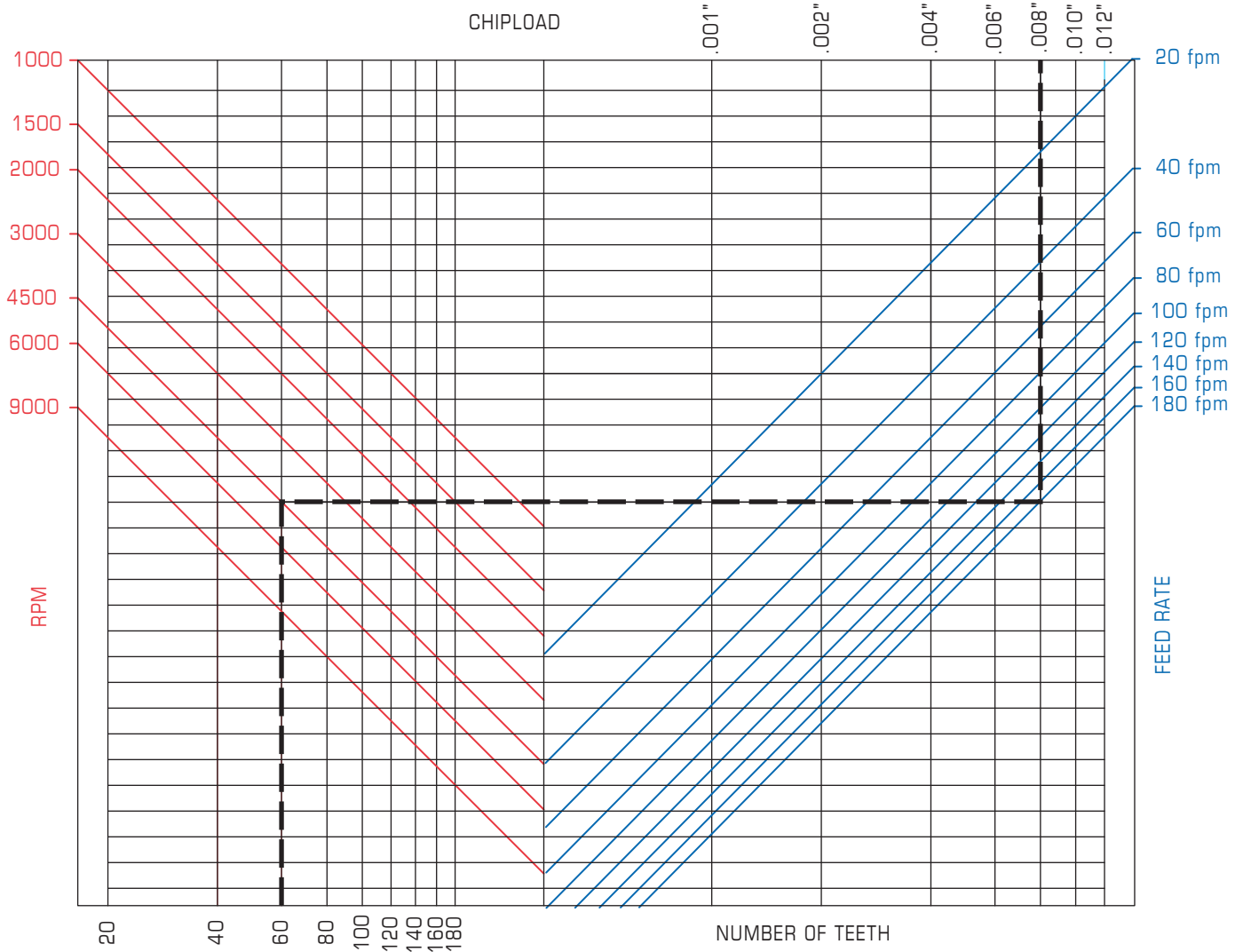
Fine finish	.010" - .030"
Medium finish	.030" - .100"
Course finish	.100" - .200"

Example

6 tooth cutter rotating at 4,500 rpm, feeding at 90 fpm has a chipload of .040"/tooth

Determination of Operation Parameters for Circular Saw Blades

Chipload, Feed Rate, R.P.M., Number of Teeth



Recommended Chiploads (inch / tooth)

Softwood:	
Along grain	.008" - .035"
Cross grain	.004" - .008"
Hardwood	.002" - .006"
Chipboard	.004" - .010"
Veneered panels	.001" - .004"
Plastic laminated panels	.001" - .002"
Aluminum	.001" - .003"

Example — — — —

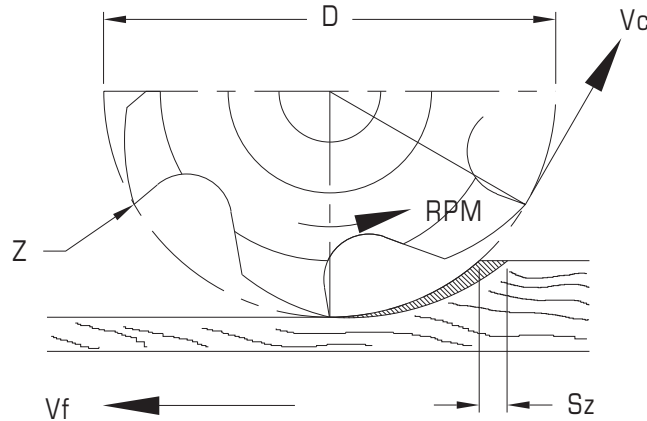
60 Tooth saw blade rotating at 4,500 rpm, feeding at 180 fpm has a chipload of .008"/tooth

Formulas

For calculating chipload, cutter marks per inch, feed rate, and cutting speed

Symbols

- D = Diameter (inches)
- Z = Number of Teeth
- RPM = Spindle Speed
- Vf = Feed Rate (fpm)
- Vc = Cutting Speed (fpm)
- Sz = Chipload (inch/tooth)
- MPI = Cutter Marks per Inch



Chipload

$$S_z = \frac{V_f \times 12}{\text{RPM} \times Z}$$

Example

$$\begin{aligned} V_f &= 90 \text{ fpm} \\ \text{RPM} &= 4500 \\ Z &= 6 \end{aligned}$$

$$\begin{aligned} S_z &= \frac{90 \times 12}{4500 \times 6} \\ &= .040" / \text{tooth} \end{aligned}$$

Cutter Marks Per Inch

$$\text{MPI} = \frac{1}{S_z}$$

Example

$$S_z = .040" / \text{tooth}$$

$$\begin{aligned} \text{MPI} &= \frac{1}{.040} \\ &= 25 \end{aligned}$$

Feed Rate

$$V_f = \frac{S_z \times \text{RPM} \times Z}{12}$$

Example

$$\begin{aligned} S_z &= .040" / \text{tooth} \\ \text{RPM} &= 4500 \\ Z &= 6 \end{aligned}$$

$$\begin{aligned} V_f &= \frac{.040 \times 4500 \times 6}{12} \\ &= 90 \text{ fpm} \end{aligned}$$

Cutting Speed

$$V_c = \frac{D \times \pi \times \text{RPM}}{12}$$

Example

$$\begin{aligned} D &= 6" \\ \pi &= 3.14 \\ \text{RPM} &= 6000 \end{aligned}$$

$$\begin{aligned} V_c &= \frac{6 \times 3.14 \times 6000}{12} \\ &= 9420 \text{ fpm} \end{aligned}$$

Operating Instructions

Handling (Packing/unpacking)

Use special care when unpacking and packing tools, as well as in handling (e.g. mounting onto the machine) due to the danger of injury from sharp cutting edges.

Transport

Due to the risk of injury, transport tool only in suitable packing. Use the original packaging where possible.

Use

Exclusively for the cutting and machining of wood materials, laminates, plastics and non-ferrous materials as described in the product pages of this catalogue.

RPM

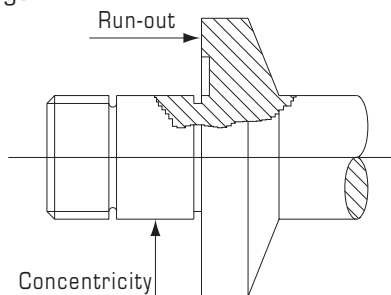
The maximum permissible speed (n max) stated on the tool must not be exceeded. This speed should not be adopted as the operating speed, as the optimum speed for the tool will be dependant upon the application of use.

Machine

Secure the machine against accidental starting before mounting or changing the tool. Use appropriate lock-out procedures.

Check that machine spindle speed does not exceed maximum permissible speed stated on the tool. Check direction of rotation.

Check spindle for concentricity and flange for run-out using a dial gauge.



Use only precision ground spacers and flanges, otherwise the spindle can become distorted.

Check that workpiece is securely clamped and that feed is correctly aligned to spindle.

Operation

All tools should be handled with care. Placing tools against each other or on hard surfaces such as machine tables may damage the cutting edges. Tools must be protected when not in use and when being moved to and from the machine.

Mount and secure the tool as specified by the machine manufacturers' instructions. Do not block the tool to assist in tightening the tool onto the machine spindle as this may cause damage to the tool. Similarly, do not jam material against the tool to assist in slowing down the tool when stopping the spindle.

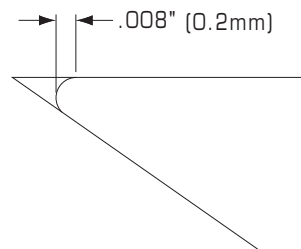
Observe all instructions and warnings included with the tool. The tool may only be mounted by trained and qualified personnel. Never operate tool without appropriate guarding in place. Always wear correct eye, ear and breathing protection which complies with current standards. All machine specifications must be adhered to. Never leave a running machine unattended. All valid safety regulations must be adhered to. Incorrect use for purposes not intended is prohibited.

Tool Maintenance

Proper care and maintenance of tooling is paramount to ensure long tool life and economic overall tool costs. Never let any tool become blunt because teeth could break if production continues. A good method of monitoring tool wear is to install an ammeter which will show the increase in power consumption on the machine as the tool wears.

Tools should be re-sharpened or knives changed when:

- Surface finish of workpiece is no longer acceptable.
- Cutting edges become rounded more than .008"



- Machine power consumption becomes too high.
- Cutting edges are chipped or broken.

The servicing of tooling should be performed by competent personnel using suitable equipment. To ensure continued high performance of your tooling throughout its service life, tools must be maintained to the manufacturers' specifications. The people best able to do this are your local FS Tool Distributors who have been selected for their ability to provide a Sharpening Service which will maintain your tools to our specifications.

Carbide Tipped Circular Saw Blades

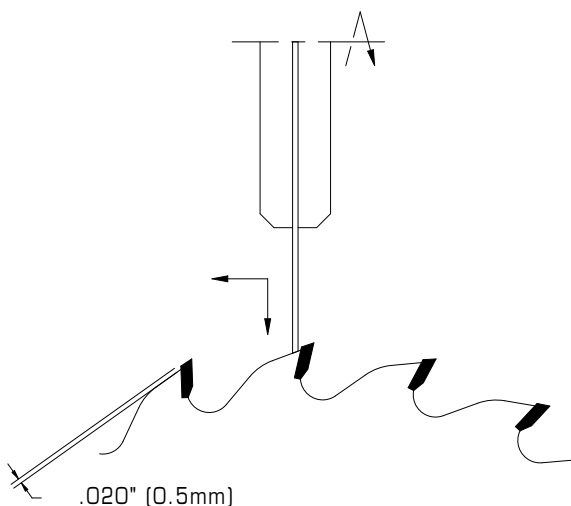
Safety

Circular saw blades which are cracked or which have been deformed may not be used. Welding or soldering of cracked saw blades is not permissible. The saw blade should not be stopped with side pressure during run down. Use of loose rings or bushings to 'make-up' bore sizes is not permitted. Reduction of the bore may only be done by the use of a fixed bushing, e.g. pressed or held by adhesive fixing. Saw blades where tips have been reduced to a minimum of .040" (1mm) will have reached the end of their regrind life and shall be taken out of service.

Cleaning and Steel Relieving

The saw blade should be cleaned to remove all build up of material (resin, gum, dust etc) from the saw plate and sides of the carbide teeth. Effective cleaning of the saw blade will increase service life by minimizing friction of the saw plate and thereby preventing overheating and loss of saw plate tension. Cleaning of the sides of the teeth will maintain the effectiveness of side clearances originally ground on the saw blade when it was manufactured. The sides of the teeth are not reground during resharpenering but the face and top geometry is reground. Cleaning is best done using an ultrasonic cleaning tank or else a propriety cleaning solution. Do not scrape or use an abrasive wheel to clean the sides of the saw plate. Such action can affect the tension of the saw plate.

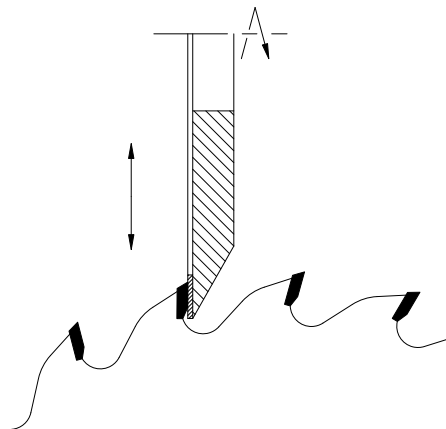
As the saw blade progresses through its regrind life it will periodically be necessary to relieve the steel body behind the top geometry of the teeth. This is necessary to ensure optimal chip clearance and to allow effective regrinding of the top geometry using diamond abrasive wheels.



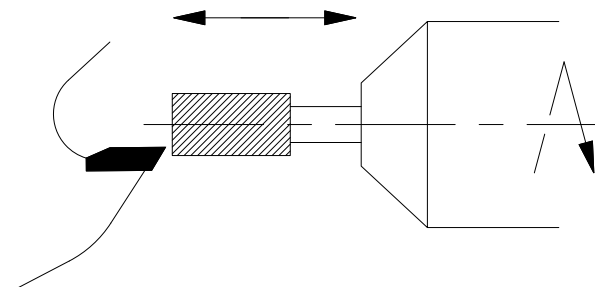
Face Grinding

Align the face of the tooth to the grinding wheel linear axis. Adjust the tooth so that the face remains parallel during regrinding. If the tooth is not ground parallel then the radial side clearance and rake angle will be adversely affected. The amount to be removed from the face is dependent upon the wear on the tooth. Typically .008" (0.2mm) is removed. When top grinding is also to be performed then not all of the wear should be removed by face grinding as the remainder will be ground from the top geometry. Take care to ensure that the tip thickness is equal on all teeth. Variations in tip thickness will cause variations in tip kerf which may lead to chipping of workpiece material.

We recommend the use of coolant when grinding with diamond abrasive wheels.



Hollow face tooth saw blades are resharpenered on their face using a diamond abrasive rod operating at high speed. Particular care is required to make sure that the abrasive rod is centered accurately. Failure to center accurately will adversely affect tooth geometry and may lead to chipping of material being cut.



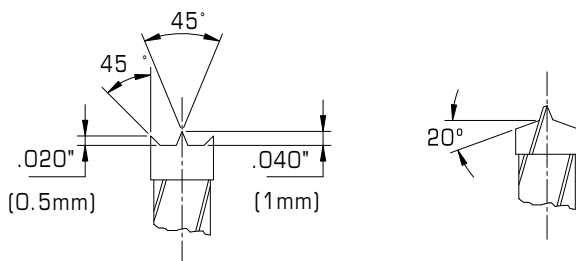
Top Grinding

Top grinding is used to sharpen the periphery of the saw blade and regenerate the original tooth geometry. Care must be taken to reproduce the original FS Tool tooth specifications.

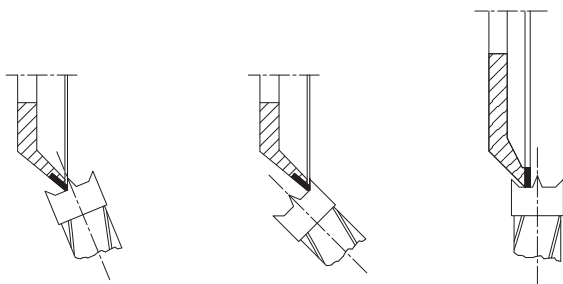
Carbide Tipped Dowel Drills

Sharpening

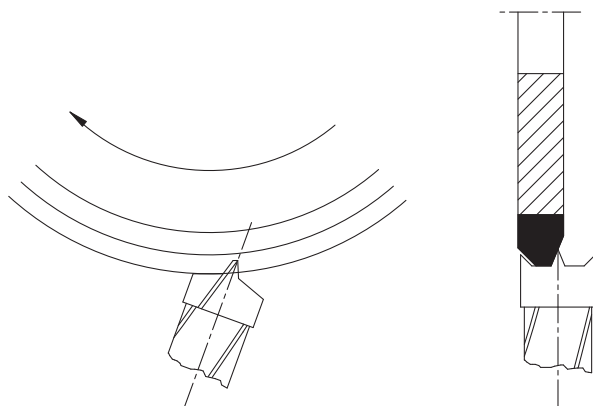
Clamp drill bits in a holder or collet and check for concentricity. Sharpen spurs and brad point maintaining projection from rakers. To avoid chipping of spurs only grind with very light grinding pressure.



Small quantities can be sharpened using standard grinding wheels using three setups. The brad point and spurs are ground using the end face of a cup wheel as shown. Next the rakers are sharpened using the periphery of a suitable wheel.



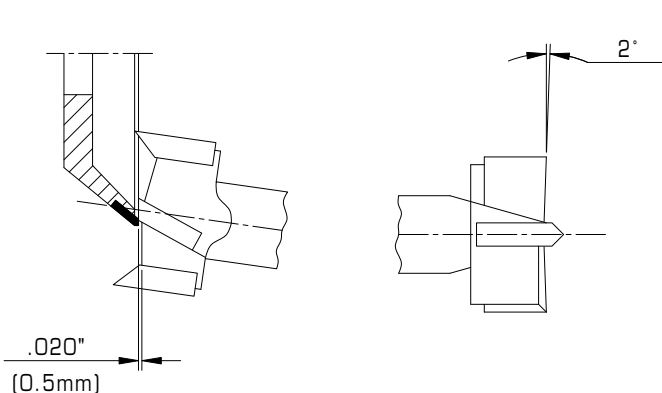
Larger quantities are best sharpened using a formed grinding wheel. With a 45 degree angle dressed on both sides of a suitable 1A1 style wheel the spur, brad point and rakers can be sharpened in one setup. Different widths of rakers are accommodated by shifting sideways. After sharpening one cutting edge the bit is rotated and the process repeated.



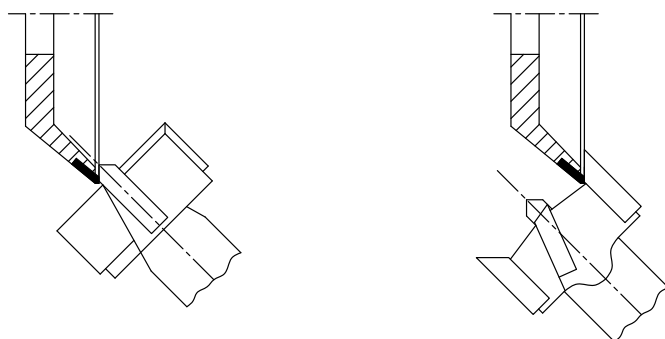
Carbide Tipped Cylinder Boring Bits

Sharpening

Clamp boring bits in a holder or collet and check for concentricity. Relieve steel body behind rakers to maintain .020" (0.5mm) protrusion of cutting edges above body. Sharpen rakers by regrinding end clearance. Maintain 2 degree end dish angle. If rakers are heavily worn then also grind rake face.



Sharpen spurs and brad point to maintain .012" to .020" (0.3 to 0.5mm) protrusion above rakers. Grind 45 degree angles on inside edge of spurs and on all edges of brad point. Spurs also require leading and trailing edges to be sharpened to ensure correct cutting action.



Always index tool using a precision dividing head or mechanical stop to make sure equal amounts are taken from cutting edges.

Carbide Tipped Router Bits

Safety

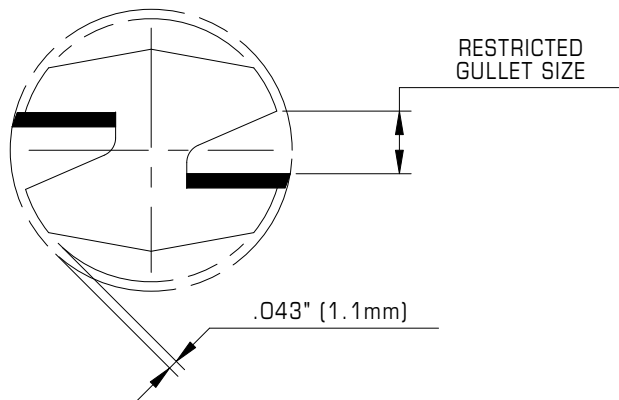
The most progressive safety standards for woodworking tooling exist in Europe. There, a harmonized European Standard has been developed and adopted by all members of the EU. Unfortunately, here in North America, there are no similar safety standards but to promote the best safe working practices and tool design, FS Tool Corporation has utilized this European Standard number EN 847-1 in the router bits we supply.

According to the Standard there are two distinct methods of working with router bits. The first is working by hand, or **MAN**ual feed, where the workpiece is held or guided by hand. This also includes use of a hand operated carriage on which the workpiece is held manually or clamped and the use of a demountable power feed unit. The second is working with integrated feed where the feed mechanism for the workpiece or tool is integrated with the machine and where the workpiece or tool are held and controlled **MECH**anically during the machining operation.

These two methods of working have lead to two different requirements for tool safety.

MANual

With manual feed there is greater risk of injury to operators due to accidental kickback of the workpiece and contact with the tool.



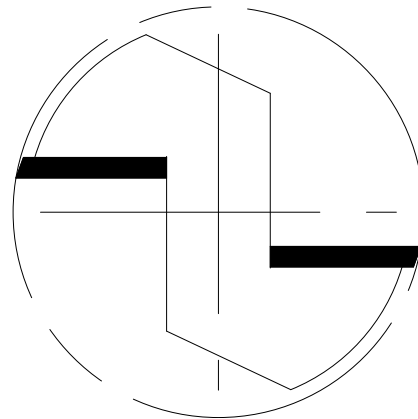
For this reason, tools for manual feed are designed with additional safety features. These include a limited projection of the cutting edges beyond the tool body and, for tools greater than 5/8" (16mm), a restricted gullet width.

Both of these safety features have the effect of minimizing the severity of kickback and injury caused by physical contact with a rotating tool.

Router bits designed for manual feed are marked **MAN**.

MECHanical

Fully automated machines, for example CNC routers, do not pose the same hazards to operators as manual fed machines. For this reason, restrictions of tip to body clearances and gullet sizes do not apply and allow greater flexibility in tool design. Tools that are intended only for use with mechanically controlled feed are marked **MEC**.



Sharpening

Router bits for jointing and rebating are to be resharpened on the face. If the teeth are excessively worn or chipped then they can also be ground on the outer cutting diameter.

Any router bits for **MAN**ual feed with chip thickness limiters will require reduction of the limiters as the router bit progresses through its regrind life. The teeth must protrude above the limiters by a maximum of .043" (1.1mm).

Profiled router bits are to be resharpened parallel to the face only.

Carbide Tipped Cutters

Sharpening

Tools must be cleaned before sharpening to remove resin and dust. Inspect the cutting edges to determine the extent of wear and to identify any edges that are more heavily worn.

Cutters can be sharpened on either universal tool and cutter grinders or else purpose built CNC cutter grinders using diamond grinding wheels.

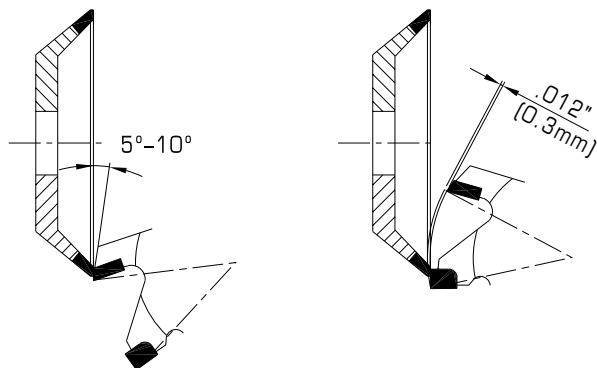
Sharpening should be performed using coolant to avoid overheating and possible damage to either the grinding wheel or the carbide teeth.

Sharpen all teeth by the same amount to remove all wear and to ensure good concentricity. Check concentricity using a dial gauge.

The sharpening method employed is dependant on the type of cutter as follows:

Grooving Cutters with or without spurs

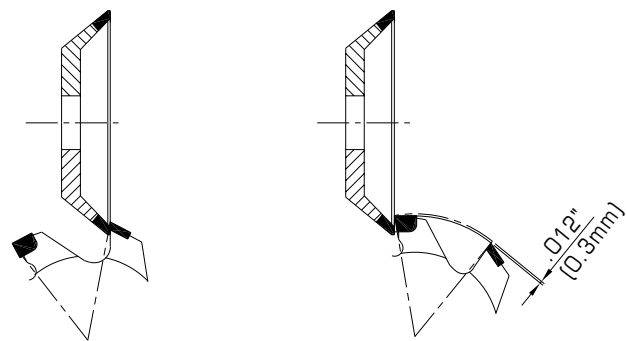
These tools are face tipped and therefore are to be sharpened on the top of the teeth. Spurs must protrude raker teeth by .012" (0.3mm) radially and .008" (0.2mm) laterally.



As the diameter of the cutter is reduced it may become necessary to relieve the steel body as shown. To relieve the steel increase the top clearance angle ground on the body by 5° to 10° using a carborundum or CBN grinding wheel.

Rebating and Jointing Cutters

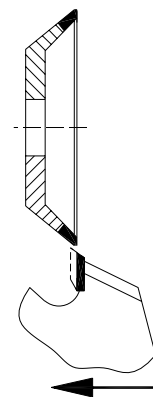
These tools are top tipped and therefore are to be sharpened on the face of the teeth. Spurs must protrude raker teeth by .012" (0.3mm) radially and .008" (0.2mm) laterally.



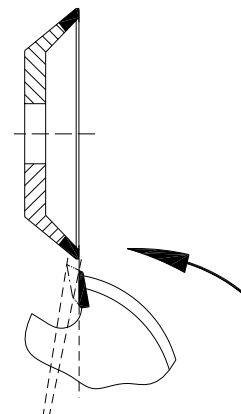
Profile Cutters

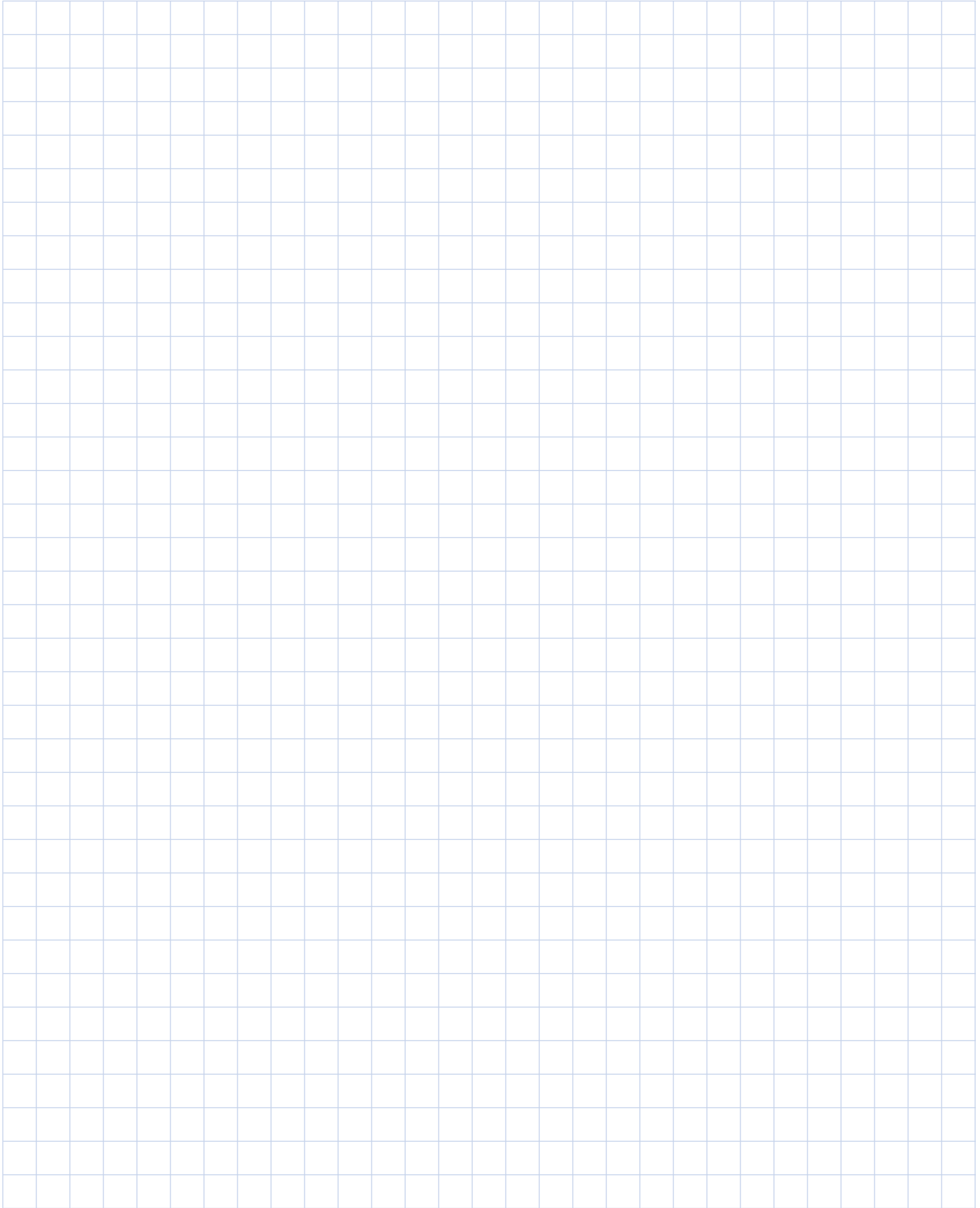
There are two different methods to sharpen profile cutters dependant upon how the profile shape has been ground.

For profile cutters with straight back relief the cutting edges are sharpened by face grinding parallel to the original face.



For profile cutters with radial back relief the cutting edges are not sharpened parallel to the original face but by rotating the tool onto the grinding wheel. This will ensure that the original cutting angle of the tool and profile shape are maintained.



A large, empty grid of small squares, intended for writing notes. The grid consists of 20 columns and 30 rows.



B

CUTTERS & CUTTER COMBINATIONS
Carbide, Stellite or HSS Tipped

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CUTTERS AND CUTTER COMBINATIONS

According to Application Made in:

H.S.S.T (High Speed Steel Tipped)

For softwood & hardwood without glue lines.

STELLITE (Stellite Tipped)

For softwood & hardwood without glue lines.

T.C.T (Tungsten Carbide-Tipped)

For hardwood, plywood, chipboard, MDF and other panel materials.

Our cutters are designed to conform with safety regulations, and are dynamically balanced.

To determine min. diameter on profiled cutters the calculation is: bore ("B") + 60mm (2-3/8") + (2 x profile depth) ("P"). As per table below.

"B"	"P"							
	5	10	15	20	25	30	35	40
30	100	110	120	130	140	150	160	170
35	105	115	125	135	145	155	165	175
40	110	120	130	140	150	160	170	180
50	120	130	140	150	160	170	180	190
60	130	140	150	160	170	180	190	200

"B"= Bore Diameter

"P"= Profile Depth

"B"	"P"				
	3/8"	3/4"	1"	1-1/4"	1-1/2"
3/4"	3-7/8"	4-5/8"	5-1/8"	5-5/8"	6-1/8"
1-1/4"	4-3/8"	5-1/8"	5-5/8"	6-1/8"	6-5/8"
1-13/16"	4-14/16"	5-7/16"	5-11/16"	5-15/16"	6-3/16"
2"	5-1/8"	6-1/8"	6-5/8"	7-1/8"	7-5/8"

"B"= Bore Diameter

"P"= Profile Depth

Order Details

(1) Type of cutter as numbered.

For softwood & hardwood without glue lines.

(2) Main dimensions in the following order: (diameter) x (cutting width) x (bore) x (number of teeth)

(3) Cutting materials H.S.S.T, STELLITE or T.C.T.

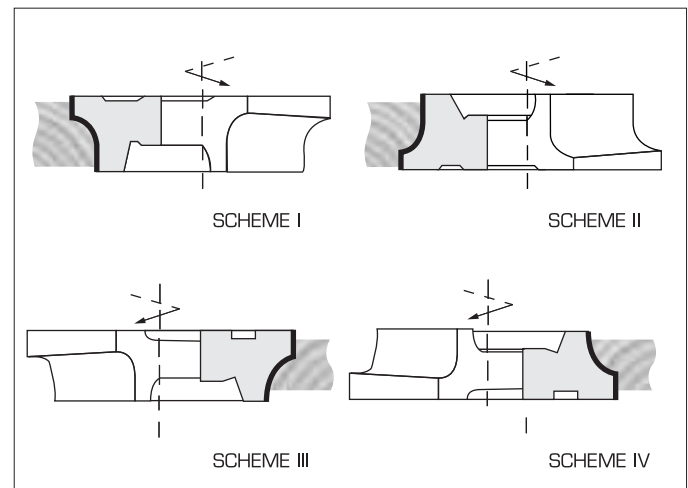
(4) R.P.M. of machine and rate of feed.

Material to be cut, if possible supply sample.

(5) Type of cut: against feed direction or with feed direction.

When Ordering Cutters with Profiles

Sketches fully dimensioned, DXF files or samples of profiles should be supplied. Details of side to table, fence side, and direction of feed should be given.



Direction of Rotation:

Scheme I - II = Counter Clock Wise (CCW)

Scheme III - IV = Clock Wise (CW)

PA PROFILE CUTTERS - SIMPLE PROFILES

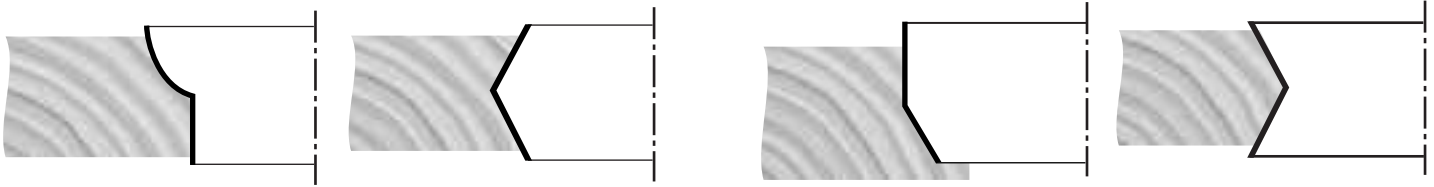


DESIGN:

- With 2-3-4-6 cutting teeth, straight or with shear angle according to profile

WHEN ORDERING SPECIFY:

- Type of wood or material to be cut
- Rotation
- Details of profile to table, fence side
- R.P.M. of machine
- Rate of feed
- Exact sketch of profile
- Possibly a wood sample or a DXF file
- Bore diameter
- Diameter of cutter



Example of Simple Profile - PA

PB PROFILE CUTTERS - COMPLEX PROFILES

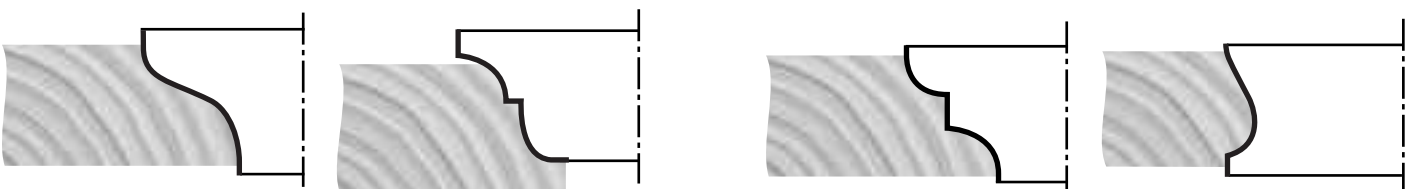


DESIGN:

- With 2-3-4-6 cutting teeth, straight or with shear angle according to profile

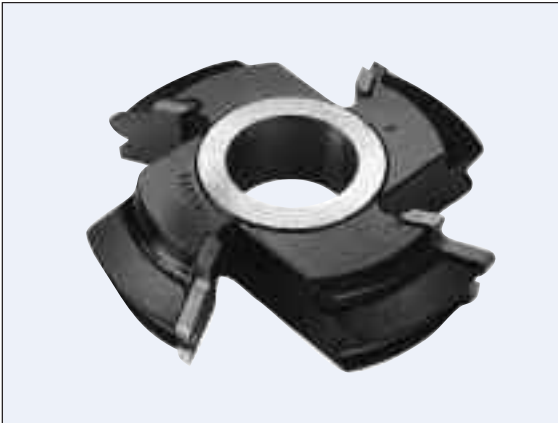
WHEN ORDERING SPECIFY:

- Type of wood or material to be cut
- Rotation
- Details of profile to table, fence side
- R.P.M. of machine
- Rate of feed
- Exact sketch of profile
- Possibly a wood sample or a DXF file
- Bore diameter
- Diameter of cutter



Example of Complex Profile - PB

PC PROFILE CUTTERS - VERY COMPLEX PROFILES

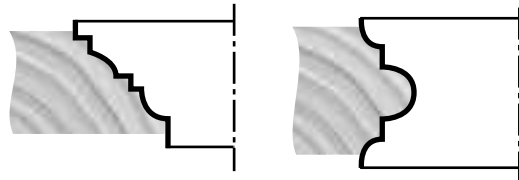
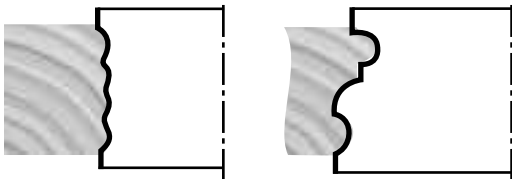


DESIGN:

- With 2-3-4-6 cutting teeth, straight or with shear angle according to profile

WHEN ORDERING SPECIFY:

- Type of wood or material to be cut
- Rotation
- Details of profile to table, fence side
- R.P.M. of machine
- Rate of feed
- Exact sketch of profile
- Possibly a wood sample or a DXF file
- Bore diameter
- Diameter of cutter



Example of Very Complex Profiles - PC

PI PROFILE CUTTERS - COMBINED PROFILES

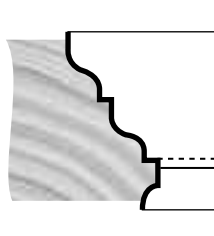
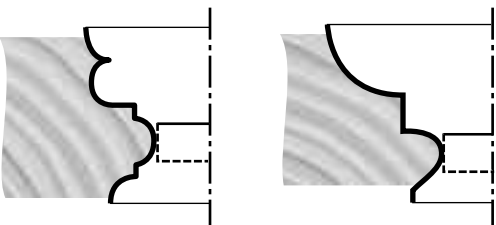


DESIGN:

- With 2-3-4 teeth interlocked. For staggered cut and spur action with shearing cut

WHEN ORDERING SPECIFY:

- Type of wood or material to be cut
- Rotation
- Details of profile to table, fence side
- R.P.M. of machine
- Rate of feed
- Exact sketch of profile
- Possibly a wood sample or a DXF file
- Bore diameter
- Diameter of cutter



Example of Combined Profiles - PI

**DESIGN:**

- Straight teeth, bevelled teeth, 4 or 6 teeth cutters
- Tungsten carbide cutting edges

APPLICATION:

- On edgeling machines
- For flush trimming, chamfering and profiling of wood-veneer and plastic edge bands

FOR MACHINES:

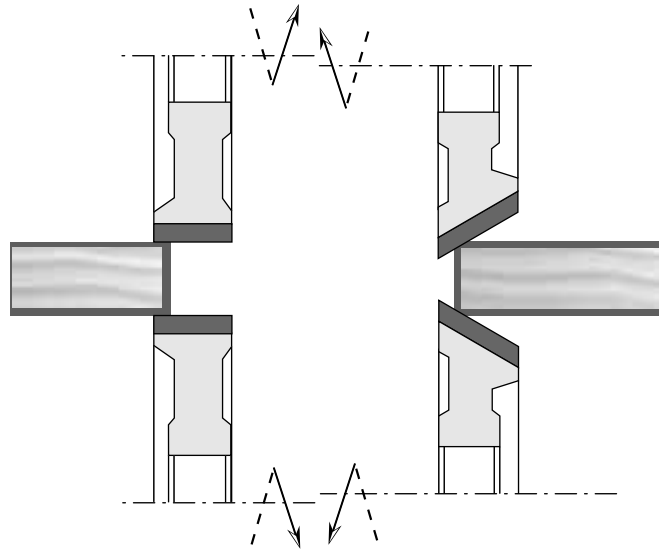
- Brandt, Egurco, Franke, Homag, Homburg, IDM, IMA, IMEF, Manea, Ocmac, Olympic, Raiman, Salgo, Stefani.

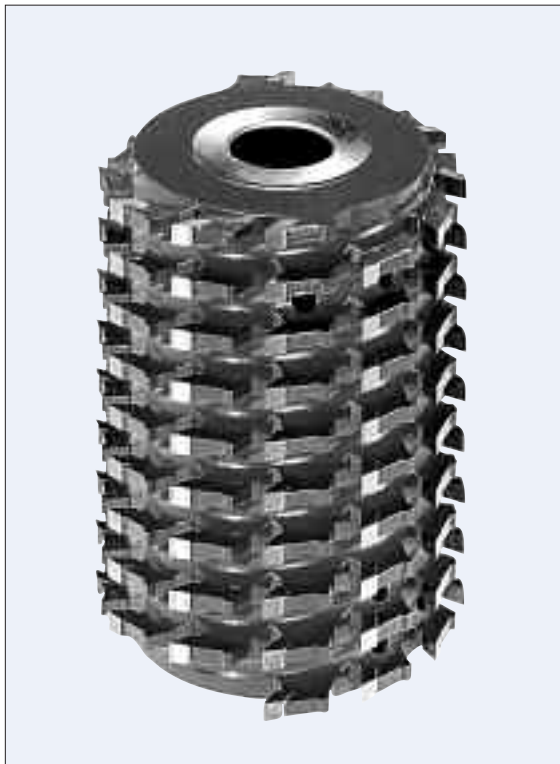
WHEN ORDERING SPECIFY:

- For which machine, and if bevelled, cutting edge degrees required.

SPECIAL PRODUCTION

UNIT OF MEASURE	DIAMETER	KERF	NO. TEETH
INCH	2-3/4" to 4"	5/8" to 1-3/8"	4 or 6
MM	70 to 100	15 to 35	4 or 6





DESIGN:

- High tensile steel body with 8 or 12 rows of carbide teeth. Straight - staggered on a spiral progression
- Tungsten carbide cutting edges

APPLICATION:

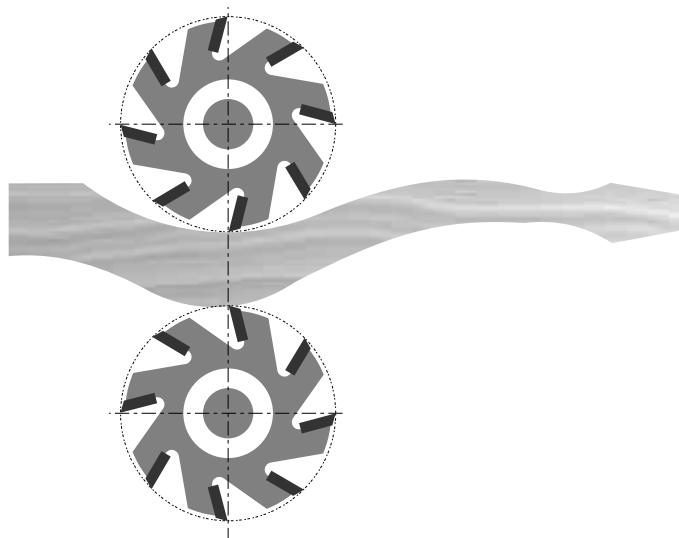
- Ideal for "easy chip flow" with fast feeding on solid wood and composite materials. Mainly used for roughing-out furniture components
- On shapers and copying machines

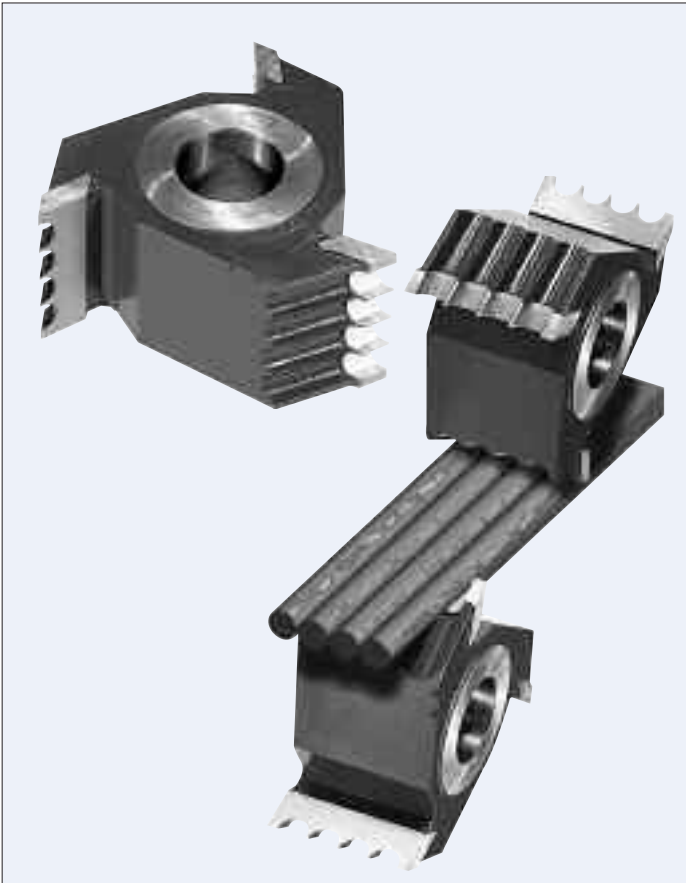
WHEN ORDERING SPECIFY:

- Cutter diameter
- Bore diameter
- Number of teeth
- Type of wood to cut
- Usable length of spindle

SPECIAL PRODUCTION

UNIT OF MEASURE	DIAMETER				KERF	NO. TEETH
	3-1/8"	4"	4-3/4"	5-1/2"		
INCH	3-1/8"	4"	4-3/4"	5-1/2"	2-3/8" to 9"	8 or 12
MM	80	100	120	140	60 to 230	8 or 12

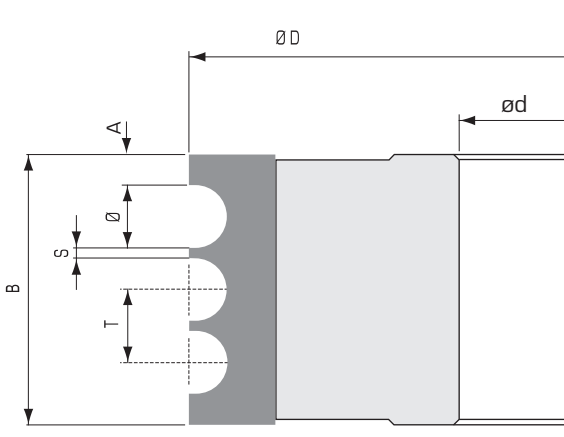


**DESIGN:**

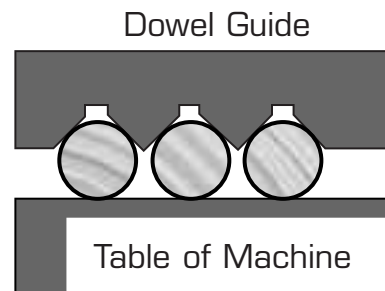
- 2 or 3 teeth, straight cut. Cutters work in pairs to produce single or multiple dowels
- H.S.S. Tipped cutting edges

APPLICATION:

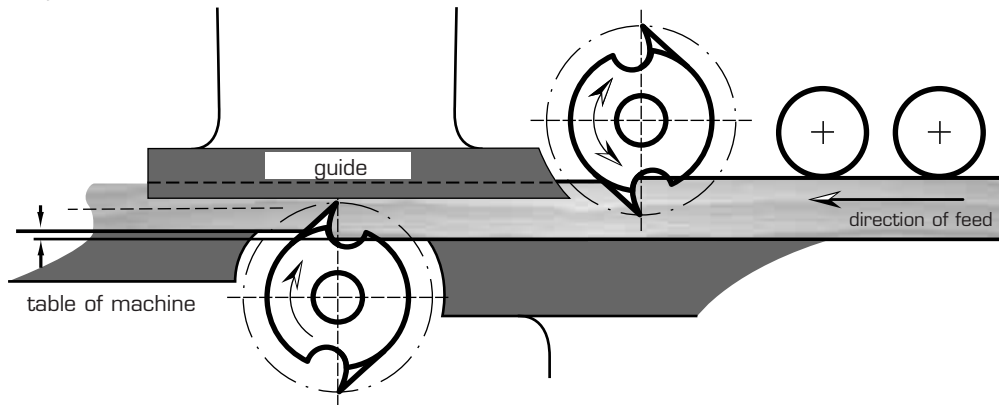
- To produce single or multiple dowels
- On moulders
- All dowells produced must be guided at three points all the way (ILL.2). Guide must take hold of dowels immediately after leaving cutting edge area. (ILL.3)



(ILL.2)



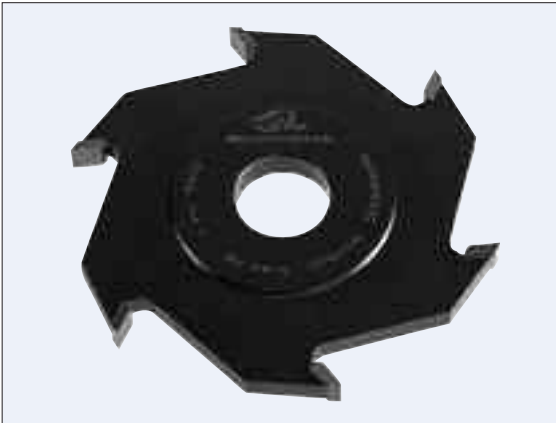
(ILL.3)



DIMENSIONS

Diam. of dowel Ø mm	3	4	5	6	7	8	9	10	11	12	13	14	15	16
Splitting point S mm	1	1	1	1	1	1	1	1	1.5	1.5	1.5	1.5	1.5	1.5
Pitch T mm	4	5	6	7	8	9	10	11	12.5	13.5	14.5	15.5	16.5	17.5
Square end A mm	4	4	4	4	4	4	4	5	5	5	5	5	5	5
Diam. ØD mm	120	120	120	120	120	120	120	120	120	120	120	120	120	140
Kerf B mm	1	11	12	13	14	15	16	17	20	21	22	23	23	25
No. of dowels	2	15	17	19	21	23	25	27	31	33.5	35.5	37.5	39.5	41.5
	3	19	22	25	28	31	34	37	42	46	49	52	55	58
	4	23	27	31	35	39	43	47	53	58.5	62.5	66.5	70.5	74.5
	5	27	32	37	42	47	52	57	64	71	76	81	86	91
	6	31	37	43	49	55	61	67	75	83.5	89.5	95.5	101.5	107.5
	7	35	42	49	56	63	70	77	86	96	103	110	117	124
	8	39	47	55	63	71	79	87	97	108.5	116.5	124.5	132.5	140.5
	9	43	52	61	70	79	88	97	108	121	130	139	148	
	10	47	57	67	77	87	97	107	119	133.5	143.5			
	11	51	62	73	84	95	106	117	130	146				
Diam. of dowel Ø mm	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Splitting point S mm	1.5	1.5	1.5	2	2	2	2	2	2	2	2	2	2	2
Pitch T mm	18.5	19.5	20.5	22	23	24	25	26	27	28	29	30	31	32
Square end A mm	5	5	5	5	7	7	7	7	7	7	7	7	7	7
Diam. ØD mm	140	140	140	140	140	140	140	140	160	160	160	160	160	160
Kerf B mm	1	27	28	29	30	35	36	37	38	39	40	41	42	43
No. of dowels	2	45.5	47.5	49.5	52	58	60	62	64	66	68	70	72	74
	3	64	67	70	74	81	84	87	90	93	96	99	102	105
	4	82.5	86.5	90.5	96	104	108	112	116	120	124	128	132	136
	5	101	106	111	118	127	132	137	142	147				
	6	119.5	125.5	131.5	140									

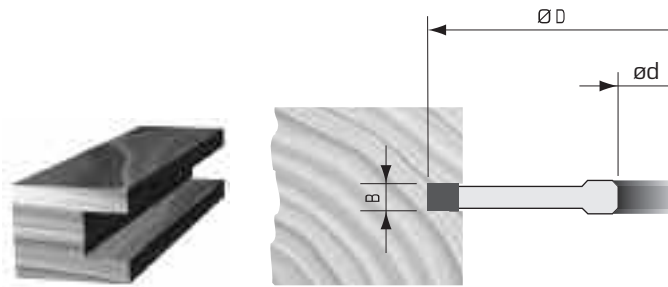
The minimum diameter indicated allows for centre bore of 40mm max.
Other sizes available upon request.

**DESIGN:**

- With straight teeth. If required with alternating teeth or left-right + raker
- Tungsten carbide cutting edges

APPLICATION:

- To make grooves in solid wood, with the grain and in uncoated panels
- Can be used in laminated materials if cutting with feed
- On shapers, double-end tenoners and moulders

**IMPERIAL**

DIAMETER ØD 4-3/4"	DIAMETER ØD 5-1/2"	DIAMETER ØD 6-1/4"	KERF B	NO. TEETH
PART NO.	PART NO.	PART NO.		
1121IC	1127IC	11213IC	3/16"	6
1122IC	1128IC	11214IC	1/4"	6
1123IC	1129IC	11215IC	5/16"	6
1124IC	11210IC	11216IC	3/8"	6
1125IC	11211IC	11217IC	1/2"	6
1126IC	11212IC	11218IC	5/8"	6

ød Bore: 1-1/4" Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")

Other sizes available upon request

METRIC

DIAMETER ØD 120	DIAMETER ØD 140	DIAMETER ØD 160	KERF Bmm	NO. TEETH
PART NO.	PART NO.	PART NO.		
1121MC	1128MC	11215MC	5	6
1122MC	1129MC	11216MC	6	6
1123MC	11210MC	11217MC	8	6
1124MC	11211MC	11218MC	10	6
1125MC	11212MC	11219MC	12	6
1126MC	11213MC	11220MC	14	6
1127MC	11214MC	11221MC	16	6

ød Bore: 1-1/4" Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")

Other sizes available upon request

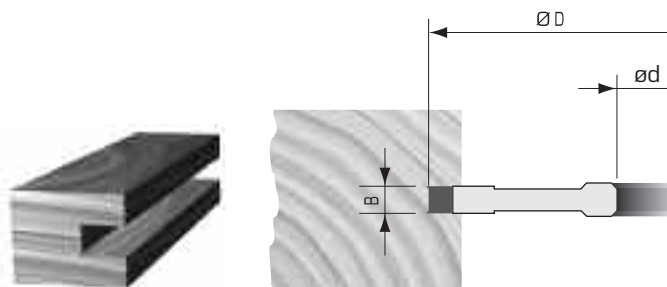


DESIGN:

- With 4 teeth + 4 spurs
- Tungsten carbide cutting edges

APPLICATION:

- For grooving solid wood, plywood, and laminated panels
- On Shapers, double-end tenoners, and moulders



IMPERIAL				
DIAMETER ØD 4-3/4"	DIAMETER ØD 5-1/2"	DIAMETER ØD 6-1/4"	KERF B	NO. TEETH AND SPURS
PART NO.	PART NO.	PART NO.		
1131IC	1137IC	11313IC	3/16"	4+4
1132IC	1138IC	11314IC	1/4"	4+4
1133IC	1139IC	11315IC	5/16"	4+4
1134IC	11310IC	11316IC	3/8"	4+4
1135IC	11311IC	11317IC	1/2"	4+4
1136IC	11312IC	11318IC	5/8"	4+4

ød Bore: 1-1/4" Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")

Other sizes available upon request

METRIC				
DIAMETER ØD 120	DIAMETER ØD 140	DIAMETER ØD 160	KERF Bmm	NO. TEETH AND SPURS
PART NO.	PART NO.	PART NO.		
1131MC	1138MC	11315MC	5	4+4
1132MC	1139MC	11316MC	6	4+4
1133MC	11310MC	11317MC	8	4+4
1134MC	11311MC	11318MC	10	4+4
1135MC	11312MC	11319MC	12	4+4
1136MC	11313MC	11320MC	14	4+4
1137MC	11314MC	11321MC	16	4+4

ød Bore: 1-1/4" Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")

Other sizes available upon request

113B LAMELLO - GROOVE CUTTER



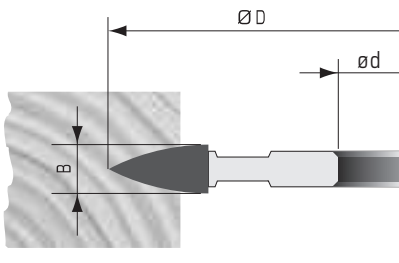
DESIGN:

- With 4 teeth, alternating shear angle
- Tungsten carbide cutting edges

APPLICATION:

- For cutting out defects in solid woods
- For use on mini-spot machines
- For patch sizes 1-4

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	NO. TEETH	RPM MIN.-MAX.
113B	100	8	22	4	7600-13400



113L LAMELLO - GROOVE CUTTER

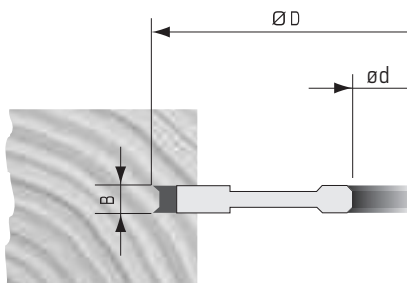


DESIGN:

- With 2 teeth and 4 spurs
- Tungsten carbide cutting edges

APPLICATION:

- For chip free grooving of LAMELLO wood joints
- For solid woods with and against the grain
- On LAMELLO and ELU machines for buscuit joints



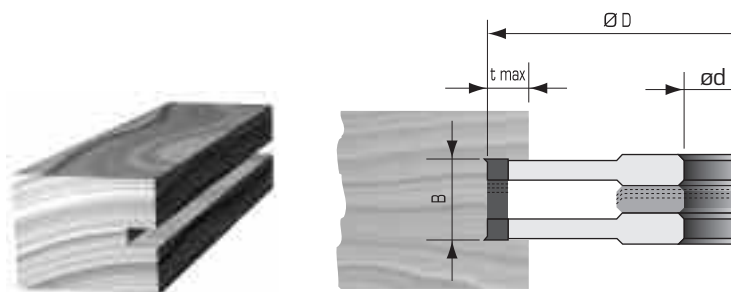
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
113L	100	3.95	22	2	2 + 2	7600-13400


DESIGN:

- Set of cutters with 4 teeth + 4 spurs, each adjustable by a set of spacers
- Tungsten carbide cutting edges

APPLICATION:

- For chip-free grooving of plywood, chipboard and solid wood with and across the grain
- In uncoated and laminated panel materials with feed
- On shapers, moulders and double-end tenoners



PART NO.	DIAM. ØD	KERF B	BORE ød	TEETH/SPURS	GROOVE DEPTH t max	RPM MIN.-MAX.
1141MC	140mm 5-1/2"	1.8 to 3.4mm 5/64" to 9/64"	31.75mm 1-1/4"	4T + 4S	15mm 19/32"	5500-9500
1142MC	140mm 5-1/2"	2.5 to 4.8mm 3/32" to 3/16"	31.75mm 1-1/4"	4T + 4S	15mm 19/32"	5500-9500
1143MC	160mm 6-1/4"	4.0 to 7.5mm 5/32" to 19/64"	31.75mm 1-1/4"	4T + 4S	35mm 1-3/8"	5100-9000
1144MC	160mm 6-1/4"	7.5 to 14mm 19/64" to 9/16"	31.75mm 1-1/4"	4T + 4S	35mm 1-3/8"	5100-9000
1145MC	160mm 6-1/4"	10 to 19mm 13/32" to 3/4"	31.75mm 1-1/4"	4T + 4S	40mm 1-9/16"	4800-8300
1146MC	180mm 7-3/32"	4.0 to 7.5mm 5/32" to 19/64"	31.75mm 1-1/4"	4T + 4S	50mm 2"	4200-7400
1147MC	180mm 7-3/32"	7.5 to 14mm 19/64" to 9/16"	31.75mm 1-1/4"	4T + 4S	50mm 2"	4200-7400
1148MC	180mm 7-3/32"	10 to 19mm 13/32" to 3/4"	31.75mm 1-1/4"	4T + 4S	50mm 2"	4200-7400

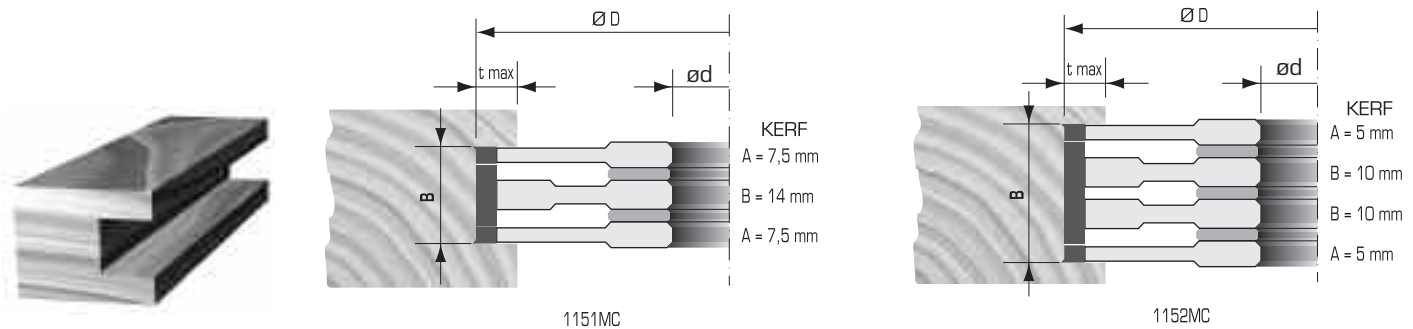
Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")

**DESIGN:**

- Set of 3 or 4 interlocked cutters adjustable by spacers and shims. Outside cutters each with 2 raker teeth and 2 spurs on outside at negative rake. Middle cutters with 4 raker teeth. Chip limiter for manual feed. Cuts grooves sharp and clean, no tear-outs
- Tungsten carbide cutting edges

APPLICATION:

- For chip-free grooving of plywood, chipboard and solid wood with and against the grain
- In uncoated and laminated panel materials with feed
- On shapers, moulders and double-end tenoners



PART NO.	DIAM. ØD	KERF B	BORE ød	TEETH/SPURS	GROOVE DEPTH t max	RPM MIN.-MAX.
1151MC	150mm 6"	7.5 to 28mm 19/64" to 1-7/64"	31.75mm 1-1/4"	4T + 4T + 4S	30mm 1-3/16"	5100-8900
1152MC	220mm 8-5/8"	5 to 30mm 3/16" to 1-3/16"	31.75mm 1-1/4"	4T + 4T + 4S	40mm 1-9/16"	3500-6000

Bore can be opened or bushed to spindle size of your machine. Maximum Bore size 50mm (2")



DESIGN:

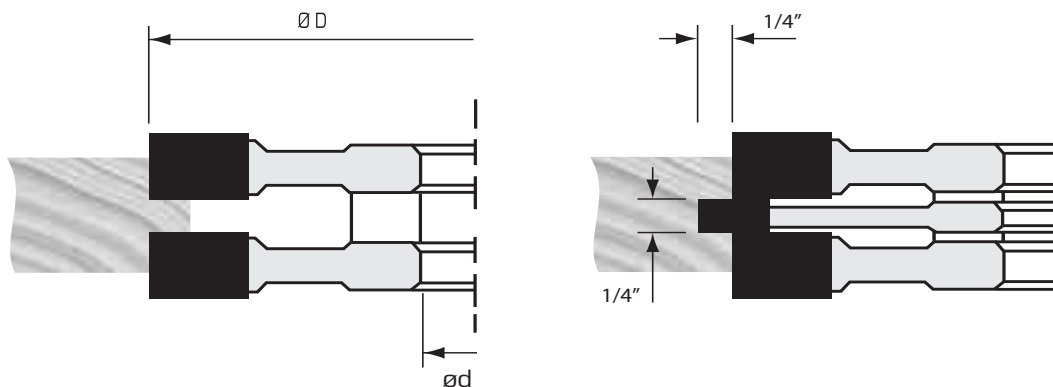
- Set of 3 cutters (1 groover + 2 cutters).
Each with 3 teeth, and spacers to obtain profiles
- Tungsten carbide cutting edges

APPLICATION:

- For producing tongue and groove shapes on plywood and solid wood
- On shapers

PART NO.	DIAM. ØD	WOOD THICKNESS	BORE ød	NO. TEETH
139IC	4"	3/4" to 1-1/8"	1-1/4"	3+3+3

Bore can be opened or bushed to spindle size of your machine.



**DESIGN:**

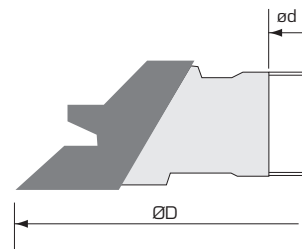
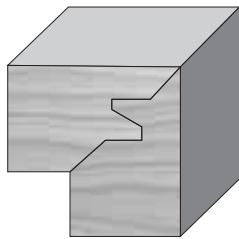
- With 3 teeth, straight
- Tungsten carbide cutting edges

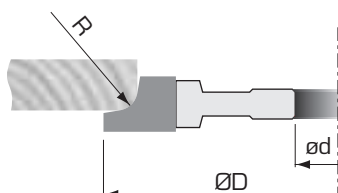
APPLICATION:

- For cutting mitre lock joints in solid wood and panel materials
- On shapers

PART NO.	DIAM. ØD	WOOD THICKNESS	BORE ød	NO. TEETH
135IC	4-3/4"	3/8" to 3/4"	1-1/4"	3

Bore can be opened or bushed to spindle size of your machine.




DESIGN:

- With 3 teeth shear cut for optimum quality of cut
- Tungsten carbide cutting edges

APPLICATION:

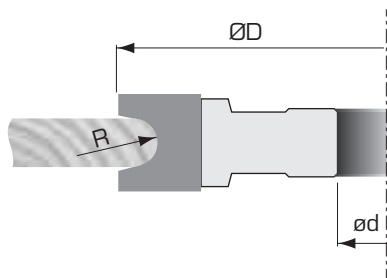
- To cut quarter round shapes in solid wood and panel materials
- On shapers

PART NO.	DIAM. ØD	RADIUS R	BORE ød	NO. TEETH
1491IC	4"	1/4"	1-1/4"	3
1492IC	4"	3/8"	1-1/4"	3
1493IC	4"	1/2"	1-1/4"	3
1494IC	4-3/4"	3/4"	1-1/4"	3

Bore can be opened or bushed to spindle size of your machine.

SPECIAL PRODUCTION:

- For all other sizes see Cutters Special Profiles "PA" on page B2


DESIGN:

- With 3 straight teeth
- Tungsten carbide cutting edges

APPLICATION:

- To cut half round shapes in solid wood and panel materials
- On shapers

PART NO.	DIAM. ØD	RADIUS R	OPENING	BORE ød	NO. TEETH
1501IC	4"	1/8"	1/4"	1-1/4"	3
1502IC	4"	1/4"	1/2"	1-1/4"	3
1503IC	4-1/2"	3/8"	3/4"	1-1/4"	3
1504IC	4-1/2"	1/2"	1"	1-1/4"	3

Bore can be opened or bushed to spindle size of your machine.

SPECIAL PRODUCTION:

- For all other sizes see Cutters Special Profiles "PB" on page B2



DESIGN:

- With 4 teeth, straight
- Tungsten carbide cutting edges

APPLICATION:

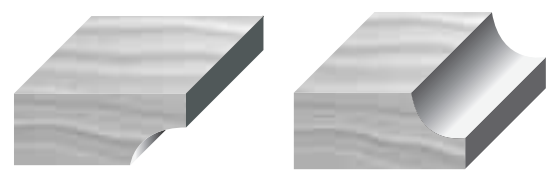
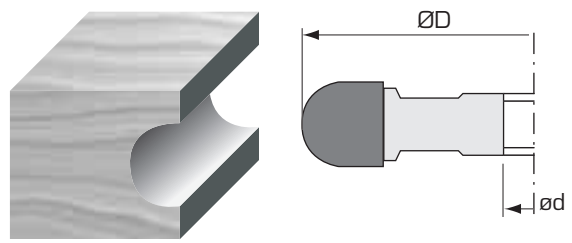
- For cutting coves in solid wood and panel materials
- On shapers

PART NO.	DIAM. ØD	RADIUS	KERF B	BORE ød	NO. TEETH
1516IC	4"	3/8"	3/4"	1-1/4"	4
1518IC	4"	1/2"	1"	1-1/4"	4

Bore can be opened or bushed to spindle size of your machine.

SPECIAL PRODUCTION:

- For all other sizes see Cutters Special Profiles "PA" on page B2



DESIGN:

- With 3 teeth, straight
- Tungsten carbide cutting edges

APPLICATION:

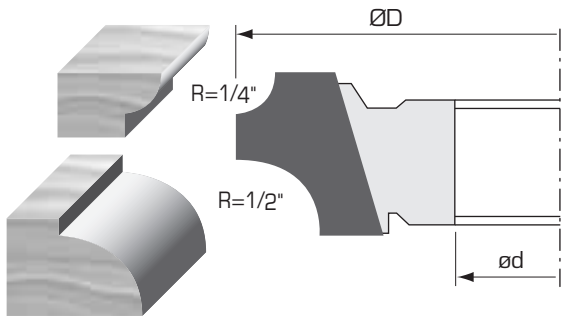
- To make 1/4" or 1/2" quarter round shapes in solid wood and panel materials
- On shapers

PART NO.	DIAM. ØD	KERF B	BORE ød	NO. TEETH
154IC	4"	1"	1-1/4"	3

Bore can be opened or bushed to spindle size of your machine.

SPECIAL PRODUCTION:

- For all other sizes see Cutters Special Profiles "PB" on page B2





DESIGN:

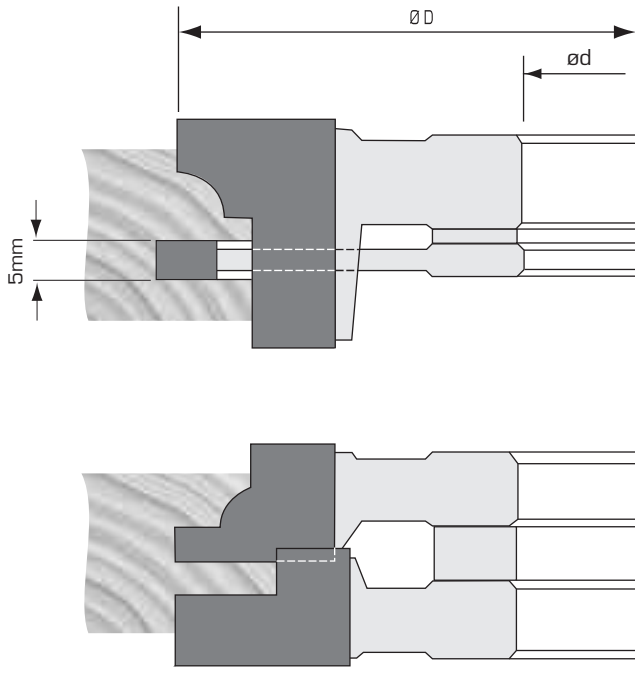
- Set of 4 cutters and spacers
- With 3 teeth
- Tungsten carbide cutting edges

APPLICATION:

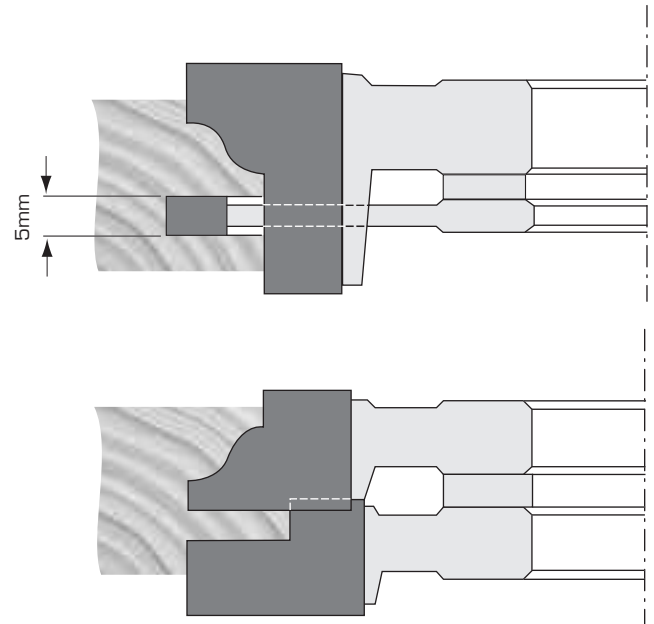
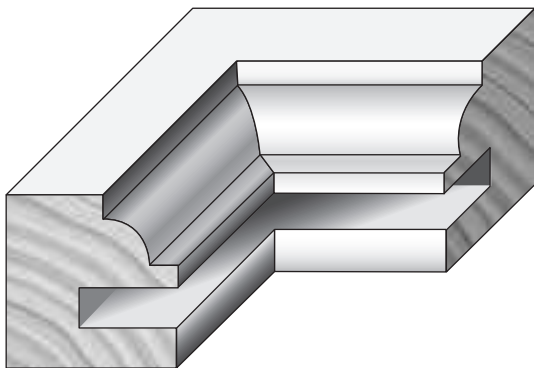
- To cut stile and rail for producing solid wood cabinet doors.
- On shapers

PART NO.	DIAM. ØD	WOOD THICKNESS	BORE ød	NO. TEETH	PROFILE
177AI	4"	3/4" TO 1"	1-1/4"	3+3	A
177BI	4"	3/4" TO 1"	1-1/4"	3+3	B

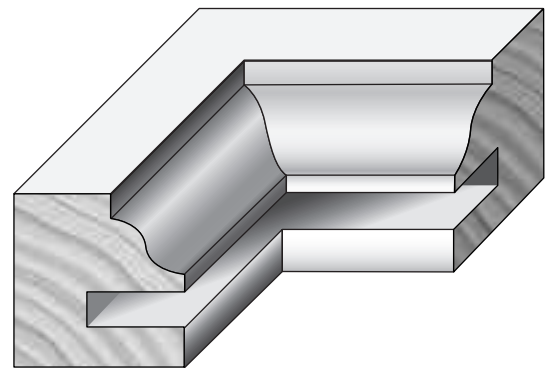
Bore can be opened or bushed to spindle size of your machine.



PROFILE A



PROFILE B





DESIGN:

- With 3 teeth and shear angle for optimum quality of cut
- Tungsten carbide cutting edges

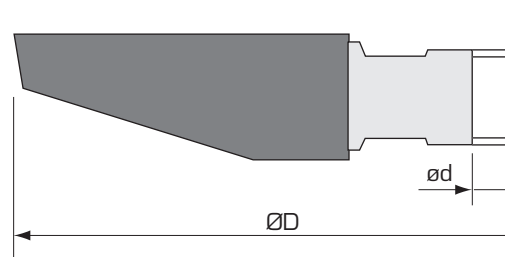
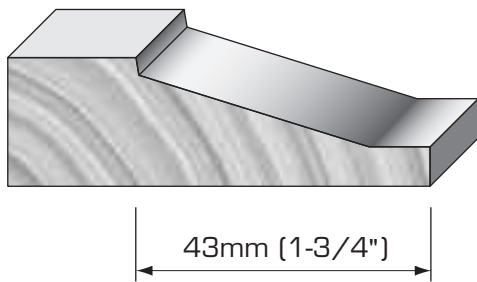
APPLICATION:

- For raised panel cutting in solid wood and MDF panels
- On shapers

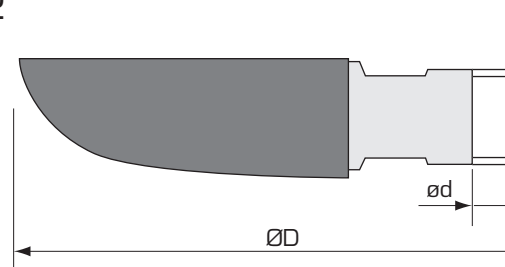
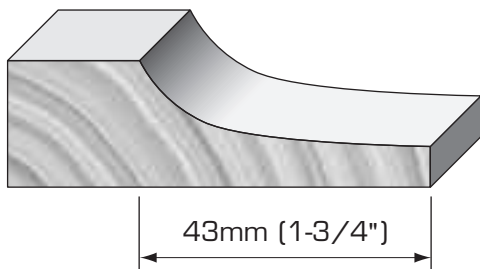
PART NO.	PROFILE NO.	DIAM. ØD	KERF B	BORE ød	NO. TEETH
1681IC	Profile No. 1	6"	5/8"	1-1/4"	3
1682IC	Profile No. 2	6"	5/8"	1-1/4"	3
1693IC	Profile No. 3	5-3/4"	5/8"	1-1/4"	3
1694IC	Profile No. 4	5-3/4"	5/8"	1-1/4"	3
1695IC	Profile No. 5	5-3/4"	5/8"	1-1/4"	3
1696IC	Profile No. 6	5-3/4"	5/8"	1-1/4"	3

Bore can be opened or bushed to spindle size of your machine.

PROFILE No. 1

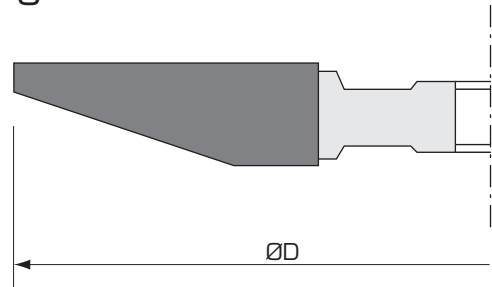
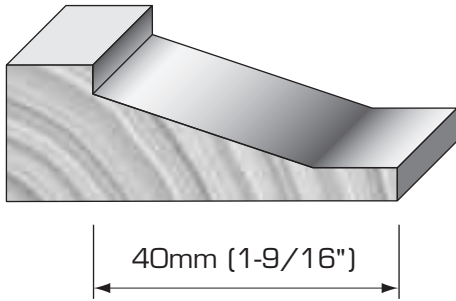


PROFILE No. 2

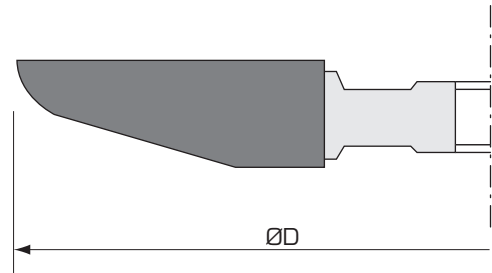
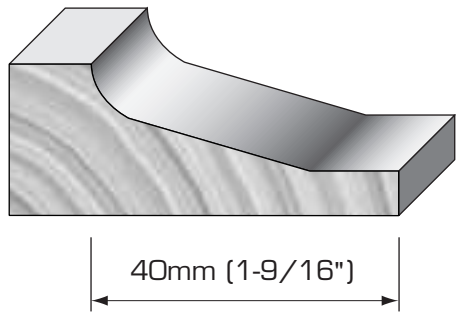


scale 1:1

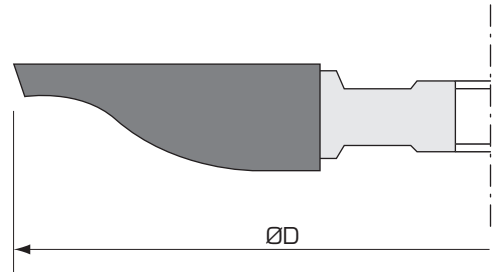
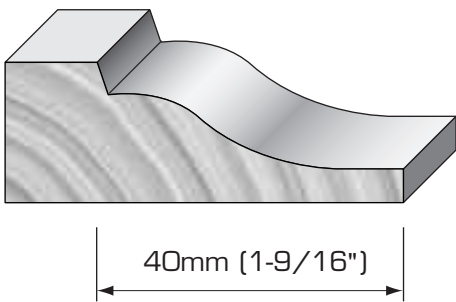
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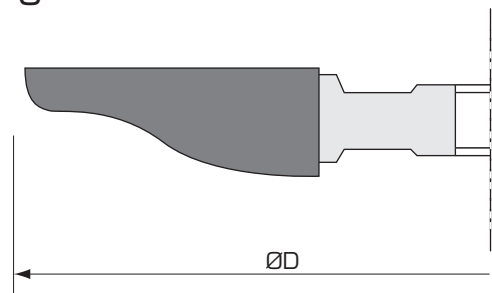
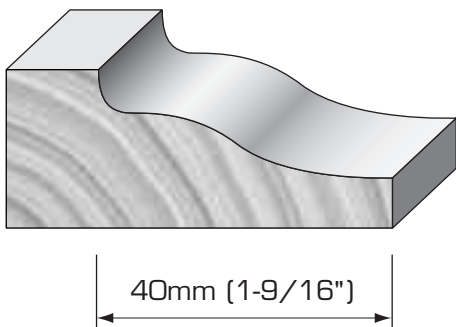
PROFILE No. 4



PROFILE No. 5



PROFILE No. 6



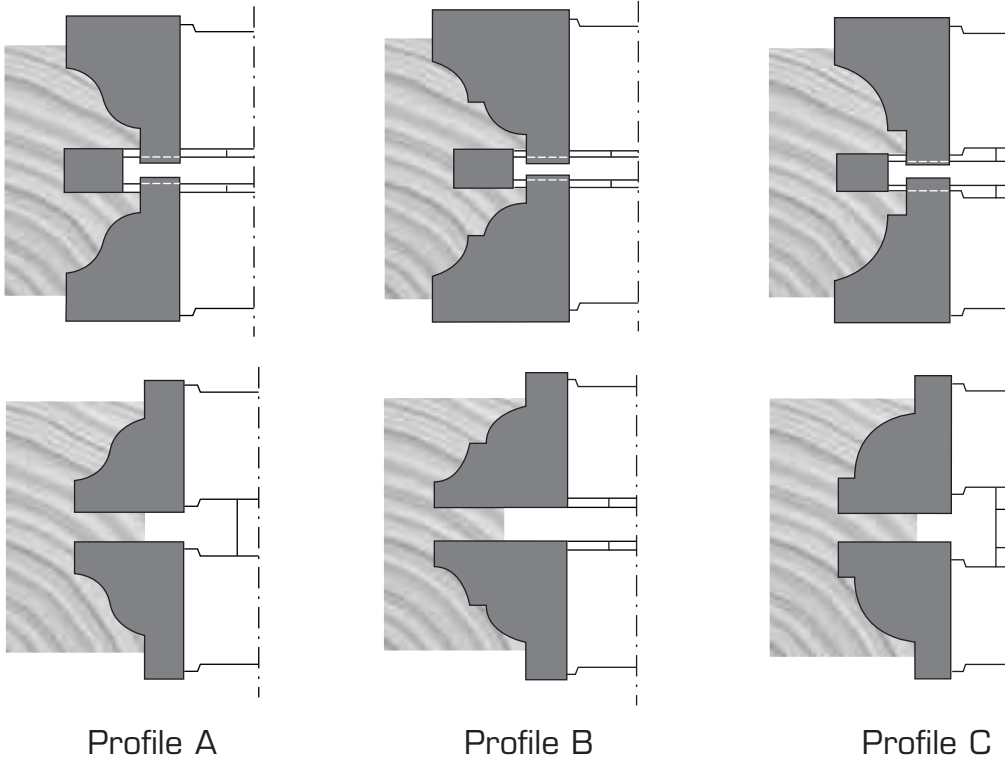
scale 1:1

**DESIGN:**

- Set of 5 cutters with 3 teeth interlocked and set of spacers
- Tungsten carbide cutting edges

APPLICATION:

- To cut stile and rail in solid wood for producing entry and passage doors
- On shapers



Profile A

Profile B

Profile C

PART NO.	DIAM. ØD	WOOD THICKNESS	BORE ød	NO. TEETH	PROFILE	RPM MIN.-MAX.
178AI	4"	1-3/8" (1/4" Tenon)	1-1/4"	3	A	7500-12500
178BI	4"	1-3/8" (1/4" Tenon)	1-1/4"	3	B	7500-12500
178CI	4"	1-3/8" (1/4" Tenon)	1-1/4"	3	C	7500-12500

PART NO.	DIAM. ØD	WOOD THICKNESS	BORE ød	NO. TEETH	PROFILE	RPM MIN.-MAX.
179AI	4"	1-3/4" (3/8" Tenon)	1-1/4"	3	A	7500-12500
179BI	4"	1-3/4" (3/8" Tenon)	1-1/4"	3	B	7500-12500
179CI	4"	1-3/4" (3/8" Tenon)	1-1/4"	3	C	7500-12500



DESIGN:

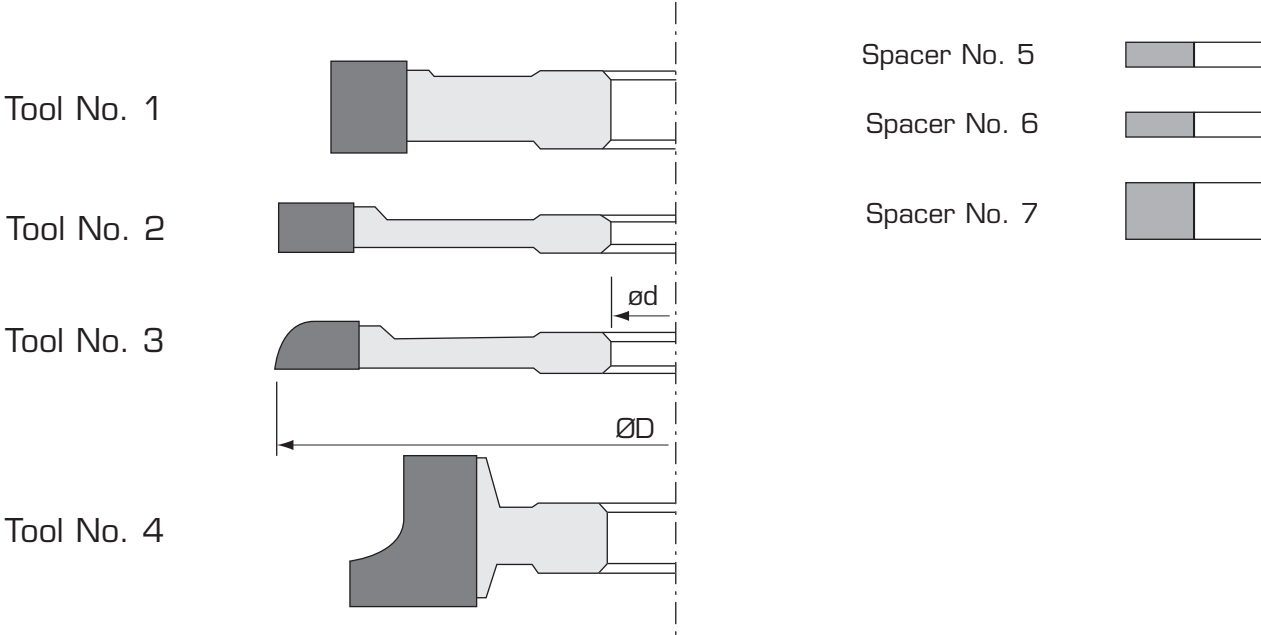
- Each set consists of 4 cutters with 3 teeth and 3 spacers engraved with no.'s 1,2,3
- Tungsten carbide cutting edges

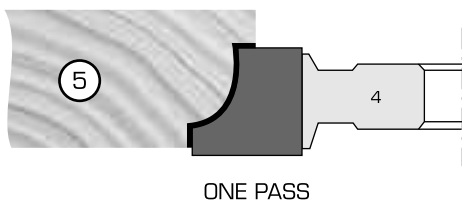
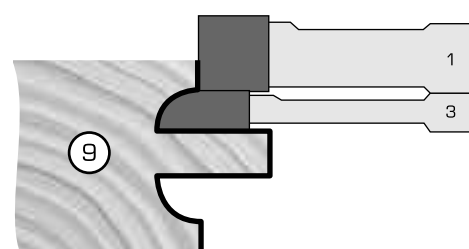
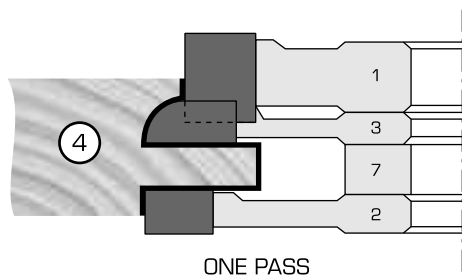
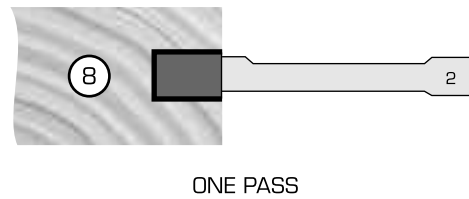
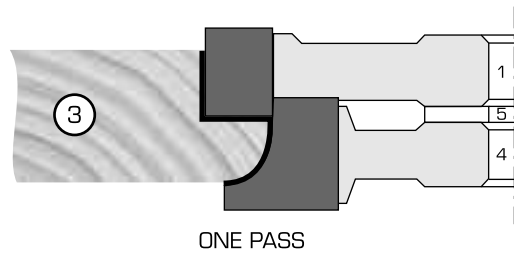
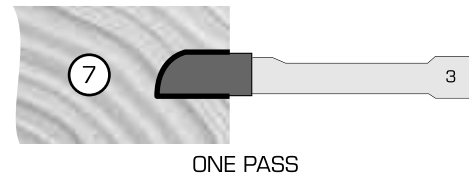
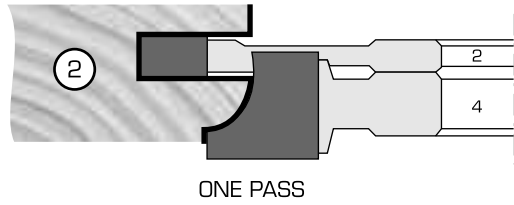
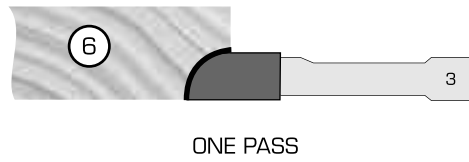
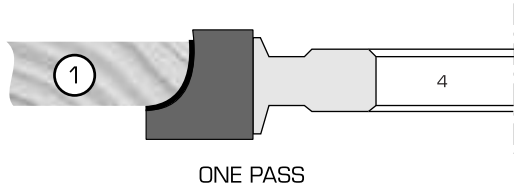
APPLICATION:

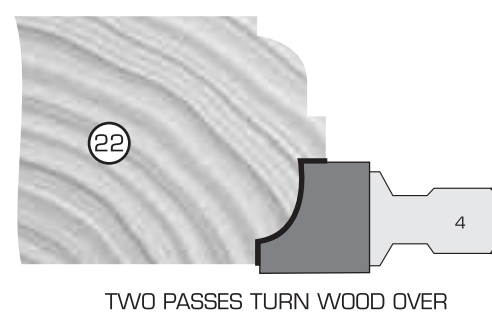
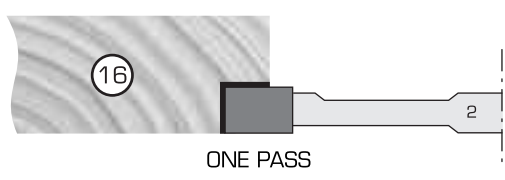
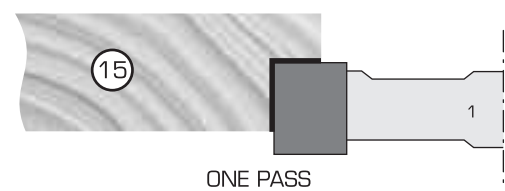
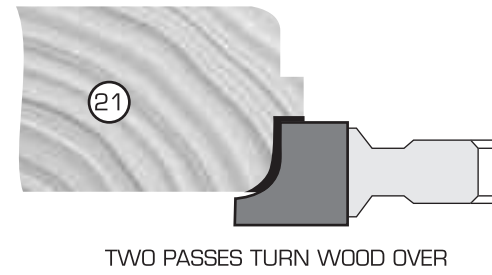
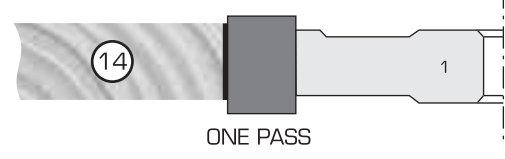
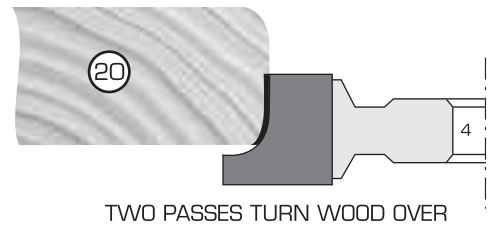
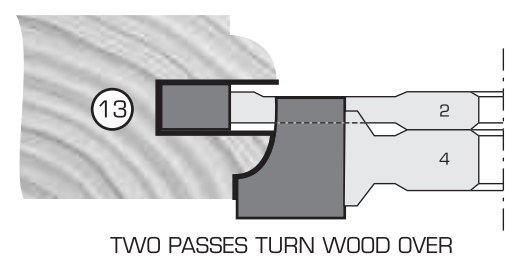
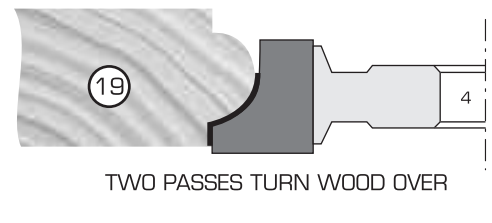
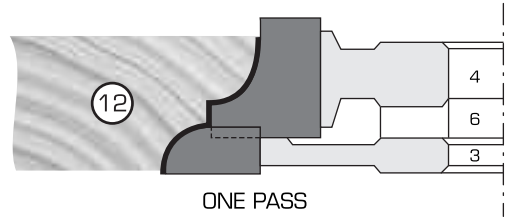
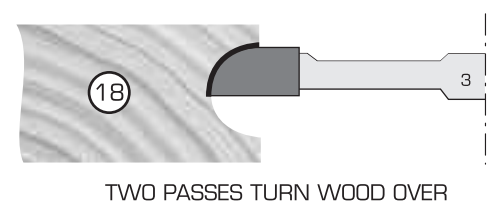
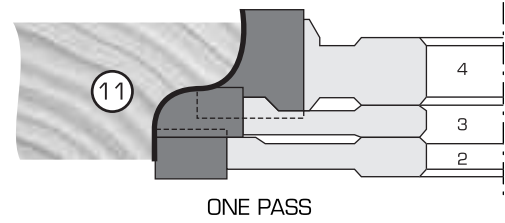
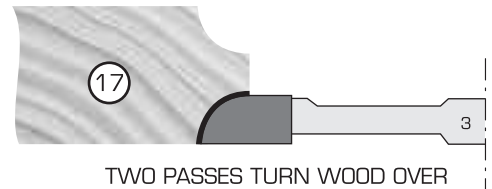
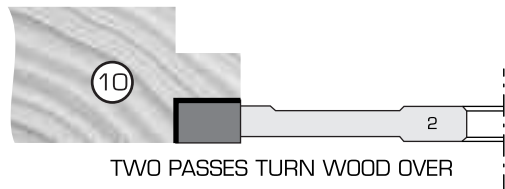
- To cut all standard moulding profiles, 4 different interlocking joints and anything else you can think of
- On shapers

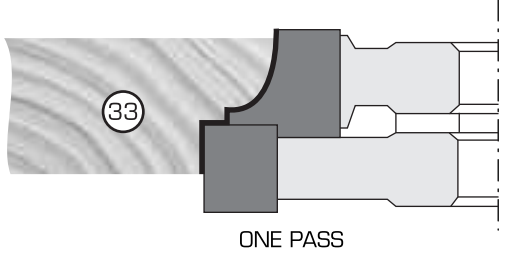
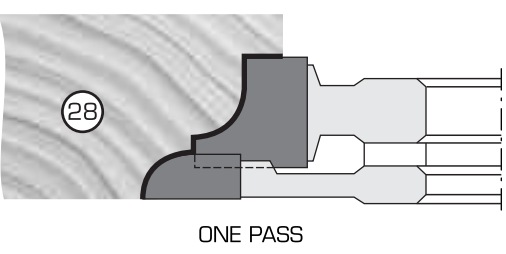
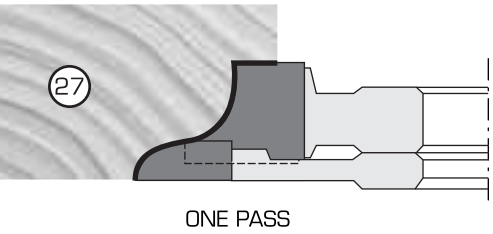
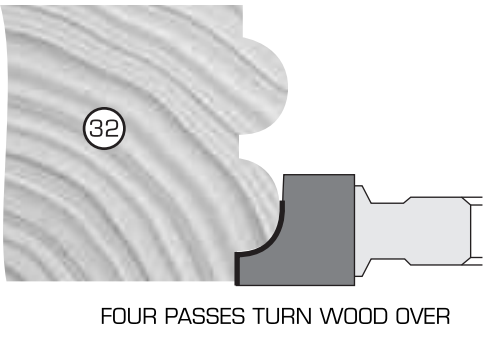
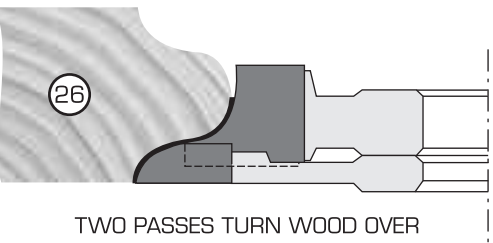
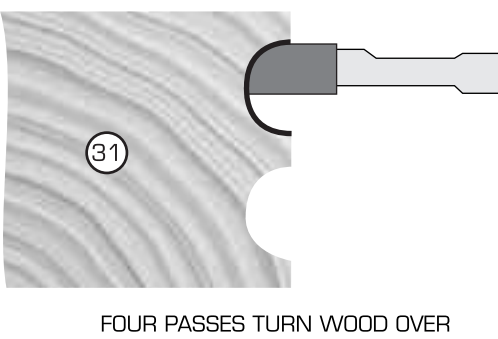
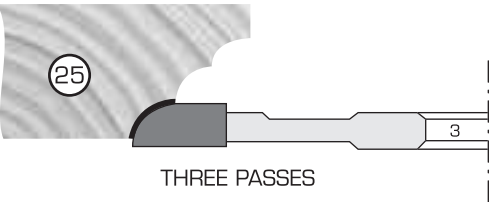
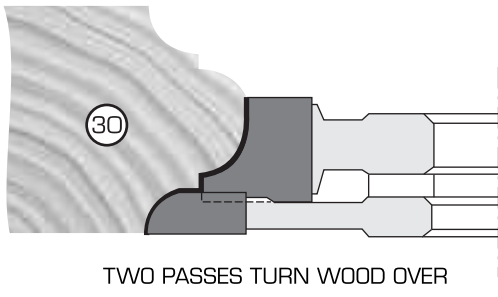
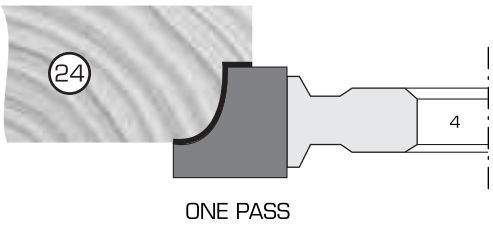
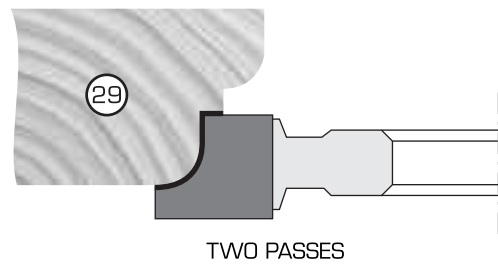
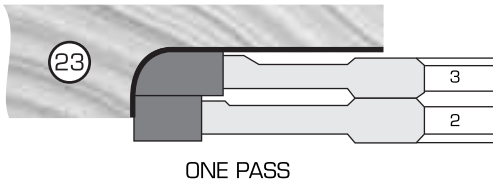
	PART NO.	DIAM. ØD	BORE ød	NO. TEETH
Small Set	1821IC	4-1/8"	3/4"	3
Large Set	1822IC	5-1/2"	1-1/4"	3

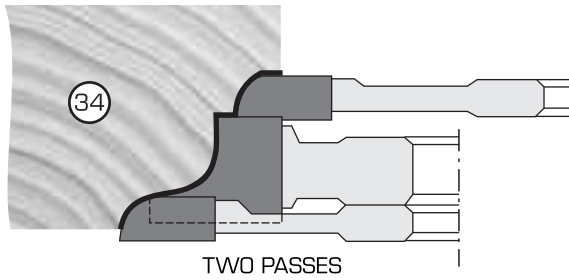
Bore can be opened or bushed to spindle size of your machine.



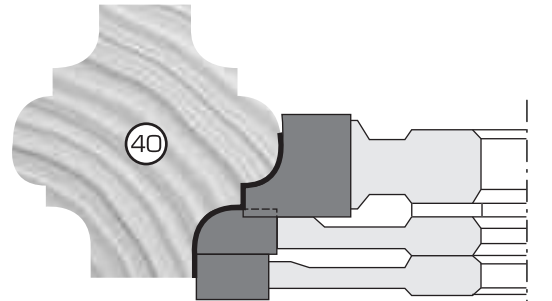




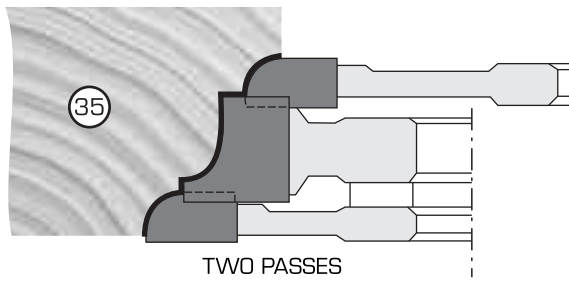




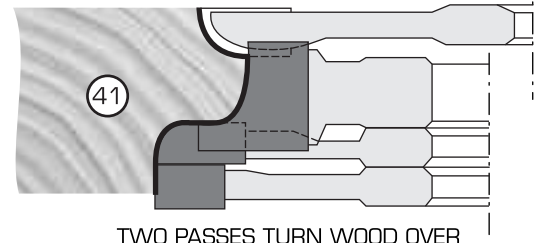
TWO PASSES



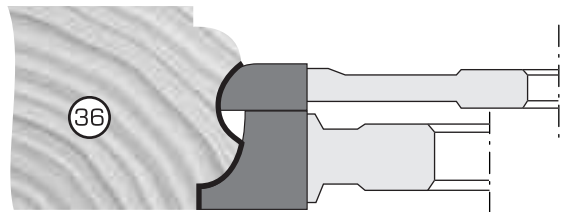
FOUR PASSES TURN WOOD OVER



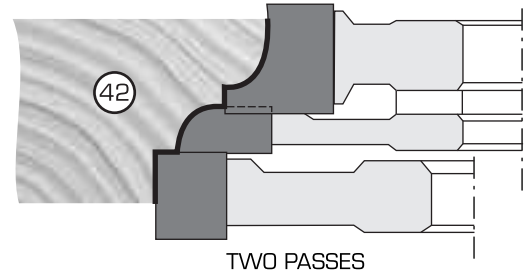
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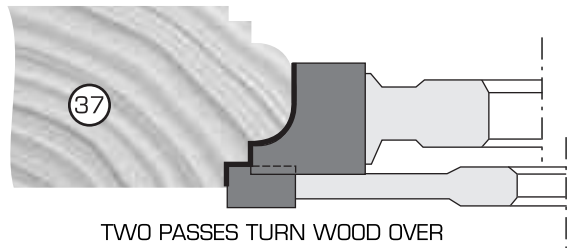
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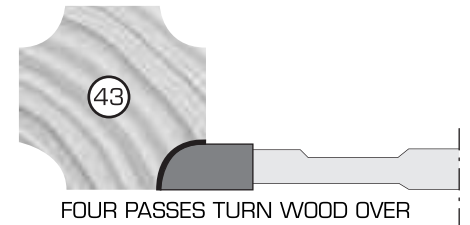
FOUR PASSES TURN WOOD OVER



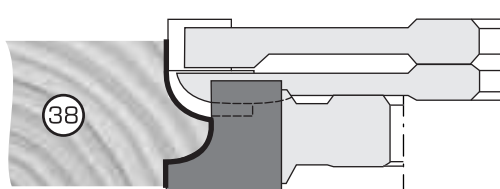
TWO PASSES



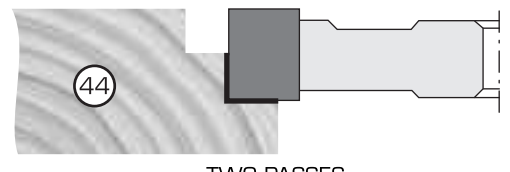
TWO PASSES TURN WOOD OVER



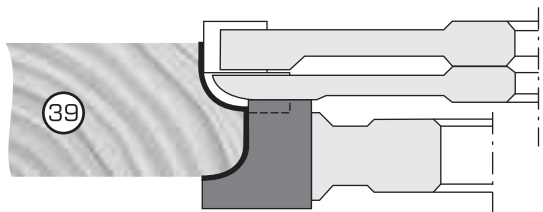
FOUR PASSES TURN WOOD OVER



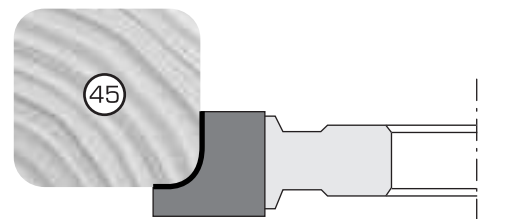
TWO PASSES TURN WOOD OVER



TWO PASSES

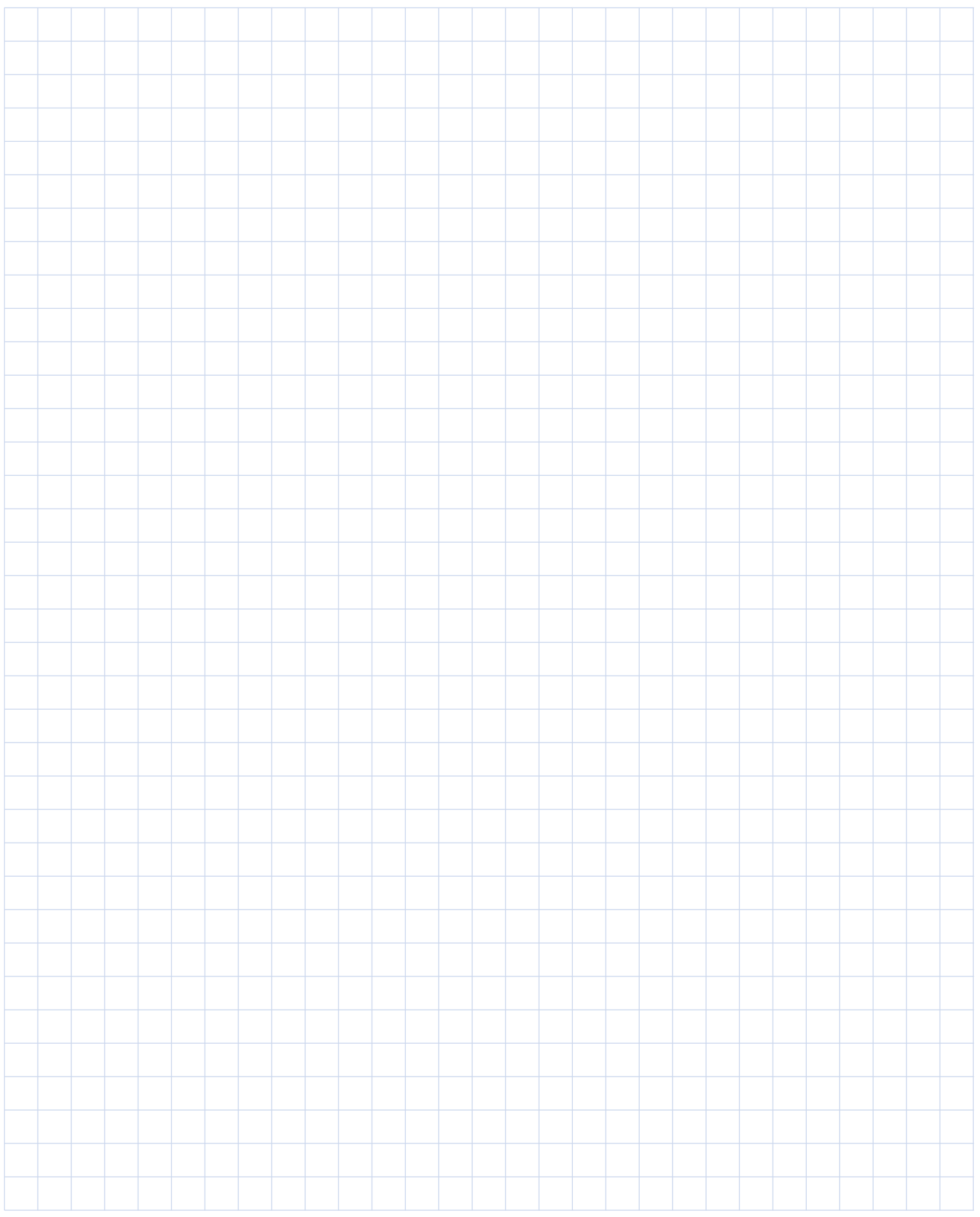


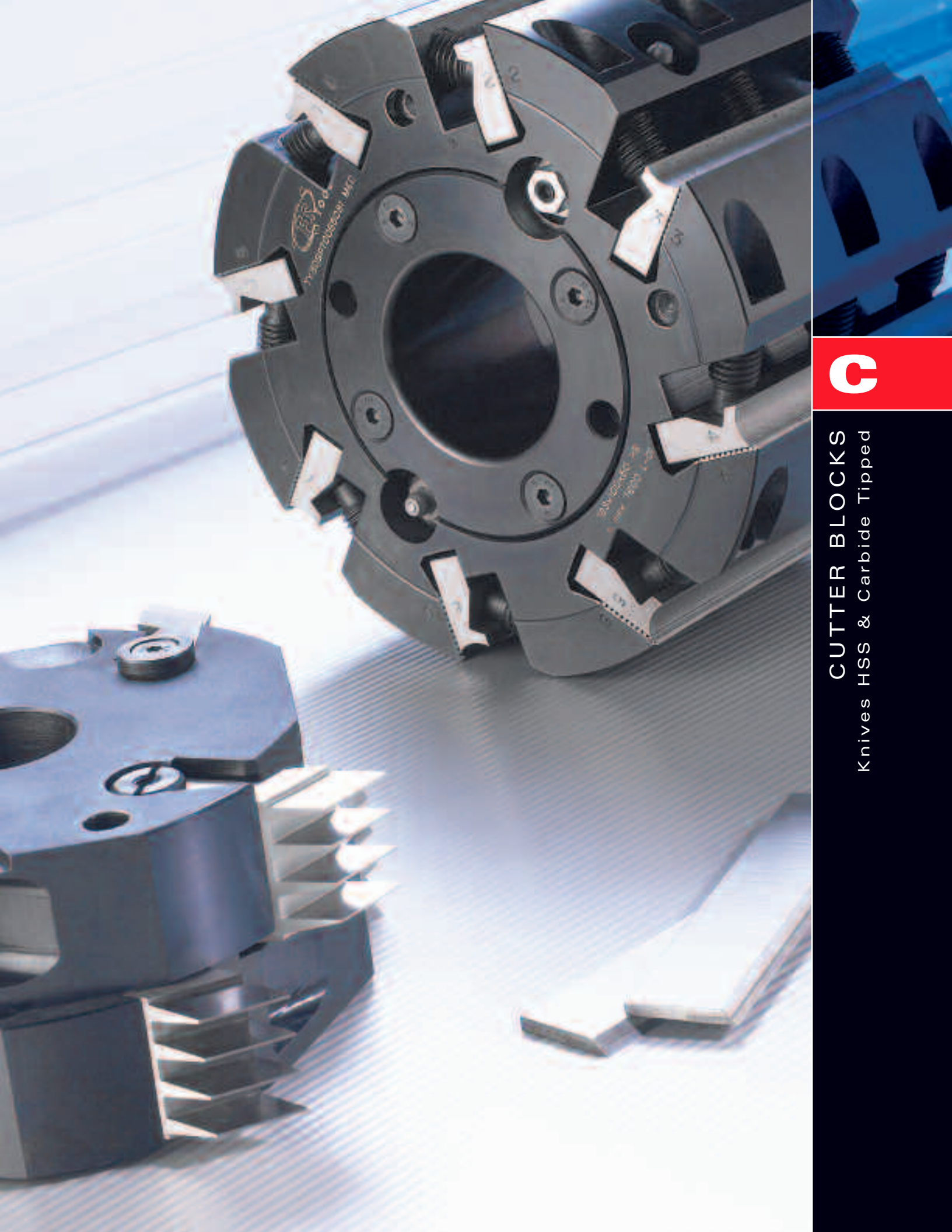
TWO PASSES TURN WOOD OVER



FOUR PASSES TURN WOOD OVER

NOTES

A large, empty grid of small squares, intended for taking notes. The grid is composed of approximately 25 columns and 40 rows of squares.



CUTTER BLOCKS
Knives HSS & Carbide Tipped

CONTENT

Corrugated Back Knives Carbide Tipped	C20
Corrugated Back Knives D2 Steel	C18
Corrugated Back Knives M2 Steel	C18
Corrugated Back Knives Stellite Tipped	C21
Corrugated Back Knives Super Tech Steel	C19
Corrugated Back Knives T1 Steel	C19
Corrugated Toolheads	C10 & C11
Disposable Planing Knives & Holders	C24
Dowel Cutters	C4 & C5
Finger Joint Toolheads	C6 & C7
Hydro-Bore Corrugated Toolheads	C12 & C13
Hydro-Bore Planing Heads	C14 & C15
Hydro-Grip ETP Sleeves	C16 & C17
Knives For Portable Machines HSS & C/T	C28
Planing Knives Carbide Tipped	C25-C27
Planing Knives M2 Steel	C23
Planing Knives T1 (18% W) Steel	C22
Planing Toolheads	C8 & C9
Universal Toolhead	C1-C3

See over for Alpha-Numeric Index

CUTTER BLOCKS AND KNIVES INDEX

ALPHA-NUMERIC INDEX

Part No.	Cat. Page	Part No.	Cat. Page	Part No.	Cat. Page	Part No.	Cat. Page
DX10114 - DX10212	C18	1901022 - 1902622	C12	2105163 - 2155323	C28	3M82293 - 3S82293	C28
DX11112 - DX11300	C18	1903012 - 1905612	C13	25120303 - 25640353	C22	30060253 - 30510253	C26
185 - 185B	C1	1903022 - 1905622	C13	26040051 - 26370145	C23	30060303 - 30810353	C26
18512 - 18536	C1	1921022 - 1924622	C14	2610114 - 2610212	C18	30060353 - 30810353	C26
186A11 - 186A14	C6	1925022 - 1925622	C15	2611112ST - 2611234ST	C19	30040051 - 30122071	C27
186A50 - 186A66	C7	2M82293 - 2S82293	C28	2611112 - 2611300	C18	30131065 - 30300141	C27
18812 - 18869-12	C10 & C11	2076203 - 2092303	C28	2710114 - 2710200	C19	30156313 - 30317354	C28
1901012 - 1902612	C12	20156313 - 20160354	C28	2711112 - 2711300	C19	3071183 - 3092303	C28
						3110293 - 3310193	C28



DESIGN:

- High tensile steel body toolhead with 2 teeth
- Supplied with 12, 24 or 36 sets of solid HSS knives
- Custom profiled knives available on request and priced according to profile

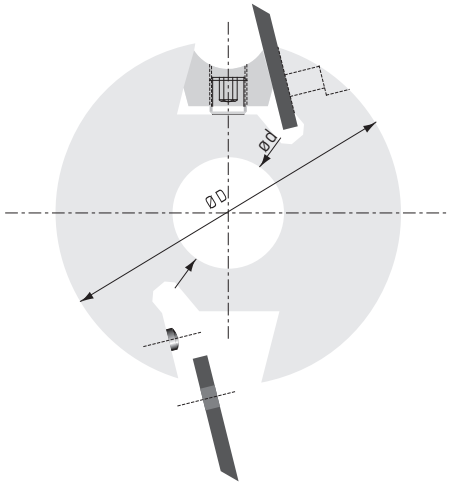
APPLICATION:

- To cut profile shapes in solid wood
- On shapers

Each set includes 1 toolhead No. 185 with 2 straight knives and profile knives in the following arrangements.

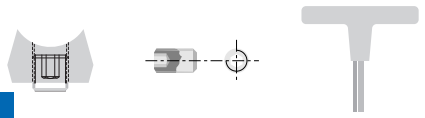
Standard Profile Knives

Profiles 185-1 to 185-36.
Blank knives to be ground to customers requirements are available upon request.



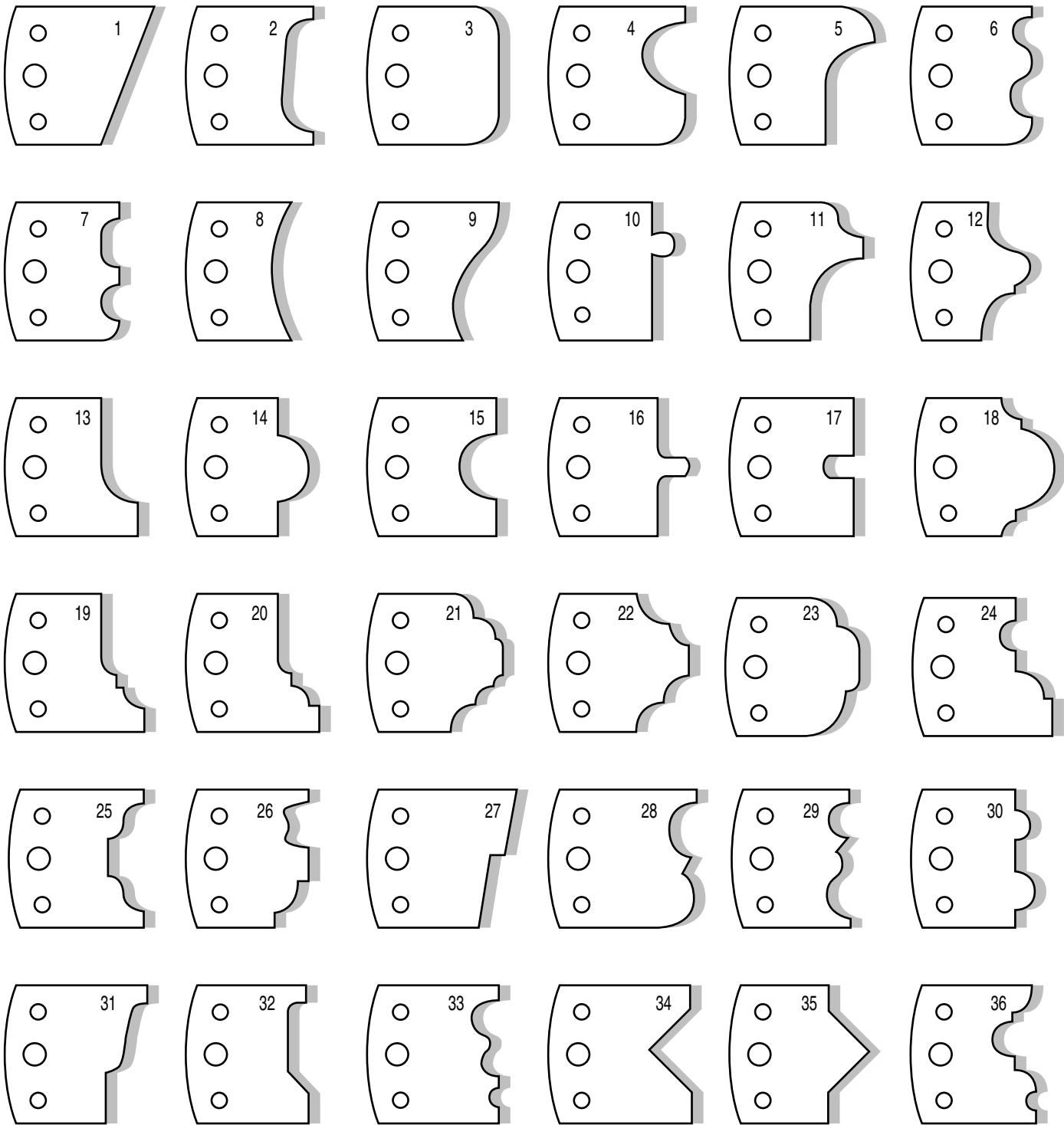
PART NO.	DIAM. ØD	KERF	BORE ød	NO. TEETH	PROFILE NO.	RPM MIN.-MAX.
18512	93mm 3-5/8"	40mm 1-9/16"	31.75mm 1-1/4"	2	1 to 12	5000-9000
18524	93mm 3-5/8"	40mm 1-9/16"	31.75mm 1-1/4"	2	1 to 24	5000-9000
18536	93mm 3-5/8"	40mm 1-9/16"	31.75mm 1-1/4"	2	1 to 36	5000-9000
185	Toolhead Only					
185B	Blank Knife 40 x 45mm (1-9/16" x 1-3/4")					

Bore can be bushed to spindle size of your machine.
Maximum Bore Size 31.75mm (1-1/4")

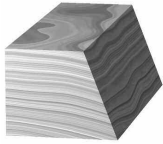


Replacement Parts			
	WEDGE	WEDGE SCREW	ALLEN WRENCH
PART NO.	W301402	W501312	W400115

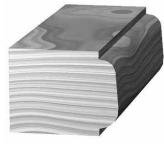
(SCALE = 60% OF ACTUAL SIZE)



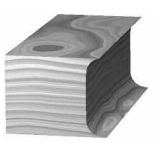
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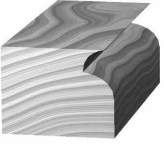
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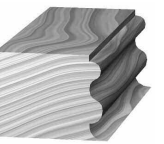
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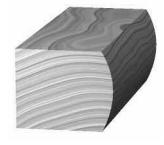
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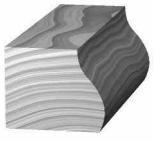
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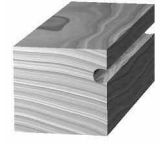
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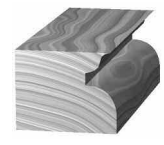
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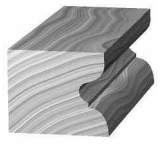
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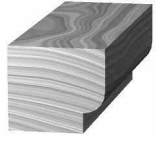
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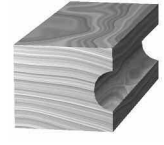
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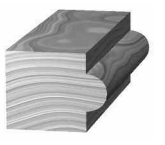
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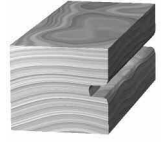
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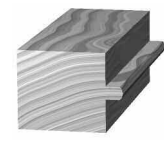
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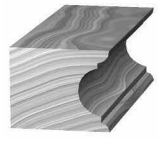
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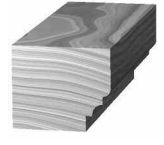
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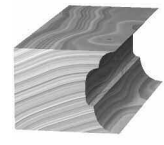
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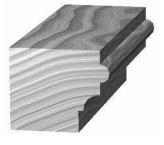
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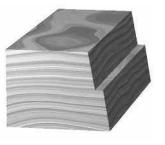
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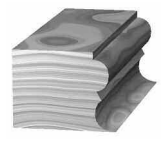
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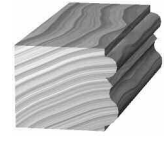
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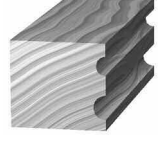
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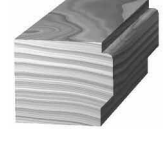
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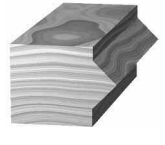
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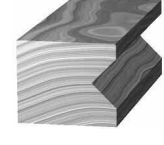
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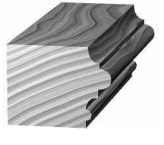
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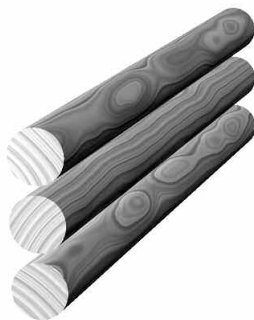
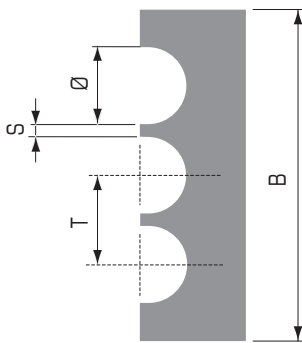
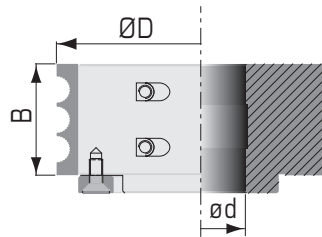
34



35



36

**DESIGN:**

- High tensile steel body with 3 teeth
- The knife locking system is very precise due to the positioning ring mounted on each toolhead
- Solid HSS knives are resharpenable and replaceable
- For higher performance, knives with titanium nitrate coating (tin) available on request

APPLICATION:

- For producing smooth dowels from 6mm to 16mm diameter
- On moulders

Toolheads**SPECIAL PRODUCTION**

DIAM. ØD	KERF B	MAX. BORE ød	NO. TEETH	MAX. RPM
110mm	50mm, 75mm, 100mm or 125mm	50mm	3	10000
4-3/8"	2", 3", 4" or 5"	2"	3	10000

Knives For Smooth Dowels**SPECIAL PRODUCTION**

DOWEL DIAM. Ø mm	SPLITTER SIZE S mm	PITCH T mm	NO. OF DOWELS	KERF B mm	CUTTING DIAM. ØD mm
6	1	7	6	50	138
8	1	9	4	50	138
10	1	11	3	50	138
12	1.5	13.5	3	50	148
14	1.5	15.5	2	50	148
16	1.5	17.5	2	50	148
6	1	7	9	75	138
8	1	9	7	75	138
10	1	11	5	75	138
12	1.5	13.5	5	75	148
14	1.5	15.5	4	75	148
16	1.5	17.5	3	75	148
6	1	7	12	100	138
8	1	9	10	100	138
10	1	11	8	100	138
12	1.5	13.5	6	100	148
14	1.5	15.5	5	100	148
16	1.5	17.5	5	100	148
6	1	7	16	125	138
8	1	9	13	125	138
10	1	11	10	125	138
12	1.5	13.5	8	125	148
14	1.5	15.5	7	125	148
16	1.5	17.5	6	125	148

**DESIGN:**

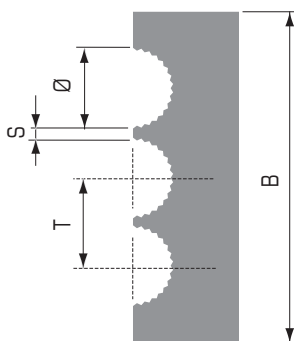
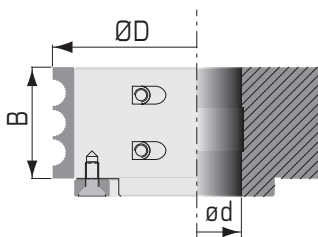
- High tensile steel body with 3 teeth
- The knife locking system is very precise due to the positioning ring mounted on each toolhead
- Solid HSS knives are resharpenable and replaceable
- For higher performance, knives with titanium nitrate coating (tin) available on request

APPLICATION:

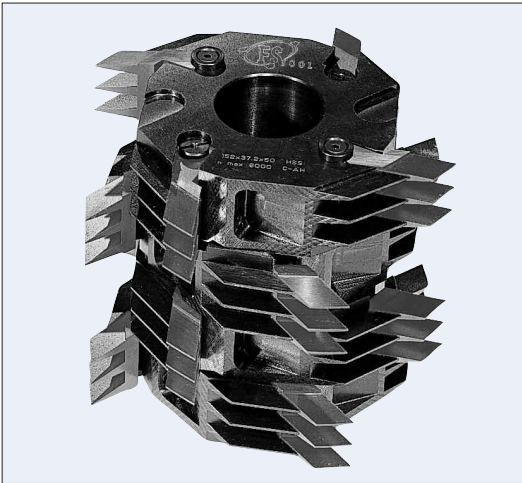
- For producing serrated dowels from 6.2mm to 16.2mm diameter
- On moulders

Toolheads**SPECIAL PRODUCTION**

DIAM. ØD	KERF B	MAX. BORE ød	NO. TEETH	MAX. RPM
110mm	50mm, 75mm, 100mm or 125mm	50mm	3	10000
4-3/8"	2", 3", 4" or 5"	2"	3	10000

**Knives For Serrated Dowels****SPECIAL PRODUCTION**

DOWEL DIAM. Ø mm	SPLITTER SIZE S mm	PITCH T mm	NO. OF SERRATIONS	NO. OF DOWELS	KERF B mm	CUTTING DIAM. ØD mm
6.2	1	7.2	16	6	50	138
8.2	1	9.2	20	4	50	138
10.2	1	11.2	22	3	50	138
12.2	1.5	13.7	22	3	50	148
14.2	1.5	15.7	22	2	50	148
16.2	1.5	17.7	22	2	50	148
6.2	1	7.2	16	9	75	138
8.2	1	9.2	20	7	75	138
10.2	1	11.2	22	5	75	138
12.2	1.5	13.7	22	5	75	148
14.2	1.5	15.7	22	4	75	148
16.2	1.5	17.7	22	3	75	148
6.2	1	7.2	16	12	100	138
8.2	1	9.2	20	10	100	138
10.2	1	11.2	22	8	100	138
12.2	1.5	13.7	22	6	100	148
14.2	1.5	15.7	22	5	100	148
16.2	1.5	17.7	22	5	100	148
6.2	1	7.2	16	16	125	138
8.2	1	9.2	20	13	125	138
10.2	1	11.2	22	10	125	138
12.2	1.5	13.7	22	8	125	148
14.2	1.5	15.7	22	7	125	148
16.2	1.5	17.7	22	6	125	148

**DESIGN:**

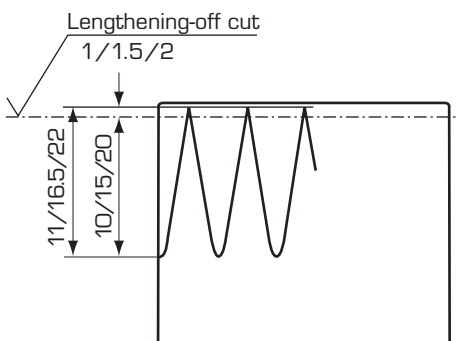
- High tensile steel body requires 4 knives, not included with toolhead
- Tools can be stacked based on the wood thickness to be cut
- Solid HSS knives are resharpenable and exchangeable
- Knives can be coated with a special PVD surface coating for longer tool life

APPLICATION:

- For finger joints in solid wood
- On finger jointing machines with or without lengthening-off device

WHEN ORDERING SPECIFY:

- Interchangeable Mini-Finger Joint Knives
- Bore size



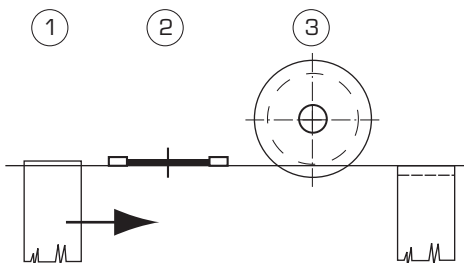
If not stated otherwise, cutters will be supplied to suit machines without lengthening-off device

PART NO.	JOINT LENGTH mm	DIAM. mm	KERF mm	BORE	NO. TEETH	MAX. RPM
186A11	4	160	25.6	1-1/4"	4	8000
186A12	10	160	30.4	1-1/4"	4	8000
186A13	15	170	30.4	1-1/4"	4	8000
186A14	20	180	37.2	1-1/4"	4	7000

Other bore sizes and diameters available upon request.

Max. Bore Size 50mm (2")

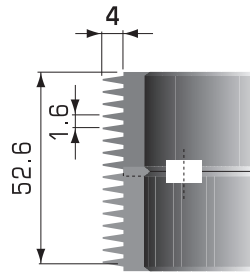
For machines with lengthening-off device (Trim Saw), finger length will be 11mm, 16.5 mm or 22 mm. By means of the lengthening-off device, the machined finger length may be between 10 and 11 mm, 15 and 16.5 mm or 20 and 22 mm according to requirements for fitting and strength of joint. If not stated otherwise, cutters will be supplied to suit machines without lengthening-off devices.



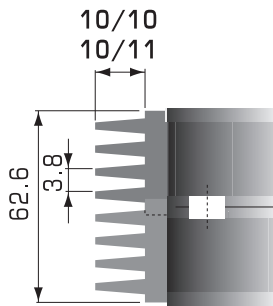
1. Timber
2. Lengthening-off device (Trim Saw)
3. Mini finger joint cutter

TOOLHEAD PART NO.

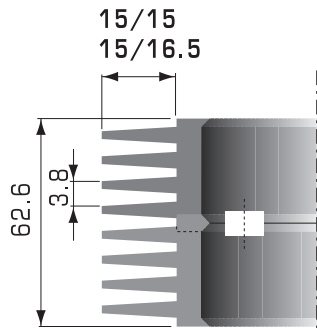
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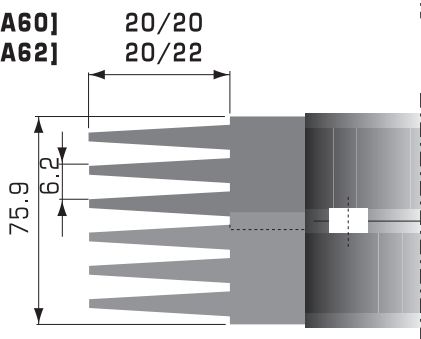
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[186A54]**



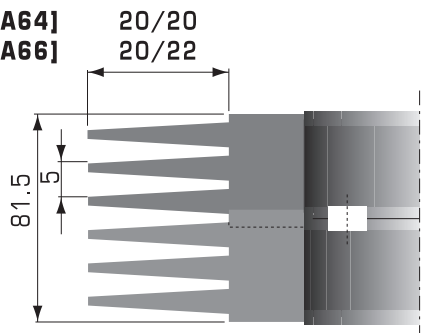
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**[186A60]
[186A62]**



**[186A64]
[186A66]**

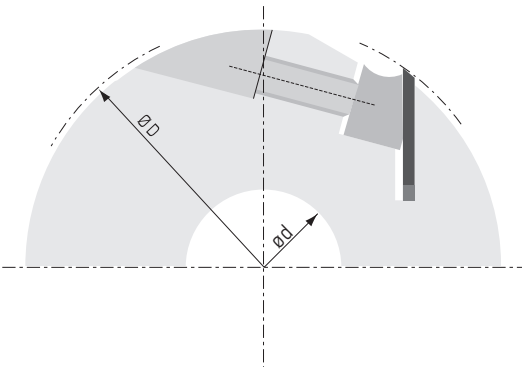


KNIVES

PART NO.	JOINT LENGTH mm	L.O.D. [A]	PITCH mm	KNIFE SIZE mm
186A50	4	NO	1.6	25.4 x 33 x 14
186A52	10-10	NO	3.8	28.4 x 38.5 x 14
186A54	10-11	YES	3.8	28.4 x 38.5 x 14
186A56	15-15	NO	3.8	28.4 x 43.5 x 14
186A58	15-16.5	YES	3.8	28.4 x 43.5 x 14
186A60	20-20	NO	6.2	32.5 x 48.5 x 14
186A62	20-22	YES	6.2	32.5 x 48.5 x 14
186A64	20-20	NO	5.0	36.5 x 48.5 x 14
186A66	20-22	YES	5.0	36.5 x 48.5 x 14

[A] Lengthening-off device (L.O.D.), for more information refer to page C6

JOINT LENGTH mm		WOOD THICKNESS mm	NO. TOOLHEADS	TOTAL KERF mm
4	1.6mm PITCH	25.2	1	27.0
4		50.8	2	52.6
4		76.4	3	78.2
4		102.0	4	103.8
4		127.6	5	129.4
10 & 15	3.8mm PITCH	29.8	1	32.2
10 & 15		60.2	2	62.6
10 & 15		90.6	3	93.0
10 & 15		121.0	4	123.4
10 & 15		151.4	5	153.8
20	6.2mm PITCH	36.3	1	38.7
20		73.5	2	75.9
20		110.7	3	113.1
20		147.9	4	150.3
20		185.1	5	187.5
20	5mm PITCH	37.4	1	41.5
20		77.4	2	81.5
20		117.4	3	121.5
20		157.4	4	161.5
20		197.6	5	201.5

**DESIGN:**

- High tensile steel body with 4 teeth
- Supplied with T1 steel knives 30x3mm
- Positioning of knives requires use of appropriate gauge
- Can also be supplied with TCT knives, priced separately

APPLICATION:

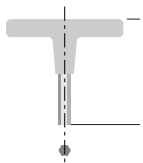
- With HSS knives for planing solid woods without glue lines
- With tungsten carbide tipped knives for planing hardwoods, exotic woods and solid woods with glue lines
- On moulders and four sided planers

SPECIAL PRODUCTION

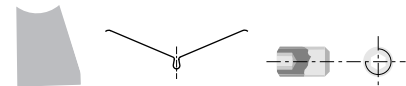
DIAM. ØD	KERF	MAX. BORE ød	NO. TEETH	MAX. RPM
125mm 5"	100mm 4"	50mm 2"	4	9000
125mm 5"	120mm 4-3/4"	50mm 2"	4	9000
125mm 5"	130mm 5-1/8"	50mm 2"	4	9000
125mm 5"	150mm 6"	50mm 2"	4	9000
125mm 5"	180mm 7"	50mm 2"	4	9000
125mm 5"	210mm 8-1/4"	50mm 2"	4	9000
125mm 5"	230mm 9"	50mm 2"	4	9000

Other sizes available upon request.

For REPLACEMENT KNIVES see HSS or TCT Planing Knives Catalogue Pages C22 - C27.

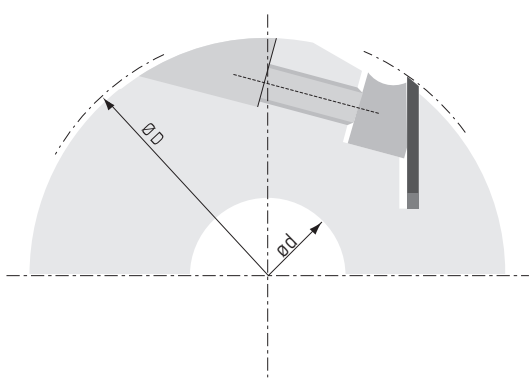


T-HANDLE ALLEN WRENCH
PART NO. W400004 5mm

**Replacement Parts**

TOOLHEAD KERF	WEDGE PART NO.	SPRING PART NO.	Wedge screw PART NO.
100mm 4"	W301109	W501602	W501309
120mm 4-3/4"	W301111	W501602	W501309
130mm 5-1/8"	W301112	W501602	W501309
150mm 6"	W301114	W501602	W501309
180mm 7"	W301117	W501602	W501309
210mm 8-1/4"	W301120	W501602	W501309
230mm 9"	W301122	W501602	W501309

187A PLANING HEADS - ALUMINUM BODY



DESIGN:

- Aluminum body with 4 teeth
- Supplied with T1 steel knives 30x3mm
- Positioning of knives requires use of appropriate gauge
- Can also be supplied with TCT knives, priced separately

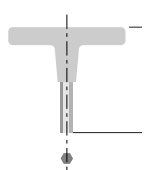
APPLICATION:

- With HSS knives for planing solid woods without glue lines
- With tungsten carbide tipped knives for planing hardwoods, exotic woods and solid woods with glue lines
- On moulders and four sided planers

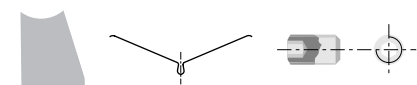
SPECIAL PRODUCTION

DIAM. ØD	KERF	MAX. BORE ød	NO. TEETH	MAX. RPM
125mm 5"	100mm 4"	50mm 2"	4	9000
125mm 5"	120mm 4-3/4"	50mm 2"	4	9000
125mm 5"	130mm 5-1/8"	50mm 2"	4	9000
125mm 5"	150mm 6"	50mm 2"	4	9000
125mm 5"	180mm 7"	50mm 2"	4	9000
125mm 5"	210mm 8-1/4"	50mm 2"	4	9000
125mm 5"	230mm 9"	50mm 2"	4	9000

For REPLACEMENT KNIVES see HSS or TCT Planing Knives Catalogue Pages C22-C27.



T-HANDLE ALLEN WRENCH
PART NO. W400004 5mm



Replacement Parts

TOOLHEAD KERF	WEDGE PART NO.	SPRING PART NO.	Wedge screw PART NO.
100mm 4"	W301109	W501602	W501309
120mm 4-3/4"	W301111	W501602	W501309
130mm 5-1/8"	W301112	W501602	W501309
150mm 6"	W301114	W501602	W501309
180mm 7"	W301117	W501602	W501309
210mm 8-1/4"	W301120	W501602	W501309
230mm 9"	W301122	W501602	W501309

**DESIGN:**

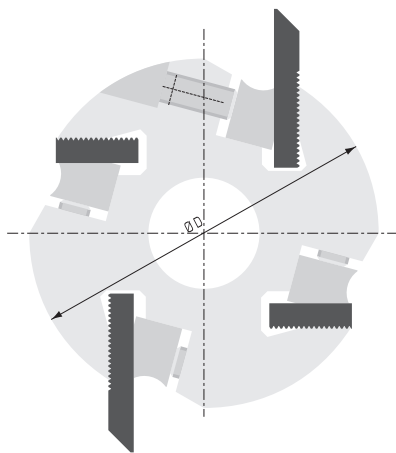
- High tensile steel body with 4 teeth
- Available in 22° or 12° hook angle
- Precise serration (60°, 1.6mm pitch) ensures tight and accurate positioning of knives

APPLICATION:

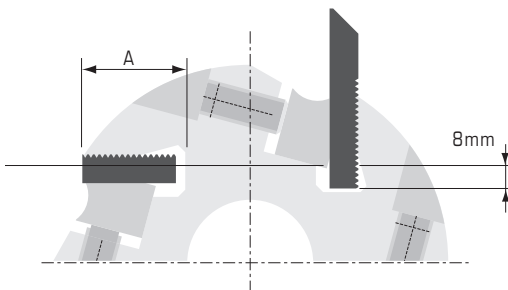
- For profiling of solid woods using HSS knives
- For profiling MDF and other abrasive materials
carbide tipped knives are required
- On moulders

PART NO. 22° HOOK	PART NO. 12° HOOK	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM
18812	N/A	101.6mm 4"	50mm 2"	31.75mm 1-1/4"	4	11000
18813	N/A	101.6mm 4"	76.2mm 3"	31.75mm 1-1/4"	4	11000
18814	N/A	101.6mm 4"	101.6mm 4"	31.75mm 1-1/4"	4	11000
18822	18822-12	122mm 4-3/4"	50mm 2"	38.1mm 1-1/2"	4	9000
18823	18823-12	122mm 4-3/4"	80mm 3-1/8"	38.1mm 1-1/2"	4	9000
18824	18824-12	122mm 4-3/4"	100mm 4"	38.1mm 1-1/2"	4	9000
18825	18825-12	122mm 4-3/4"	130mm 5-1/8"	38.1mm 1-1/2"	4	9000
18826	18826-12	122mm 4-3/4"	150mm 6"	38.1mm 1-1/2"	4	9000
18828	18828-12	122mm 4-3/4"	180mm 7"	38.1mm 1-1/2"	4	9000
18830	18830-12	122mm 4-3/4"	230mm 9"	38.1mm 1-1/2"	4	9000
18832	18832-12	122mm 4-3/4"	50mm 2"	40mm 1.575"	4	9000
18833	18833-12	122mm 4-3/4"	80mm 3-1/8"	40mm 1.575"	4	9000
18834	18834-12	122mm 4-3/4"	100mm 4"	40mm 1.575"	4	9000
18835	18835-12	122mm 4-3/4"	130mm 5-1/8"	40mm 1.575"	4	9000
18836	18836-12	122mm 4-3/4"	150mm 6"	40mm 1.575"	4	9000
18837	18837-12	122mm 4-3/4"	180mm 7"	40mm 1.575"	4	9000
18839	18839-12	122mm 4-3/4"	230mm 9"	40mm 1.575"	4	9000

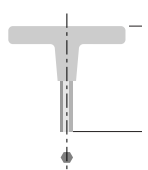
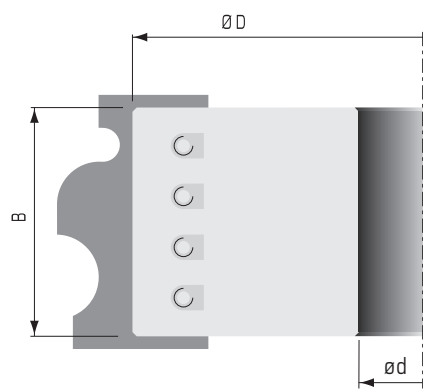
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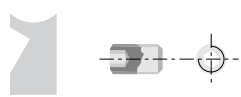
A = 25mm for 4" diam.
A = 28mm for 4-3/4" diam. and over



...continued from C10



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

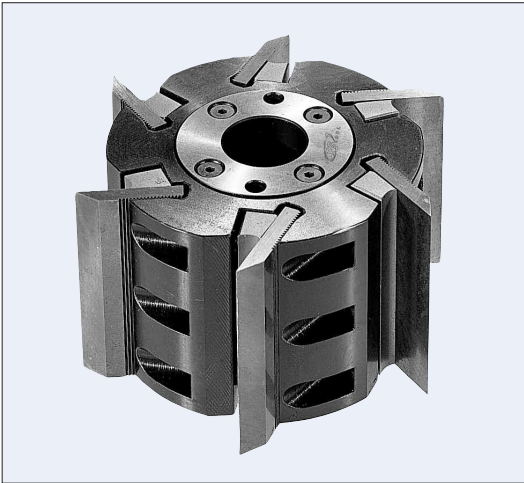


Replacement Parts

TOOLHEAD KERF	WEDGE PART NO.	WEDGE SCREW PART NO.
50mm (2")	W301104	W501305
80mm (3-1/8")	W301107	W501305
100mm (4")	W301109	W501305
130mm (5-1/8")	W301112	W501305
150mm (6")	W301114	W501305
180mm (7")	W301117	W501305
230mm (9")	W301122	W501305

PART NO. 22° HOOK	PART NO. 12° HOOK	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM
18842	18842-12	122mm 4-3/4"	50mm 2"	46.04mm 1-13/16"	4	9000
18843	18843-12	122mm 4-3/4"	80mm 3-1/8"	46.04mm 1-13/16"	4	9000
18844	18844-12	122mm 4-3/4"	100mm 4"	46.04mm 1-13/16"	4	9000
18845	18845-12	122mm 4-3/4"	130mm 5-1/8"	46.04mm 1-13/16"	4	9000
18846	18846-12	122mm 4-3/4"	150mm 6"	46.04mm 1-13/16"	4	9000
18852	18852-12	137mm 5-3/8"	50mm 2"	46.04mm 1-13/16"	4	8000
18853	18853-12	137mm 5-3/8"	80mm 3-1/8"	46.04mm 1-13/16"	4	8000
18854	18854-12	137mm 5-3/8"	100mm 4"	46.04mm 1-13/16"	4	8000
18855	18855-12	137mm 5-3/8"	130mm 5-1/8"	46.04mm 1-13/16"	4	8000
18856	18856-12	137mm 5-3/8"	150mm 6"	46.04mm 1-13/16"	4	8000
18857	18857-12	137mm 5-3/8"	180mm 7"	46.04mm 1-13/16"	4	8000
18859	18859-12	137mm 5-3/8"	230mm 9"	46.04mm 1-13/16"	4	8000
18862	18862-12	137mm 5-3/8"	50mm 2"	40mm 1.575"	4	8000
18863	18863-12	137mm 5-3/8"	80mm 3-1/8"	40mm 1.575"	4	8000
18864	18864-12	137mm 5-3/8"	100mm 4"	40mm 1.575"	4	8000
18865	18865-12	137mm 5-3/8"	130mm 5-1/8"	40mm 1.575"	4	8000
18866	18866-12	137mm 5-3/8"	150mm 6"	40mm 1.575"	4	8000
18867	18867-12	137mm 5-3/8"	180mm 7"	40mm 1.575"	4	8000
18869	18869-12	137mm 5-3/8"	230mm 9"	40mm 1.575"	4	8000

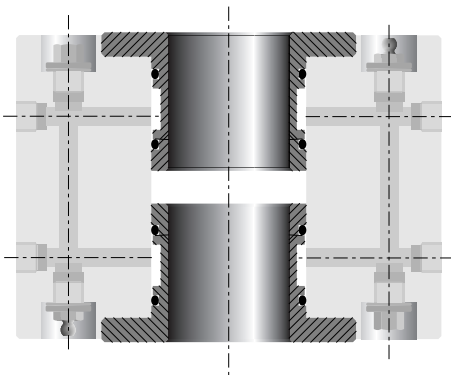
Other sizes available upon request.

**DESIGN:**

- High tensile steel body with 4,6 or 8 teeth
- Available in 22° or 12° hook angle
- Precise serration (60°, 1.6mm pitch) ensure tight and accurate positioning of knives
- With dual-chamber hydro-clamping to ensure precise concentricity tolerance
- High radial running accuracy and low operating vibration

APPLICATION:

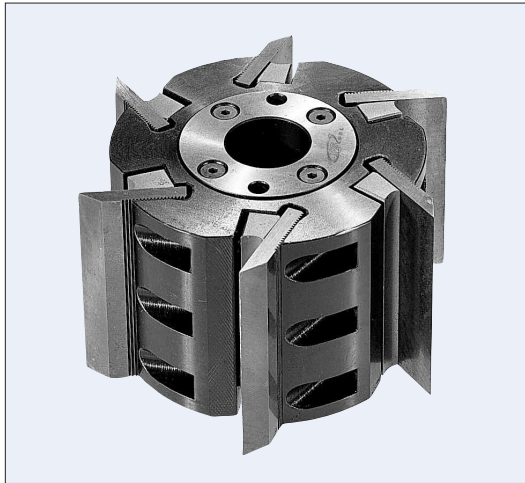
- For profiling at high feed rates with superior surface finish
- Use HSS or Stellite tipped knives for solid woods
- Use carbide tipped knives for exotic woods and MDF (see page C20)
- On moulders



Grease fittings mounted on both ends of toolheads for easy access.

PART NO. 22° HOOK	PART NO. 12° HOOK	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM
1901022	1901012	137mm 5-3/8"	60mm 2-3/8"	40mm 1-1/2"	4	8900
1901122	1901112	137mm 5-3/8"	80mm 3-1/8"		4	8900
1901222	1901212	137mm 5-3/8"	100mm 4"		4	8900
1901322	1901312	137mm 5-3/8"	130mm 5-1/8"		4	8900
1901422	1901412	137mm 5-3/8"	150mm 6"		4	8900
1901522	1901512	137mm 5-3/8"	180mm 7"		4	8900
1901622	1901612	137mm 5-3/8"	230mm 9"		4	8900
1902022	1902012	150mm 6"	60mm 2-3/8"	1-1/2", 1-13/16", 2-1/8" 40mm, 50mm	4	8000
1902122	1902112	150mm 6"	80mm 3-1/8"		4	8000
1902222	1902212	150mm 6"	100mm 4"		4	8000
1902322	1902312	150mm 6"	130mm 5-1/8"		4	8000
1902422	1902412	150mm 6"	150mm 6"		4	8000
1902522	1902512	150mm 6"	180mm 7"		4	8000
1902622	1902612	150mm 6"	230mm 9"		4	8000

continued on C13...



PART NO. 22° HOOK	PART NO. 12° HOOK	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM
1903022	1903012	150mm 6"	60mm 2-3/8"	1-1/2", 1-13/16", 2-1/8" 40mm, 50mm	6	8000
1903122	1903112	150mm 6"	80mm 3-1/8"		6	8000
1903222	1903212	150mm 6"	100mm 4"		6	8000
1903322	1903312	150mm 6"	130mm 5-1/8"		6	8000
1903422	1903412	150mm 6"	150mm 6"		6	8000
1903522	1903512	150mm 6"	180mm 7"		6	8000
1903622	1903612	150mm 6"	230mm 9"		6	8000
1904022	1904012	163mm 6-3/8"	60mm 2-3/8"		1-13/16", 2-1/8" 50mm	6
1904122	1904112	163mm 6-3/8"	80mm 3-1/8"	6		7600
1904222	1904212	163mm 6-3/8"	100mm 4"	6		7600
1904322	1904312	163mm 6-3/8"	130mm 5-1/8"	6		7600
1904422	1904412	163mm 6-3/8"	150mm 6"	6		7600
1904522	1904512	163mm 6-3/8"	180mm 7"	6		7600
1904622	1904612	163mm 6-3/8"	230mm 9"	6		7600
1905022	1905012	163mm 6-3/8"	60mm 2-3/8"	1-13/16", 2-1/8" 50mm		8
1905122	1905112	163mm 6-3/8"	80mm 3-1/8"		8	7600
1905222	1905212	163mm 6-3/8"	100mm 4"		8	7600
1905322	1905312	163mm 6-3/8"	130mm 5-1/8"		8	7600
1905422	1905412	163mm 6-3/8"	150mm 6"		8	7600
1905522	1905512	163mm 6-3/8"	180mm 7"		8	7600
1905622	1905612	163mm 6-3/8"	230mm 9"		8	7600

Replacement Parts

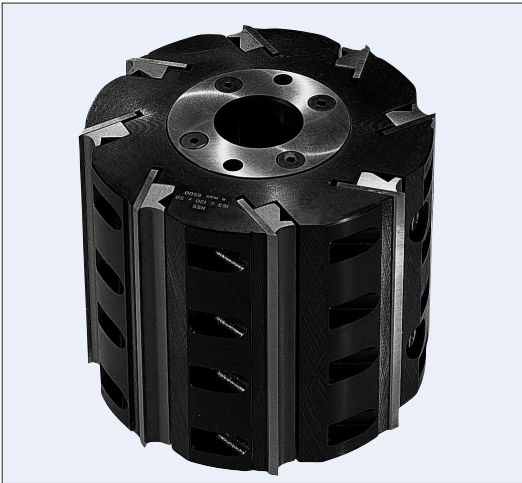
Product	Product Name	PART NO.
	Screw for Flanges M6 x 16mm	W500605
	Grease Nipple	W501810
	Release Valve	W501811
	Grease Gun	1T463HP
	T-Handle Allen Wrench	W400113 3mm W400115 5mm

Replacement Parts

TOOLHEAD KERF	WEDGE PART NO.	WEDGE SCREW PART NO.
60mm (2-3/8")	W301805	W501409
80mm (3-1/8")	W301807	W501409
100mm (4")	W301809	W501409
130mm (5-1/8")	W301812	W501409
150mm (6")	W301814	W501409
180mm (7")	W301817	W501409
230mm (9")	W301822	W501409

Other sizes available upon request.

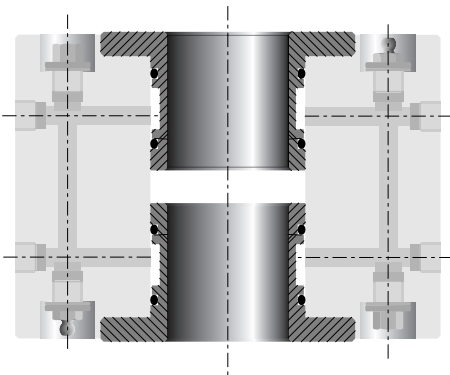
When ordering, add bore size to part no. (ie: 1901022-40 for 40mm bore)

**DESIGN:**

- High tensile steel body with 6,8,12 and 16 teeth
- Available with hook angle between 23° and 27°
- With dual-chamber hydro-clamping to ensure precise concentricity tolerance
- High radial running accuracy and low operating vibration

APPLICATION:

- With HSS knives for planing solid woods without glue lines
- With tungsten carbide tipped knives for planing hardwoods, exotic woods and solid woods with glue lines
- On moulders, conventional or high speed

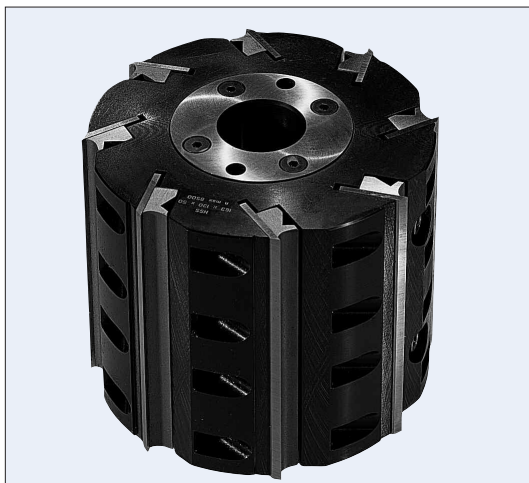


Grease fittings mounted on both ends of toolheads for easy access.

PART NO.	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM	
1921022	163mm 6-3/8"	150mm 6"	1-1/2", 1-13/16", 2-1/8" 40mm, 50mm	6	9300	
1921222	163mm 6-3/8"	230mm 9"		6	9300	
1921422	163mm 6-3/8"	260mm 10-1/4"		6	9300	
1921622	163mm 6-3/8"	310mm 12-1/4"		6	9300	
1922022	163mm 6-3/8"	150mm 6"		8	9300	
1922222	163mm 6-3/8"	230mm 9"		8	9300	
1922422	163mm 6-3/8"	260mm 10-1/4"		8	9300	
1922622	163mm 6-3/8"	310mm 12-1/4"		8	9300	
1923022	203mm 8"	150mm 6"		1-1/2", 1-13/16", 2-1/8" 40mm, 50mm, 60mm	8	7500
1923222	203mm 8"	230mm 9"			8	7500
1923422	203mm 8"	260mm 10-1/4"	8		7500	
1923622	203mm 8"	310mm 12-1/4"	8		7500	
1924022	203mm 8"	150mm 6"	1-1/2", 1-13/16", 2-1/8" 40mm, 50mm, 60mm	12	7500	
1924222	203mm 8"	230mm 9"		12	7500	
1924422	203mm 8"	260mm 10-1/4"		12	7500	
1924622	203mm 8"	310mm 12-1/4"		12	7500	

continued on C15...

...continued from C14



PART NO.	DIAM. ØD	KERF B	BORE ød	NO. TEETH	MAX. RPM
1925022	203mm 8"	150mm 6"	1-1/2", 1-13/16", 2-1/8" 40mm, 50mm, 60mm	16	7500
1925222	203mm 8"	230mm 9"		16	7500
1925422	203mm 8"	260mm 10-1/4"		16	7500
1925622	203mm 8"	310mm 12-1/4"		16	7500

Other sizes available upon request.
When ordering, add bore size to part no.
(ie: 1925022-112 for 1-1/2" Bore)



Replacement Parts

PRODUCT	PRODUCT NAME	PART NO.
	Screw for Flanges M6 x 16mm	W500605
	Grease Nipple	W501810
	Release Valve	W501811
	Grease Gun	1T463HP
	T-Handle Allen Wrench	W400113 3mm W400115 5mm
	Gib Screw for 6, 8 & 12 Wing Toolheads M10 x 20mm	W501409
	Gib Screw for 16 wing toolhead M8 x 16mm	W501403
	Spring	W501602

Replacement Parts

TOOLHEAD KERF	WEDGE PART NO.
150mm (6")	W302014
230mm (9")	W302022
260mm (10-1/4")	W302025
310mm (12-1/4")	W302030

Type A

HYDRO-GRIP SLEEVES



DESIGN:

- High precision hydraulic sleeves
- Designed for light press fit against the tool and fastened together with screws
- When pressurized, the sleeve expands only against the spindle
- Sleeve pressurized by a grease pump

APPLICATION:

- For mounting onto cutters and cutter assemblies

Complete catalogue of ETP sleeves and toolholders available upon request.

Type AI

HYDRO-GRIP SLEEVES



DESIGN:

- High precision hydraulic sleeves
- Designed for light press fit against the tool and fastened together with screws
- When pressurized, the sleeve expands only against the spindle
- Sleeve pressurized by tightening a pressure screw
- No grease pump required

APPLICATION:

- For mounting onto cutters and cutter assemblies

Complete catalogue of ETP sleeves and toolholders available upon request.

Type B

HYDRO-GRIP SLEEVES



DESIGN:

- High precision hydraulic sleeves provided with threaded and knurled ring nut
- Sleeves can be easily interchanged between tools
- When pressurized, the outer sleeve expands against the tool and the inner sleeve against the spindle
- Sleeve pressurized by a grease pump

APPLICATION:

- For mounting onto cutters and cutter assemblies

Complete catalogue of ETP sleeves and toolholders available upon request.

Type BI

HYDRO-GRIP SLEEVES



DESIGN:

- High precision hydraulic sleeves provided with threaded and knurled ring nut
- Sleeves can be easily interchanged between tools
- When pressurized, the outer sleeve expands against the tool and the inner sleeve against the spindle
- Sleeve pressurized by tightening a pressure screw
- No grease pump required

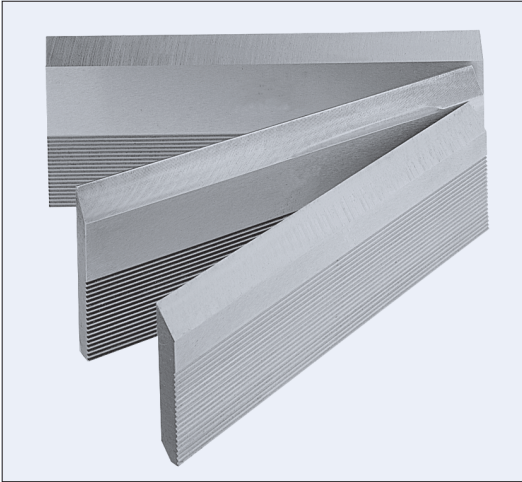
APPLICATION:

- For mounting onto cutters and cutter assemblies

Complete catalogue of ETP sleeves and toolholders available upon request.

DX10/DX11

CORRUGATED BACK KNIVES D2 STEEL



DESIGN:

- Solid D2 high carbon, high chrome steel
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

- Used primarily in softwood production and short runs in hardwoods

D2 STEEL

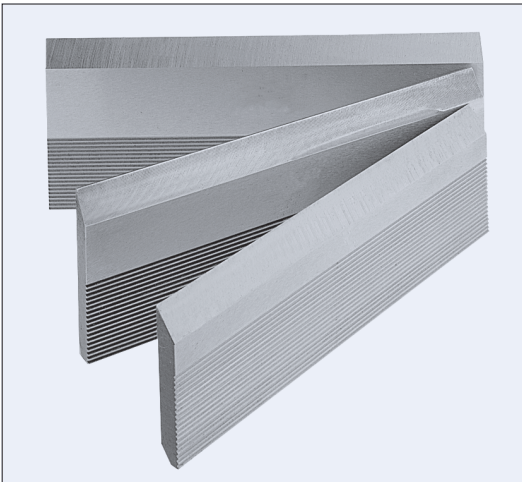
PART NO.	LENGTH L	HEIGHT H	THICKNESS T
DX10114	25"	1-1/4"	1/4"
DX10112	25"	1-1/2"	1/4"
DX10134	25"	1-3/4"	1/4"
DX10200	25"	2"	1/4"
DX10214	25"	2-1/4"	1/4"
DX10212	25"	2-1/2"	1/4"
DX11112	25"	1-1/2"	5/16"
DX11134	25"	1-3/4"	5/16"
DX11200	25"	2"	5/16"
DX11214	25"	2-1/4"	5/16"
DX11212	25"	2-1/2"	5/16"
DX11234	25"	2-3/4"	5/16"
DX11300	25"	3"	5/16"

BENEFITS:

- Resistant to chipping and nicks
- Ideal for use where there is high moisture content
- Resists chemical erosion found in such woods as cedar and redwood.

2610/2611

CORRUGATED BACK KNIVES M2 STEEL



DESIGN:

- Solid M2 high speed steel with 6% tungsten content
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

- Used for longer runs than D2 in softwoods and hardwoods

M2 STEEL

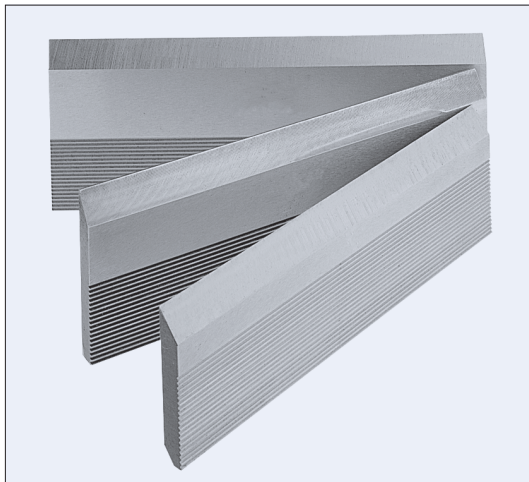
PART NO.	LENGTH L	HEIGHT H	THICKNESS T
2610114	25"	1-1/4"	1/4"
2610112	25"	1-1/2"	1/4"
2610134	25"	1-3/4"	1/4"
2610200	25"	2"	1/4"
2610214	25"	2-1/4"	1/4"
2610212	25"	2-1/2"	1/4"
2611112	25"	1-1/2"	5/16"
2611134	25"	1-3/4"	5/16"
2611200	25"	2"	5/16"
2611214	25"	2-1/4"	5/16"
2611212	25"	2-1/2"	5/16"
2611234	25"	2-3/4"	5/16"
2611300	25"	3"	5/16"

BENEFITS:

- Consistent hardness with high molybdenum content that allows for easy grinding
- Higher wear resistance in harder materials
- Retains edge in medium to long production runs

2710/2711

CORRUGATED BACK KNIVES T1 STEEL



T1 STEEL

PART NO.	LENGTH L	HEIGHT H	THICKNESS T
2710114	25"	1-1/4"	1/4"
2710112	25"	1-1/2"	1/4"
2710134	25"	1-3/4"	1/4"
2710200	25"	2"	1/4"
2711112	25"	1-1/2"	5/16"
2711134	25"	1-3/4"	5/16"
2711200	25"	2"	5/16"
2711214	25"	2-1/4"	5/16"
2711212	25"	2-1/2"	5/16"
2711234	25"	2-3/4"	5/16"
2711300	25"	3"	5/16"

DESIGN:

- Solid T1 high speed steel with 18% tungsten content
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

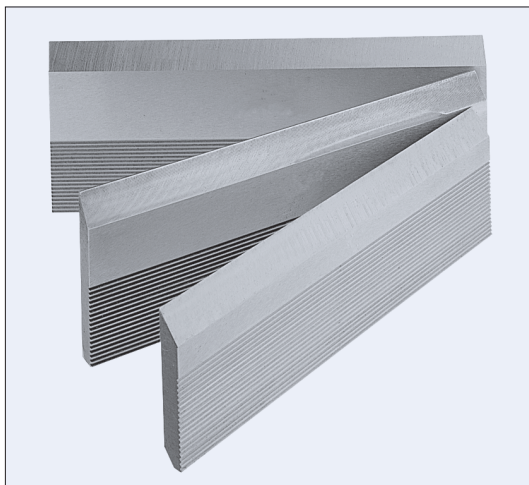
- Used for longer runs than M2 in softwoods and hardwoods

BENEFITS:

- Higher wear resistance in harder materials due to increased tungsten content
- Retains edge in long production runs

ST-1

SUPER TECH CORRUGATED BACK KNIVES



STANDARD PRODUCTION

PART NO.	LENGTH L	HEIGHT H	THICKNESS T
2611112ST	25"	1-1/2"	5/16"
2611134ST	25"	1-3/4"	5/16"
2611200ST	25"	2"	5/16"
2611214ST	25"	2-1/4"	5/16"
2611212ST	25"	2-1/2"	5/16"
2611234ST	25"	2-3/4"	5/16"

DESIGN:

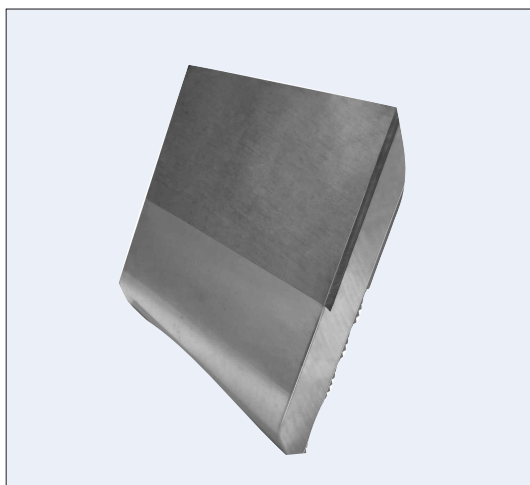
- Solid M2 steel with special coating
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

- For surface planing and profiling soft and hardwoods

BENEFITS

- Up to 10 times longer cutting life
- Superior surface finish
- Increased cutting life dramatically reduces downtime
- Cutting edge is more resistant to knots and exotic woods minimizing edge chipping
- Reduces noise levels due to lower cutting resistance
- Easy to grind using standard grinding wheels normally used for grinding HSS knives

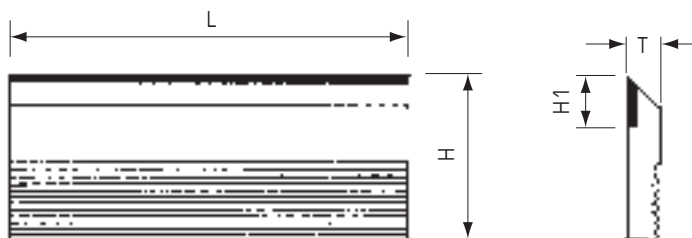


DESIGN:

- Solid HSS knives with brazed tungsten carbide inlay
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

- For surface planing and profiling hardwoods, solid woods with glue lines, exotic woods and MDF



SPECIAL PRODUCTION

CARBIDE INLAY (H1) OF: 11mm, 15mm, 20mm		
L mm	H mm	T mm
40	40	10
50	40	10
60	40	10
70	40	10
80	40	10
90	40	10
100	40	10
120	40	10
130	40	10
150	40	10
170	40	10
180	40	10
200	40	10
210	40	10
230	40	10
260	40	10
310	40	10

SPECIAL PRODUCTION

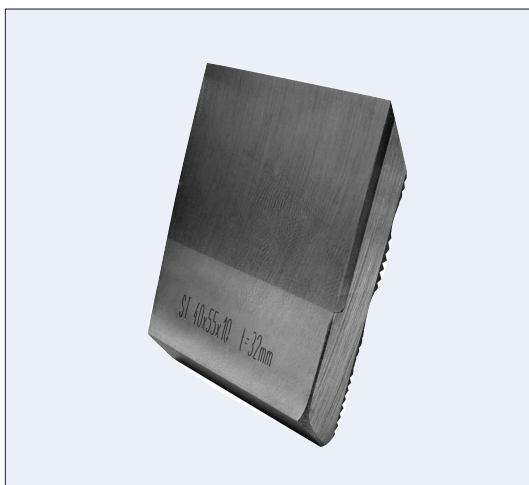
CARBIDE INLAY (H1) OF: 11mm, 15mm, 20mm		
L mm	H mm	T mm
40	50	10
50	50	10
60	50	10
70	50	10
80	50	10
90	50	10
100	50	10
120	50	10
130	50	10
150	50	10
170	50	10
180	50	10
200	50	10
210	50	10
230	50	10
260	50	10
310	50	10

SPECIAL PRODUCTION

CARBIDE INLAY (H1) OF: 15mm, 20mm, 25mm		
L mm	H mm	T mm
40	60	10
50	60	10
60	60	10
70	60	10
80	60	10
90	60	10
100	60	10
120	60	10
130	60	10
150	60	10
170	60	10
180	60	10
200	60	10
210	60	10
230	60	10
260	60	10
310	60	10

SPECIAL PRODUCTION

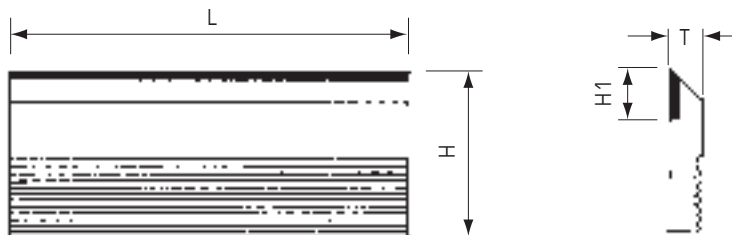
CARBIDE INLAY (H1) OF: 25mm, 30mm		
L mm	H mm	T mm
40	70	10
50	70	10
60	70	10
70	70	10
80	70	10
90	70	10
100	70	10
120	70	10
130	70	10
150	70	10
170	70	10
180	70	10
200	70	10
210	70	10
230	70	10
260	70	10
310	70	10


DESIGN:

- Solid HSS knives with brazed stellite inlay
- Precision ground serrations (60°, 1.6mm pitch) ensures tight and accurate positioning of knives onto toolheads

APPLICATION:

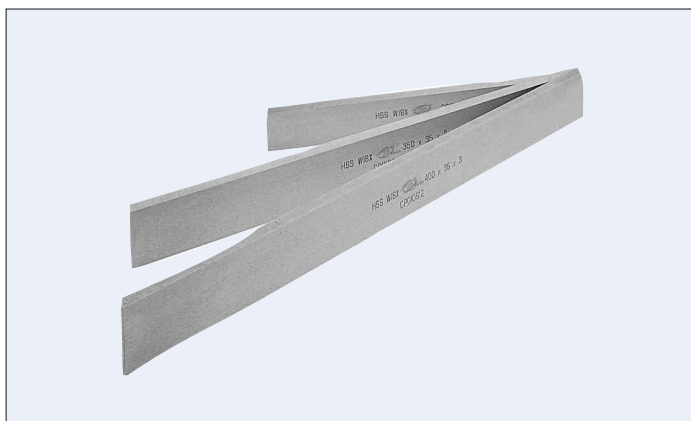
- For surface planing and profiling hardwoods
- For solid wood with glue lines and exotic woods, use carbide inlay knives on page C20



SPECIAL PRODUCTION			
L mm	H mm	T mm	H1 mm
40	55	10	25
50	55	10	25
60	55	10	25
80	55	10	25
100	55	10	25
130	55	10	25
150	55	10	25
165	55	10	25
180	55	10	25
210	55	10	25
230	55	10	25
260	55	10	25
300	55	10	25
310	55	10	25
350	55	10	25

SPECIAL PRODUCTION			
L mm	H mm	T mm	H1 mm
40	60	10	32
50	60	10	32
60	60	10	32
80	60	10	32
100	60	10	32
130	60	10	32
150	60	10	32
165	60	10	32
180	60	10	32
210	60	10	32
230	60	10	32
260	60	10	32
300	60	10	32
310	60	10	32
350	60	10	32

SPECIAL PRODUCTION			
L mm	H mm	T mm	H1 mm
40	70	10	45
50	70	10	45
60	70	10	45
80	70	10	45
100	70	10	45
130	70	10	45
150	70	10	45
165	70	10	45
180	70	10	45
210	70	10	45
230	70	10	45
260	70	10	45
300	70	10	45
310	70	10	45
350	70	10	45

**DESIGN:**

- Solid T1 steel (18% w) knives
- Precision ground

APPLICATION:

- For surface planing hardwoods
- On surface planers, jointers, four sided planers and moulders
- For exotic woods or solid woods with glue lines use tungsten carbide inlaid knives on page C25 - C27

Thin Planing Knives
Precision ground and sharpened

2501 HSS 18% W

Standard Dimensions

Special dimensions
Single piece production

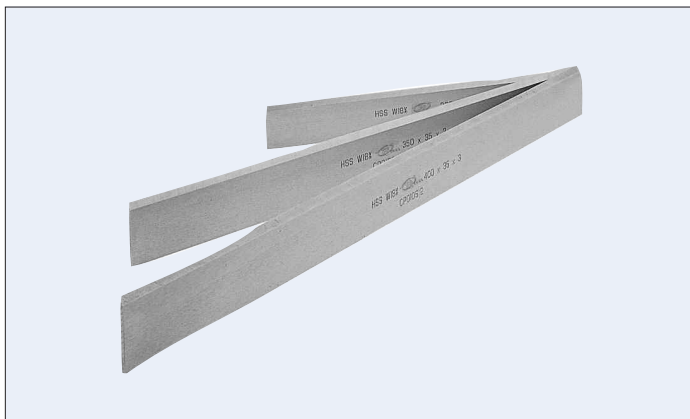
2501 HSS 18% W

Priced per meter - For Lengths from
200 to 1000mm (8" to 40")

- 30 x 3mm (1-3/16" x 1/8")
- 35 x 3mm (1-3/8" x 1/8")

Extra charges for other lengths on request.
Extra charges for knives with slots and holes
on request.

PART NO.	DIMENSIONS L x H x T	
	INCH	mm
25 120 303	4-3/4" x 1-3/16" x 1/8"	120 x 30 x 3
25 130 303	5-1/8" x 1-3/16" x 1/8"	130 x 30 x 3
25 150 303	6" x 1-3/16" x 1/8"	150 x 30 x 3
25 160 303	6-1/4" x 1-3/16" x 1/8"	160 x 30 x 3
25 170 303	6-3/4" x 1-3/16" x 1/8"	170 x 30 x 3
25 180 303	7" x 1-3/16" x 1/8"	180 x 30 x 3
25 210 303	8-1/4" x 1-3/16" x 1/8"	210 x 30 x 3
25 230 303	9" x 1-3/16" x 1/8"	230 x 30 x 3
25 260 303	10-1/4" x 1-3/16" x 1/8"	260 x 30 x 3
25 410 303	16" x 1-3/16" x 1/8"	410 x 30 x 3
25 510 303	20" x 1-3/16" x 1/8"	510 x 30 x 3
25 610 303	24" x 1-3/16" x 1/8"	610 x 30 x 3
25 640 303	25" x 1-3/16" x 1/8"	640 x 30 x 3
251066 303	39-1/2" x 1-3/16" x 1/8"	1000 x 30 x 3
25 400 353	15-3/4" x 1-3/8" x 1/8"	400 x 35 x 3
25 410 353	16" x 1-3/8" x 1/8"	410 x 35 x 3
25 450 353	17-3/4" x 1-3/8" x 1/8"	450 x 35 x 3
25 500 353	19-5/8" x 1-3/8" x 1/8"	500 x 35 x 3
25 510 353	20" x 1-3/8" x 1/8"	510 x 35 x 3
25 600 353	23-5/8" x 1-3/8" x 1/8"	600 x 35 x 3
25 610 353	24" x 1-3/8" x 1/8"	610 x 35 x 3
25 630 353	24-3/4" x 1-3/8" x 1/8"	630 x 35 x 3
25 640 353	25" x 1-3/8" x 1/8"	640 x 35 x 3
251066 353	39-1/2" x 1-3/8" x 1/8"	1000 x 35 x 3


DESIGN:

- Solid M2 steel
- Precision ground

APPLICATION:

- For surface planing soft and hardwoods
- For exotic woods or solid woods with glue lines, use tungsten carbide inlaid knives on page C25 - C27
- On surface planers, jointers, four sided planers and moulders

PART NO.	DIMENSIONS L x H x T INCHES
26040051	4"x5/8"x1/8"
26040071	4"x7/8"x1/8"
26051061	5-1/16"x3/4"x1/8"
26060051	6"x5/8"x1/8"
26060071	6"x7/8"x1/8"
26060101	6"x1"x1/8"
26061061	6-1/16"x3/4"x1/8"
26062051	6-1/8"x3/4"x1/8"
26068101	6-1/2"x1"x1/8"
26080051	8"x5/8"x1/8"
26080061	8"x3/4"x1/8"
26080071	8"x7/8"x1/8"
26080101	8"x1"x1/8"
26084121	8-1/4"x1-1/4"x1/8"
26120051	12"x5/8"x1/8"
26120061	12"x3/4"x1/8"
26120071	12"x7/8" x1/8"

PART NO.	DIMENSIONS L x H x T INCHES
26120101	12"x1"x1/8"
26121051	12-1/4"x5/8"x1/8"
26121061	12-1/4"x3/4"x1/8"
26121101	12-1/4"x1"x1/8"
26160101	16"x1"x1/8"
26180115	18"x1-1/8"x5/32"
26200101	20"x1"x1/8"
26240115	24"x1-1/8"x5/32"
26240145	24x1-1/2"x5/32"
26250051	25"x5/8"x1/8"
26250061	25"x3/4"x1/8"
26250121	25"x1-1/4"x1/8"
26250125	25"x1-1/4"x5/32"
26300141	30x1-1/2"x1/8"
26370111	37"x1-1/8"x1/8"
26370125	37"x1-1/4"x5/32"
26370131	37x1-3/8"x1/8"
26370135	37"x1-3/8"x5/32"
26370145	37"x1-1/2"x5/32"

Special dimensions
Single piece production

2602

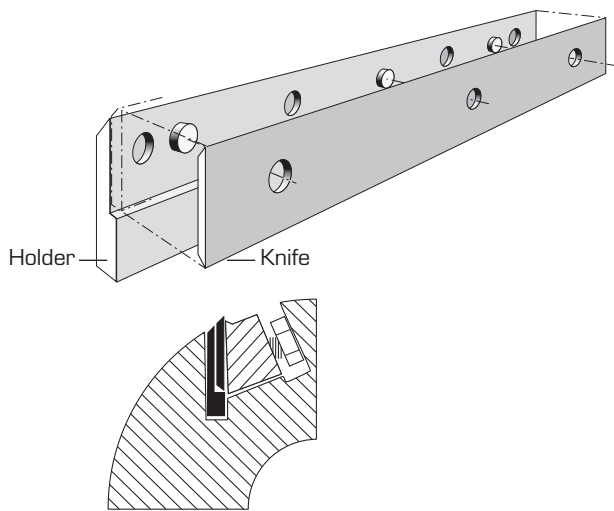
Priced per meter - For Lengths from 200 to 1000mm (8" to 40")

- 30 x 3mm (1-3/16" x 1/8")
- 35 x 3mm (1-3/8" x 1/8")

Thin Planing Knives
Precision ground and sharpened

2602 HSS M2

Standard Dimensions

**DESIGN:**

- Precision made knife holder for easy and accurate knife positioning
- Precision ground reversible knives

APPLICATION:

- For surface planing of solid wood
- Can be fitted into any planing toolheads and jointer heads
- On surface planers, jointers, four sided planers and moulders

For Planing Heads & Jointing Heads

Reduction of cost is one of the major features of our double-edged knife system. The price of double-edged knives is lower than re-usable knives, and the knife holder is a non-recurrent investment easily amortised by the savings of knife cost.

Knife cost is cut to 80% and set-up is decreased by 400%.

More detailed instructions are available with separate brochure.

KNIFE LENGTH		KNIFE HOLDER 25x3mm/1"x1/8"	DOUBLE EDGE KNIFE 18.6x1.0mm
mm	INCH	PART NO.	PART NO.
60	2-3/8"	29H060	299060
80	3-1/8"	29H080	299080
100	4"	29H100	299100
105		29H105	299105
120	4-3/4"	29H120	299120
125		29H125	299125
130	5-1/8"	29H130	299130
136		29H136	299136
140		29H140	299140
150	6"	29H150	299150
150 (3/4"H)	6"(3/4"H)	29H150-19	299150
160	6"	29H160	299160
170		29H170	299170
180	7"	29H180	299180
180 (3/4"H)	7"(3/4"H)	29H180-19	299180
186		29H186	299186
190		29H190	299190
190 (3/4"H)	7-1/2"(3/4"H)	29H190-19	299190
200	8"	29H200	299200
200 (3/4"H)	8"(3/4"H)	29H200-19	299200
210	8-1/4"	29H210	299210
230	9"	29H230	299230
240		29H240	299240
250	10"	29H250	299250
260		29H260	299260
300		29H300	299300

KNIFE LENGTH		KNIFE HOLDER 25x3mm/1"x1/8"	DOUBLE EDGE KNIFE 18.6x1.0mm
mm	INCH	PART NO.	PART NO.
305	12"	29H305	299305
310	12-1/4"	29H310	299310
350	13-3/4"	29H350	299350
360	14-1/8"	29H360	299360
400	15-3/4"	29H400	299400
410	16-1/4"	29H410	299410
420		29H420	299420
430		29H430	299430
450		29H450	299450
460	18-1/8"	29H460	299460
500		29H500	299500
510		29H510	299510
520		29H520	299520
530		29H530	299530
600		29H600	299600
610	24"	29H610	299610
630		29H630	299630
640		29H640	299640
650		29H650	299650
660		29H660	299660
710		29H710	299710
740		29H740	299740
760		29H760	299760
810		29H810	299810


DESIGN:

- Brazed tungsten carbide inlay
- Tungsten carbide inlay ground to a polish surface finish

APPLICATION:

- For surface planing hardwoods, exotic woods and solid woods with glue lines

The knives are ground flat, sharpened and honed with fine grit diamond wheels.

Especially suitable for: All hardwoods (particularly exotics), pressed wood, layered wood, hard paper, hardweave, and all laminated materials.

SPECIAL SIZES

Single Piece Production
Part No.: 3001 000 00

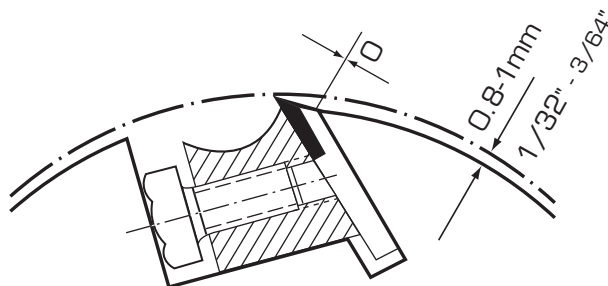
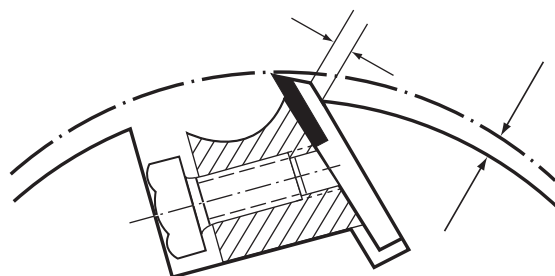
Length	(L)	100 to 810mm or 4" to 32"
Height	(H)	25, 30, 35mm or 1", 1-1/4", 1-1/8"
Thickness	(T)	3mm (1/8") and 4mm (5/32")

Thickness of Knife (T)	=	2.8mm (7/64")	+	5% Surcharge
Thickness of Knife (T)	=	2.5mm (3/32")	+	10% Surcharge
Thickness of Knife (T)	=	4.0mm (5/32")	+	10% Surcharge
Height of Knife (H)	=	40mm (1-1/2")	+	10% Surcharge
Height of Knife (H)	=	Less than 25mm (1")	+	10% Surcharge

Instructions for Setting Carbide Tipped Knives onto planing and jointing heads:

The cutting edge must not protrude more than 1.0mm, or 3/64", see sketches.

Correct setting: To protrude between 0.8 and 1.0mm (1/32" and 3/64").

Correct setting

Incorrect setting


DESIGN:

- Brazed tungsten carbide inlay
- Tungsten carbide inlay ground to a polish surface finish
- Depth of tungsten carbide inlay 11mm

APPLICATION:

- For surface planing hardwoods, exotic woods and solid woods with glue lines

The knives are ground flat, sharpened and honed with fine grit diamond wheels.

Especially suitable for: All hardwoods (particularly exotics), pressed wood, layered wood, hard paper, hardweave, and all laminated materials.



PART NO.	DIMENSIONS L x H x T MM
30 060 253	60x25x3
30 080 253	80x25x3
30 090 253	90x25x3
30 100 253	100x25x3
30 110 253	110x25x3
30 120 253	120x25x3
30 130 253	130x25x3
30 140 253	140x25x3
30 150 253	150x25x3
30 180 253	180x25x3
30 200 253	200x25x3
30 210 253	210x25x3
30 230 253	230x25x3
30 250 253	250x25x3
30 260 253	260x25x3
30 300 253	300x25x3
30 310 253	310x25x3
30 350 253	350x25x3
30 410 253	410x25x3
30 510 253	510x25x3

PART NO.	DIMENSIONS L x H x T MM
30 060 303	60x30x3
30 080 303	80x30x3
30 090 303	90x30x3
30 100 303	100x30x3
30 110 303	110x30x3
30 120 303	120x30x3
30 130 303	130x30x3
30 140 303	140x30x3
30 150 303	150x30x3
30 160 303	160x30x3
30 170 303	170x30x3
30 180 303	180x30x3
30 200 303	200x30x3
30 210 303	210x30x3
30 230 303	230x30x3
30 240 303	240x30x3
30 250 303	250x30x3
30 260 303	260x30x3
30 300 303	300x30x3
30 310 303	310x30x3
30 350 303	350x30x3
30 400 303	400x30x3
30 410 303	410x30x3
30 450 303	450x30x3
30 500 303	500x30x3
30 510 303	510x30x3
30 600 303	600x30x3
30 610 303	610x30x3
30 630 303	630x30x3
30 640 303	640x30x3
30 710 303	710x30x3
30 810 303	810x30x3

PART NO.	DIMENSIONS L x H x T MM
30 060 353	60x35x3
30 080 353	80x35x3
30 090 353	90x35x3
30 100 353	100x35x3
30 120 353	120x35x3
30 130 353	130x35x3
30 150 353	150x35x3
30 170 353	170x35x3
30 180 353	180x35x3
30 200 353	200x35x3
30 210 353	210x35x3
30 230 353	230x35x3
30 250 353	250x35x3
30 260 353	260x35x3
30 300 353	300x35x3
30 310 353	310x35x3
30 350 353	350x35x3
30 400 353	400x35x3
30 410 353	410x35x3
30 450 353	450x35x3
30 500 353	500x35x3
30 510 353	510x35x3
30 600 353	600x35x3
30 610 353	610x35x3
30 630 353	630x35x3
30 640 353	640x35x3
30 710 353	710x35x3
30 810 353	810x35x3


DESIGN:

- Brazed tungsten carbide inlay
- Tungsten carbide inlay ground to a polish surface finish
- Depth of tungsten carbide inlay 7.5mm for knives 5/8 height, all others supplied with 11mm inlay

APPLICATION:



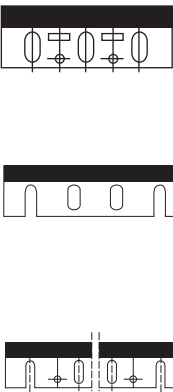

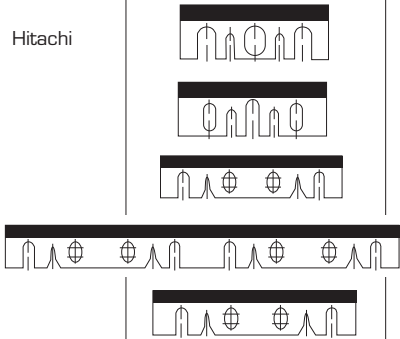
- For surface planing hardwoods, exotic woods and solid woods with glue lines

The knives are ground flat, sharpened and honed with fine grit diamond wheels.

Especially suitable for: All hardwoods (particularly exotics), pressed wood, layered wood, hard paper, hardweave, and all laminated materials.

PART NO.	DIMENSIONS L x H x T INCHES
30040051	4"x5/8"x1/8"
30040071	4"x7/8"x1/8"
30051061	5-1/16"x3/4"x1/8"
30060051	6"x5/8"x1/8"
30060061	6"x3/4"x1/8"
30060071	6"x7/8"x1/8"
30060101	6"x1"x1/8"
30061061	6-1/16"x3/4"x1/8"
30062071	6-1/8"x3/4"x1/8"
30068101	6-1/2"x1"x1/8"
30080051	8"x5/8"x1/8"
30080061	8"x3/4"x1/8"
30080071	8"x7/8"x1/8"
30080101	8"x1"x1/8"
30084121	8-1/4"x1-1/4"x1/8"
30120051	12"x5/8"x1/8"
30120061	12"x3/4"x1/8"
30120071	12"x7/8"x1/8"
30120101	12"x1" x1/8"
30121051	12-1/4"x5/8"x1/8"
30121061	12-1/4"x3/4"x1/8"
30121101	12-1/4"x1" x1/8"
30122071	12-1/2"x15/16"x1/8"

PART NO.	DIMENSIONS L x H x T INCHES
30131065	13-1/8"x1-1/16"x5/32"
30141061	14-1/8"x3/4"x1/8"
30180115	18"x1-1/8"x5/32"
30190061	19"x1-1/16"x1/8"
30200101	20"x1"x1/8"
30240115	24"x1-1/8"x5/32"
30240145	24"x1-1/2"x5/32"
30250051	25"x5/8"x1/8"
30250061	25"x3/4"x1/8"
30250121	25"x1-1/4"x1/8"
30250125	25"x1-1/4"x5/32"
30300141	30"x1-1/2"x1/8"

MACHINE	SHAPE	MODEL	DIMENSIONS	LxWxT mm	CARBIDE PART NO.	HSS PART NO.
AEG		HTH 75 EH 82 H 822		76x20x3 82x18x3	30 76 20 3 30 82 18 3	20 76 20 3 20 82 18 3
Black & Decker			3-1/4" x 1-1/8" x 1/8"	82x29x3	30 82 29 3	20 82 29 3
Makita		1900 B 1923 B 1100 1125 1001 1911 B 1805 1805 N 1805 B 1806 B	3-1/4" x 1-1/8" x 1/8" 4-3/8" x 1-1/8" x 1/8" 6-1/16" x 1-1/4" x 1/8" 6-11/16" x 1-3/8" x 1/8"	82x29x3 110x29x3 155x32x3 170x35x3	3M 82 29 3 31 10 29 3 31 55 32 3 31 70 35 3	2M 82 29 3 21 10 29 3 21 55 32 3 2 1 70 35 3
Skil		60506 96 H	3" x 1-1/8" x 1/8" 3-1/4" x 1-1/8" x 1/8"	77x28.6x3.15 82x29x3	30 77 28 3 3S 82 29 3	20 77 28 3 2S 82 29 3
Hitachi		F20A,FU20,FP20 F30A F50A F1000A,P100F F1000	3-1/4" x 1-7/64" x 1/8" 3-5/8" x 1-3/16" x 1/8" 6-9/64" x 1-7/32" x 1/8" 126-1/2" x 1-3/8" x 5/32" 6-5/16" x 1-3/8" x 5/32"	82x28x3 92x30x3 156x31x3 317x35x4 160x35x4	30 82 28 3 30 92 30 3 30 156 31 3 30 317 35 4 30 160 35 4	20 82 28 3 20 92 30 3 20 156 31 3 20 317 35 4 20 160 35 4



C-04 n max 15000

MEC HW

94.8x30x31.75

ITS06

100%
DIN 9137

D

TOOLHEADS with DISPOSABLE
CARBIDE KNIVES / Reversible Inserts

TOOLHEADS WITH DISPOSABLE CARBIDE KNIVES

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1T4751I - 1T4755M	D43	1TS06	D30
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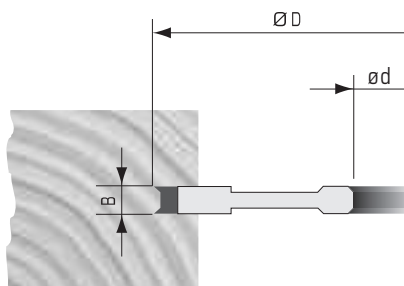

DESIGN:

- High tensile steel body with 4 teeth and 4 spurs
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

- For chip-free grooving of lamello wood joints
- For solid wood with and against the grain and laminated panels
- On Lamello and ELU machines for biscuit joints

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
1T13L	100	4	22	4	4	7700-13200


Replacement Parts

DESCRIPTION	KNIFE	KNIFE SCREW SPUR SCREW	THREADED RING FOR KNIFE	SPUR	THREADED RING FOR SPUR
PART NO.	320301	W500401	W501101	301414	W501001
DIMENSIONS	18x18x1.95	M4x3.2	12x1.7	14x14x1.2	10x1.65



TORX WRENCH
PART NO. W400401 - T9

1T500 GROOVING CUTTERS



DESIGN:

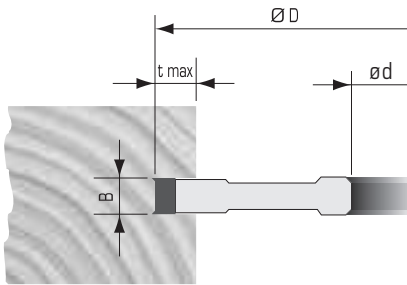
- High tensile steel body with 8 teeth and 4 spurs
- Reversible tungsten carbide inserts with 2 cutting edges for the teeth and 4 cutting edges for the spurs

APPLICATION:

- For grooving solid wood, plywood and laminated panels
- On shapers, double-end tenoners and moulders

METRIC SIZES

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	RPM MIN.-MAX.
1T5001M	140	8	1-1/4"	50	4	4	32	5500-9200
1T5002M	140	10	1-1/4"	50	4	4	32	5500-9200
1T5003M	140	12	1-1/4"	50	4	4	32	5500-9200
1T5004M	180	8	1-1/4"	60	4	4	45	4200-7200
1T5005M	180	10	1-1/4"	60	4	4	45	4200-7200
1T5006M	180	12	1-1/4"	60	4	4	45	4200-7200



Other sizes available upon request.

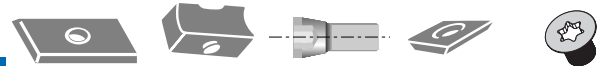
IMPERIAL SIZES

PART NO.	DIAM. ØD	KERF B	BORE ød	MAX. BORE ød	NO. TEETH	NO. SPURS	t-MAX.	RPM MIN.-MAX.
1T5001I	5-1/2"	1/4"	1-1/4"	2"	4	4	1-1/4"	5500-9200
1T5002I	5-1/2"	3/8"	1-1/4"	2"	4	4	1-1/4"	5500-9200
1T5003I	5-1/2"	1/2"	1-1/4"	2"	4	4	1-1/4"	5500-9200
1T5004I	7-3/32"	1/4"	1-1/4"	2-3/8"	4	4	1-3/4"	4200-7200
1T5005I	7-3/32"	3/8"	1-1/4"	2-3/8"	4	4	1-3/4"	4200-7200
1T5006I	7-3/32"	1/2"	1-1/4"	2-3/8"	4	4	1-3/4"	4200-7200

Other sizes available upon request.



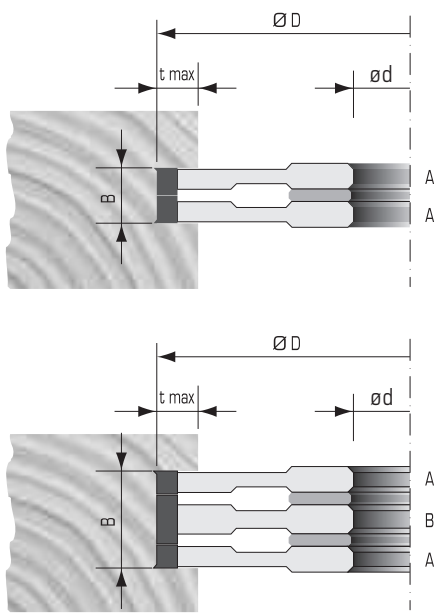
TORX WRENCH
PART NO. W400420 T20



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T5001M	PART NO.	300800	W350021	W502403	301404	W500002
1T5004M	DIMENSIONS	7.65x12x1.5	6.8	M5x18	14x14x2	M5x7
1T5002M	PART NO.	300960	W350022	W502403	301404	W500002
1T5005M	DIMENSIONS	9.6x12x1.5	7.6	M5x18	14x14x2	M5x7
1T5003M	PART NO.	301160	W350023	W502403	301404	W500002
1T5006M	DIMENSIONS	11.6x12x1.5	9	M5x18	14x14x2	M5x7
1T5001I	PART NO.	300600	W302801	W501313	301404	W500004
1T5004I	DIMENSIONS	6x12x1.5	5.2	M4x16	14x14x2	M5x5.1
1T5002I	PART NO.	300920	W350022	W502403	301404	W500002
1T5005I	DIMENSIONS	9.2x12x1.5	7.6	M5x18	14x14x2	M5x7
1T5003I	PART NO.	301230	W350023	W502403	301404	W500002
1T5006I	DIMENSIONS	12.3x12x1.5	9	M5x18	14x14x2	M5x7

1T600 ADJUSTABLE GROOVING CUTTERS



DESIGN:

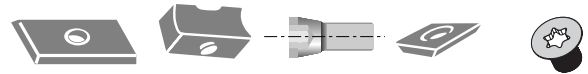
- High tensile steel body with either 2 or 4 teeth and 2 or 4 spurs on outside cutters and 2 teeth on centre cutter
- Toolheads and spacers secured with pins
- Cutting width adjustable with shims in 0.1mm (0.004") increments
- Reversible tungsten carbide inserts with 2 or 4 cutting edges

APPLICATION:

- For grooving solid woods, plywood and laminated panels
- On Shapers, double-end tenoners and moulders

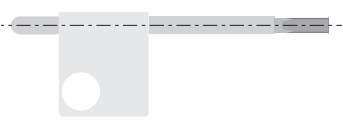
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød INCH	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	CUTTER TYPE	RPM MIN.-MAX.
1T6001M	160	8-15	1-1/4"	40	4	4	30	A	4800-7200
1T6007M	160	15	1-1/4"	40	2	-	30	B	4800-7200
1T6006M	160	8-15	1-1/4"	40	4	8	30	A	4800-7200
1T6008M	160	12.5-24	1-1/4"	40	4	4	30	A	4800-7200
1T6002M	160	16-30	1-1/4"	40	4	4	30	A	4800-7200
1T6003M	200	8-15	1-1/4"	40	4	4	50	A	3800-5800
1T6009M	200	15	1-1/4"	40	2	-	50	B	3800-5800
1T6004M	250	8-15	1-1/4"	40	8	8	50	A	3100-4600

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T6001M/6M	PART NO.	300800	W350021	W502403	301404	W500002
1T6003M/4M	DIMENSIONS	7.65x12x1.5	6.8	M5x18	14x14x2	M5x7
1T6008M	PART NO.	301200	W350023	W502403	301404	W500002
	DIMENSIONS	12x12x1.5	9	M5x18	14x14x2	M5x7
1T6002M	PART NO.	301500	W350004	W502402	301404	W500002
	DIMENSIONS	15x12x1.5	11	M7x21	14x14x2	M5x7
1T6007M	PART NO.	301500	W350004	W502402		
1T6009M	DIMENSIONS	15x12x1.5	11	M7x21		



TORX WRENCH
PART NO. W400420 T20

- FOR TOOL NO.
- 1T6001M 1T6004M
 - 1T6002M 1T6006M
 - 1T6003M 1T6008M



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

- FOR TOOL NO.
- 1T6002M
 - 1T6007M
 - 1T6009M



DESIGN:

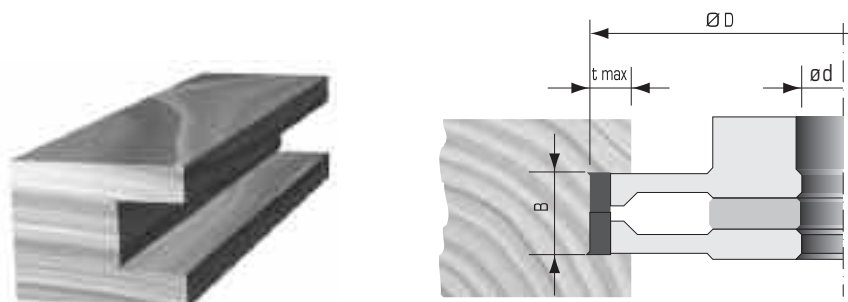
- High tensile steel body with 4 teeth and 4 spurs
- Cutting width adjustable with threaded flange
- Reversible tungsten carbide inserts with 2 cutting edges on the teeth and 4 cutting edges on the spurs

APPLICATION:

- For precision grooves in solid wood, plywood and laminated panels
- On shapers and double-end tenoners

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	RPM MIN.-MAX.
1T6104M	160	8-15	40mm	50	4	4	27	4700-8000

Other sizes available upon request.



Replacement Parts

DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
PART NO.	300800	W350021	W502403	301404	W500002
DIMENSIONS	7.65x12x1.5	6.8	M5x18	14x14x2	M5x7



TORX WRENCH
PART NO. W400420 T20

1T620 ADJUSTABLE GROOVING CUTTERS



DESIGN:

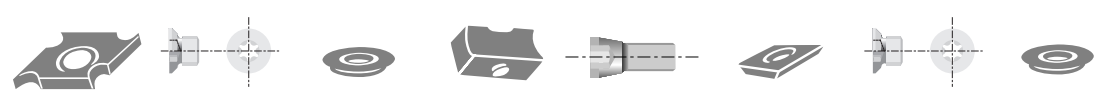
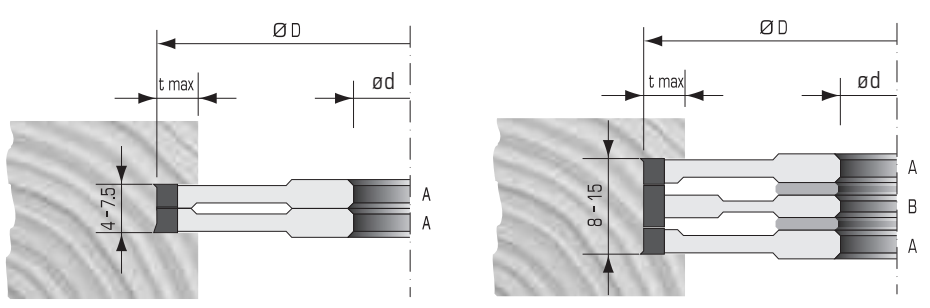
- High tensile steel body with 4 teeth and 4 spurs on outside cutters and 2 teeth on center cutter
- Toolheads and spacers secured with pins
- Cutting width adjustable with shims in 0.1mm (0.004") increments
- Reversible tungsten carbide inserts with 2 or 4 cutting edges

APPLICATION:

- For grooving solid woods, plywood and laminated panels
- On shapers and double-end tenoners

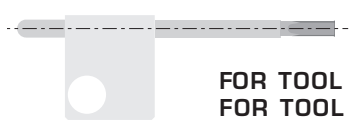
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	CUTTER TYPE	RPM MIN.-MAX.
1T6201M	180	4-7.5	1-1/4"	40	8	4	32	A	4200-7400
1T6204M	180	7.65	1-1/4"	40	2	-	32	B	4200-7400

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	KNIFE SCREW	THREADED RING	WEDGE	WEDGE SCREW	SPUR SCREW	SPUR SCREW	THREADED RING
1T6201M	PART NO.	320301	W500401	W501101			301414	W500401	W501001
	DIMENSIONS	18x18x1.95	M4x3.2	12x1.7			14x14x1.2	M4x3.2	10x1.65
1T6204M	PART NO.	300800			W350021	W502403			
	DIMENSIONS	7.65x12x1.5			6.8	M5x18			



FOR TOOL NO. 1T6201M ... USE PART NO. W400401 T9
 FOR TOOL NO. 1T6204M ... USE PART NO. W400420 T20



DESIGN:

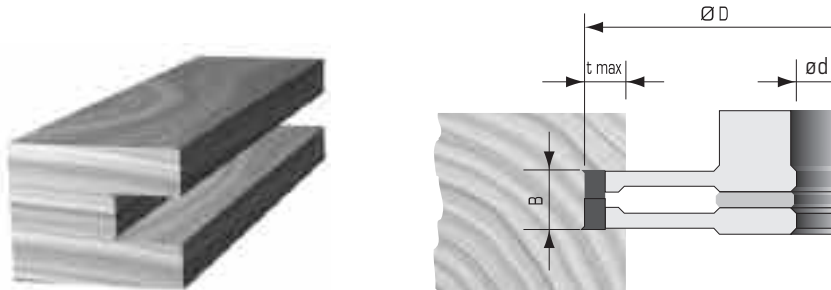
- High tensile steel body with 8 teeth and 4 spurs
- Cutting width adjustable with threaded flange
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

- For precision grooves in solid wood, plywood and laminated panels
- On shapers and double-end tenoners

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød INCH	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	RPM MIN.-MAX.
1T6301M	180	4-7.5	1-1/4"	35	8	4	32	4200-7400

Other sizes available upon request.



Replacement Parts

DESCRIPTION	KNIFE	KNIFE SCREW	THREADED RING FOR KNIFE	SPUR	SPUR SCREW	THREADED RING FOR SPUR
PART NO.	320301	W500401	W501101	301414	W500401	W501001
DIMENSIONS	18x18x1.95	M4x3.2	12x1.7	14x14x1.2	M4x3.2	10x1.65



TORX WRENCH
PART NO. W400401 T9



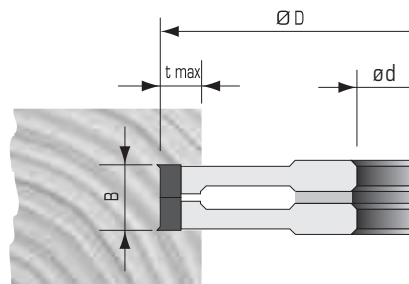
DESIGN:

- High tensile steel body with 4 teeth and 4 spurs
- Toolheads secured together with pins
- Cutting width adjustable with shims in 0.1mm (0.004") increments
- Reversible tungsten carbide inserts with 2 cutting edges on the teeth and 4 cutting edges on the spurs

APPLICATION:

- For grooving and rabbeting solid woods, plywood and laminated panels
- On shapers, double-end tenoners and moulders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	t-MAX. mm	RPM MIN.-MAX.
1T6401M	160	26-39	1-1/4"	40	4	4	43	4800-8300
1T6403M	160	36-59	1-1/4"	40	4	4	43	4800-8300
1T6405M	160	56-99	1-1/4"	40	4	4	43	4800-8300



Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T6401M	PART NO.	302000	W350005	W502402	301404	W500002
	DIMENSIONS	20x12x1.5	16	M7x21	14x14x2	M5x7
1T6403M	PART NO.	303000	W350007	W502402	301404	W500002
	DIMENSIONS	30x12x1.5	26	M7x21	14x14x2	M5x7
1T6405M	PART NO.	305000	W350009	W502402	301404	W500002
	DIMENSIONS	50x12x1.5	46	M7x21	14x14x2	M5x7



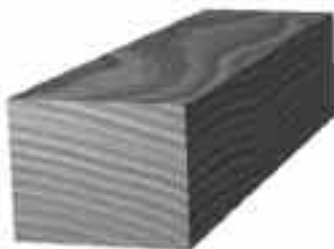
T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

**DESIGN:**

- High tensile steel body with 2 or 4 straight teeth
- Reversible tungsten carbide inserts with 2 cutting edges

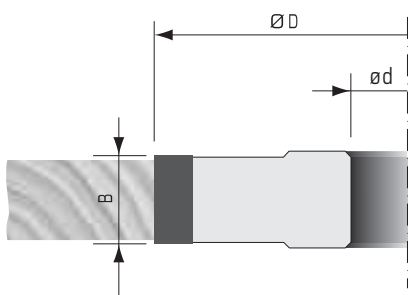
APPLICATION:

- For planing and jointing solid woods with the grain and in uncoated panels.
- On shapers and double-end tenoners

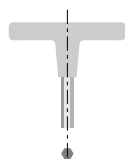


PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T4710M	85	100	1-1/4"	30	2	9000-15700
1T4711M	100	50	1-1/4"	35	2	7700-13300
1T4712M	125	30	1-1/4"	50	2	6100-10700
1T4713M	125	50	1-1/4"	50	2	6100-10700
1T4714M	125	50	1-1/4"	50	4	6100-10700

Other sizes available upon request.

**Replacement Parts**

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T4712M	PART NO.	303000	W350007	W502402
	DIMENSIONS	30x12x1.5	26	M7x21
1T4711M 1T4713M 1T4714M	PART NO.	305000	W350009	W502402
	DIMENSIONS	50x12x1.5	46	M7x21
	PART NO.	310000	W350018	W502402
1T4710M	DIMENSIONS	100x13x2.2	94	M7x21



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

1T472 RABBETING TOOLHEADS



DESIGN:

- High tensile steel body with 2 or 4 teeth, alternating shear angle and with 4 spurs
- Tungsten carbide reversible inserts with 2 cutting edges on the teeth and 4 cutting edges on the spurs

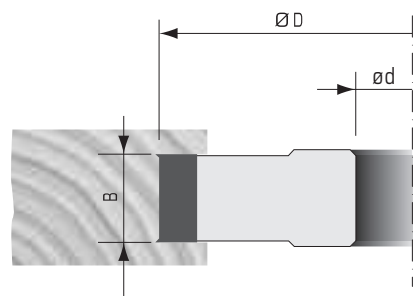
APPLICATION:

- For jointing and rabbeting solid woods with the grain and in uncoated panels
- On shapers, double-end tenoners and moulders



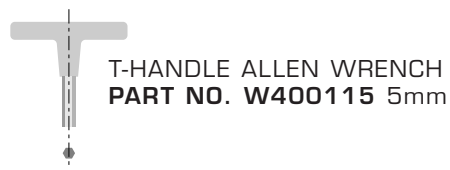
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
1T4721M	125	30	1-1/4"	50	2	4	6100-10700
1T4722M	125	50	1-1/4"	50	2	4	6100-10700
1T4723M	125	50	1-1/4"	50	4	4	6100-10700
1T4724M	140	50	1-1/4"	50	4	4	5500-9500
1T4726M	180	50	1-1/4"	50	4	4	4300-7500

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T4721M	PART NO.	303000	W350007	W502402	301404	W500002
	DIMENSIONS	30x12x1.5	26	M7x21	14x14x2	M5x7
1T4722M/4M	PART NO.	305000	W350009	W502402	301404	W500002
	DIMENSIONS	50x12x1.5	46	M7x21	14x14x2	M5x7





DESIGN:

- High tensile steel body, (2+2) or (3+3) teeth with opposing (compression) shear angle for chip free edges
- Reversible tungsten carbide inserts with 2 cutting edges

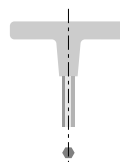
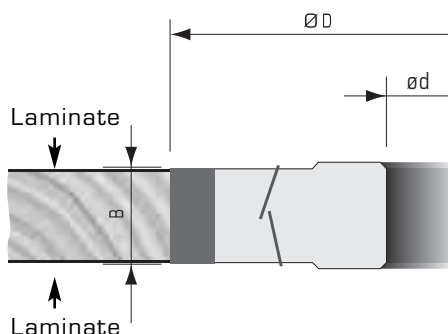
APPLICATION:

- For chip-free jointing of laminated panels
- On shapers, double-end tenoners and edgebanders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ødmm	NO. TEETH	RPM MIN.-MAX.
1T4801M	125	56	1-1/4"	50	2+2	6100-10700
1T4803M	125	56	1-1/4"	50	3+3	6100-10700
1T4805M	150	56	1-1/4"	50	2+2	5000-9000
1T4807M	150	56	1-1/4"	50	3+3	5000-9000
1T4809M	180	56	1-1/4"	50	3+3	4200-7500



Other sizes available upon request.

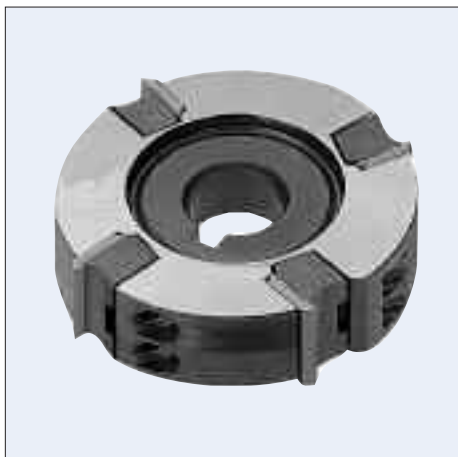


T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm



Replacement Parts

MANUFACTURED DATE	DESCRIPTION	KNIFE	WEDGE SCREW	WEDGE
2004 - 2009	PART NO.	303000	W350007	W502402
	DIMENSIONS	30x12x1.5	26	M7x21
2009 - PRESENT	PART NO.	303000	W360019	W501403
	DIMENSIONS	30x12x1.5	26	M8x16



DESIGN:

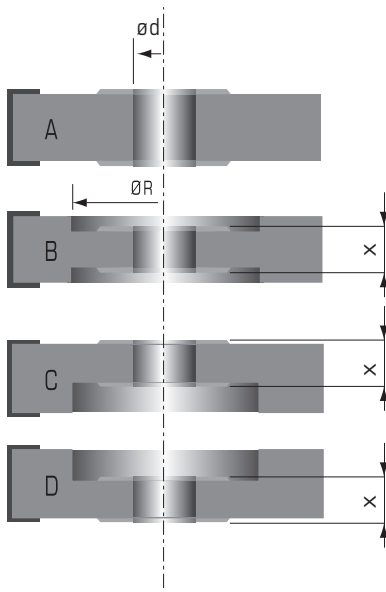
- High tensile steel body with 4 or 6 straight teeth
- Reversible tungsten carbide inserts with 2 cutting edges

APPLICATION:

- For flush trimming solid wood, veneer, and plastic edge bands
- On single and double edgebanders

SPECIAL PRODUCTION

DIAM. RANGE ØD mm range	KERF B mm	NO. TEETH
50 to 70	15	4
50 to 70	20	4
50 to 70	30	4
71 to 80	15	4
71 to 80	20	4
71 to 80	30	4
81 to 100	15	4
81 to 100	20	4
81 to 100	30	4
50 to 70	15	6
50 to 70	20	6
50 to 70	30	6
71 to 80	15	6
71 to 80	20	6
71 to 80	30	6
81 to 100	15	6
81 to 100	20	6
81 to 100	30	6



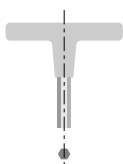
WHEN ORDERING SPECIFY:

- CUTTER TYPE (A,B,C or D)
- DIMENSION X
- RECESS ØR (Recess Diameter)
- Keyway Dimensions

Replacement Parts



DESCRIPTION	KNIFE	KNIFE	KNIFE	WEDGE	WEDGE	WEDGE	WEDGE SCREW
PART NO.	301500	302000	303000	W300203	W300204	W300205	W501301
DIMENSIONS	15x12x1.5	20x12x1.5	30x12x1.5	13	18	28	M6x12



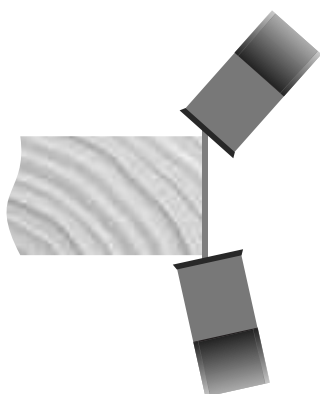
T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm

**DESIGN:**

- High tensile steel body with 4 straight cutting edges
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

- For flush trimming solid wood, veneer, and plastic edge bands
- On HOMAG and EMA edgebanders

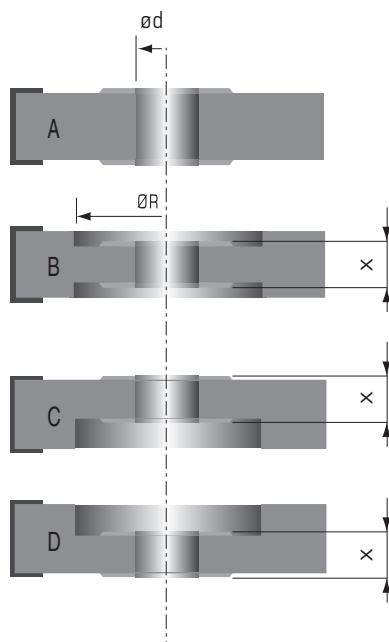
**SPECIAL PRODUCTION**

DIAM. ØD mm	KERF B mm	MAX BORE ød mm	NO. TEETH
70	14	22	4

WHEN ORDERING SPECIFY:

- CUTTER TYPE (A,B,C or D)
- DIMENSION X
- RECESS ØR (Recess Diameter)

Also available in "HSK 25R" for HOMAG and IMA edgebanders.

**Replacement Parts**

DESCRIPTION	SPUR	SPUR SCREW
PART NO.	301404	W500002
DIMENSIONS	14x14x2	M5x7

1T190 TOOLHEADS FOR EDGE BANDING MACHINES



DESIGN:

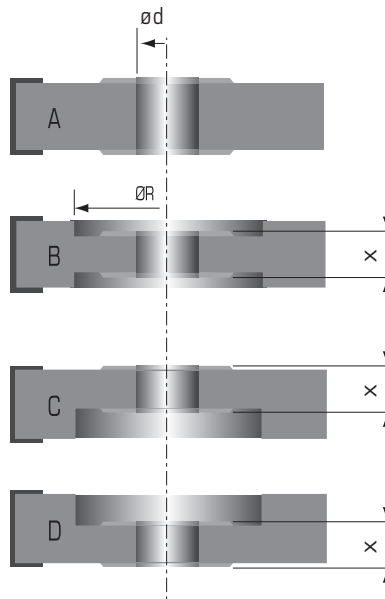
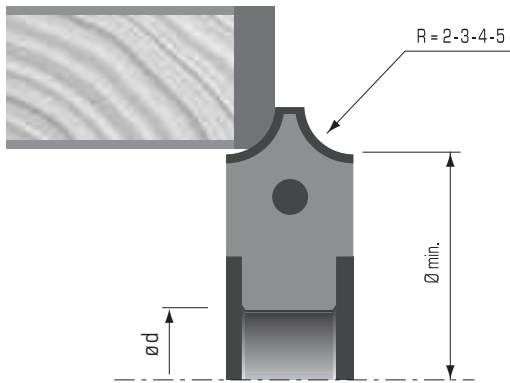
- High tensile steel body with 3 straight teeth
- Disposable tungsten carbide inserts
- For right and left hand rotation

APPLICATION:

- For rounding of edge bands in solid wood and plastic edges
- On single and double edgebanders

SPECIAL PRODUCTION

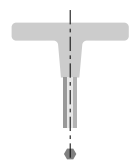
DIAM. ØD mm	KERF B mm	MIN. DIAM. mm	MAX BORE ød mm	NO. TEETH
73	16	61	22	3
83	16	70	25	3



WHEN ORDERING SPECIFY:

- CUTTER TYPE (A, B, C or D)
- DIMENSION X
- RECESS ØR (Recess Diameter)
- RADIUS R

Replacement Parts							
DESCRIPTION	WEDGE	KNIFE R2	KNIFE R3	KNIFE R4	KNIFE R5	WEDGE SCREW	
PART NO.	W302503	401002	401003	401004	401005	W501301	
DIMENSIONS	15	16x17.5x2	16x17.5x2	16x17.5x2	16x17.5x2	M6x12	



T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm



DESIGN:

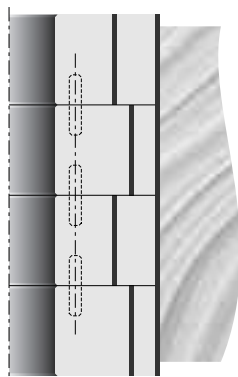
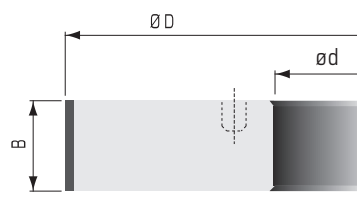
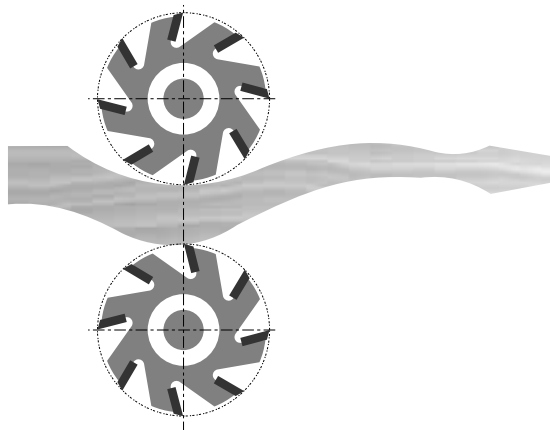
- High tensile steel body with 3 straight teeth
- Cutters pinned together
- Toolheads can be stacked to cut various wood thickness
- Reversible Tungsten carbide inserts with 2 cutting edges

APPLICATION:

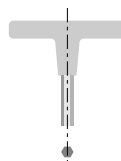
- For jointing and shaping solid wood components
- On shapers and CNC machines

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T4101M	90	30	31.75	31.75	3	8500-17000
1T4102M	100	30	31.75	35	3	7500-15000

Other sizes available upon request.



Replacement Parts			
DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
PART NO.	303000	W300205	W501303
DIMENSIONS	30x12x1.5	28	M8x10



T-HANDLE ALLEN WRENCH
PART NO. W400114 4mm



DESIGN:

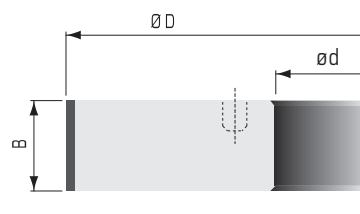
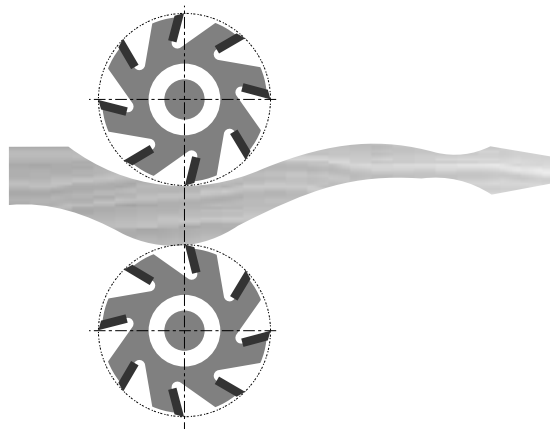
- High tensile steel body with 4 straight teeth
- Cutters pinned together
- Toolheads can be stacked to cut various wood thickness
- Reversible Tungsten carbide inserts with 4 cutting edges and chipbreakers
- Chipbreaker allows for heavier stock removal

APPLICATION:

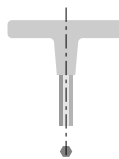
- For jointing and shaping solid wood components
- On shapers and CNC machines

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T411M	100	15	1-1/4"	35	4	7500-13000

Other sizes available upon request.



Replacement Parts			
DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
PART NO.	301505	W300701	W501302
DIMENSIONS	15x15x2	14.5	M6x16



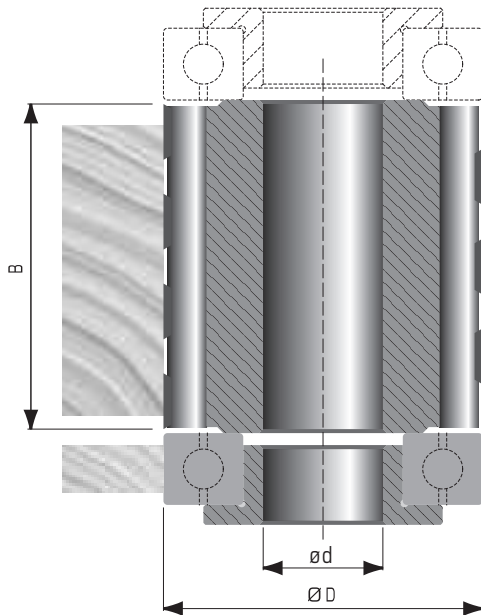
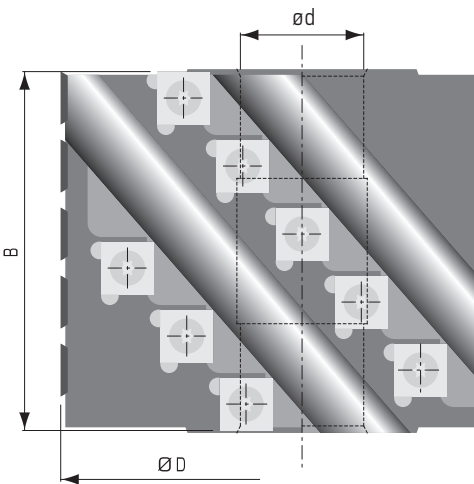
T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm


DESIGN:

- High tensile steel body with 4 helical wings
- Tungsten carbide reversible inserts with 4 cutting edges
- Staggered teeth and helical design provide for greater stock removal and superior surface finish
- Ball bearing guide and flange sleeve can be supplied upon request
- Toolheads can be stacked to cut various wood thickness

APPLICATION:

- For jointing and shaping solid wood components
- On shapers



PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	MAX. BORE ød mm	NO. WINGS	TOTAL NO. KNIVES	RPM MIN.-MAX.
1T4121M	80	81.5	1-1/4"	35	4	14	9500-15000
1T4123M	80	126.5	1-1/4"	35	4	20	9500-15000

Other sizes available upon request.

BEARING GUIDE

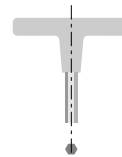
PART NO.	DIAM. ØDmm	BORE ødmm
W057114-80	80	1-1/4"

FLANGE SLEEVE

PART NO.	O.D. ØDmm	I.D. ød
054-40-3175	40	1-1/4"

Replacement Parts

DESCRIPTION	KNIFE	KNIFE SCREW
PART NO.	301404	W500003
DIMENSIONS	14x14x2	M5x14



T-HANDLE TORX WRENCH
PART NO. W400420 T20

1T200

MULTI-ANGLE TOOLHEADS



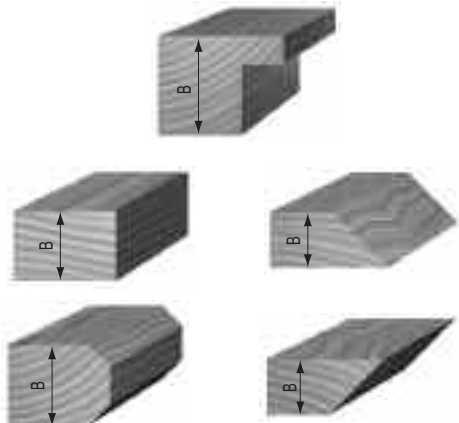
DESIGN:

- High Tensile steel body with 2 teeth
- Progressively adjustable from 0° to 70°
- Additional interlocking cutter for rabbet cuts available upon request, toolhead must be set to the 0° position
- Tungsten carbide reversible inserts with 2 cutting edges

APPLICATION:

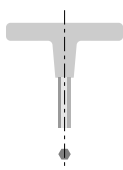
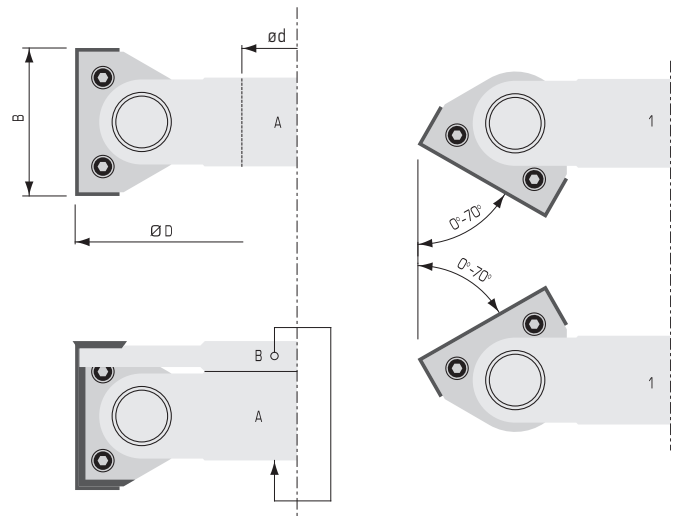
- For jointing and chamfering solid wood and panel materials veneered and plastic coated
- On shapers, double-end tenoners and moulders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	CUTTER TYPE	RPM MIN.-MAX.
1T2001M	160	50	1-1/4"	40	2		A	5000-7500
1T2002M	160	8	1-1/4"	40		2	B	5000-7500
1T2004M	170	50	50mm	50	2		A	4700-7000
1T2005M	170	8	50mm	50		2	B	4700-7000



Other sizes available upon request.

0° - B max= 48	35° - B max= 39
5° - B max= 48	45° - B max= 33
10° - B max= 47	50° - B max= 30
15° - B max= 46	55° - B max= 26
20° - B max= 45	60° - B max= 23
25° - B max= 43	65° - B max= 19
30° - B max= 41	70° - B max= 15



T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm

ALLEN WRENCH
PART NO. W400007 8mm



DESCRIPTION	KNIFE	SPUR	SPUR SCREW	WEDGE	WEDGE SCREW
PART NO.	305000			W302602	W501401
DIMENSIONS	50x12x1.5			47	M6x12
PART NO.		301404	W500002		
DIMENSIONS		14x14x2.0	M5x7		



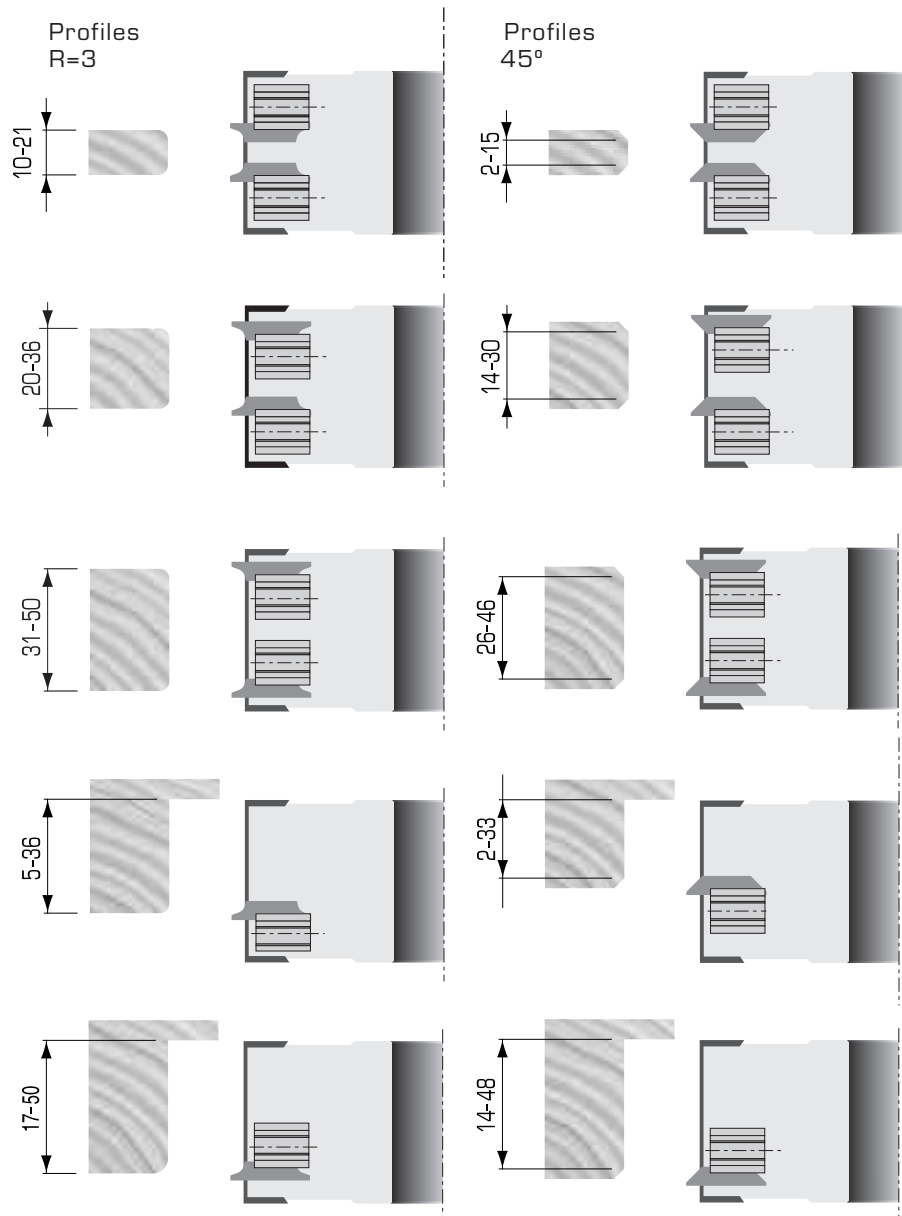
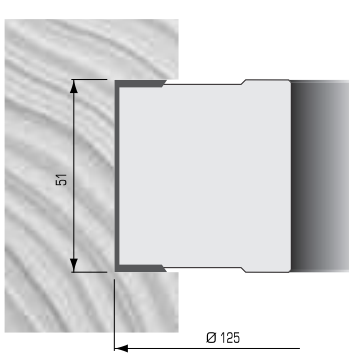
DESIGN:

- High tensile steel body with 2 teeth, alternating shear angle
- Reversible tungsten carbide inserts with 2 and 4 cutting edges
- Toolhead supplied in a wooden box complete with set of tungsten carbide knives for chamfering, corner rounding, jointing and rabbeting
- Adjustable for various wood thickness

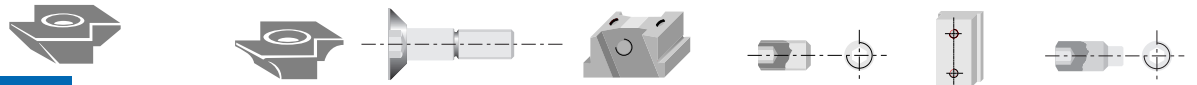
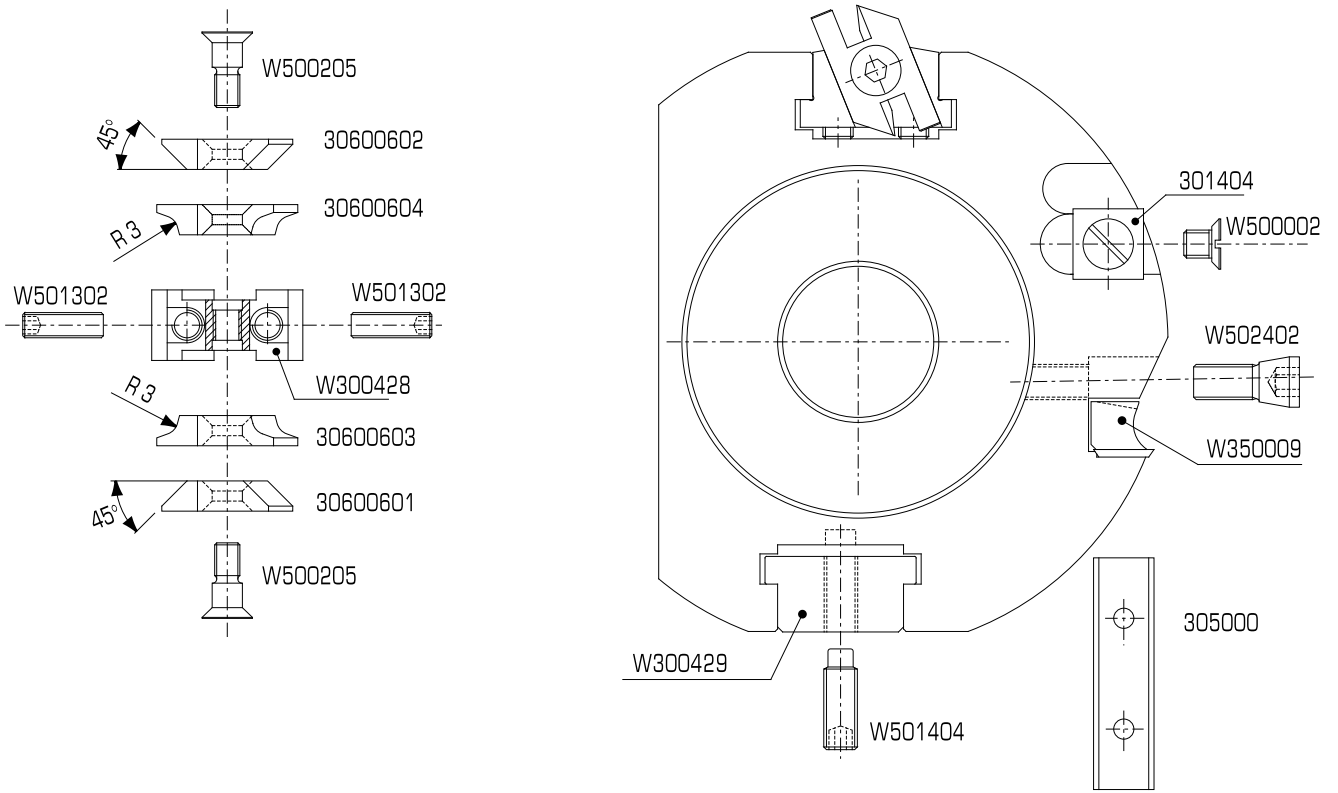
APPLICATION:

- For chamfering, corner rounding, jointing and rabbeting solid wood, MDF, particle board and plywood
- On shapers, double-end tenoners and moulders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød INCH	MAX. BORE ød mm	NO. TEETH	NO. SPURS	NO. CHAMFER & RADIUS INSERTS	RPM MIN.-MAX.
1T511	125	51	1-1/4"	50	2	4	4	6000-10500

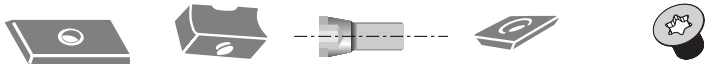


1T511 CORNER ROUNDING/CHAMFERING TOOLHEAD



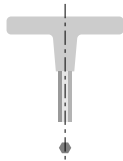
Replacement Parts

DESCRIPTION	RH/LH CHAMFER KNIFE (45°)	RH/LH ROUNDING KNIFE R=3	HEX SCREW	INSERTS ADJUSTMENT UNIT	SCREW	FILLER BLOCKS	SCREW
PART NO.	30600601/02	30600603/04	W500205	W300428	W501302	W300429	W501404
DIMENSIONS	27x6x16	27 x 6 x 16	M6x15	14x30x16.5	M6x16	48x30x15	M8x20



Replacement Parts

DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
PART NO.	305000	W350009	W502402	301404	W500002
DIMENSIONS	50x12x1.5	46	M7x21	14x14x2	M5x7



T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm
PART NO. W400114 4mm
PART NO. W400115 5mm

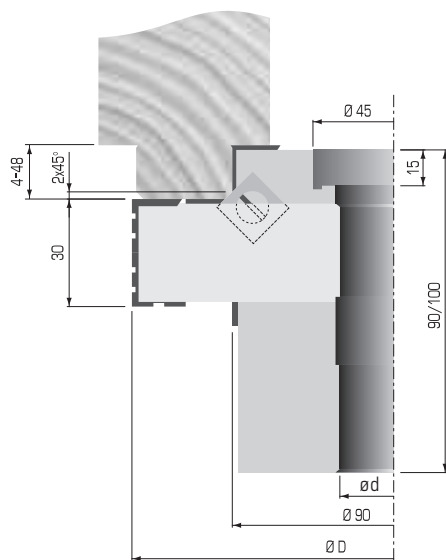


DESIGN:

- High tensile steel body with 6+4 teeth and 2+4 spurs
- Adjustable for producing bevelled tenons from 4 to 48mm long
- Reversible tungsten carbide inserts with 2 and 4 cutting edges

APPLICATION:

- For producing tenons in solid wood
- On tenoning machines
- For BALESTRINI machines **Part No. 1T5201M**
- For BACCI and PADE machines **Part No. 1T5202M**



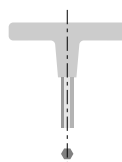
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
1T5201M	145	90	30	35	6+4	2+4	5000-9000
1T5202M	145	100	30	35	6+4	2+4	5000-9000

Other sizes available upon request.

Repl. Parts					
DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
PART NO.	305000	W300206	W501301	301404	W500002
DIMENSIONS	50x12x1.5	48	M6x12	14x14x2	M5x7

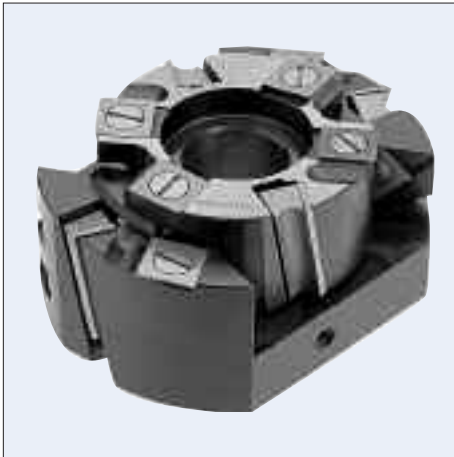
Repl. Parts					
DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	WEDGE	SPUR SCREW
PART NO.	301505	W300702	W501302	W300406	W501702
DIMENSIONS	15x15x2	27.4	M6x16	24x15x15	M5x16

NOTE: Two knives per wing required
PART NO. 301505



T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm
PART NO. W400114 4mm

1T522 TOOLHEADS FOR TENONING MACHINES



DESIGN:

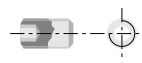
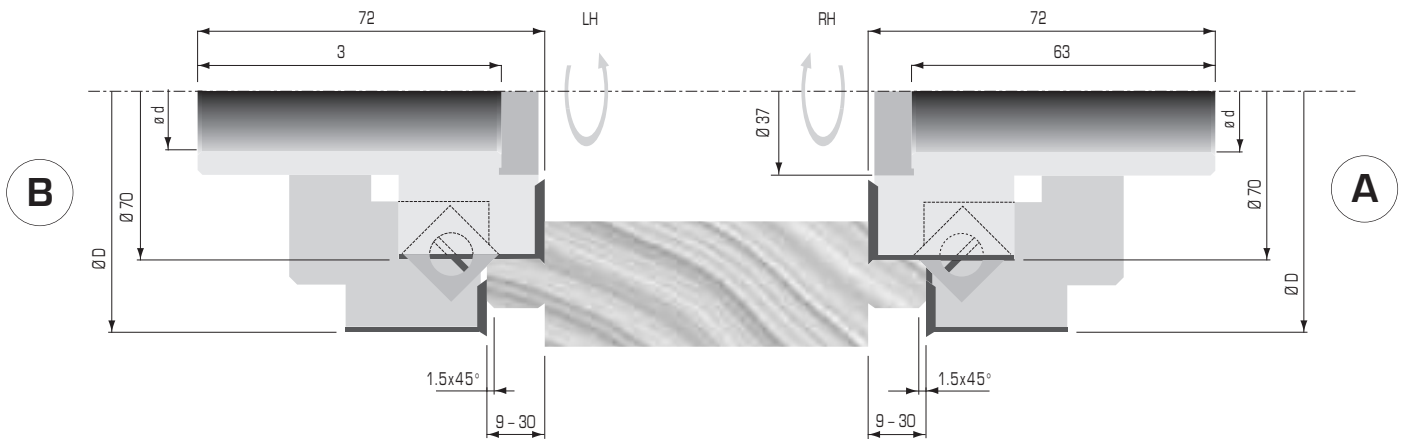
- High tensile steel body with 4+2 teeth and 2+4 spurs
- Adjustable for producing bevelled tenons from 9 to 30mm long
- Reversible tungsten carbide inserts with 2 and 4 cutting edges

APPLICATION:

- For producing tenons in solid wood
- On tenoning machines such as BALESTRINI, PADE, and BACCI

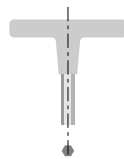
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	MAX. BORE ød mm	NO. TEETH	NO. SPURS	CUTTER TYPE	RPM MIN.-MAX.
1T5221M	100	72	25	25	4+2	2+4	B	7500-12000
1T5222M	100	72	25	25	4+2	2+4	A	7500-12000

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T5221M	PART NO.	1T522A	W300205	W501301	301404	W500002
	DIMENSIONS	30x12x1.5	28	M6x12	14x14x2	M5x7
1T5222M	PART NO.	1T522B	W300205	W501301	301404	W500002
	DIMENSIONS	30x12x1.5	28	M6x12	14x14x2	M5x7



T-HANDLE ALLEN WRENCH
PART NO. W400113 3mm

1T530 MITRE JOINT TOOLHEADS 45°



DESIGN:

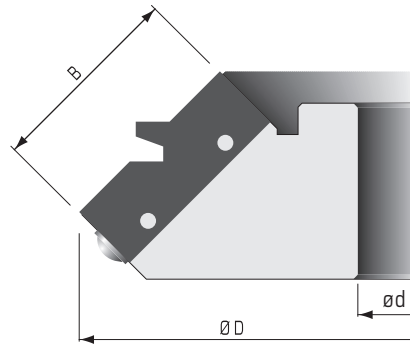
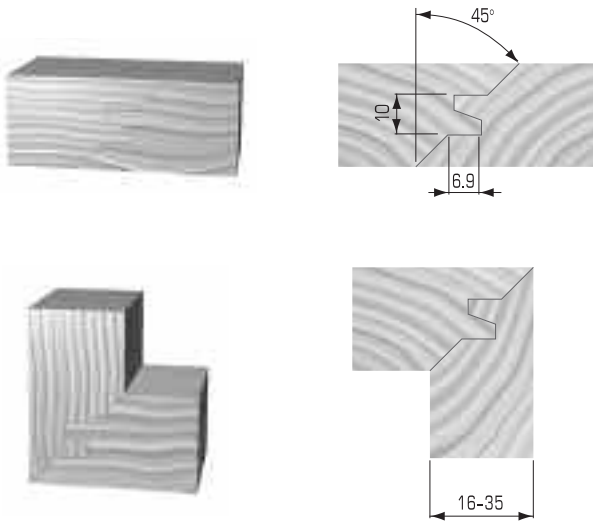
- High tensile steel body with 2 teeth
- Produces 45° lock mitre Joints
- Disposable tungsten carbide inserts

APPLICATION:

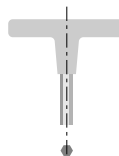
- For cutting 45° lock mitre joints in solid wood and panel materials in two steps: First with the workpiece in horizontal position and then with workpiece in vertical position
- Suitable for various material thickness from 5/8" to 1-3/8"
- On shapers

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ødmm	NO. TEETH	RPM MIN.-MAX.
1T5301M	170	50	1-1/4"	40	2	4500-7800

Other sizes available upon request.



Replacement Parts	KNIFE	WEDGE	WEDGE SCREW
DESCRIPTION			
PART NO.	1T530A	W350009	W502402
DIMENSIONS	50x25x2	46	M7x21



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

1T540 MITRE JOINT TOOLHEADS 45°



DESIGN:

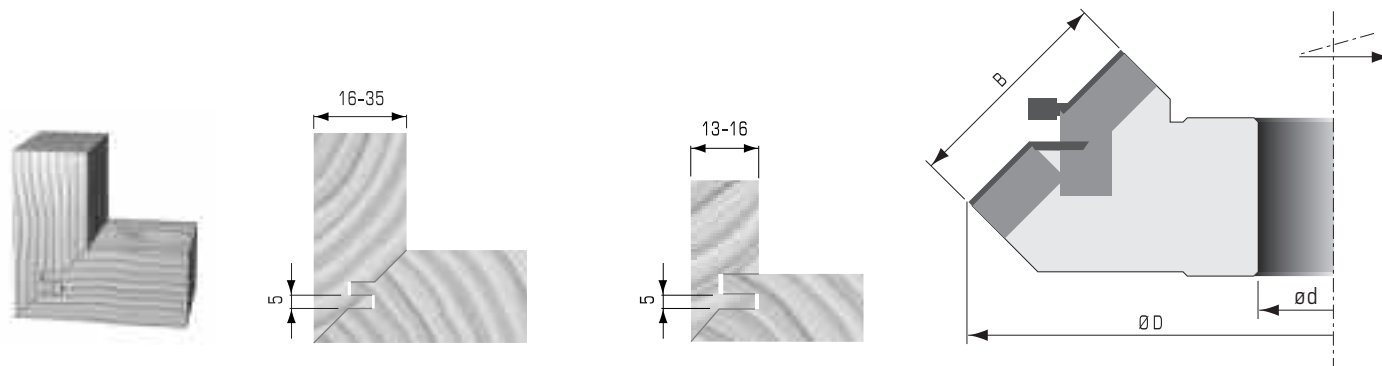
- High tensile steel body with staggered tooth design
- Produces 45° lock mitre Joints
- Reversible tungsten carbide inserts with 2 or 4 cutting edges

APPLICATION:

- For cutting 45° lock mitre joints in solid wood and panel materials in two steps: First with the workpiece in horizontal position and then with workpiece in vertical position
- Suitable for various material thickness from 5/8" to 1-3/8"
- On shapers

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	MAX. BORE ød mm	NO. TEETH	NO. SPURS	NO. GROOVING INSERTS G	RPM MIN.-MAX.
1T5401M	170	52	35	50	4+2	2	2	4500-8500

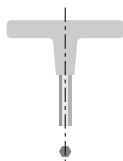
Bore can be opened or bushed to spindle diameter
Other sizes available upon request.



Replacement Parts



DESCRIPTION	KNIFE	SPUR	SPUR SCREW	WEDGE	WEDGE SCREW	RH GROOVING INSERTS G	SCREW FOR GROOVING INSERTS
PART NO.	302000	301404	W500002	W350005	W502402	307814	W500205
DIMENSIONS	20x12x1.5	14x14x2	M5x7	16	M7x21	48x5x16	M6x15



T-HANDLE ALLEN WRENCH
PART NO. W400114 4mm
PART NO. W400115 5mm



DESIGN:

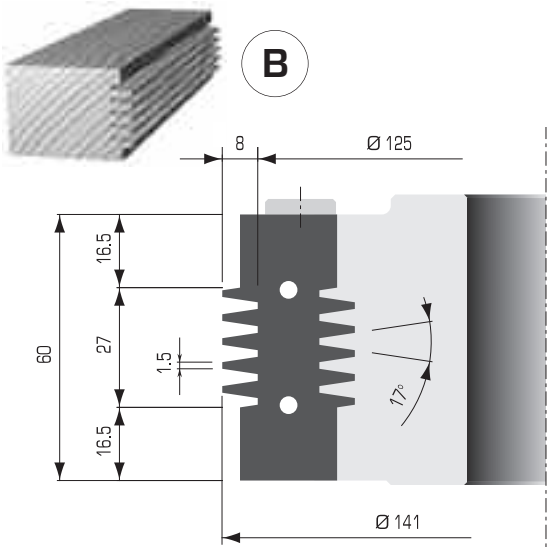
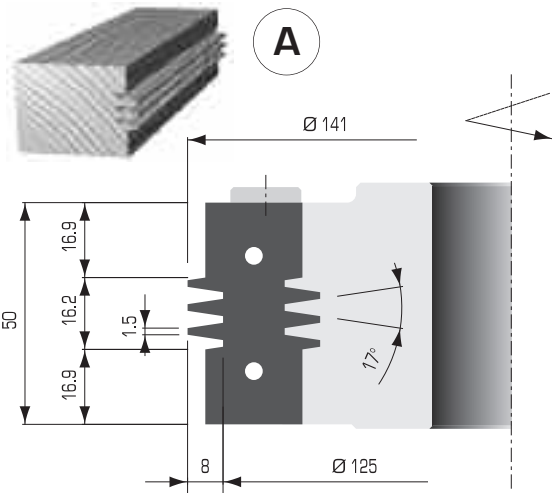
- High tensile steel body with 4 straight teeth
- Knives are positioned in the toolhead to produce "loose" joints
- By adjusting two opposite positioning screws with the use of the graduated scale (see page D25), "tight" or "loose" joints can be obtained, depending on requirements
- Reversible tungsten carbide inserts with 2 cutting edges

APPLICATION:

- For cutting edge glue joints in solid wood and panel material
- On shapers, and moulders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	PROFILE TYPE	RPM MIN.-MAX.
1T5501M	141	50	1-1/4"	50	4	A	5600-9500
1T5503M	141	60	1-1/4"	50	4	B	5600-9500
1T5505M	145	50	1-1/4"	50	4	C	5600-9500
1T5507M	145	60	1-1/4"	50	4	D	5600-9500

Other sizes available upon request.

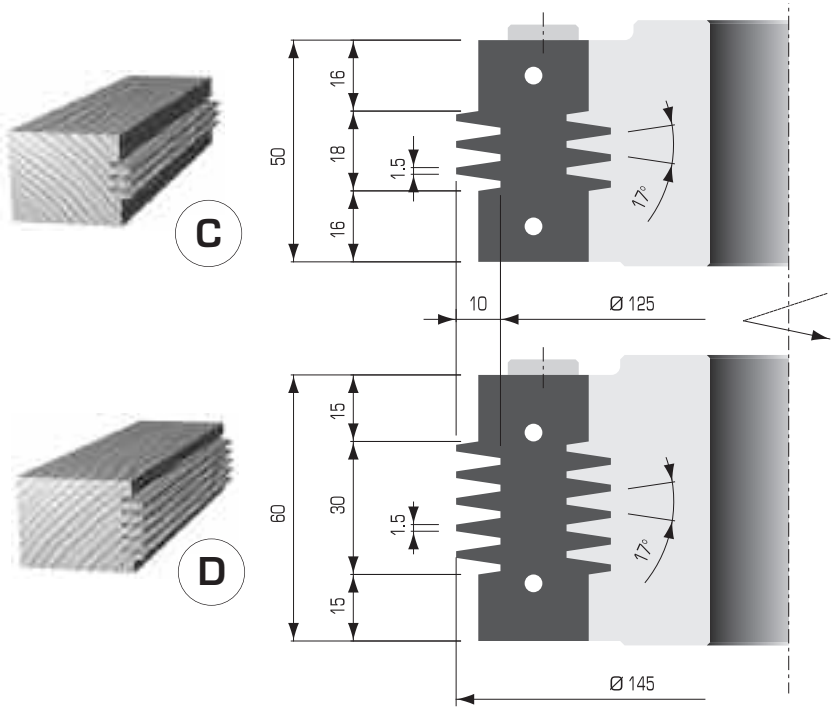


ALLEN WRENCH
 PART NO. W400001 2.5mm
 PART NO. W400003 4mm

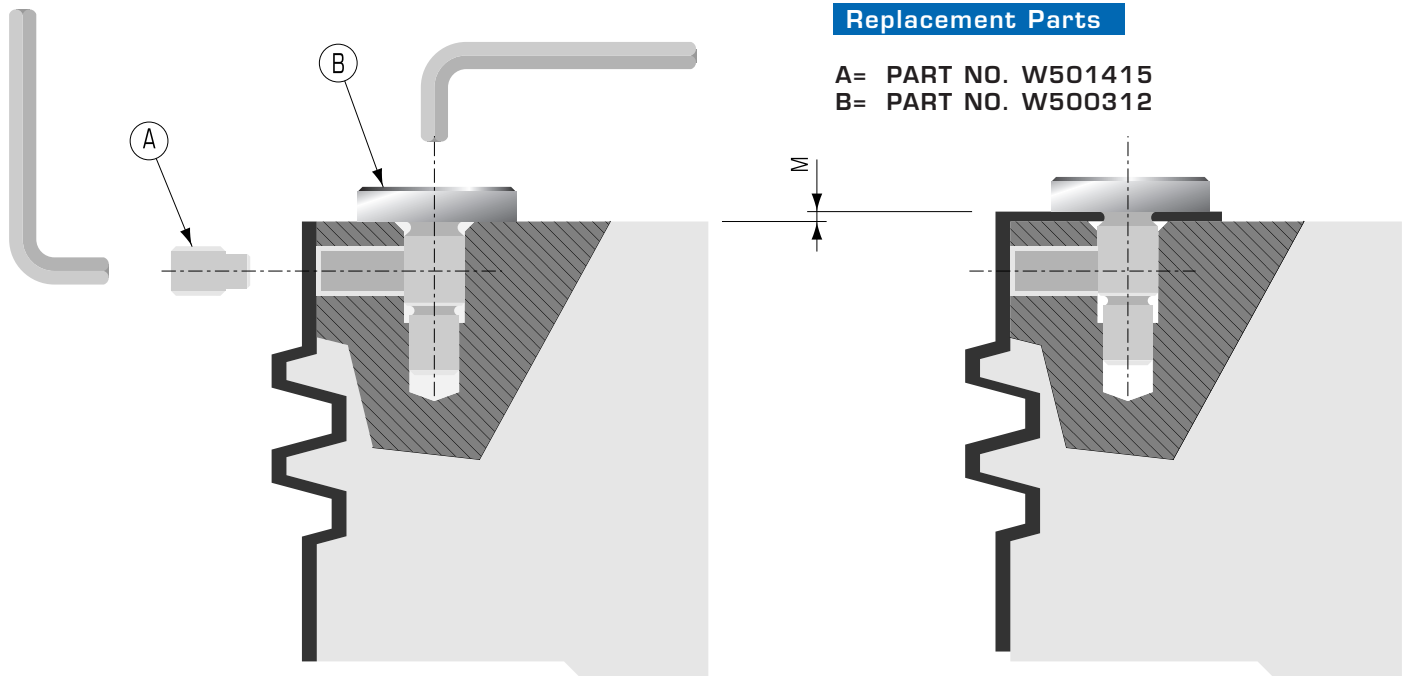


Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T5501M	PART NO.	1T550A	W303008	W501410
	DIMENSIONS	50x30x2	48	M8x25
1T5503M	PART NO.	1T550B	W303009	W501410
	DIMENSIONS	60x30x2	58	M8x25
1T5505M	PART NO.	1T550C	W303006	W501410
	DIMENSIONS	50x35x2	48	M8x25
1T5507M	PART NO.	1T550D	W303007	W501410
	DIMENSIONS	60x35x2	58	M8x25

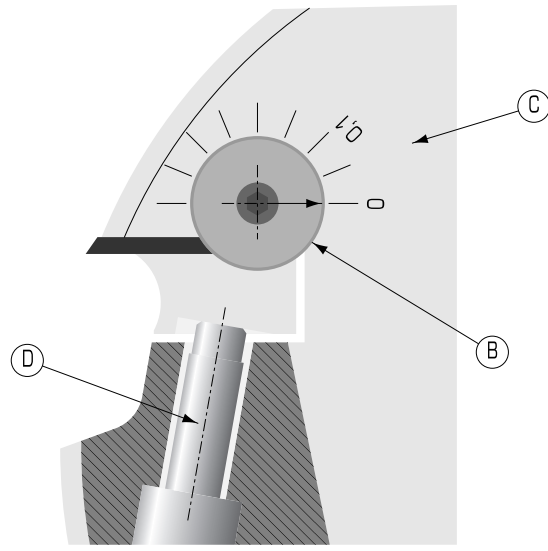
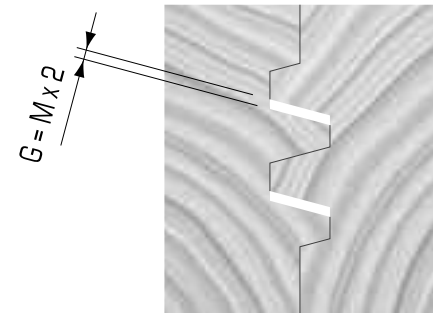
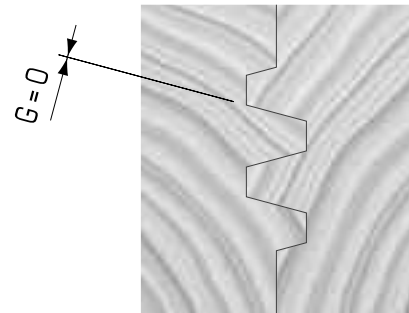


1T550 GLUE JOINT TOOLHEADS - ADJUSTABLE



Replacement Parts

- A= PART NO. W501415
- B= PART NO. W500312



Instructions to modify type of joint with or without play by turning the graduated screw B (one notch = M 0.05mm).

INSTRUCTIONS:

- 1) Loosen screws A and B
- 2) Place screw B reference on the notch of the desired measure (e.g. 0.1)
- 3) Lock screw A
- 4) Release screws D
- 5) Place the knife against screw B
- 6) Lock screws D

In this case the joint will have a G play of 0.2mm



DESIGN:

- High tensile steel body with 2 straight teeth
- Knives are positioned in the toolhead to produce "loose" joints
- By adjusting one of the positioning screws with the use of the graduated scale (see page D25), "tight" or "loose" joints can be obtained, depending on requirements
- Reversible tungsten carbide inserts with 2 cutting edges

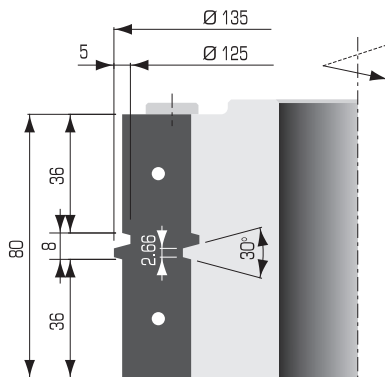
APPLICATION:

- For cutting edge glue joints in solid wood and panel material
- On shapers and moulders

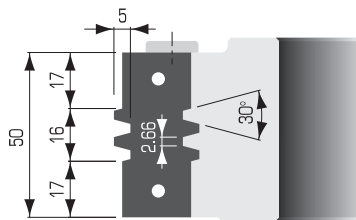
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	CUTTER TYPE	RPM MIN.-MAX.
1T5551M	135	80	1-1/4"	50	2	A	5600-9500
1T5553M	135	50	1-1/4"	50	2	B	5600-9500
1T5555M	135	60	1-1/4"	50	2	C	5600-9500
1T5557M	135	80	1-1/4"	50	2	D	5600-9500
1T5559M	131	80	1-1/4"	50	2	E	5600-9500

Other sizes available upon request.

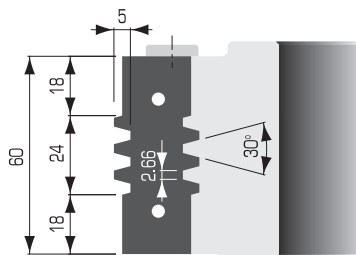
A



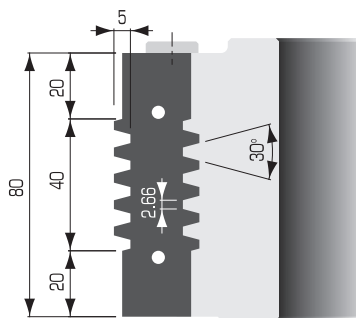
B



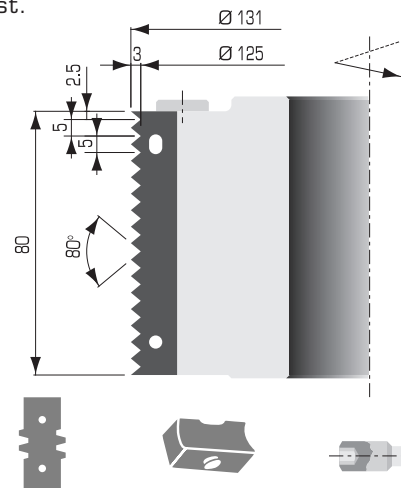
C



D



E



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T5551M	PART NO.	1T555A	W303013	W501410
	DIMENSIONS	80x25x2	78	M8x25
1T5553M	PART NO.	1T555B	W303004	W501410
	DIMENSIONS	50x25x2	48	M8x25
1T5555M	PART NO.	1T555C	W303012	W501410
	DIMENSIONS	60x25x2	58	M8x25
1T5557M	PART NO.	1T555D	W303013	W501410
	DIMENSIONS	80x25x2	78	M8x25
1T5559M	PART NO.	1T555E	W303005	W501404
	DIMENSIONS	80x13x2.2	78	M8x20

ALLEN WRENCH
 PART NO. W400001 2.5mm
 PART NO. W400003 4mm

1T560 CORNER ROUNDING TOOLHEADS



DESIGN:

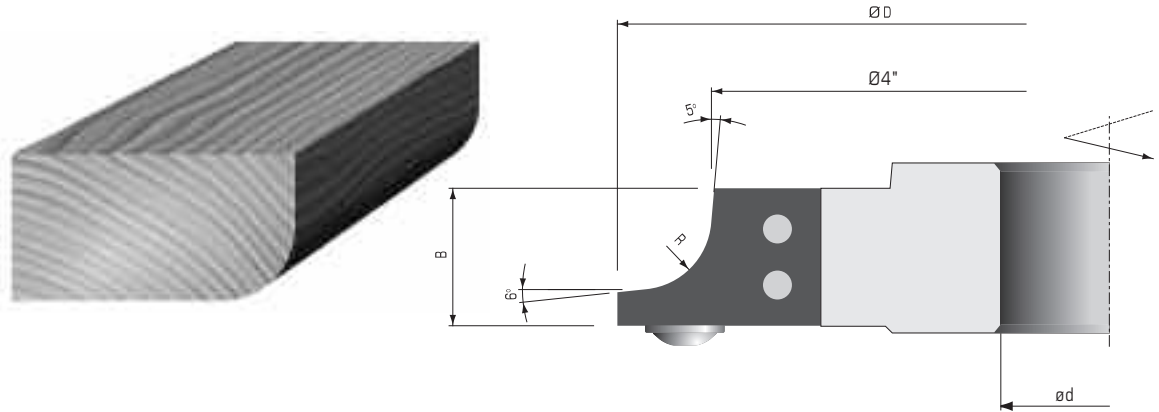
- High tensile steel body with 3 teeth on a shear angle
- Disposable tungsten carbide insert knives

APPLICATION:

- For producing quarter round edges in solid wood and panel materials
- On shapers and double-end tenoners

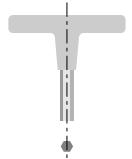
PART NO.	DIAM. ØD mm	KERF B mm	RADIUS R	BORE ød	MAX. BORE mm	NO. TEETH	RPM MIN.-MAX.
1T5601M	124	20	1/4"	1-1/4"	50	3	6100-10600
1T5603M	124	20	3/8"	1-1/4"	50	3	6100-10600
1T5605M	143	30	1/2"	1-1/4"	50	3	5300-9100
1T5607M	143	30	5/8"	1-1/4"	50	3	5300-9100
1T5608M	143	30	3/4"	1-1/4"	50	3	5300-9100

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T5601M	PART NO.	1T560A	W070761	W501404
	DIMENSIONS	15x25x2	17.6x11x9.5	M8x20
1T5603M	PART NO.	1T560B	W070761	W501404
	DIMENSIONS	20x25x2	17.6x11x9.5	M8x20
1T5605M	PART NO.	1T560C	W049971	W501316
	DIMENSIONS	30x25x2	27x11x9.5	M6x20
1T5607M	PART NO.	1T560D	W049971	W501316
	DIMENSIONS	30x30x2	27x11x9.5	M6x20
1T5608M	PART NO.	1T560E	W049971	W501316
	DIMENSIONS	30x35x2	27x11x9.5	M6x20



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

1T565 BEADING & COVE TOOLHEADS



DESIGN:

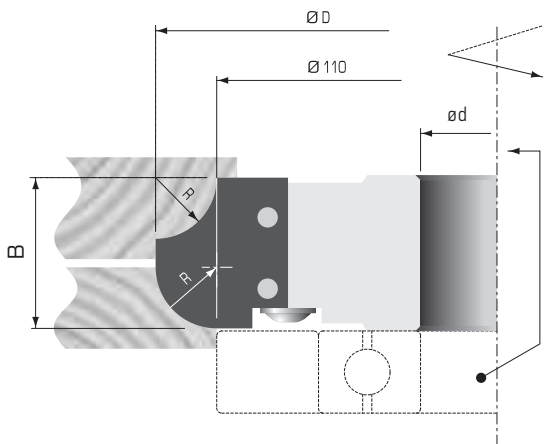
- High tensile steel body with 3 straight teeth
- Disposable tungsten carbide insert knives

APPLICATION:

- For producing bead and cove edges in solid wood and panel materials
- On shapers and double-end tenoners

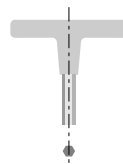
PART NO.	DIAM. ØD mm	KERF B mm	RADIUS R	BORE ød	MAX. BORE mm	NO. TEETH	RPM MIN.-MAX.
1T5651M	114	20	1/4"	1-1/4"	50	3	6600-11500
1T5653M	121	25	3/8"	1-1/4"	50	3	6100-10600
1T5655M	127	30	1/2"	1-1/4"	50	3	5800-10200
1T5657M	133	35	5/8"	1-1/4"	50	3	5700-9800
1T5658M	140	50	3/4"	1-1/4"	50	3	5500-9400

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T5651M	PART NO.	1T565A	W340006	W501404
	DIMENSIONS	20x25x2	15	M8x20
1T5653M	PART NO.	1T565B	W049801	W501404
	DIMENSIONS	25x25x2	20	M8x20
1T5655M	PART NO.	1T565C	W340026	W501316
	DIMENSIONS	30x30x2	26	M6x20
1T5657M	PART NO.	1T565D	W340027	W501316
	DIMENSIONS	35x30x2	31	M6x20
1T5658M	PART NO.	1T565E	W049771	W501404
	DIMENSIONS	50x35x2	46	M8x20



T-HANDLE ALLEN WRENCH
PART NO. W400114 4mm

1T570 HALF ROUND TOOLHEADS



DESIGN:

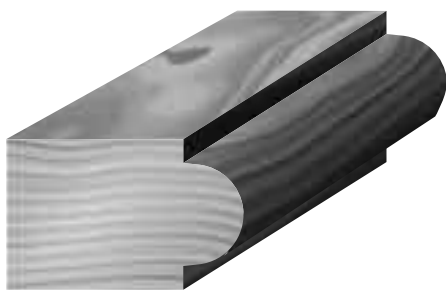
- High tensile steel body with 3 straight teeth
- Disposable tungsten carbide insert knives

APPLICATION:

- For producing half round edges in solid wood and panel materials
- On shapers, double-end tenoners and moulders

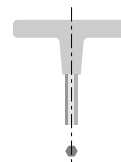
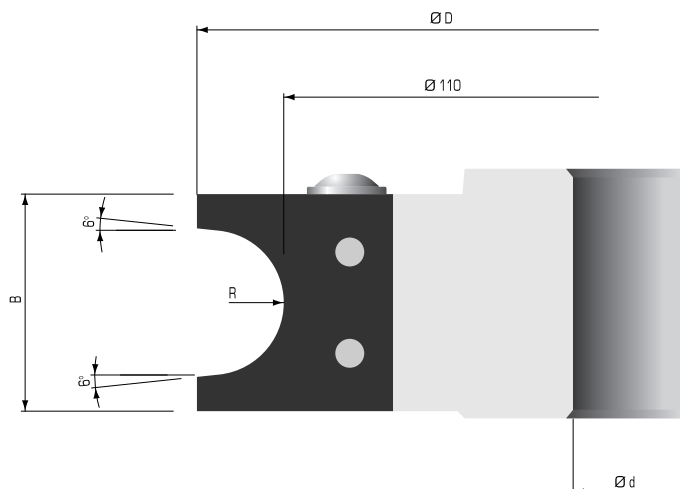
PART NO.	DIAM. ØD mm	KERF B mm	RADIUS R	CUTTER OPENING B1 mm	BORE ød	MAX BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T5701M	122	20	1/4"	13.0	1-1/4"	50	3	6100-10600
1T5703M	126	30	3/8"	19.5	1-1/4"	50	3	5800-10200
1T5705M	133	35	1/2"	26.0	1-1/4"	50	3	5700-9800
1T5707M	137	40	5/8"	32.3	1-1/4"	50	3	5500-9400
1T5708M	142	50	3/4"	38.5	1-1/4"	50	3	5300-9100

Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T5701M	PART NO.	1T570A	W049801	W501404
	DIMENSIONS	25x25x2	20	M8x20
1T5703M	PART NO.	1T570B	W340026	W501316
	DIMENSIONS	30x25x2	26	M6x20
1T5705M	PART NO.	1T570C	W0081201	W501404
	DIMENSIONS	35x30x2	32x11x9.5	M8x20
1T5707M	PART NO.	1T570D	W049631	W501404
	DIMENSIONS	40x30x2	36x11x9.5	M8x20
1T5708M	PART NO.	1T570E	W049771	W501404
	DIMENSIONS	50x35x2	46	M8x20



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

1TS06 STILE AND RAIL TOOLHEAD SET



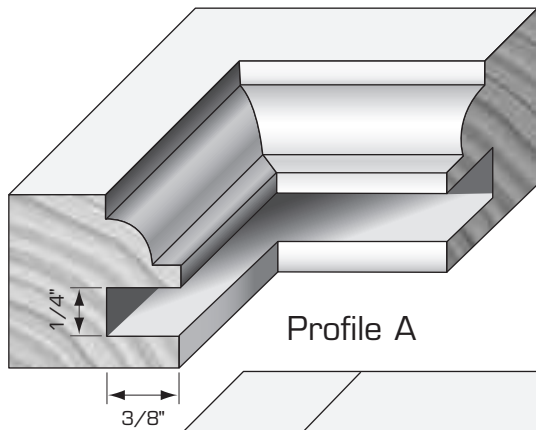
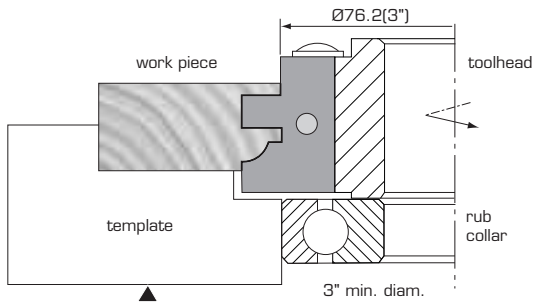
DESIGN:

- High tensile steel body with 3 straight teeth
- Set of 2 toolheads and 24 tungsten carbide insert knives to produce 4 different profiles "A - D"
- Packed in wooden box complete with wrenches
- Ball bearing guide is optional and sold separately

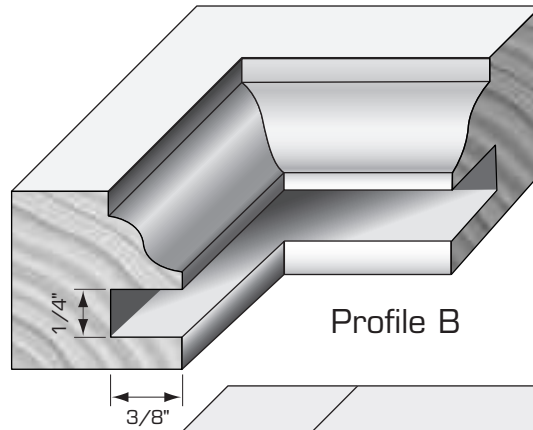
APPLICATION:

- To produce stile and rails in solid wood
- On shapers

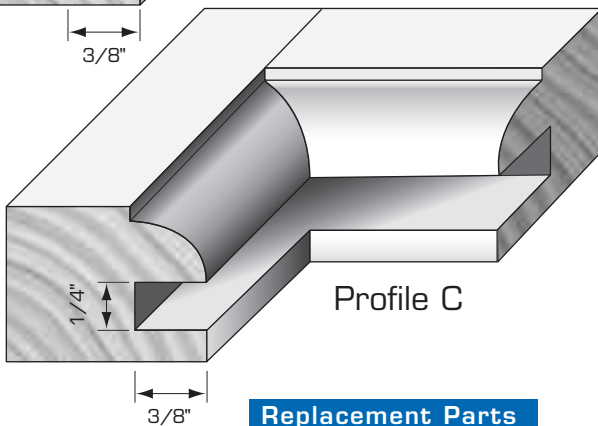
PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MAX.
1TS06	95	30	1-1/4"	1-1/4"	3	7500-12000



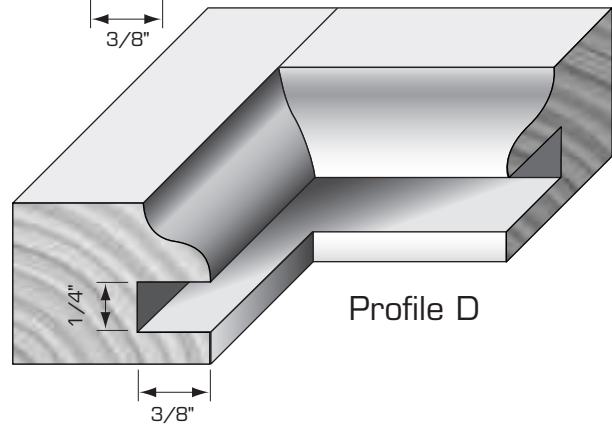
Profile A



Profile B



Profile C



Profile D

Replacement Parts

PART NO.	DESCRIPTION
W057114-3	Rub collar - 3" diameter
W042581	Gib 28mm
W501301	Set screw for Gib M6x12
W400102	Allen Wrench 3mm

Replacement Knives

PART NO.	DESCRIPTION
1TS06A1	Rail end profile A
1TS06A2	Stile profile A
1TS06B1	Rail end profile B
1TS06B2	Stile profile B
1TS06C1	Rail end profile C
1TS06C2	Stile profile C
1TS06D1	Rail end profile D
1TS06D2	Stile profile D

1TS08 PANEL RAISING TOOLHEAD SET



DESIGN:

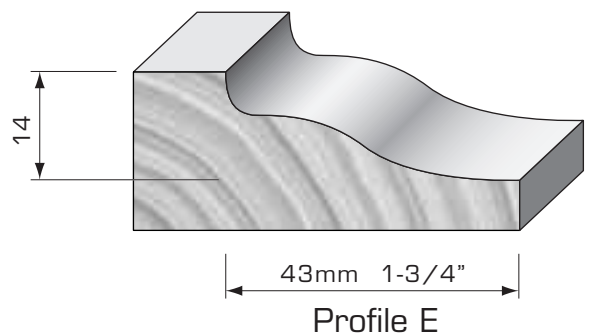
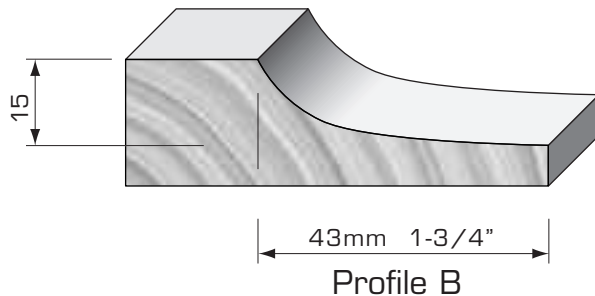
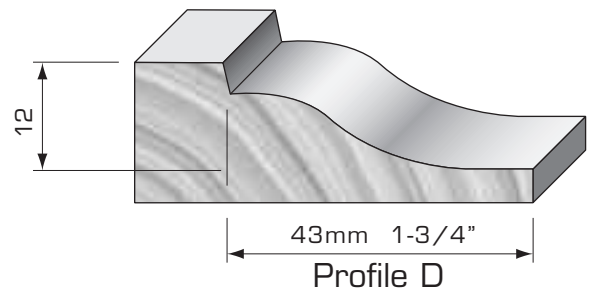
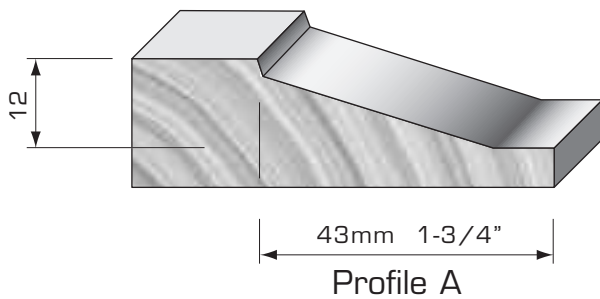
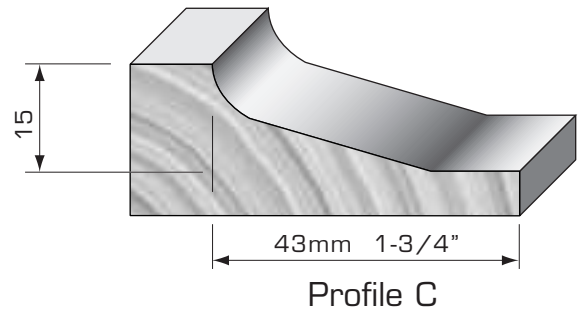
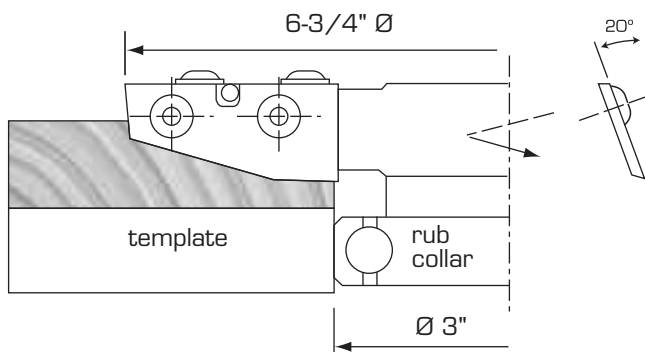
- High tensile steel body with 3 teeth on a shear angle
- Single toolhead complete with 15 tungsten carbide insert knives to produce 5 different raised panel profiles "A - E"
- Packed in wooden box complete with wrenches
- Ball bearing guide is optional and sold separately

APPLICATION:

- To produce raised panels in solid wood, and panel materials
- On shapers

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MAX.
1TS08	172	22	1-1/4"	35	3	4500-7500

Other sizes available upon request.



Replacement Knives

PART NO.	TYPE
1TS08A	A
1TS08B	B
1TS08C	C
1TS08D	D
1TS08E	E

Replacement Parts

PART NO.	DESCRIPTION
W501203	Knife locking screw
W502601	Positioning screw
W400002	Allen Wrench 3mm
W057114-3	3" Diam. rub collar
W300460	Washer for locking screw



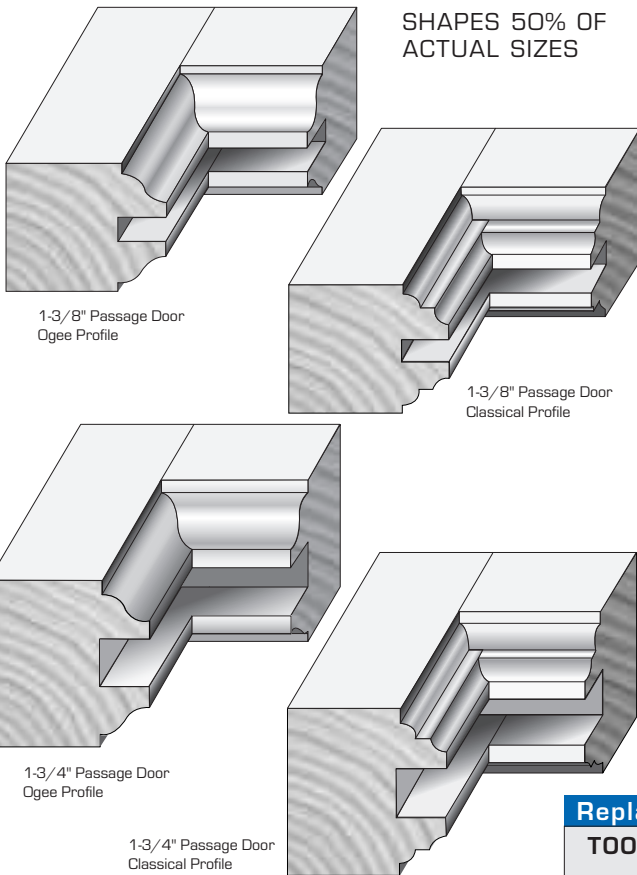
DESIGN:

- High tensile steel body with 2 teeth and spurs
- Set of 5 cutters complete with tungsten carbide inserts and 6 spacers to produce 4 different profiles
- Ball bearing guide optional and sold separately

APPLICATION:

- To cut stile and rails in solid wood
- On shapers

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
1TS09	127	see drawing	1-1/4"	32	2	2	6000-10000



SHAPES 50% OF ACTUAL SIZES

Replacement Knives - PROFILED

TOOLHEAD NO. 1		TOOLHEAD NO. 2	
PART NO.	TYPE	PART NO.	TYPE
1TS091A	PROFILE 1A	1TS092A	PROFILE 2A
1TS091B	PROFILE 1B	1TS092B	PROFILE 2B
1TS091C	PROFILE 1C	1TS092C	PROFILE 2C
1TS091D	PROFILE 1D	1TS092D	PROFILE 2D

Replacement Knives - STRAIGHT

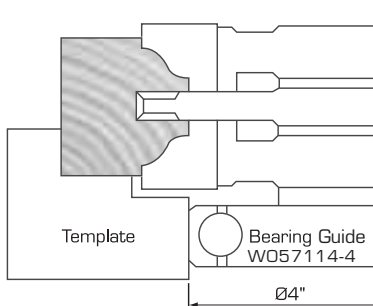
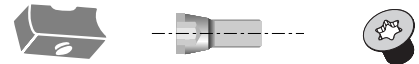
TOOLHEAD NO.	STRAIGHT KNIVES PART NO.	SPURS PART NO.
3	1TS0914	301404
4	301230	301404
5	303000	301404

SPACERS

PART NO.	SPACER	PART NO.	SPACER
1TS09A	A	1TS09D	D
1TS09B	B	1TS09E	E
1TS09C	C	1TS09F	F

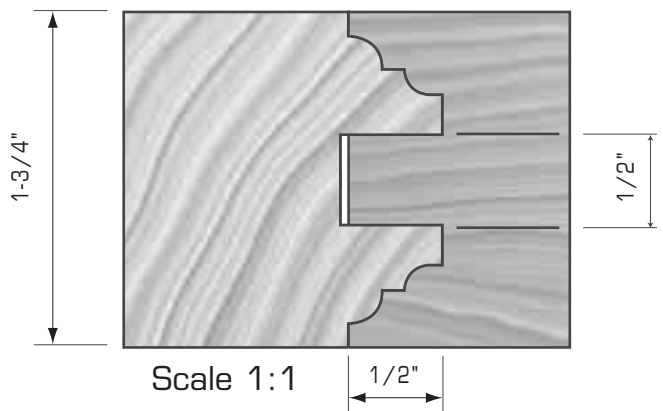
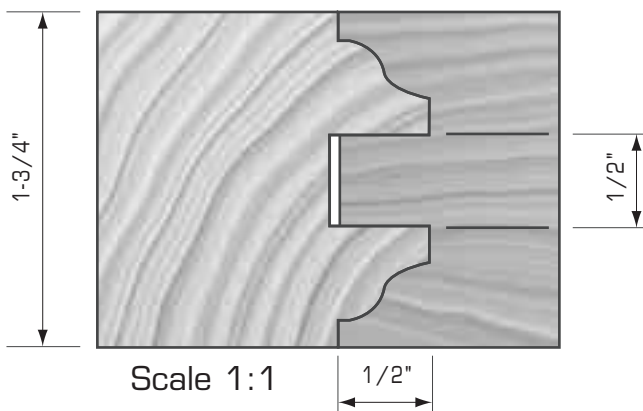
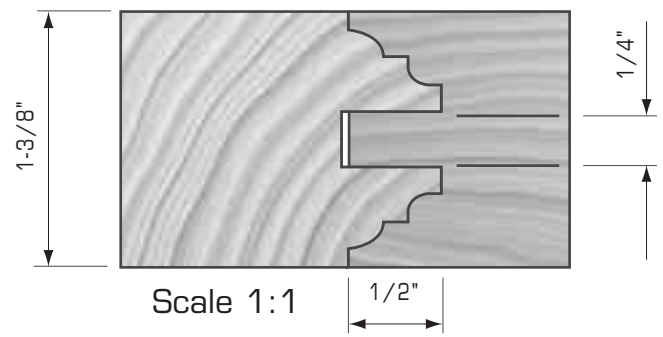
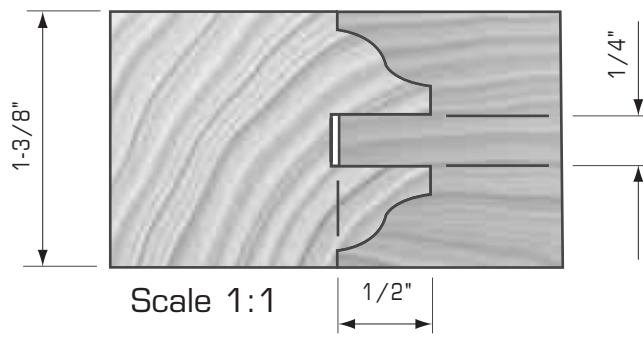
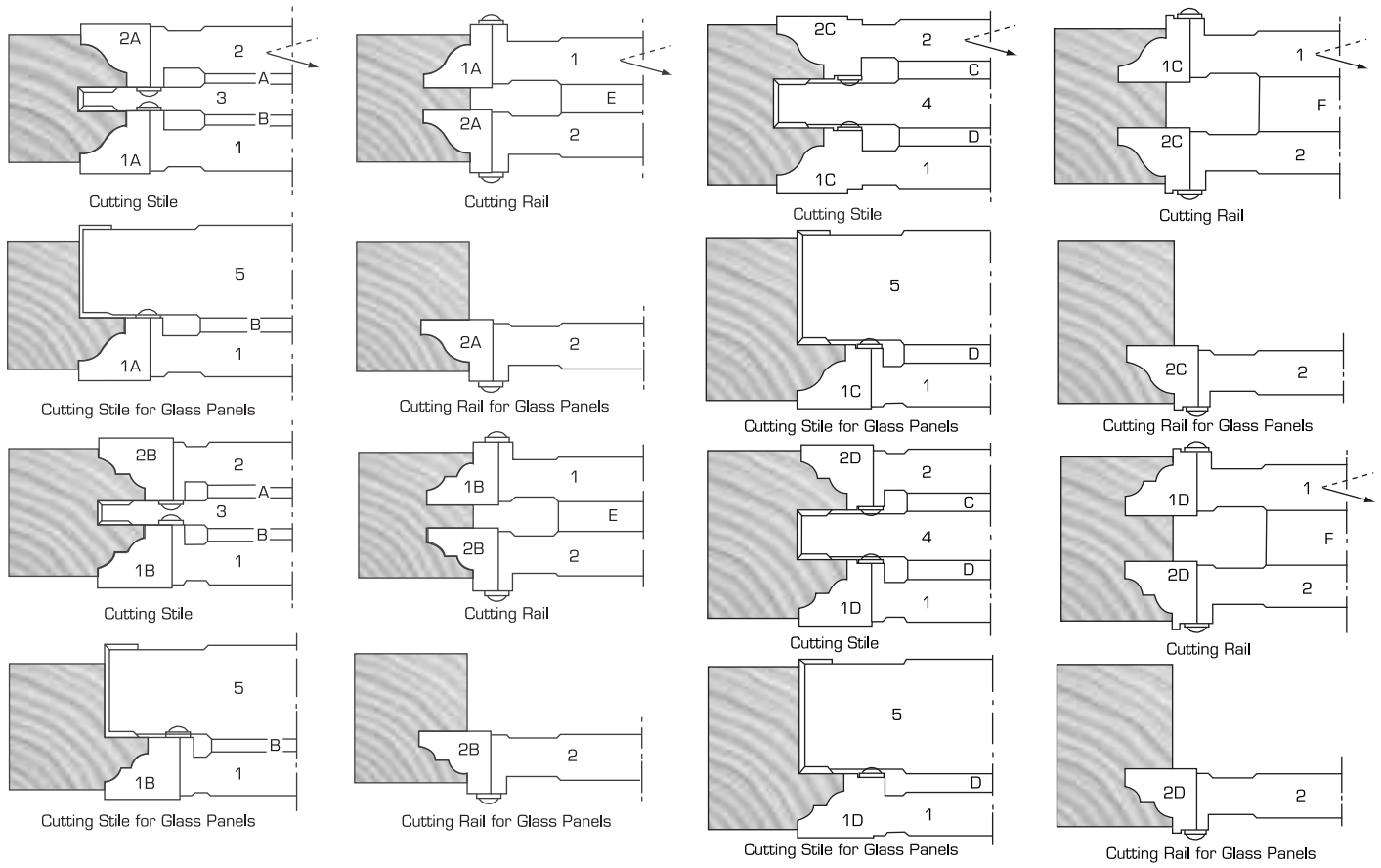
Replacement Parts

TOOL NO.	DESCRIPTION	WEDGE	WEDGE SCREW	SPUR SCREW
NO. 1	PART NO.	W46961	W502402	-
	DIMENSIONS	13x11x9.5	M7x21	-
NO. 2	PART NO.	W46951	W502402	-
	DIMENSIONS	13x11x9.5	M7x21	-
NO. 3	PART NO.	W32641	W501313	W500004
	DIMENSIONS	5x10x8	M4x16	M5x5.1
NO. 4	PART NO.	W350023	W502403	W500002
	DIMENSIONS	9	M5x18	M5x7
NO. 5	PART NO.	W350054	W502402	W500002
	DIMENSIONS	26x11x9.5	M7x21	M5x7



Replacement Wrenches

1TS09 ENTRY AND PASSAGE DOORS TOOLHEAD SET





DESIGN:

- High tensile steel body with 3 teeth on a shear angle
- Set of 3 interlocking toolheads with set of spacers, adjustable for various wood thickness
- Knives for toolheads "A" and "C" are sold separately
- Toolhead "B" is supplied with 1 set of knives
- Tungsten carbide insert knives

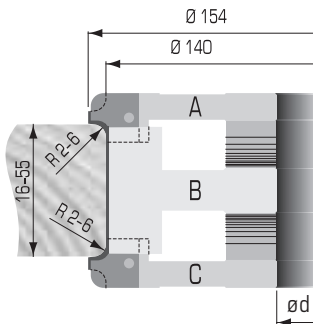
APPLICATION:

- For jointing, corner rounding and chamfering in solid wood and panel materials
- On shapers, double-end tenoners and moulders

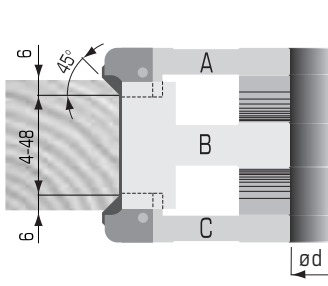
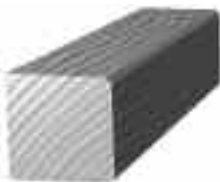


PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	CUTTER TYPE	RPM MIN.-MAX.
1T580	154	20	1-1/4"	50	3	A	5600-9500
COMPLETE SET	140	50	1-1/4"	50	3	B	5600-9500
	154	20	1-1/4"	50	3	C	5600-9500

Cutters A and C excluding knives
Other sizes available upon request.

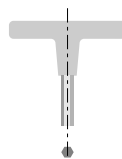


KNIFE	DIMENSIONS	R	PART NO.
	20x20.5x2	2	402002
	20x20.5x2	3	402003
	20x20.5x2	4	402004
	20x20.5x2	5	402005
	20x20.5x2	6	402006
	20x20.5x2	$\alpha=45^\circ$	402020



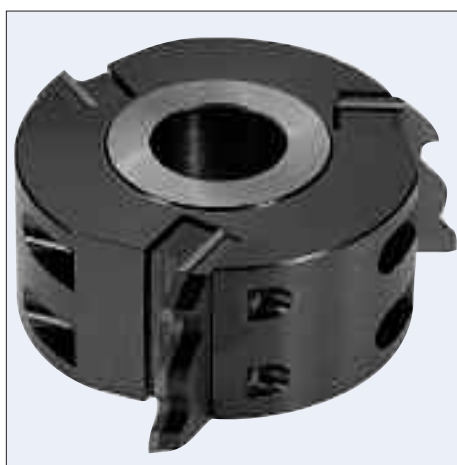
Replacement Parts

TOOL TYPE	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
TYPE A	PART NO.	SEE TABLE	W350055	W502402
	DIMENSIONS	20x20.5x2	16	M7x21
TYPE C	PART NO.	SEE TABLE	W350053	W502402
	DIMENSIONS	20x20.5x2	16	M7x21
TYPE B	PART NO.	305000	W350009	W502402
	DIMENSIONS	50x12x1.5	46	M7x21



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm

1T585 MULTI PROFILE TOOLHEADS



DESIGN:

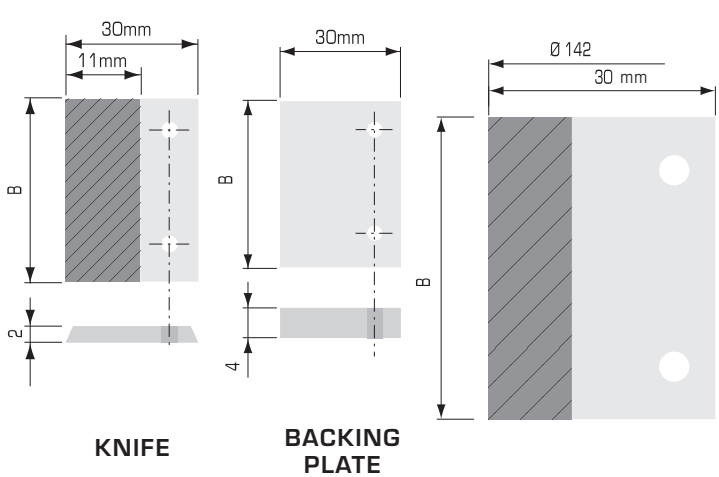
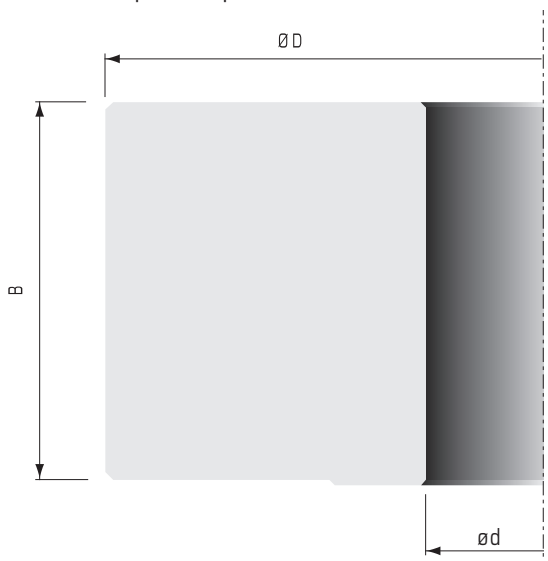
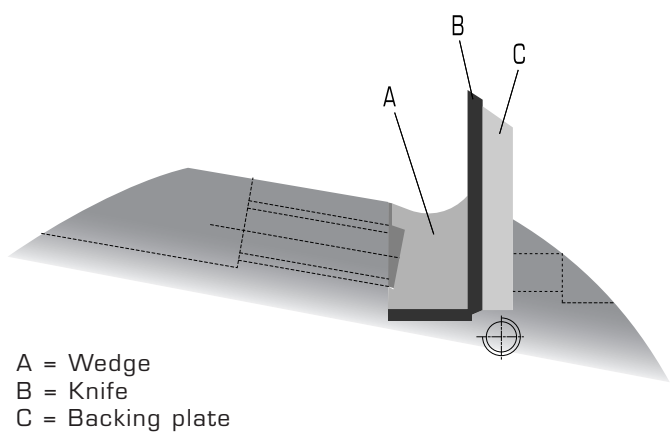
- High tensile steel body with 3 straight teeth
- Backing plates 4mm thick
- Tungsten carbide insert knives 2mm thick
- Knives and backing plates can be profiled for various shapes
- Knives and backing plates not included with toolhead

APPLICATION:

- For profiling in solid wood and panel materials
- On shapers, double-end tenoners and moulders

PART NO.	BODY ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	MAX. RPM
1T5851M	116	40	1-1/4"	50	3	10500
1T5852M	116	50	1-1/4"	50	3	10500
1T5853M	116	60	1-1/4"	50	3	10500

Cutter excluding knives and backing plates
Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	WEDGE	WEDGE SCREW
1T5851M	PART NO.	W303001	W501404
	DIMENSIONS	38	M8x20
1T5852M	PART NO.	W303002	W501404
	DIMENSIONS	48	M8x20
1T5853M	PART NO.	W303003	W501404
	DIMENSIONS	58	M8x20

ALLEN WRENCH
PART NO. W400003 4mm



DESIGN:

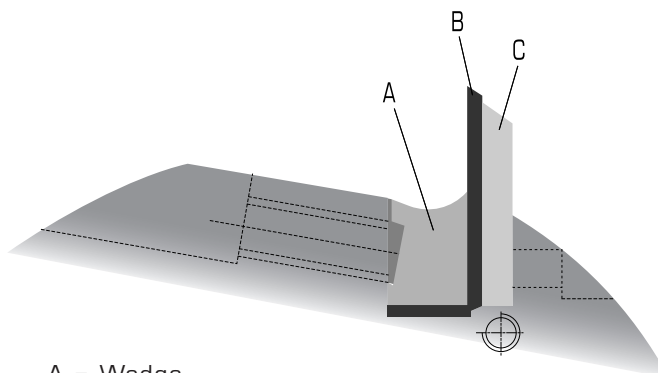
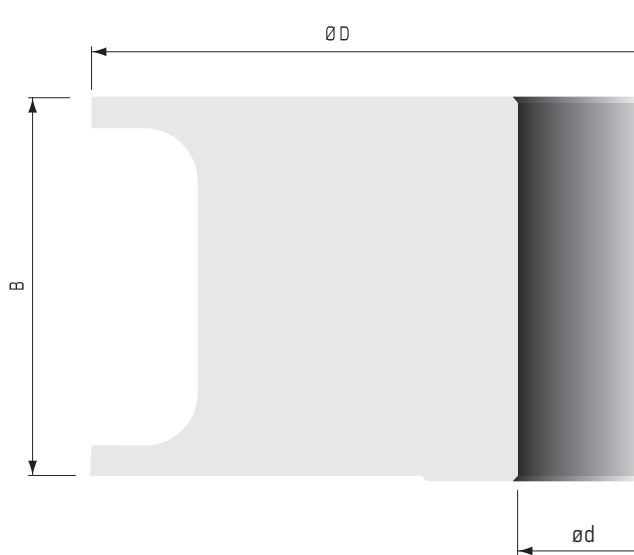
- High tensile steel body with 3 straight teeth
- Backing plates 4mm thick
- Tungsten carbide insert knives 2mm thick
- Knives and backing plates can be profiled for various shapes
- Knives and backing plates not included with toolhead

APPLICATION:

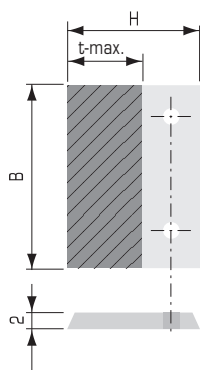
- For profiling in solid wood and panel materials
- On shapers, double-end tenoners and moulders

PART NO.	BODY ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	MAX. RPM
1T5871M	147	40	1-1/4"	50	3	9500
1T5872M	147	50	1-1/4"	50	3	9500
1T5873M	147	60	1-1/4"	50	3	9500

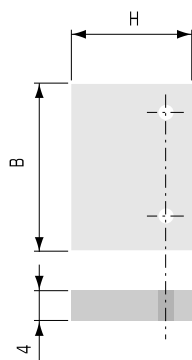
Cutter excluding knives and backing plates
Other sizes available upon request.



A = Wedge
B = Knife
C = Backing plate



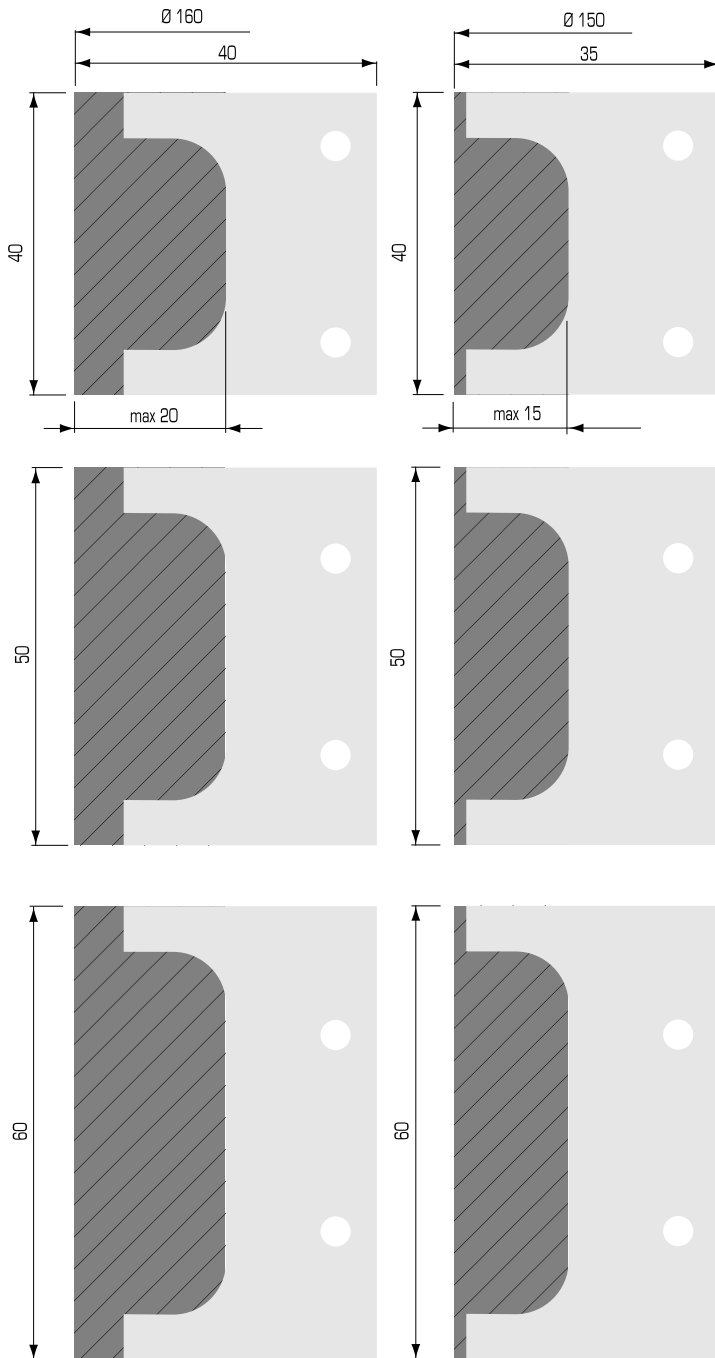
KNIFE



BACKING PLATE

CARBIDE KNIVES	STEEL BACKING PLATES	MAXIMUM PROFILE DEPTH t-MAX mm
DIMENSIONS BxHxT	DIMENSIONS BxHxT	
40x35x2	39x33x4	15
40x40x2	39x38x4	20
50x35x2	49x33x4	15
50x40x2	49x38x4	20
60x35x2	59x33x4	15
60x40x2	59x38x4	20

1T587 MULTI PROFILE TOOLHEADS



Replacement Parts

TOOL NO.	DESCRIPTION	WEDGE	WEDGE SCREW
1T5871M	PART NO.	W303001	W501404
	DIMENSIONS	38	M8x20
1T5872M	PART NO.	W303002	W501404
	DIMENSIONS	48	M8x20
1T5873M	PART NO.	W303003	W501404
	DIMENSIONS	58	M8x20

ALLEN WRENCH
PART NO. W400003 4mm



DESIGN:

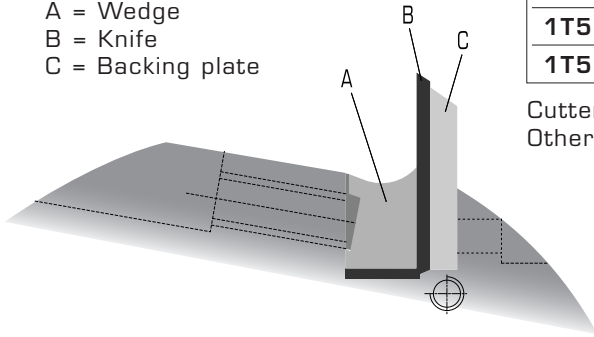
- High tensile steel body with 3 straight teeth
- Backing plates 4mm thick
- Tungsten carbide insert knives 2mm thick
- Knives and backing plates can be profiled for various shapes
- Knives and backing plates not included with toolhead

APPLICATION:

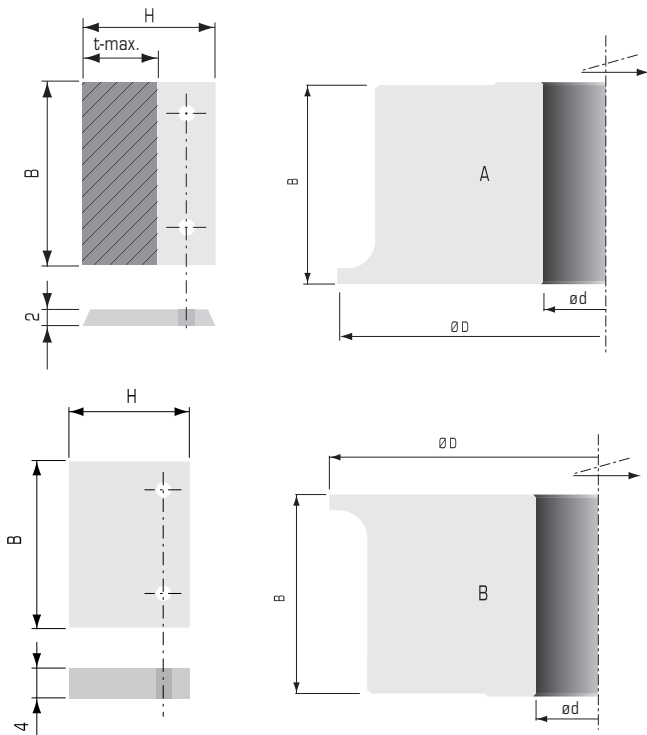
- For profiling in solid wood and panel materials
- On shapers, double-end tenoners and moulders

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	TOOL TYPE	MAX. RPM
1T5891M	137	40	1-1/4"	50	3	A	10000
1T5892M	137	50	1-1/4"	50	3	A	10000
1T5893M	137	60	1-1/4"	50	3	A	10000
1T5894M	137	40	1-1/4"	50	3	B	10000
1T5895M	137	50	1-1/4"	50	3	B	10000
1T5896M	137	60	1-1/4"	50	3	B	10000

A = Wedge
B = Knife
C = Backing plate



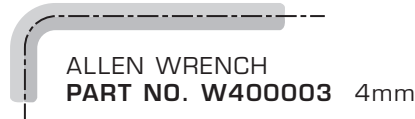
Cutter excluding knives and backing plates
Other sizes available upon request.



Replacement Parts

TOOL NO.	DESCRIPTION	WEDGE	WEDGE SCREW
1T5891M	PART NO.	W303001	W501404
1T5894M	DIMENSIONS	38	M8x20
1T5892M	PART NO.	W303002	W501404
1T5895M	DIMENSIONS	48	M8x20
1T5893M	PART NO.	W303003	W501404
1T5896M	DIMENSIONS	58	M8x20

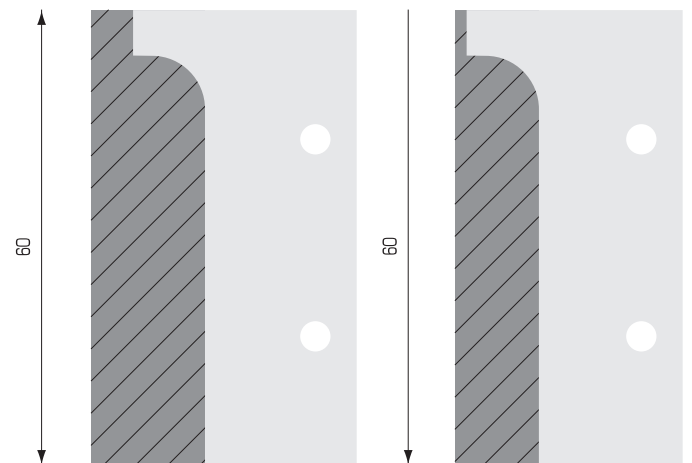
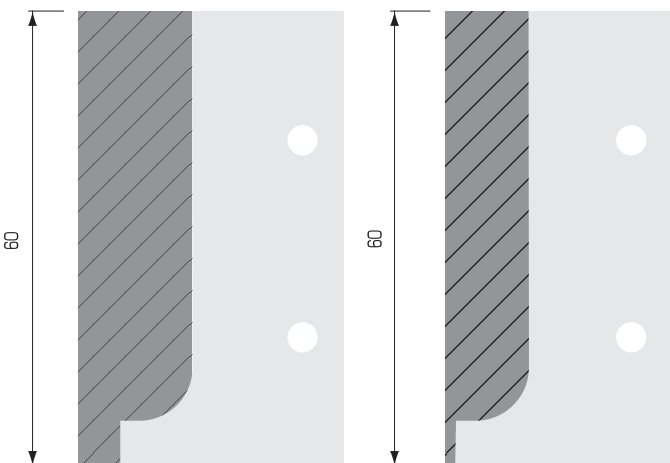
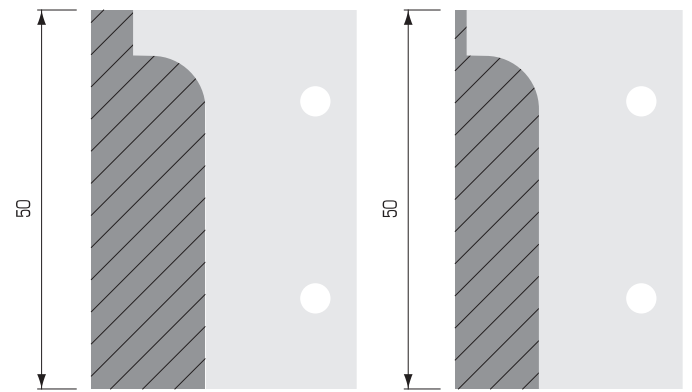
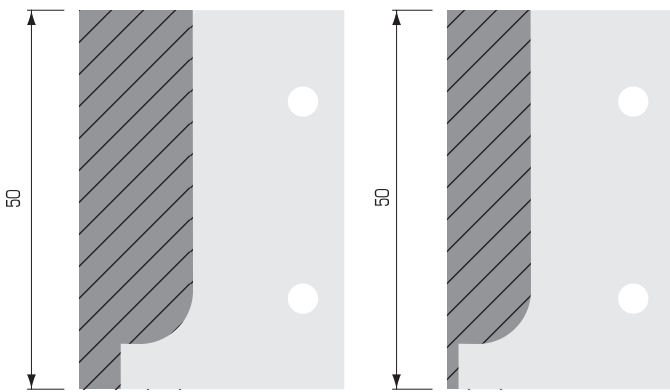
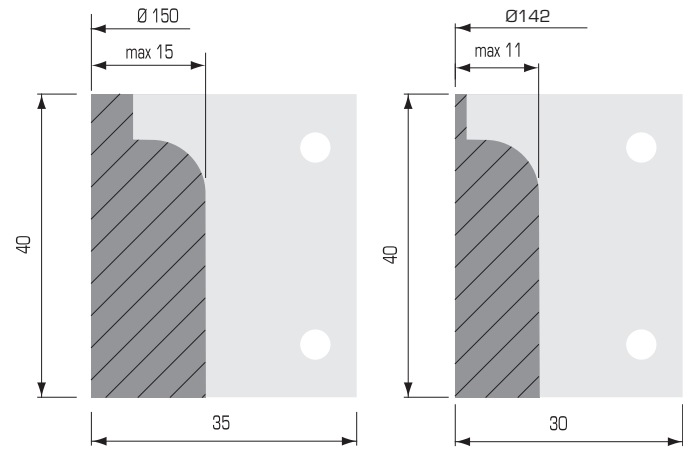
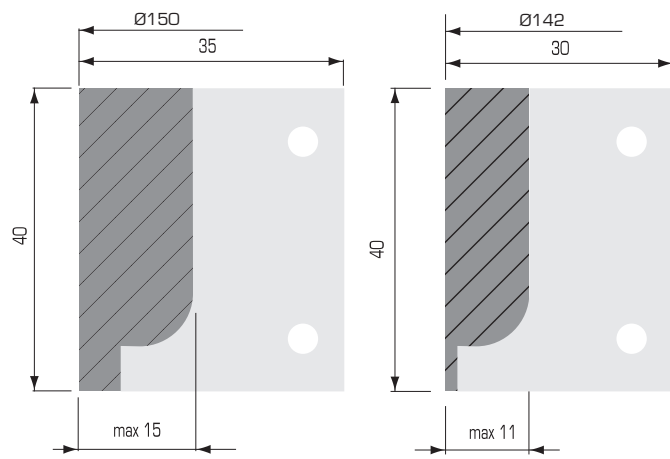
CARBIDE KNIVES	BACKING PLATES	MAXIMUM PROFILE DEPTH t-MAX mm
DIMENSIONS BxHxT	DIMENSIONS BxHxT	
40x30x2	39x28x4	11
40x35x2	39x33x4	15
50x30x2	49x28x4	11
50x35x2	49x33x4	15
60x30x2	59x28x4	11
60x35x2	59x33x4	15



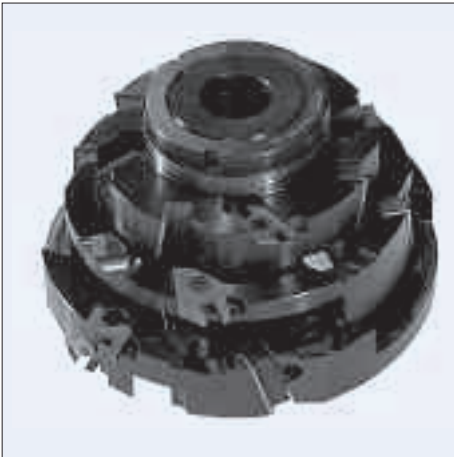
1T589 MULTI PROFILE TOOLHEADS

Type A

Type B



1T595 WINDOW TOOLING

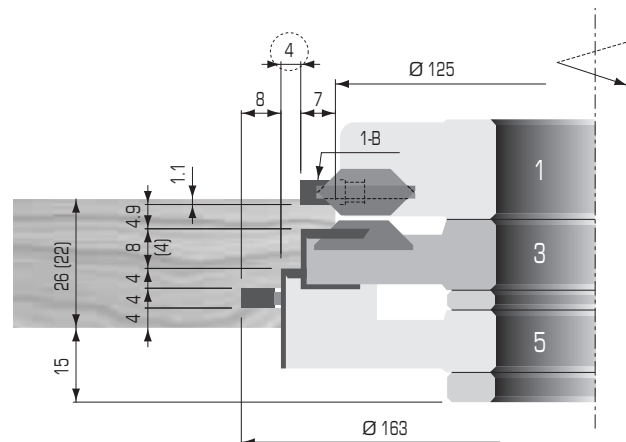
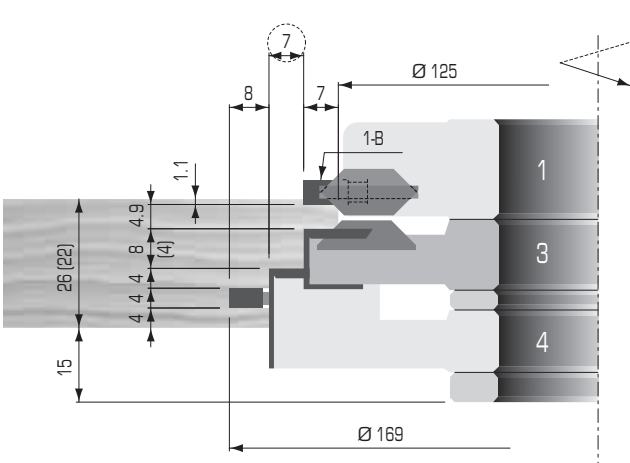
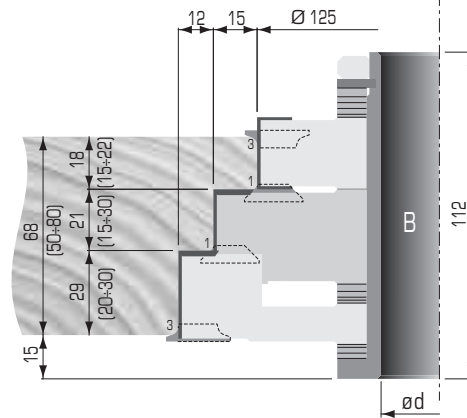
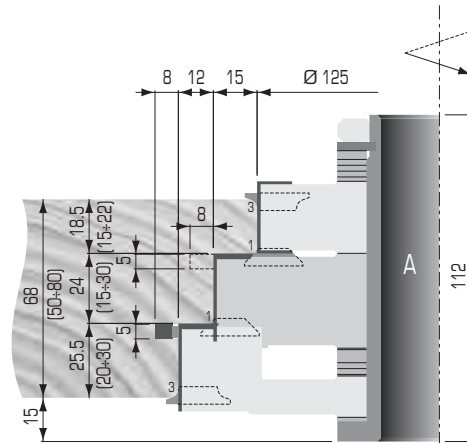


DESIGN:

- High tensile steel body with tungsten carbide insert knives
- Tools custom manufactured to customer's specifications

APPLICATION:

- For producing window components in solid wood
- On single and double-end tenoners



1T595 WINDOW TOOLING

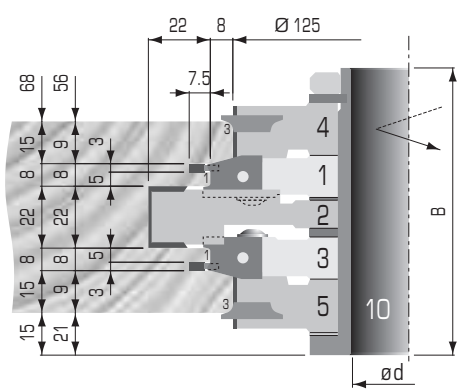
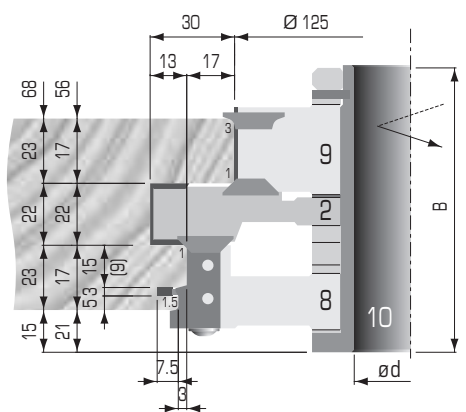
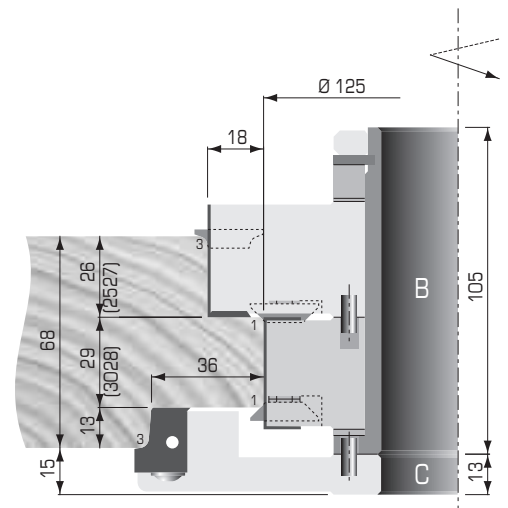
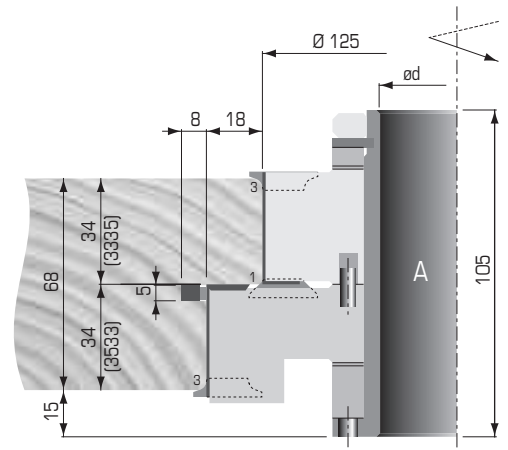


DESIGN:

- High tensile steel body with tungsten carbide insert knives
- Tools custom manufactured to customer's specifications

APPLICATION:

- For producing window components in solid wood
- On moulders





DESIGN:

- High tensile steel body with 4 straight teeth
- Toolheads interlock and can be stacked to required cutting width
- When stacked, the insert knives overlap each other
- Reversible tungsten carbide insert knives with 2 cutting edges

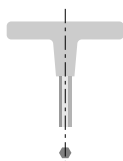
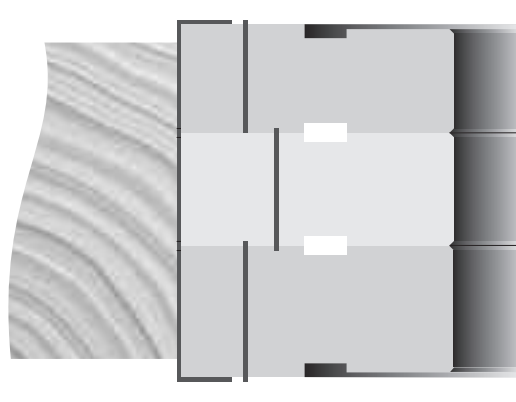
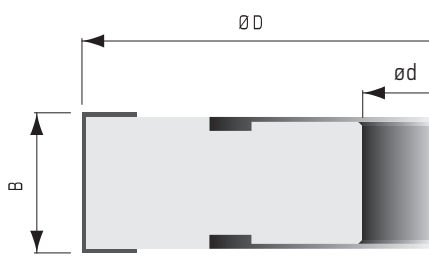
APPLICATION:

- For surface planing, jointing, and preplaning on the first bottom spindle
- On moulders and four-sided planers



PART NO.	DIAM ØD mm	KERF B mm	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T4742M	125	30	40	50	4	6000-11500
1T4745M	125	50	40	50	4	6000-11500

Other sizes available upon request.



T-HANDLE ALLEN WRENCH
PART NO. W400115 5MM



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW
1T4742M	PART NO.	303000	W350007	W502402
	DIMENSIONS	30x12x1.5	26	M7x21
1T4745M	PART NO.	305000	W350009	W502402
	DIMENSIONS	50x12x1.5	46	M7x21

1T475 SPIRAL STAGGERED TOOTH TOOLHEADS

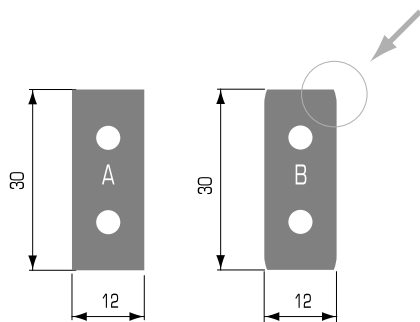


DESIGN:

- High tensile steel body with staggered knives on a shear angle and spiral progression
- Toolheads supplied with type "A" reversible inserts, type "B" knives for superior surface finish are available upon request
- Reversible tungsten carbide insert knives with 2 cutting edges
- Design of toolhead reduces noise levels

APPLICATION:

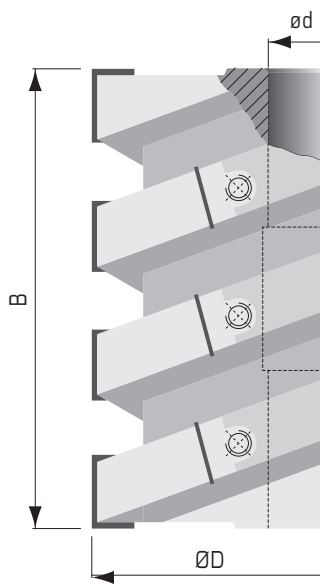
- For surface planing, jointing, and preplaning on 1st bottom spindle
- Ideal for machining curved furniture components
- On shapers, moulders and four-sided planers



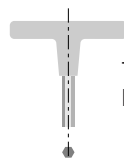
PART NO.	DIAM ØD	KERF B	BORE ød	MAX. BORE ød mm	NO. TEETH	RPM MIN.-MAX.
1T4751I	4"	3-7/8"	1-1/4"	35	12	7500-13000
1T4752I	4"	4-51/64"	1-1/4"	35	15	7500-13000
1T4751M	125mm	99mm	40mm	50	12	6000-11000
1T4752M	125mm	122mm	40mm	50	15	6000-11000
1T4753M	125mm	145mm	40mm	50	18	6000-11000
1T4754M	125mm	191mm	40mm	50	24	6000-11000
1T4755M	125mm	228mm	40mm	50	30	6000-11000

Other sizes available upon request.

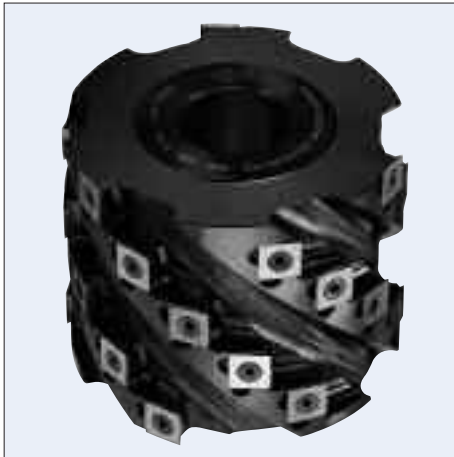
Also available in aluminum body by special order.
Prices quoted upon request.



Replacement Parts				
DESCRIPTION	KNIFE TYPE A	KNIFE TYPE B	WEDGE	WEDGE SCREW
PART NO.	303000	303000R	W350063	W502402
DIMENSIONS	30x12x1.5	30x12x1.5	26	M7x21



T-HANDLE ALLEN WRENCH
PART NO. W400115 5MM



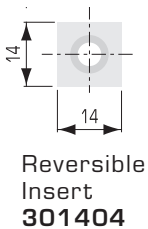
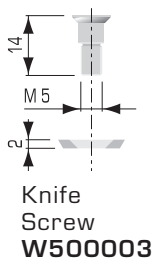
DESIGN:

- Surface treated steel or aluminum body helical toolhead with 4-6-8 helices
- Spiral and staggered design enables heavy stock removal with or against the wood grain
- Toolheads can be custom made with spurs on one or both sides for tenoning and rabbet cuts
- Reversible tungsten carbide inserts with 4 cutting edges

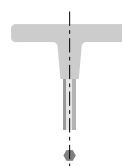
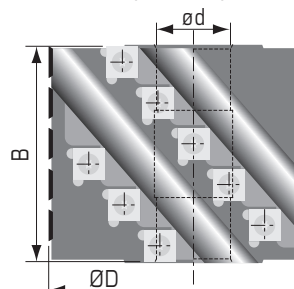
APPLICATION:

- For surface planing, jointing, and preplaning in solid wood on the 1st bottom spindle
- Ideal for machining curved furniture components
- On shapers, double-end tenoners, surface planers and moulders

PART NO. STEEL BODY	PART NO. ALUMINUM BODY	DIAM ØD mm	KERF B mm	BORE ød mm	MAX BORE ødmm	NO. helices	NO. INSERT KNIVES	RPM MIN.-MAX.
1T47601	1T47701	80	89	1-1/4"	35	4	14	9500-16000
1T47603	1T47703	100	102	1-1/4"	40	4	16	7500-13000
1T47605	1T47705	125	102	40	60	4	16	6000-10000
1T47606	1T47706	125	127	40	60	4	20	6000-10000
1T47607	1T47707	125	151.5	40	60	4	24	6000-10000
1T47608	1T47708	125	177	40	60	4	28	6000-10000
1T47609	1T47709	125	227	40	60	4	36	6000-10000
1T47610	1T47710	125	102	40	60	6	27	6000-10000
1T47611	1T47711	125	127	40	60	6	30	6000-10000
1T47612	1T47712	125	151.5	40	60	6	36	6000-10000
1T47613	1T47713	125	177	40	60	6	42	6000-10000
1T47614	1T47714	125	227	40	60	6	54	6000-10000
1T47615	1T47715	140	102	40	60	6	27	5500-9500
1T47616	1T47716	140	127	40	60	6	30	5500-9500
1T47617	1T47717	140	151.5	40	60	6	36	5500-9500
1T47618	1T47718	140	177	40	60	6	42	5500-9500
1T47619	1T47719	140	227	40	60	6	54	5500-9500
1T47620	1T47720	140	102	40	60	8	32	5500-9500
1T47621	1T47721	140	127	40	60	8	40	5500-9500
1T47622	1T47722	140	151.5	40	60	8	48	5500-9500
1T47623	1T47723	140	177	40	60	8	56	5500-9500
1T47624	1T47724	140	227	40	60	8	72	5500-9500



Other sizes available upon request up to a maximum diameter of 300mm and 4-6-8-10 helices.



T-HANDLE TORX WRENCH
PART NO. W400420 T20

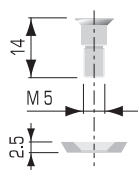
IMG REQ.

DESIGN:

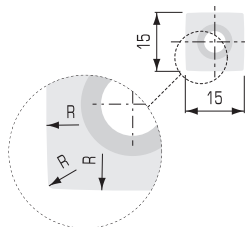
- Surface treated steel or aluminum body helical toolhead with 4-6-8 helices
- Spiral and staggered design along with rounded corner reversible inserts provide superior surface finish
- Toolheads can be custom made with spurs on one or both sides for tenoning and rabbet cuts
- Reversible tungsten carbide inserts with 4 rounded edges and 4 radiused corners (see drawing)

APPLICATION:

- For surface planing, jointing, and preplaning in solid wood
- On shapers, double-end tenoners, surface planers and moulders



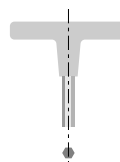
Knife
Screw
W500003



Reversible
Insert
301525

PART NO. STEEL BODY	PART NO. ALUMINUM BODY	DIAM ØD mm	KERF B mm	BORE ød mm	MAX BORE ødmm	NO. helices	NO. INSERT KNIVES	RPM MIN.-MAX.
1T48001	1T48101	80	83	1-1/4"	35	4	18	9500-16000
1T48003	1T48103	100	102	1-1/4"	40	4	20	7500-13000
1T48005	1T48105	125	102	40	60	4	20	6000-10000
1T48006	1T48106	125	131	40	60	4	26	6000-10000
1T48007	1T48107	125	150	40	60	4	30	6000-10000
1T48008	1T48108	125	179	40	60	4	36	6000-10000
1T48009	1T48109	125	227	40	60	4	46	6000-10000
1T48010	1T48110	125	102	40	60	6	30	6000-10000
1T48011	1T48111	125	131	40	60	6	39	6000-10000
1T48012	1T48112	125	150	40	60	6	45	6000-10000
1T48013	1T48113	125	179	40	60	6	54	6000-10000
1T48014	1T48114	125	227	40	60	6	69	6000-10000
1T48015	1T48115	140	102	40	60	6	30	5500-9500
1T48016	1T48116	140	131	40	60	6	39	5500-9500
1T48017	1T48117	140	150	40	60	6	45	5500-9500
1T48018	1T48118	140	179	40	60	6	54	5500-9500
1T48019	1T48119	140	227	40	60	6	69	5500-9500
1T48020	1T48120	140	102	40	60	8	40	5500-9500
1T48021	1T48121	140	131	40	60	8	52	5500-9500
1T48022	1T48122	140	150	40	60	8	60	5500-9500
1T48023	1T48123	140	179	40	60	8	72	5500-9500
1T48024	1T48124	140	227	40	60	8	92	5500-9500

Other sizes available upon request up to a maximum diameter of 300mm and 4-6-8-10 helices.



T-HANDLE TORX WRENCH
PART NO. W400420 T20



DESIGN:

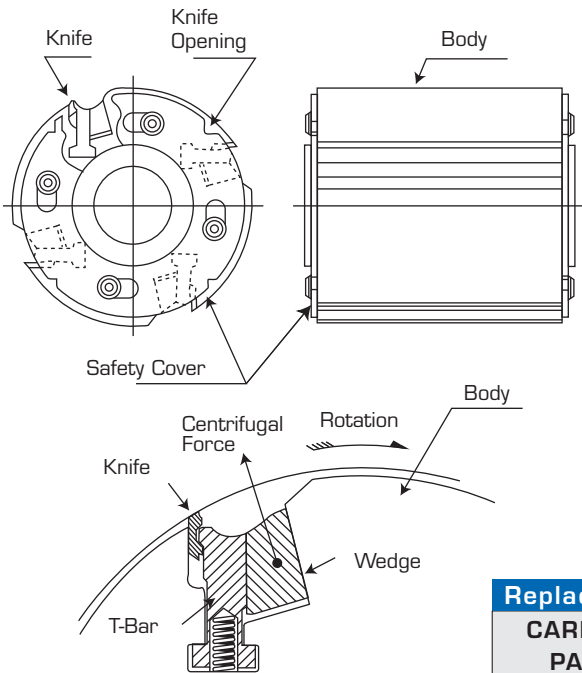
- High tensile steel body with 4 straight teeth
- Unique centrifugal self locking system accurately locks knives in place
- The reversible double edged knives with unique chipbreaker design and polished edges provide an ultra smooth surface finish
- Toolhead supplied without knives
- Knives available in surface treated HSS and in micro-grain mirror-finish solid carbide

APPLICATION:

- For surface planing and jointing in solid wood, panel materials, plastics and cellulose

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød	NO. TEETH	RPM MIN.-MAX.
1T46622	125	80	40mm	4	6000-8000
1T46624	125	100	40mm	4	6000-8000
1T46626	125	130	40mm	4	6000-8000
1T46628	125	150	40mm	4	6000-8000
1T46630	125	180	40mm	4	6000-8000
1T46632	125	230	40mm	4	6000-8000
1T46642	140	80	1-13/16"	4	5500-7000
1T46644	140	100	1-13/16"	4	5500-7000
1T46646	140	130	1-13/16"	4	5500-7000
1T46648	140	150	1-13/16"	4	5500-7000
1T46650	140	180	1-13/16"	4	5500-7000
1T46652	140	230	1-13/16"	4	5500-7000

Other sizes available upon request.



ALLEN WRENCH
PART NO. W400002 3mm

Replacement Knives

CARBIDE PART NO.	HSS PART NO.	CUTTING LENGTH mm	WIDTH mm	THICKNESS mm	NO. OF KNIVES PER PACKAGE
1T466C080	1T466H080	80	8	2	12
1T466C100	1T466H100	100	8	2	12
1T466C130	1T466H130	130	8	2	12
1T466C150	1T466H150	150	8	2	12
1T466C180	1T466H180	180	8	2	12
1T466C230	1T466H230	230	8	2	12

Replacement Parts

TOOL NO.	DESCRIPTION	WEDGE	T-BAR	END PLATE SCREW	GIB RELEASE PUNCH
1T46622/42	PART NO.	W800100	W800120	W800140	W800142
1T46624/44	PART NO.	W800102	W800122	W800140	W800142
1T46626/46	PART NO.	W800104	W800124	W800140	W800142
1T46628/48	PART NO.	W800106	W800126	W800140	W800142
1T46630/50	PART NO.	W800108	W800128	W800140	W800142
1T46632/52	PART NO.	W800110	W800130	W800140	W800142



DESIGN:

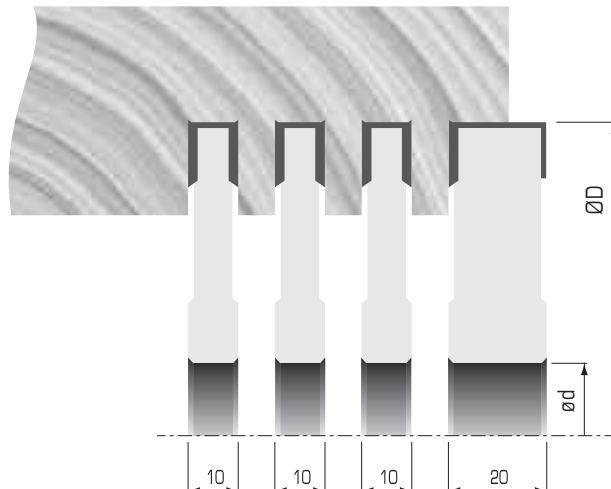
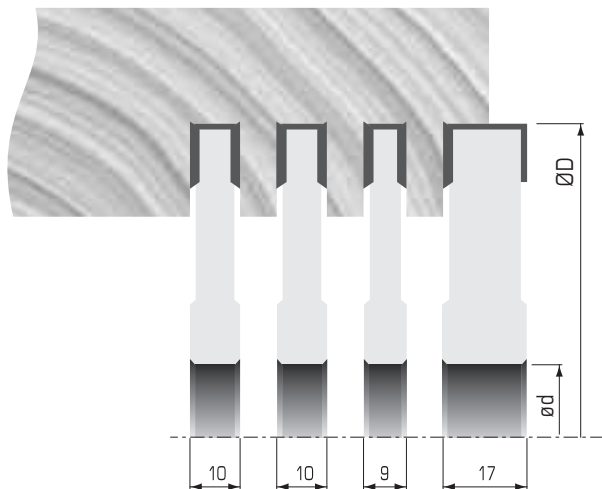
- High tensile steel body with 2 straight teeth and 2 spurs
- Reversible tungsten carbide inserts with 2 cutting edges on the straight knives and 4 cutting edges on the spurs

APPLICATION:

- For cutting guide grooves in solid wood
- On moulders with grooved bed

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	MAX. BORE ød mm	NO. TEETH	NO. SPURS	RPM MIN.-MAX.
1T4901M	125	9	40	50	2	2	6000-11500
1T4902M	125	10	40	50	2	2	6000-11500
1T4903M	125	17	40	50	2	2	6000-11500
1T4904M	125	20	40	50	2	2	6000-11500

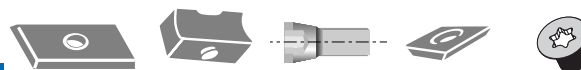
Other sizes available upon request.



T-HANDLE TORX WRENCH
PART NO. W400420 T20



T-HANDLE ALLEN WRENCH
PART NO. W400115 5mm



Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
1T4901M	PART NO.	300860	W350021	W502403	301404	W500002
	DIMENSIONS	8.6x12x1.5	6.8	M5x18	14x14x2	M5x7
1T4902M	PART NO.	300960	W350022	W502403	301404	W500002
	DIMENSIONS	9.6x12x1.5	7.6	M5x18	14x14x2	M5x7
1T4903M	PART NO.	301700	W350017	W502403	301404	W500002
	DIMENSIONS	11.6x12x1.5	14	M5x18	14x14x2	M5x7
1T4904M	PART NO.	302000	W350005	W502402	301404	W500002
	DIMENSIONS	20x12x1.5	16	M7x21	14x14x2	M5x7

**DESIGN:**

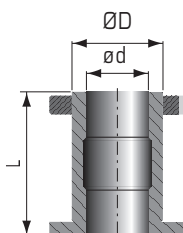
- High tensile steel body with 2 or 4 teeth and 2 or 4 spurs
- Set of cutters mounted on sleeves and adjustable by spacers and shims to produce a variety of tongue and groove profiles. See details on pages D50 - D51
- Toolheads sold individually, for profile selection refer to pages D50 - D51
- Tungsten carbide inserts with 2 or 4 cutting edges



APPLICATION:

- For producing various tongue and groove profiles in solid wood and panel materials
- On moulders

PART NO.	DIAM ØD mm	KERF B mm	BORE ød mm	NO. TEETH	NO. SPURS	NO. GROOVING INSERTS	NO. CHAMFERING INSERTS	TOOL TYPE	RPM MIN.-MAX.
1T2511M	140	15	50	4	2			1	5500 -10000
1T2512M	140	15	50	4	2			2	5500 -10000
1T2513M	127	12	50	2			2	3	5800 -10000
1T2514M	155	20	50	4		2		4	4900 -10000
1T2515M	155	20	50	4		2		5	4900 -10000
1T2516M	139	15	50	4	2			6	5500 -10000
1T2517M	175	15	50	4	2			7	4400 - 8000
1T2518M	155	20	50	4		2		8	4900 - 9000
1T2519M	160	15	50	4	2			9	4800 - 9000
1T25110M	155	20	50	4		2		10	4900 - 9000
1T25111M	168	20	50	4		2		11	4500 - 9500
1T25112M	149	15	50	4	2			12	5100 - 9500
1T25113M	168	20	50	4		2		13	4500 - 8500
1T25114M	168	20	50	4		2		14	4500 - 8500
1T25115M	154	12	50	2				15	4900 - 9000
1T25116M	154	12	50	2				16	4900 - 9000

Other sizes available upon request.

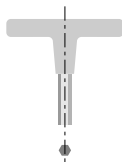
**MECHANICAL SLEEVES**

		D	L	d (mm)	PART NO.
RH		50 x 105 x 1-1/4"			W05950105114R
		50 x 105 x 1-1/2"			W05950105112R
		50 x 105 x 40			W05950105040R
LH		50 x 105 x 1-1/4"			W05950105114L
		50 x 105 x 1-1/2"			W05950105112L
		50 x 105 x 40			W05950105040L

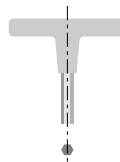


Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW	GROOVING INSERT	SCREW	CHAMFER INSERT
1,2,6	PART NO.	301500	W350004	W502404	301404	W500002			
	DIMENSIONS	15x12x1.5	11	M7x19	14x14x2	M5x7			
7,9,12	PART NO.	301500	W350004	W502402	301404	W500002			
	DIMENSIONS	15x12x1.5	11	M7x21	14x14x2	M5x7			
3	PART NO.	301200	W350023	W502403				W500201	30600601 [RH] 30600602 [LH]
	DIMENSIONS	12x12x1.5	9	M5x18				M6x12	27x6x14
4	PART NO.	302000	W350005	W502402			307809	W500205	
	DIMENSIONS	20x12x1.5	16	M7x21			48x4x16	M6x15	
5	PART NO.	302000	W350005	W502402			307810	W500205	
	DIMENSIONS	20x12x1.5	16	M7x21			48x4x16	M6x15	
8,10, 13,14	PART NO.	302000	W350005	W502402			307810	W500205	
	DIMENSIONS	20x12x1.5	16	M7x21			48x4x16	M6x15	
11	PART NO.	302000	W350005	W502402			307831	W500205	
	DIMENSIONS	20x12x1.5	16	M7x21			60x4x16	M6x15	
15,16	PART NO.	301200	W350023	W502403					
	DIMENSIONS	12x12x1.5	9	M5x18					



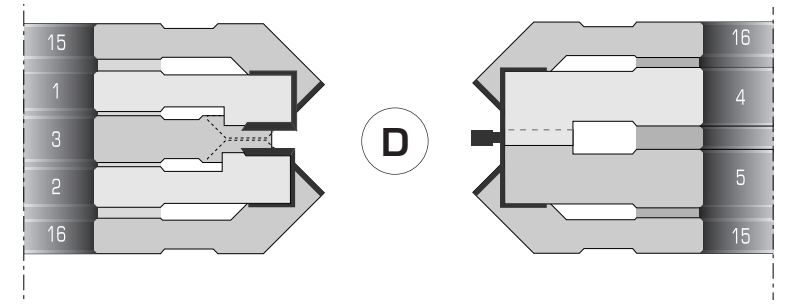
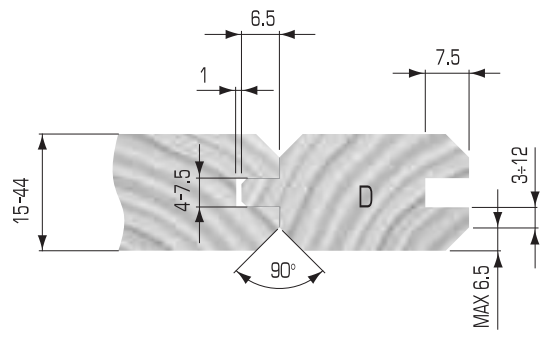
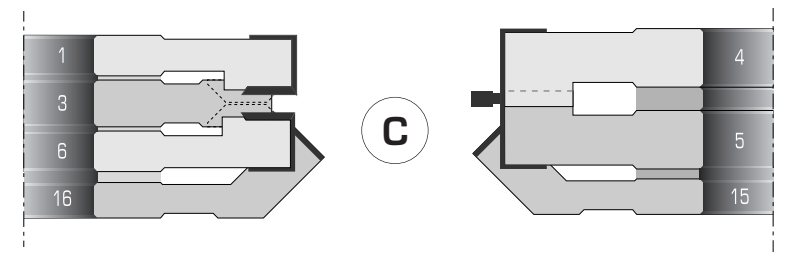
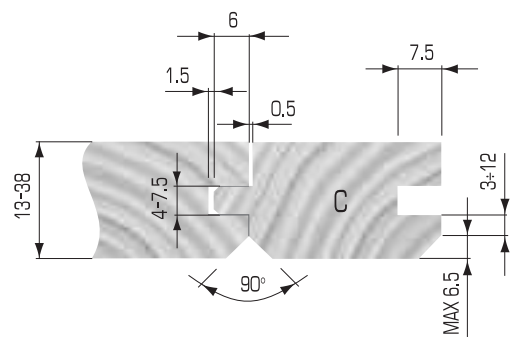
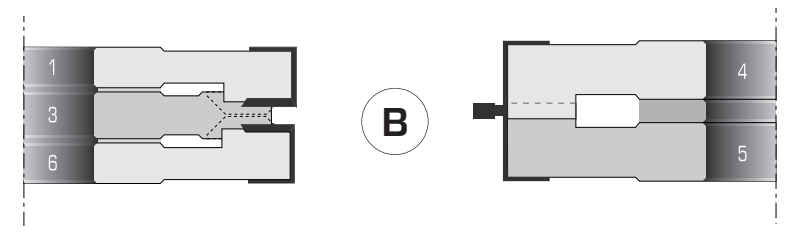
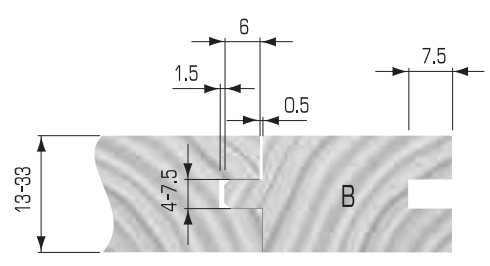
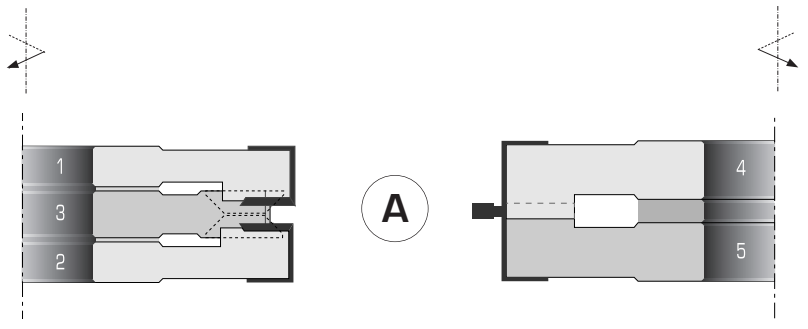
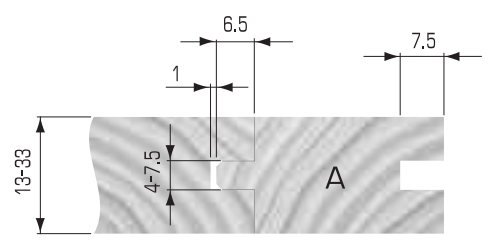
T-HANDLE ALLEN WRENCH
PART NO. W400114 4mm
PART NO. W400115 5mm



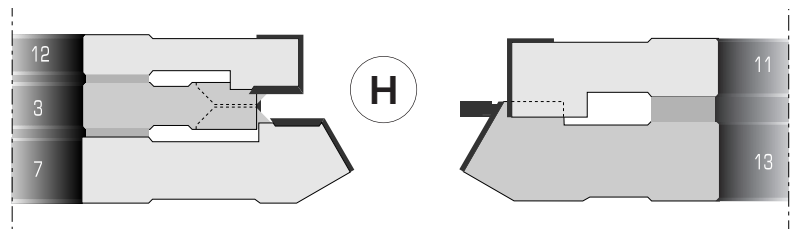
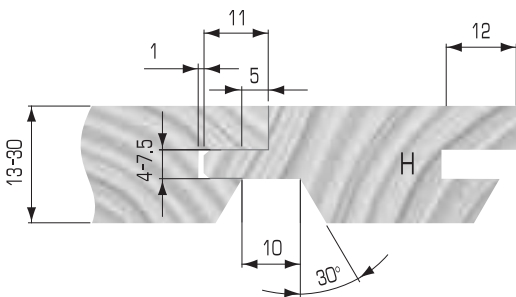
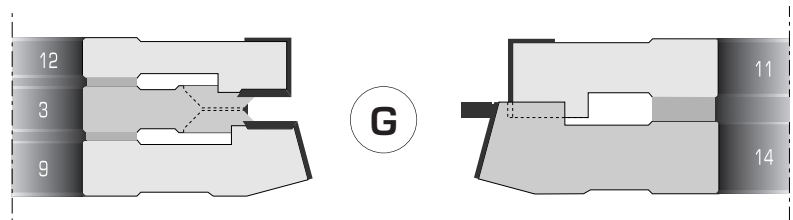
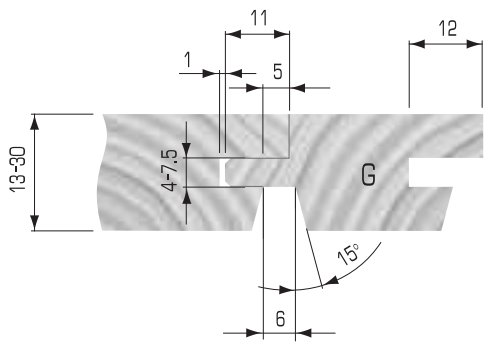
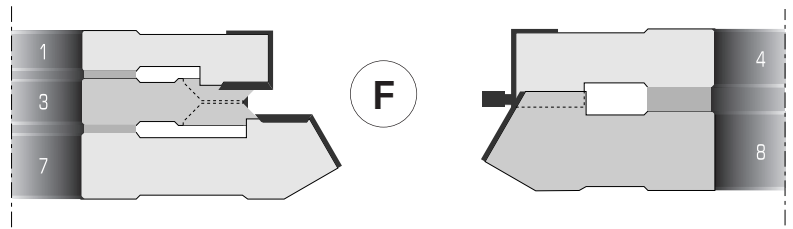
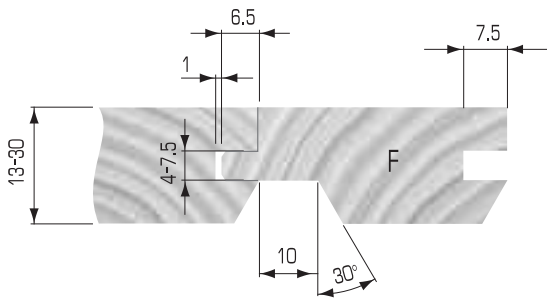
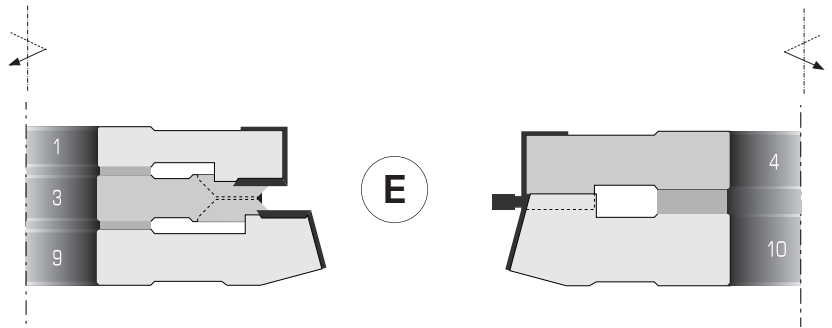
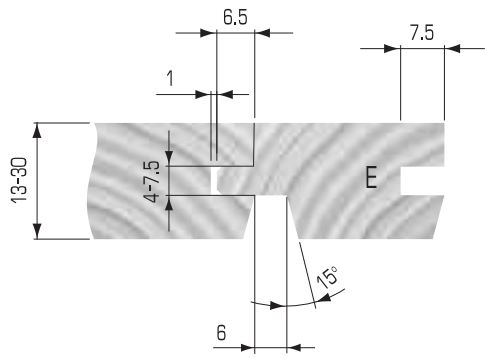
T-HANDLE TORX WRENCH
PART NO. W400420 T20

For profile selection see page D50 - D51

1T251 ADJUSTABLE TONGUE AND GROOVE TOOLHEADS



1T251 ADJUSTABLE TONGUE AND GROOVE TOOLHEADS

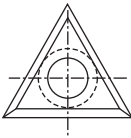
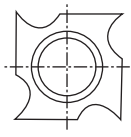
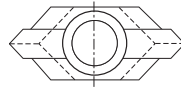
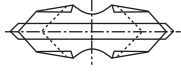

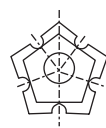
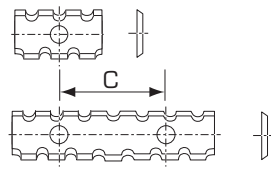


35° BACK ANGLE - 2 CUTTING EDGES

	PART NO.	PART NO.	LENGTH	WIDTH	THICKNESS	DIMENSION
	GRADE K05	GRADE XL4000 (EXTENDED LIFE)	L mm	W mm	T mm	C mm
<p>* Screw Hole, 2.5mm Diam.</p>	300600 *	-	6.0	12	1.5	-
	300800	-	7.5	12	1.5	-
	300860	-	8.6	12	1.5	-
	300920	-	9.2	12	1.5	-
	300960	-	9.6	12	1.5	-
	301050	-	10.5	12	1.5	-
	301100	-	11.0	12	1.5	-
	301160	-	11.6	12	1.5	-
	301230	-	12.3	12	1.5	-
	301300	-	13.0	12	1.5	-
	301500	-	15.0	12	1.5	-
	301570	-	15.7	12	1.5	-
	301700	-	17.0	12	1.5	-
	301800	-	18.0	12	1.5	-
	301900	-	19.0	12	1.5	-
	302000	302000XL	20.0	12	1.5	-
	302500	-	25.0	12	1.5	-
	302501	-	25.0	12	1.5	14
	303000	303000XL	30.0	12	1.5	14
	304000	-	40.0	12	1.5	26
	305000	305000XL	50.0	12	1.5	26
	306000	-	60.0	12	1.5	26
	308000	-	80.0	13	2.2	60
	310000	-	100.0	13	2.2	60
	312000	-	120.0	13	2.2	60
<p>Left Hand 303020 305020</p> <p>Right Hand 303021 305021</p>	303020	-	29.5	12	1.5	14
	303021	-	29.5	12	1.5	14
	305020	-	49.5	12	1.5	26
	305021	-	49.5	12	1.5	26
<p>Left Hand 303030 305030</p> <p>Right Hand 303031 305031</p>	303030	-	29.5	12	1.5	14
	303031	-	29.5	12	1.5	14
	305030	-	49.5	12	1.5	26
	305031	-	49.5	12	1.5	26

4 CUTTING EDGES

	PART NO. GRADE K05	PART NO. GRADE XL4000 (EXTENDED LIFE)	LENGTH L mm	WIDTH W mm	THICKNESS T mm	BACK ANGLE α°
	301051	-	10.5	10.5	1.5	35°
	301200	301200XL	12.0	12.0	1.5	35°
	301301	-	13.0	13.0	2.5	35°
	301701	-	17.0	17.0	2.0	35°
	301901	-	19.0	19.0	2.0	35°
	301052	-	10.5	10.5	1.5	35°
	301360	-	13.6	13.6	2.0	30°
	301361	-	13.6	13.6	2.0	45°
	301414	-	14.0	14.0	1.2	30°
	301424	-	14.0	14.0	1.7	30°
	301404	301404XL	14.0	14.0	2.0	30°
	301414-H	-	14.0	14.0	1.2	30°
	301430	-	14.3	14.3	2.5	35°
	301460	-	14.6	14.6	2.5	30°
	301515	-	15.0	15.0	2.5	30°
	301405	-	14.0	14.0	2.0	30°
	301525	-	15.0	15.0	2.5	30°
	301505	-	15.0	15.0	2.0	35°

	PART NO. GRADE K05	LENGTH L mm	WIDTH W mm	THICKNESS T mm	BACK ANGLE DEGREE
	320201	22.0	19.0	2.0	30°
	320301	18.0	18.0	1.95	
	320302	18.0	18.0	2.45	
	320303	18.0	18.0	2.95	
	320305	18.0	18.0	3.70	
	320401	18.9	7.9	4.0	
	320501	18.0	6.0	3.5	
	320601	33.5	3.0		
	320701	18.5		3.25	30°
	320802	20.0	12.0	1.5	-
	320803	30.0	12.0	1.5	C=14.0
	320805	50.0	12.0	1.5	C=26.0

	PART NO. GRADE K05	LENGTH L mm	WIDTH W mm	THICKNESS T mm	DIMENSION C mm
<p>2 Cutting Edges</p>	302010	20.0	9.0	1.5	-
	302012	19.5	12.0	1.5	-
<p>4 Cutting Edges</p>	302810	28.0	7.0	1.5	14
	303010	29.5	9.0	1.5	14
	303012	29.5	12.0	1.5	14
	304010	39.5	9.0	1.5	26
	304012	39.5	12.0	1.5	26
	305010	49.5	9.0	1.5	26
	305012	49.5	12.0	1.5	26
	306012	59.5	12.0	1.5	26
<p>2 Cutting Edges</p>	300906	10.0	9.5	1.5	-
	301006	10.0	10.5	1.5	-
<p>4 Cutting Edges</p>	303009	29.5	9.0	1.5	14
	303022	29.5	12.0	1.5	14
	304009	39.5	9.0	1.5	26
	304022	39.5	12.0	1.5	26
	305009	49.5	9.0	1.5	26
	305022	49.5	12.0	1.5	26
<p>4 Cutting Edges</p>	305025	50.0	12.0	1.7	37

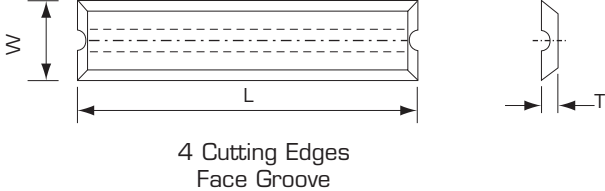
45° BACK ANGLE

	PART NO. GRADE K05	LENGTH L mm	WIDTH W mm	THICKNESS T mm	DIMENSION C mm	
<p>2 Cutting Edges</p>	307545	7.5	12.0	1.5	-	
	309645	9.6	12.0	1.5	-	
	301545	15.0	12.0	1.5	-	
	302045	20.0	12.0	1.5	-	
<p>2 Cutting Edges</p>	303045	30.0	12.0	1.5	14	
	304045	40.0	12.0	1.5	26	
	305045	50.0	12.0	1.5	26	
	306045	60.0	12.0	1.5	26	
	*301245	12.0	12.0	1.5	-	

* 4 Cutting Edges

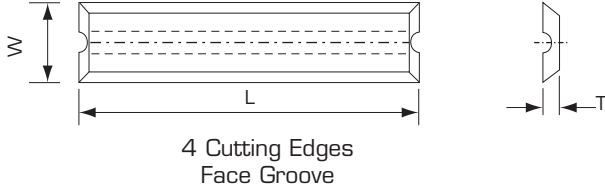
C4 GRADE MICRO GRAIN MIRROR FINISH

PART NO.	LENGTH	WIDTH	THICKNESS
	L mm	W mm	T mm
300911M	9.0	9.0	1.5
301211M	12.0	5.5	1.1
301511M	15.0	5.5	1.1
302011M	20.0	5.5	1.1
302511M	25.0	5.5	1.1
303011M	30.0	5.5	1.1
303511M	35.0	5.5	1.1
304011M	40.0	5.5	1.1
304511M	45.0	5.5	1.1
305011M	50.0	5.5	1.1
306011M	60.0	5.5	1.1



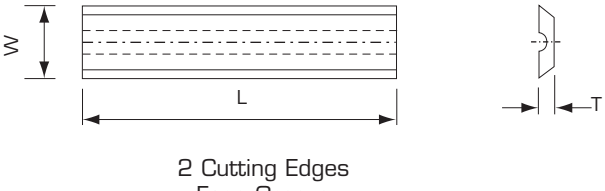
K05 GRADE STANDARD FINISH

PART NO.	LENGTH	WIDTH	THICKNESS
	L mm	W mm	T mm
303011S	30.0	5.5	1.1
303511S	35.0	5.5	1.1
304011S	40.0	5.5	1.1
304511S	45.0	5.5	1.1
305011S	50.0	5.5	1.1
306011S	60.0	5.5	1.1

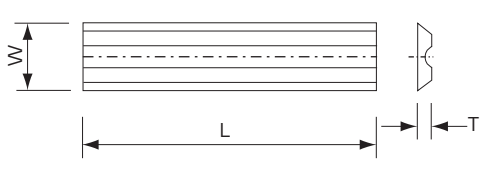
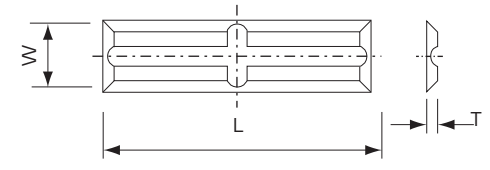


K05 GRADE STANDARD FINISH

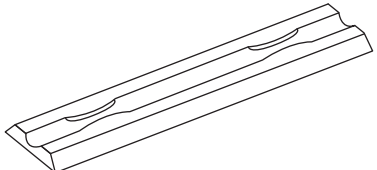
PART NO.	LENGTH	WIDTH	THICKNESS
	L mm	W mm	T mm
301211	12.0	5.5	1.1
301511	15.0	5.5	1.1
302011	20.0	5.5	1.1
303011	30.0	5.5	1.1
304011	40.0	5.5	1.1
305011	50.0	5.5	1.1
306011	60.0	5.5	1.1



K05 GRADE STANDARD FINISH

 <p>2 Cutting Edges Back Groove</p>	PART NO.	LENGTH L mm	WIDTH W mm	THICKNESS T mm
	341211	12.0	5.5	1.1
	342011	20.0	5.5	1.1
	343011	30.0	5.5	1.1
	345011	50.0	5.5	1.1
 <p>4 Cutting Edges Back and Cross-Groove</p>	352010	20.0	4.1	1.1
	352011	20.0	5.5	1.1
	352511	25.0	5.5	1.1
	353011	30.0	5.5	1.1
	354011	40.0	5.5	1.1
	355011	50.0	5.5	1.1

REVERSIBLE KNIVES FOR PORTABLE HAND-PLANNERS

	PART NO.	LENGTH L mm	WIDTH W mm	THICKNESS T mm	MACHINES
	305600	56.0	5.5	1.1	ADLER
	306001	60.0	5.5	1.1	WEGOMA
	307500	75.5	5.5	1.1	AEG, BOSCH, FESTO HAFFNER, KRESS, MAFELL, METABO SCHEER, SKIL HOLZ-HER
	307570	75.7	5.5	1.2	B & D
	307800	78.0	5.5	1.1	VIRUTEX
	318000	80.5	5.9	1.2	ELU
	308052	80.5	5.5	1.1	ELU
	308200	82.0	5.5	1.1	AEG, B&D, BOSCH ALU, FEIN, FELISATTI HAFFNER, HITACHI HOLZ-HER, MAFELL MAKITA, METABO, PEUGOT, RYOBI, SKIL
	308270	82.7	5.5	1.2	B & D
	309200	92.0	5.5	1.1	AEG, HITACHI
					RYOBI
	301020	102.0	5.5	1.1	AEG

CHAMFERING AND CORNER ROUNDING

				PART NO.	DIMENSIONS mm	TYPE	ROTATION
				30600601	27x14x6	A	R.H.
				30600602	27x14x6	A	L.H.
				30600605	R=1.5	B	R.H.
				30600613	R=2.0	B	R.H.
				30600603	R=3.0	B	R.H.
				30600606	R=1.5	B	L.H.
				30600614	R=2.0	B	L.H.
				30600604	R=3.0	B	L.H.

CHAMFERING AND CORNER ROUNDING [BG TEST]

				PART NO.	DIMENSIONS mm	TYPE	ROTATION
				30600607	27x16x6	A	R.H.
				30600608	27x16x6	A	L.H.
				30600617	R=1.5	B	R.H.
				30600611	R=2.0	B	R.H.
				30600609	R=3.0	B	R.H.
				30600618	R=1.5	B	L.H.
				30600612	R=2.0	B	L.H.
				30600610	R=3.0	B	L.H.

CHAMFERING AND CORNER ROUNDING [BG TEST]

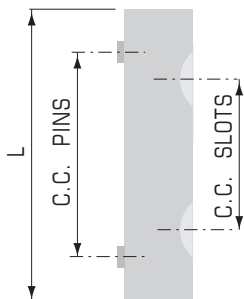
				PART NO.	DIMENSIONS mm	TYPE	RADIUS R
				30700501	16x22x5	A	-
				30700503	16x22x5	B	1.5
				30700504	16x22x5	B	2.0
				30700505	16x22x5	B	2.5
				30700506	16x22x5	B	3.0
				30700507	16x22x5	B	4.0
				30700508	16x22x5	B	5.0
				30700509	16x22x5	B	6.0

REVERSIBLE GROOVING INSERTS - CARBIDE TIPPED

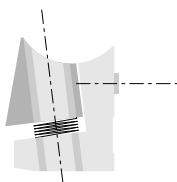
	PART NO.	DIMENSIONS mm	ROTATION
	307807	48x3.0x16	L.H.
307808	48x3.0x16	R.H.	
307809	48x4.0x16	L.H.	
307810	48x4.0x16	R.H.	
307813	48x5.0x16	L.H.	
307814	48x5.0x16	R.H.	
307817	48x6.35x16	L.H.	
307818	48x6.35x16	R.H.	
307831	60x4.0x16	L.H.	
307832	60x4.0x16	R.H.	
307835	60x5.0x16	L.H.	
307836	60x5.0x16	R.H.	

SOLID CARBIDE STANDARD PROFILE KNIVES

	PART NO.	DIMENSIONS LxWxH mm	Radius (R) mm
	401002	16x17.5x2.0	2
401003	16x17.5x2.0	3	
401004	16x17.5x2.0	4	
401005	16x17.5x2.0	5	
402002	20x20.5x2.0	2	
402003	20x20.5x2.0	3	
402004	20x20.5x2.0	4	
402005	20x20.5x2.0	5	
402006	20x20.5x2.0	6	
	402020	20x20.5x2.0	$\alpha=45^\circ$



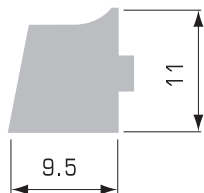
WEDGES					
PART NO.	LENGTH mm	NO. PINS	C.C. PINS mm	NO. SLOTS	C.C. SLOTS mm
W350021	6.8	1	0	1	0
W350022	7.6	1	0	1	0
W350023	9.0	1	0	1	0
W350004	11.0	1	0	1	0
W350017	14.0	1	0	1	0
W350005	16.0	1	0	1	0
W350006	21.0	1	0	1	0
W350014	26.0	1	0	1	0
W350007	26.0	2	14	1	0
W350008	36.0	2	26	2	18
W350009	46.0	2	26	2	24
W350056	55.0	2	26	2	30
W350011	74.0	2	60	2	44
W350018	94.0	2	60	4	25



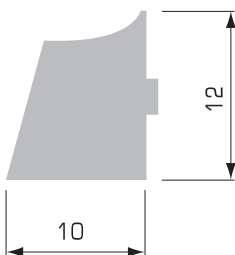
WEDGES			
PART NO.	LENGTH mm	NO. PINS	C.C. PINS mm
W300004	18	1	0
W300037	26	1	0
W300023	46	2	26
W300024	56	2	26



WEDGES			
PART NO.	LENGTH mm	NO. PINS	C.C. PINS mm
W300203	13	1	0
W300204	18	1	0
W300205	28	2	14
W300206	48	2	26



WEDGES			
PART NO.	LENGTH mm	NO. PINS	C.C. PINS mm
W340006	15	1	0
W340026	26	2	14
W340027	31	2	18

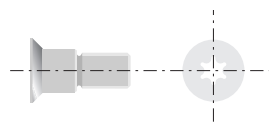


WEDGES			
PART NO.	LENGTH mm	NO. PINS	C.C. PINS mm
W300701	14.5	1	0
W300702	27.4	2	15.3

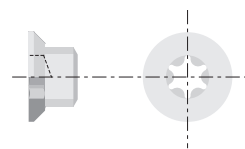
W501313 REPLACEMENT PARTS



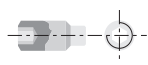
WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W501313	M4x16
W501307	M5x8
W501301	M6x12
W501302	M6x16
W501316	M6x20
W501303	M8x10
W501312	M10x12
W501305	M10x20
W501309	M10x25



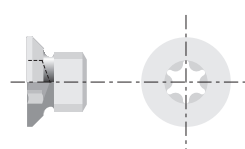
TORX SCREWS	
PART NO.	DIMENSIONS mm
W500003	M5x14



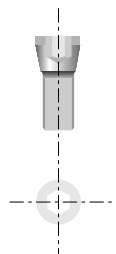
TORX SCREWS	
PART NO.	DIMENSIONS mm
W500002	M5x7
W500004	M5x5.1



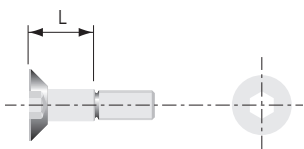
WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W501415	M5x8
W501402	M6x10
W501401	M6x12
W501404	M8x20
W501410	M8x25
W501409	M10x20



TORX SCREWS	
PART NO.	DIMENSIONS mm
W500401	M4x3.2
W500402	M4x4.0

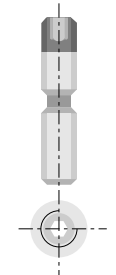


WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W502403*	M5x18
W502405	M7x17
W502404	M7x19
W502402	M7x21
W502401	M7x26

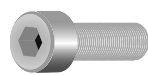


HEX SCREWS		
PART NO.	DIMENSIONS mm	L mm
W500205	M6x15	7.0
W500206	M6x19	11.0

* T20 TORX



WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W500901	M6x15
W500902	M6x20
W500903	M8x22



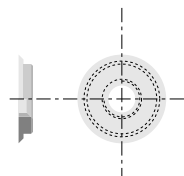
HEX SCREWS	
PART NO.	DIMENSIONS mm
W501702	M5x16



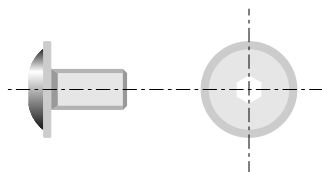
HEX SCREWS	
PART NO.	DIMENSIONS mm
W500605	M6x16
W500601	M8x50



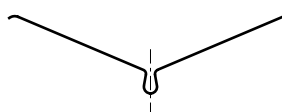
HEX SCREWS	
PART NO.	DIMENSIONS mm
W500201	M6x12
W500312	M16x19



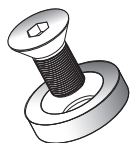
Threaded Rings for Spurs	
PART NO.	DIMENSIONS mm
W501001	10x1.65
W501101	12x1.7



POSITIONING SCREWS	
PART NO.	DIMENSIONS mm
W502601	M5x10



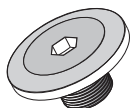
Springs for Planing Toolheads	
PART NO.	DIMENSIONS mm
W501601	25x52
W501602	36x95



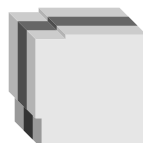
POSITIONING SCREWS	
PART NO.	DIMENSIONS mm
W500604	M5 x 10
W500303	16mm x 3.5



SIDE GAUGES	
PART NO.	DIMENSIONS mm
W200202	0.4
W200201	1.0
W200204	1-0.35



POSITIONING SCREWS	
PART NO.	DIMENSIONS mm
W502604	M5x5



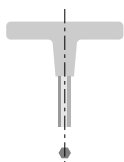
MAGNETIC SIDE GAUGE	
PART NO.	DIMENSIONS mm
W200203	-



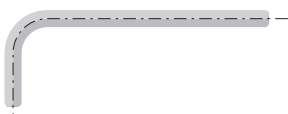
WRENCHES	
PART NO.	DIMENSIONS mm
W400501	55
W400502	65


TORX WRENCHES

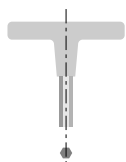
PART NO.	DIMENSIONS mm
W400406	T8
W400401	T9
W400405	T15


T-HANDLE TORX WRENCHES

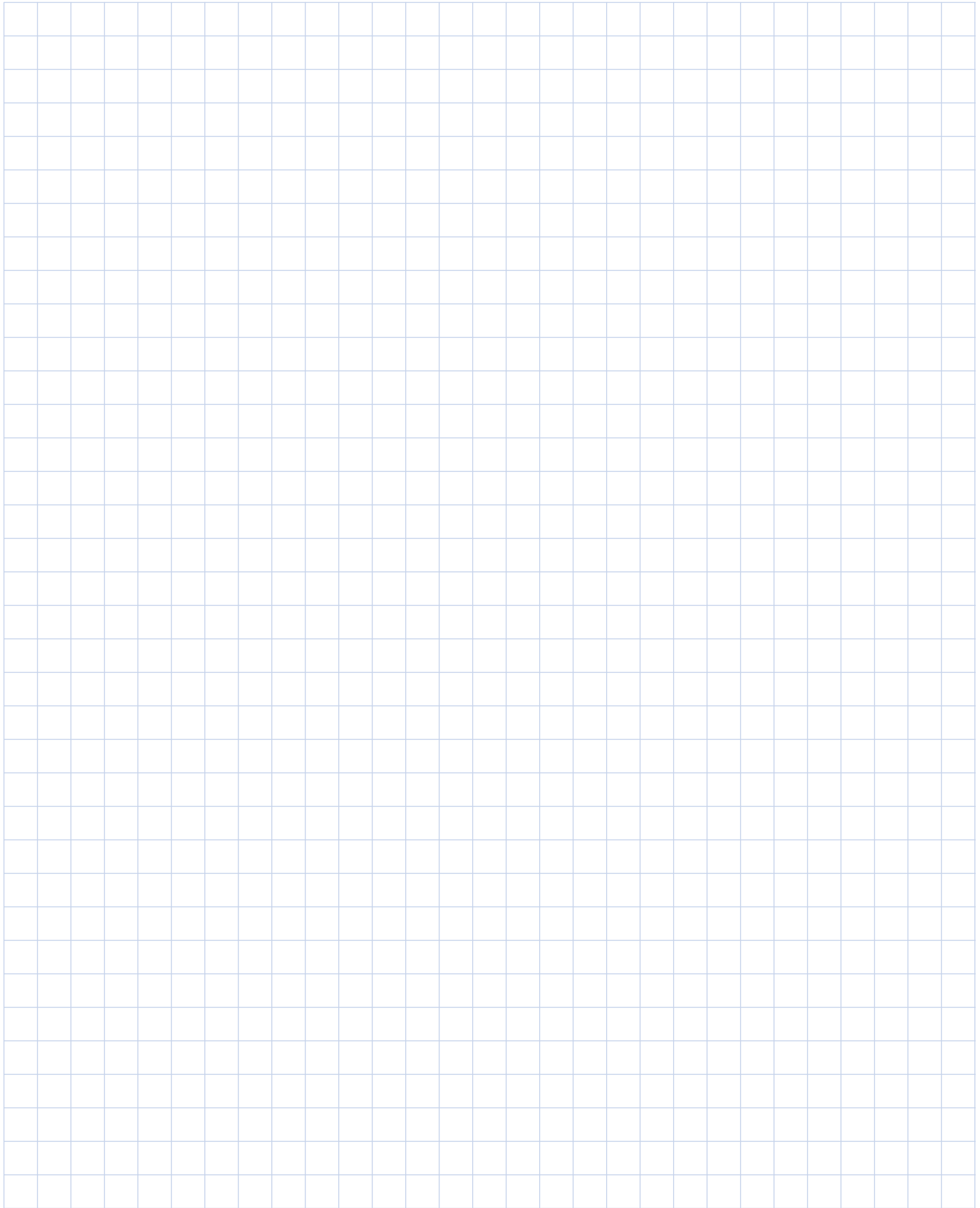
PART NO.	DIMENSIONS mm
W400420	T20

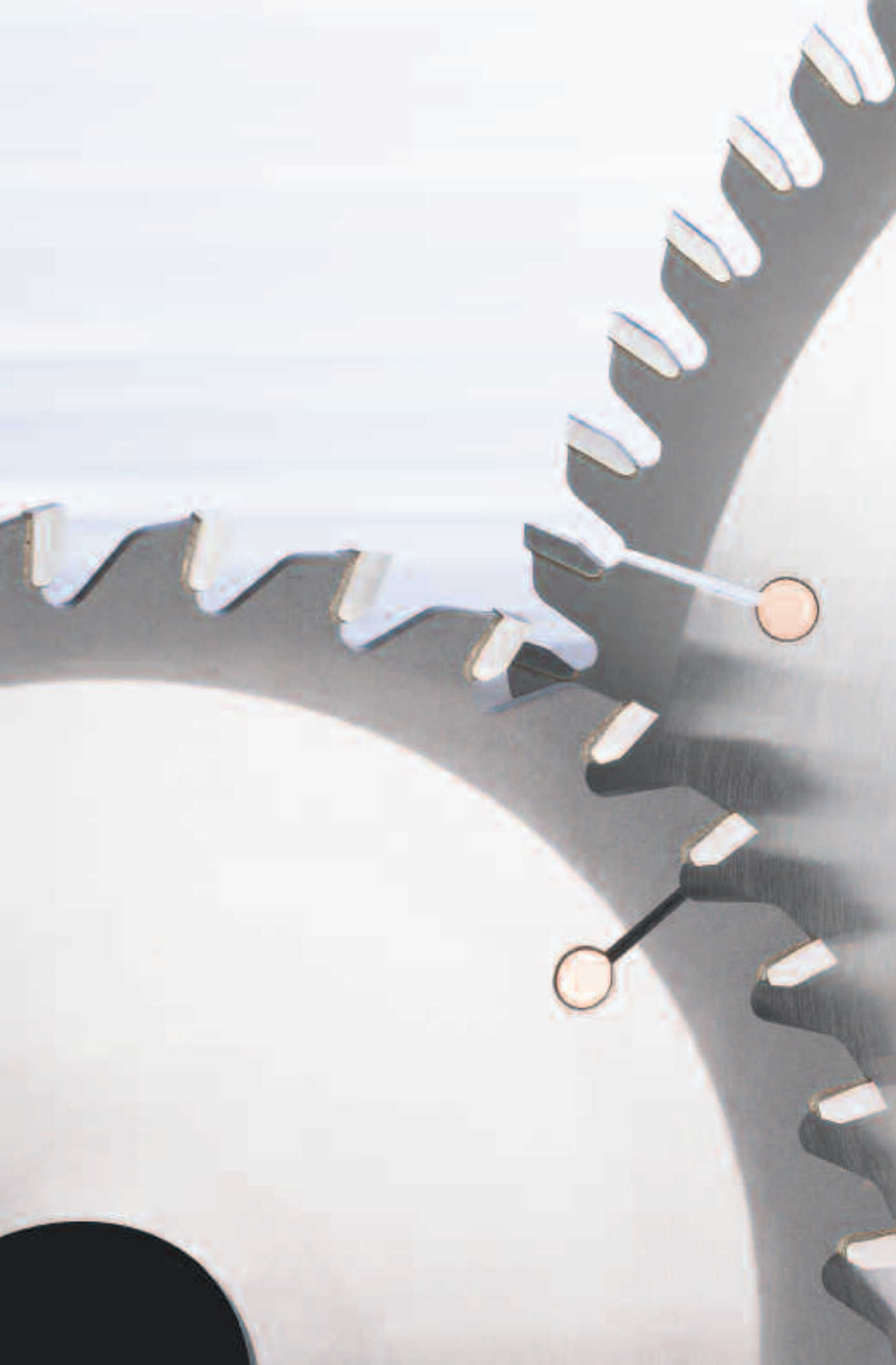

ALLEN WRENCHES

PART NO.	DIMENSIONS mm
W400001	2.5
W400002	3
W400003	4
W400004	5
W400005	6
W400006	7
W400007	8
W400008	10


T-HANDLE ALLEN WRENCHES

PART NO.	DIMENSIONS mm
W400101	2.5
W400113	3
W400114	4
W400115	5
W400116	6
W400117	8
W400108	10

A large grid area for taking notes, consisting of many small squares. A blue circle is partially visible on the left edge of the page.



CIRCULAR SAW BLADES / Dado Sets /
Grooving Saw Blades / Hogging Units

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L1A180 - L1A500	E36	L42220-H - L42350	E23	S4D250-LH - S4D300-RH	E7	560090A - 560195R	E35
L1B200 - L1B501	E37	L5030048-30 - L5067060-40	E24	S55225 - S55350	E3	570170L - 570170R	E35
L1C250 - L1C308	E36	L5224054-30 - L5270060-80	E25-E27	S6D350-LH - S6D350-RH	E7		
L10150 - L10450	E18	L55180 - L55400	E16				

XL4000

Extended Life Saw Blades

A revolutionary technology

20 years of development has refined every aspect of our saw blade manufacturing, materials and geometries. Today we offer nearly 1500 models all derived from the same engineering resources compiled over three decades of application experience. From plate to finished saw blade, each is manufactured using the latest technology. Once the plate has been transformed into the most formidable TCT saw blade on the market, it undergoes a nearly artisan, manual tensioning process.

Renowned as the premier saw blade available throughout our industry, the *XL4000* series will provide measurable cost savings by reducing machine downtime and by increasing your production's efficiency and quality of cut.



TOOL

Engineered to outperform

Why Change?

XL4000 TCT Saw Blades will reduce your machine's downtime and increase your production's efficiency by consistently providing an accurate, quality cut that lasts substantially longer and can be serviced more times.

Application Specific Cutting Geometries

XL4000 Submicron grade carbide teeth cut cleaner and last longer

Exceptional tensioning & superior steel ensures your blade always runs true

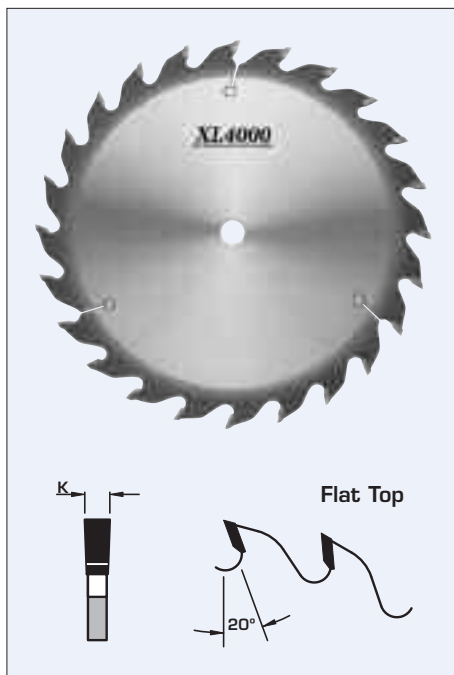
Oversized teeth give you more sharpenings

Polished plate resists resin build-up (no coatings needed)

XL4000
EXTENDED LIFE SAW BLADES

Cutting up to 5 times longer than conventional blades

QUALITY • SERVICE • PRIDE • TRADITION • INNOVATION

S21
XL4000 HEAVY DUTY RIP SAW BLADES

DESIGN:

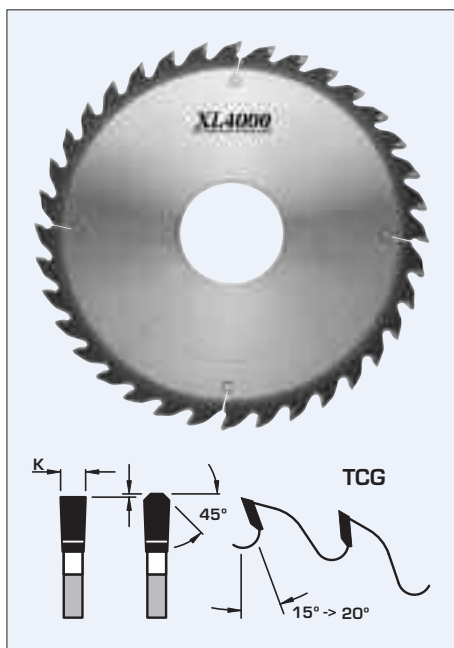
- Tooth configuration: Flat Top
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

APPLICATION:

- For ripping dry soft and hardwoods
- On table saws or gang-rip saws with one or two shafts

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S21250	10"	.142"	.095"	5/8"	24
S18300	12"	.160"	.110"	1"	24
S21300	12"	.160"	.110"	1"	30
S21300-80 ▲	300mm	3.4mm	2.2mm	80mm	28
S21350	14"	.170"	.118"	1"	30

▲ RAIMANN 2 keyways, 4/2 pin holes

S22
XL4000 GLUE LINE RIP SAW BLADES

DESIGN:

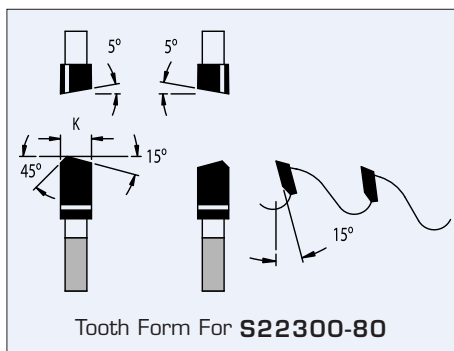
- Tooth configuration: TCG
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

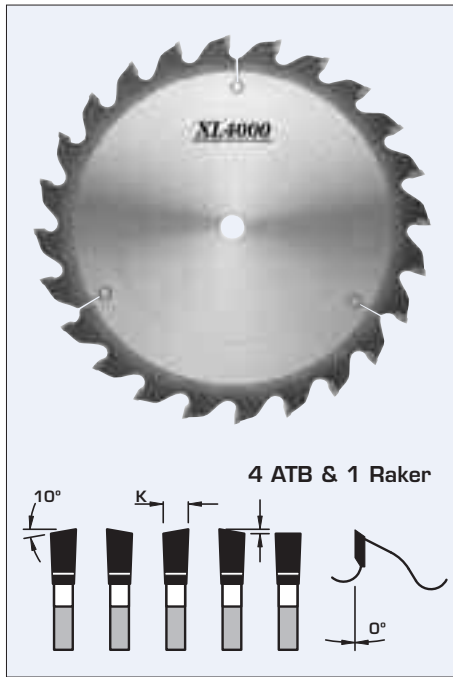
APPLICATION:

- For glue line ripping dry soft and hardwoods
- Extra smooth cut for gluing applications
- On straight line rip saws, gang rip saws and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S22250	10"	.142"	.095"	5/8"	24
S22252 ●	10"	.126"	.087"	3-1/8"	42
S22307-80 ◆	300mm	4.1mm	2.8mm	80mm	36
S22300-80 ◇	300mm	2.85mm	2.0mm	80mm	48
S22302	12"	.126"	.083"	1"	36
S22306	12"	.160"	.110"	1"	36
S22306-2 ▲	12"	.160"	.110"	2"	36
S22302-318 ●	12"	.126"	.083"	3-1/8"	36
S22306-318 ●	12"	.160"	.110"	3-1/8"	36
S22306-70 ■	12"	.160"	.110"	70mm	36
S22350	14"	.169"	.118"	1"	36
S22350-2 ▲	14"	.169"	.118"	2"	36
S22350-318 ●	14"	.169"	.118"	3-1/8"	36
S22350-70 ■	14"	.169"	.118"	70mm	36
S22350-418 ●	14"	.169"	.118"	4-1/8"	36

- ▲ Diehl with 9/16" pin-hole
- Mereen - Johnson
- SCM with 2 keyways 20 x 5mm
- ◇ RAIMANN - modified ATB + shear face - 2 keyways, 4/2 pin holes
- ◆ RAIMANN - TCG - 2 keyways, 4/2 pin holes




DESIGN:

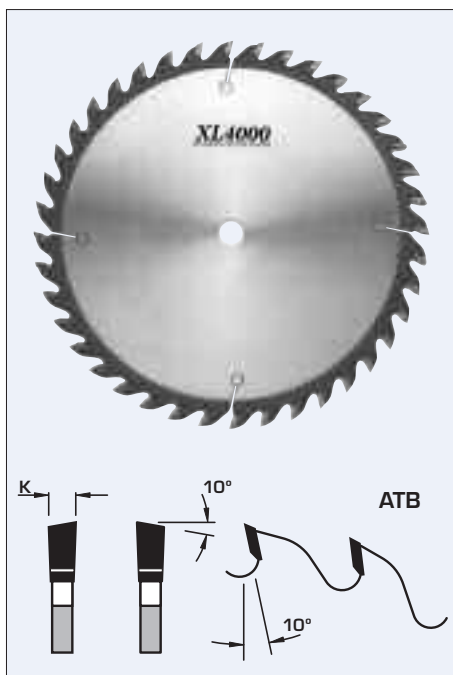
- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged
- 0° hook angle reduces the tendency of the blade grabbing the material

APPLICATION:

- For cross cutting and ripping dry soft and hardwoods
- On radial arm saws and other saws where the blade is above the work piece

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S07250 ♦	10"	.135"	.095"	5/8"	24
S07300 ♦	12"	.150"	.110"	1"	36
S07350	14"	.165"	.118"	1"	40

♦ 2 ATB & 1 Raker

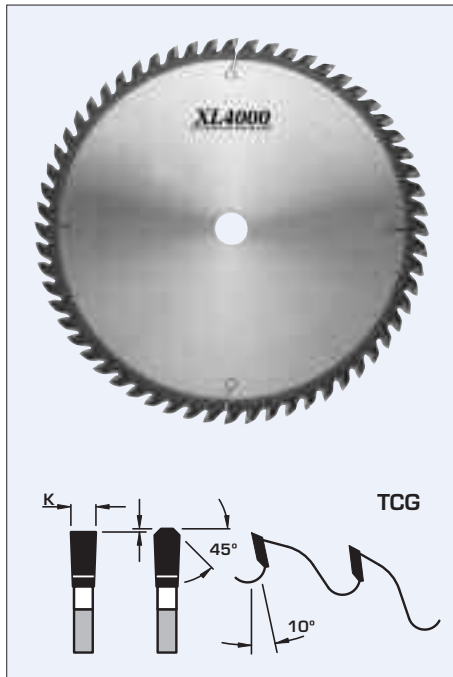

DESIGN:

- Tooth configuration: ATB
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plywood, masonite and raw MDF panels
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S03250	10"	.126"	.087"	5/8"	40
S03300	12"	.135"	.095"	1"	48
S09300	12"	.135"	.095"	1"	60
S03350	14"	.155"	.110"	1"	60
S03400	16"	.155"	.110"	1"	60
S09400	16"	.155"	.110"	1"	80

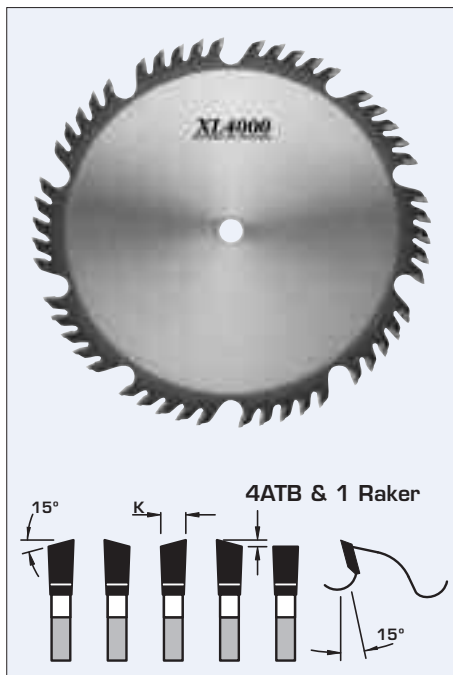

DESIGN:

- Tooth configuration: TCG
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plastic laminated composite materials (single sided)
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S19250	10"	.126"	.087"	5/8"	40
S19300	12"	.135"	.095"	1"	60
S19350	14"	.155"	.110"	1"	60
S19400	16"	.155"	.110"	1"	80

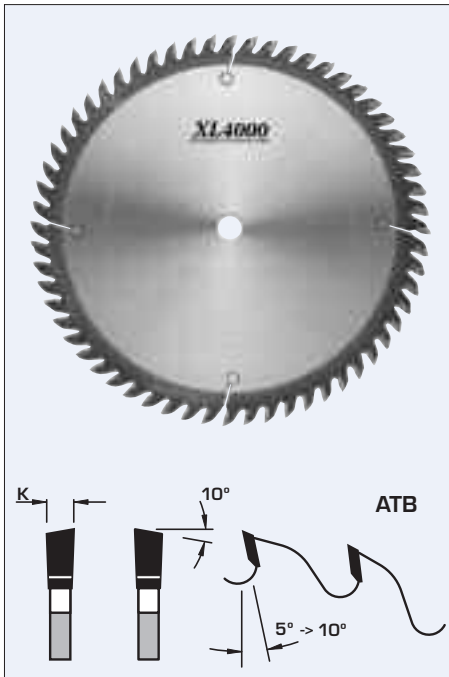

DESIGN:

- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC *XL4000*
- Four ATB teeth and one raker with deep gullet allow for deeper cuts and improved chip-flow

APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plywood and particleboard
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S55225	9"	.125"	.087"	5/8"	40
S55250	10"	.138"	.095"	5/8"	50
S55300	12"	.155"	.110"	1"	60
S55350	14"	.165"	.118"	1"	70

**DESIGN:**

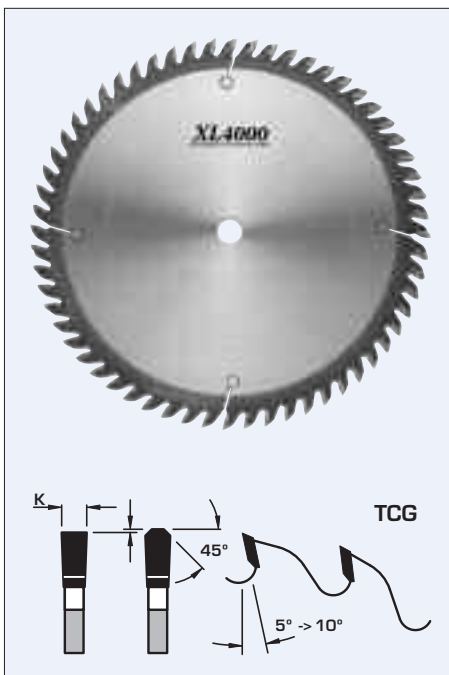
- Tooth configuration: ATB
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For general cut-off and trimming of soft and hardwoods, plywood and composite panel materials, wood veneered (single sided), or (double sided) using a pre-scoring unit
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S04225	9"	.126"	.087"	5/8"	60
S04250	10"	.126"	.087"	5/8"	60
S04302 ▲	300mm	3.4mm	2.4mm	30mm	72
S04300	12"	.135"	.095"	1"	80
S04350	14"	.150"	.110"	1"	80
S04400	16"	.160"	.118"	1"	100

▲ Altendorf, Omega, SCMI, Striebig

**DESIGN:**

- Tooth configuration: TCG
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

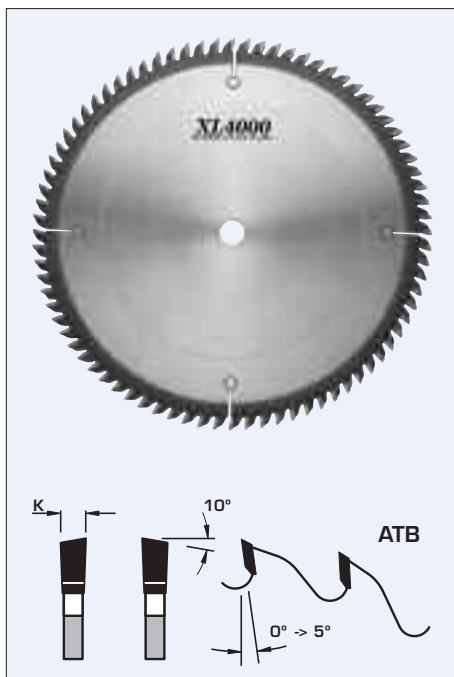
- For general cut-off and trimming of plastic laminated materials (single sided), or (double sided) using a pre-scoring unit
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S23225	9"	.126"	.087"	5/8"	60
S23250	10"	.126"	.087"	5/8"	60
S23302 ▲	300mm	3.4mm	2.4mm	30mm	72
S23300	12"	.135"	.095"	1"	80
S23350	14"	.150"	.110"	1"	80
S23352	350mm	3.5mm	2.5mm	30mm	80
S23400	16"	.160"	.118"	1"	100

▲ Altendorf, Omega, SCMI, Striebig

S06

XL4000 FINE CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

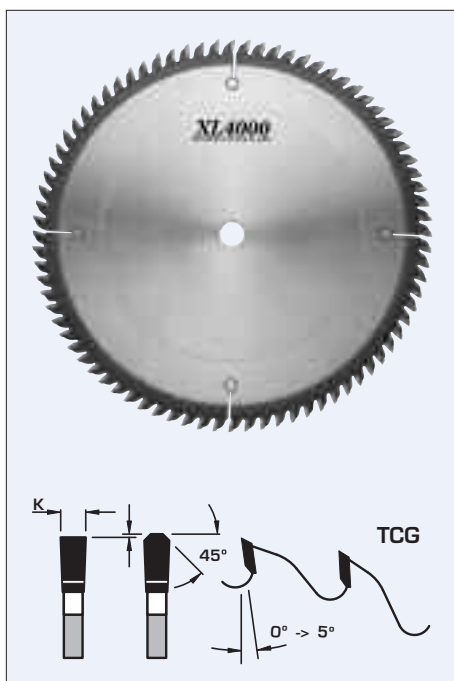
- For fine cut-off and trimming of soft and hardwoods, plywood, wood veneered and plastic laminated panel materials
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S06200	8"	.126"	.087"	5/8"	60
S06250	10"	.126"	.087"	5/8"	80
S06300	12"	.135"	.095"	1"	100
S06350	14"	.150"	.110"	1"	100
S06400CT ▲	16"	.160"	.118"	1"	120

▲ Specifically designed for cutting kitchen counter tops

S10

XL4000 FINE CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: TCG
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For fine sizing cuts in single or double sided melamine panels, MDF, OSB and HDF panels
- On table saws, sliding table saws and vertical panel sizing saws

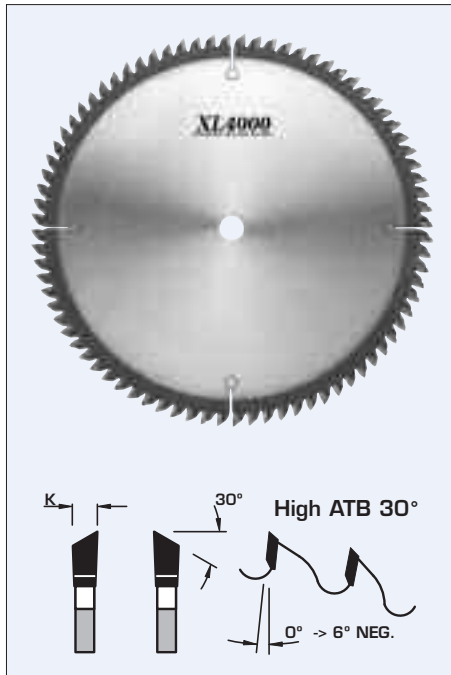
PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S10200	8"	.126"	.087"	5/8"	60
S10220-H ▲	220mm	3.2mm	2.2mm	30mm	64
S10250	10"	.126"	.087"	5/8"	80
S10300	12"	.135"	.095"	1"	100
S10350	14"	.150"	.110"	1"	100
S10358 ■	350mm	3.4mm	2.4mm	30mm	108
S10400CT ●	16"	.160"	.118"	1"	120

▲ Holz-Her, pin holes 2/7/42

■ Pin Holes, 2/10/60

● Specifically designed for cutting kitchen counter tops

SM6 30° XL4000 CHIP-FREE MELAMINE TRIM BLADES



DESIGN:

- Tooth configuration: High ATB (30°)
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

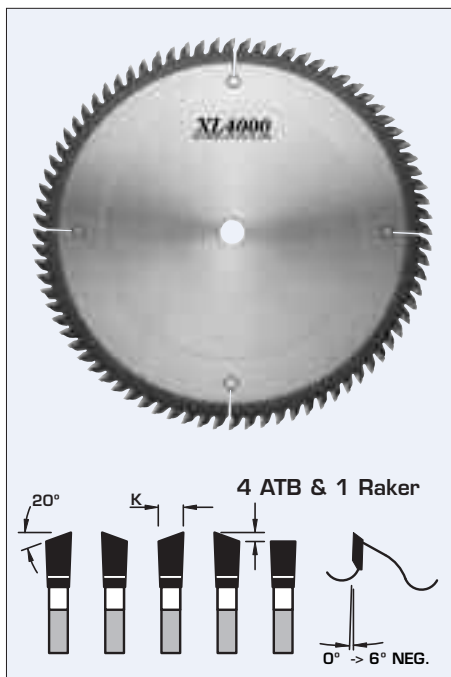
APPLICATION:

- For chip-free sizing cuts (on both sides) in melamine and wood veneered panels, without the need for pre-scoring
- For fine cross cuts in solid woods
- On table saws, sliding table saws, vertical panel sizing saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
SM6201	8"	.118"	.087"	5/8"	60
SM6221-H ▲	220mm	3.2mm	2.4mm	30mm	64
SM6251	10"	.118"	.087"	5/8"	80
SM6251-30 ▲	250mm	3.0mm	2.2mm	30mm	80
SM6301-30 ●	300mm	3.2mm	2.4mm	30mm	100
SM6301	12"	.126"	.095"	1"	100
SM6352	14"	.150"	.118"	1"	100
SM6401	16"	.157"	.118"	1"	120

- ▲ Holz-Her, pin holes, 2/7/42
- Altendorf, Striebig

SM6 XL4000 MITRE JOINT SAW BLADES



DESIGN:

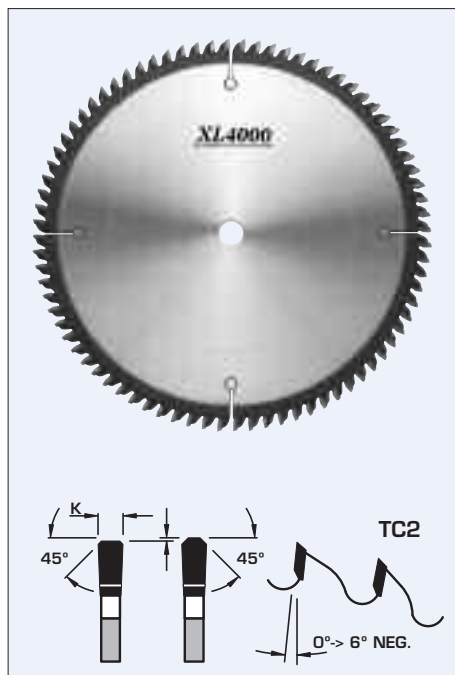
- Tooth configuration: 4 ATB & 1 raker
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

APPLICATION:

- For mitre joint cuts in soft and hardwoods, painted mouldings, gesso and other high-gloss and pre-finished picture frames and furniture mouldings as well as P.V.C. substrates
- For aluminum cuts see L1A, L1B, L1C series page E36, E37
- On single or double cut-off mitre machines and radial arm saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
SM6250	10"	.112"	.087"	5/8"	80
SM6300	12"	.120"	.095"	1"	100
SM6308 ▲	12"	.135"	.110"	5/8"	100

- ▲ Pistorius, CTD


DESIGN:

- Tooth configuration: TC2
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

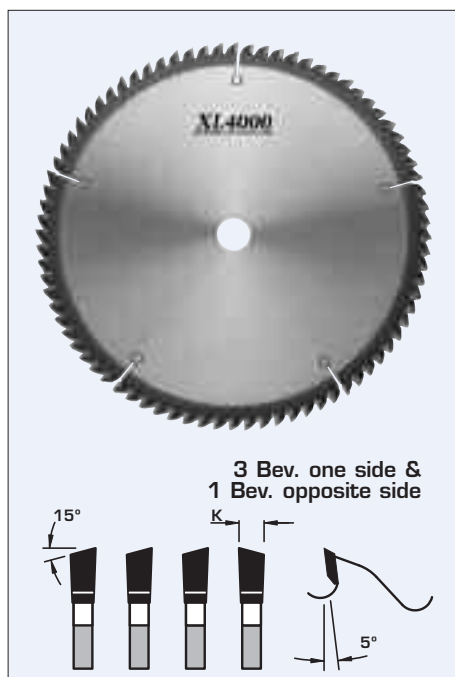
APPLICATION:

- For fine sizing cuts in single or double laminated panels, plexiglass and solid surface materials such as Wilsonart® Gibraltar®, SSV®, Corian®; Surell®; Avonite®; Fountainhead®, etc.
- On table saws, sliding table saws, radial arm saws and vertical panel sizing saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
SS1200	8"	.126"	.087"	5/8"	60
SS1220 ▲	220mm	3.4mm	2.4mm	30mm	64
SS1249	10"	.126"	.087"	5/8"	60
SS1250	10"	.126"	.087"	5/8"	80
SS1299-30 ●	300mm	3.4mm	2.4mm	30mm	80
SS1300-30 ●	300mm	3.4mm	2.4mm	30mm	100
SS1299	12"	.135"	.095"	1"	80
SS1300	12"	.135"	.095"	1"	100
SS1350	14"	.158"	.118"	1"	100
SS1400	16"	.160"	.118"	1"	120
SS1450	18"	.185"	.138"	1"	120

▲ Holz-Her, pin holes 2/7/42

● Altendorf, Striebig


DESIGN:

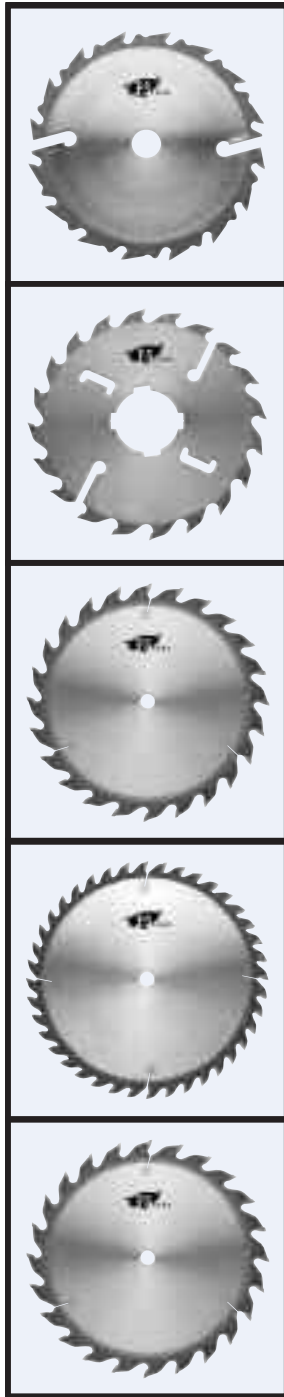
- Tooth configuration: 3 bevelled one side & 1 bevelled opposite side. Supplied in pairs 1 LH & 1 RH (order separately)
- Cutting material: TC *XL4000*
- Extra heavy plate provides added stability
- Expansion slots: Cu plugged

APPLICATION:

- For fine cut-off and mitre cuts of soft and hardwoods, and trimming of plywood, wood veneered and plastic laminated panels (single sided), or (double sided) using a pre-scoring unit
- On double cut-off machines and single or double end tenoners

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
S4D250-LH	10"	.165"	.118"	5/8"	60
S4D250-RH	10"	.165"	.118"	5/8"	60
S4D300-LH	12"	.160"	.118"	1"	80
S4D300-RH	12"	.160"	.118"	1"	80
S6D350-LH	14"	.185"	.138"	1"	100
S6D350-RH	14"	.185"	.138"	1"	100

A Saw Blade for Every Industrial Woodworking Application



FS Tool's offering of industrial saw blades represents the state-of-the-art answers for today's woodworking cutting applications on North American and European machinery.

Our product offering is the largest of its kind. Each saw blade has been developed to fulfill a specific cutting application.

Each model has been developed with its own grades of materials (carbide and saw plate), its own cutting geometry (grind, hook angle, kerf), and its own operational enhancements (copper noise reducing plugs, cooling slots).

There is a perfect FS Tool industrial saw blade for every industrial woodworking cutting application.

Commitment to Development

Our commitment to development is that each product must meet the challenge of today's applications and materials. New materials such as melamine require the development of saw blades that preserve the efficiencies of large volume cutting of the new material.

Commitment to Quality

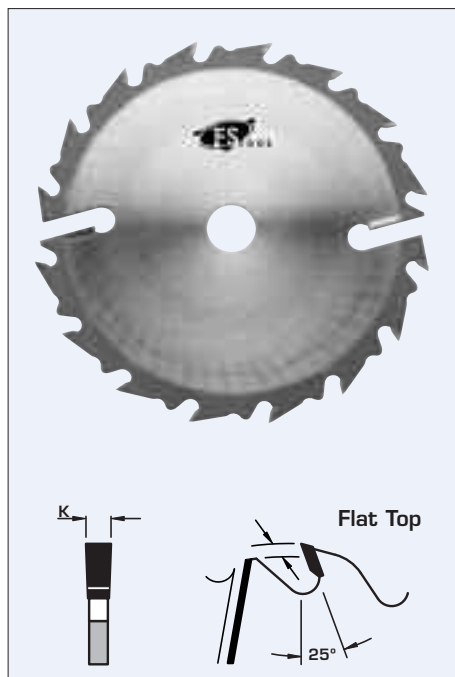
Our commitment to quality is founded on the critical manufacturing element; personal checking of saw blades at each step in our highly-automated manufacturing process. And final checking before they are packaged for shipment.

Commitment to Value

Our large volume manufacturing and material purchasing keep our costs in line... without compromising quality. We will always be competitive in a demanding and dynamic industrial marketplace.

L13

GANG RIP SAW BLADES WITH 2 RAKERS



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Two tungsten carbide rakers

APPLICATION:

- For ripping soft and hardwoods, dry up to 15% wood moisture
- On gang-rip saws with one or two shafts

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L13250 (A)	10"	.125"	.083"	2-3/8"	10+2
L13300 (D)	12"	.125"	.083"	2-15/16"	12+2
L13302 (D)	12"	.150"	.109"	2-15/16"	12+2
L13350 (D)	14"	.160"	.120"	2-1/2"	14+2
L13352 (G)	14"	.125"	.083"	4"	16+2

(A) 1 square keyway 3/8" x 3/8"

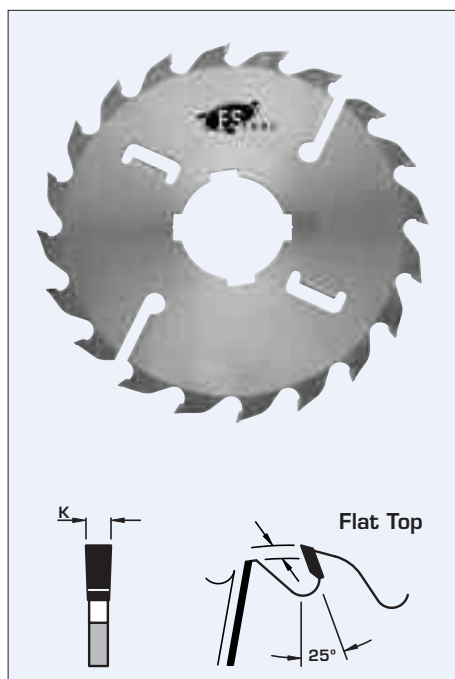
(D) 2 round keyways 3/8" x 3/8" + 1 round keyway 1/2" x 1/2"

(G) 1 pin hole 7/16" diam. on 5" bolt circle

Other sizes available on request

L14

GANG RIP SAW BLADES WITH 2+2 RAKERS



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Two chip clearance rakers and two wiper slots

APPLICATION:

- For ripping soft and hardwoods, wet or frozen
- On single and gang-rip saws with one or two shafts

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L14250 (A)	10"	.174"	.110"	2-3/8"	18+2+2
L14300 (D)	12"	.197"	.125"	2-15/16"	20+2+2
L14350 (D)	14"	.197"	.125"	2-1/2"	24+2+2
L14352 (G)	14"	.197"	.125"	4"	24+2+2

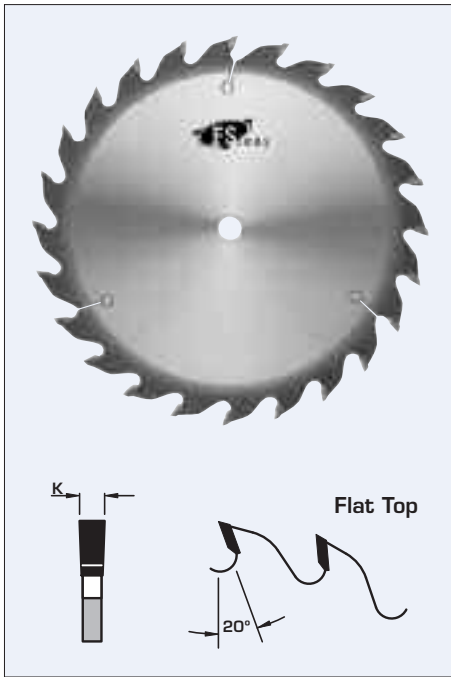
(A) 1 square keyway 3/8" x 3/8"

(D) 2 round keyways 3/8" x 3/8" + 1 round keyway 1/2" x 1/2"

(G) 1 pin hole 7/16" diam. on 5" bolt circle

Other sizes available on request

L21TK THIN KERF RIP SAW BLADES



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For ripping dry soft and hardwoods
- On table saws or gang-rip saws

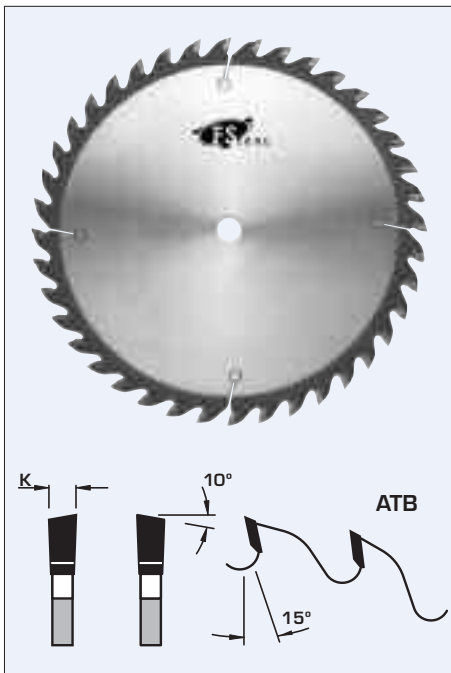
PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L21250TK	10"	.098"	.071"	5/8"	24
L21251TK	10"	.134"	.087"	5/8"	24

EXTRA THIN KERF SAW BLADES

All custom manufactured for your specific application

- Glue-joint rip saw blades
- Gang-rip saw blades
- Thin rim splitting saw blades (with double hub) for moulders

L03TK THIN KERF CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

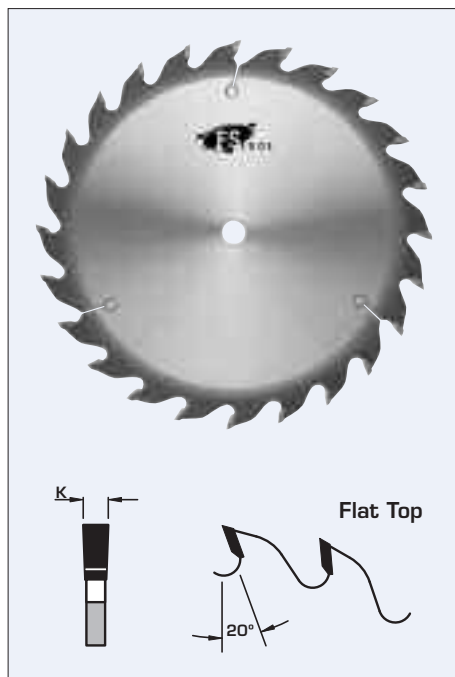
APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plywood and veneered plywoods
- Not recommended to cut stock over 3/4" without the use of stabilizer flanges

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L03200TK	8"	.090"	.063"	5/8"	34
L03250TK	10"	.090"	.063"	5/8"	40
L03300TK	12"	.090"	.063"	1"	48
L03350TK	14"	.090"	.063"	1"	54

L18

HEAVY DUTY RIP SAW BLADES



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged

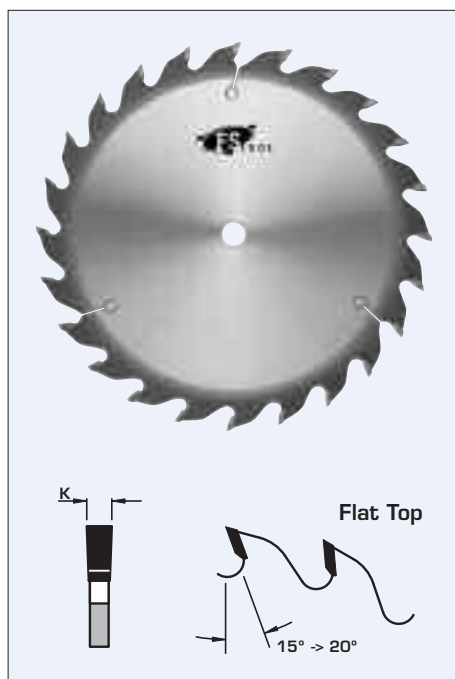
APPLICATION:

- For ripping dry soft and hardwoods
- On table saws or gang-rip saws with one or two shafts

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L18250	10"	.126"	.087"	5/8"	18
L18300	12"	.160"	.110"	1"	24
L18350	14"	.170"	.118"	1"	24
L18400	16"	.174"	.118"	1"	30
L18450	18"	.193"	.138"	1"	40

L21

STANDARD RIP SAW BLADES



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

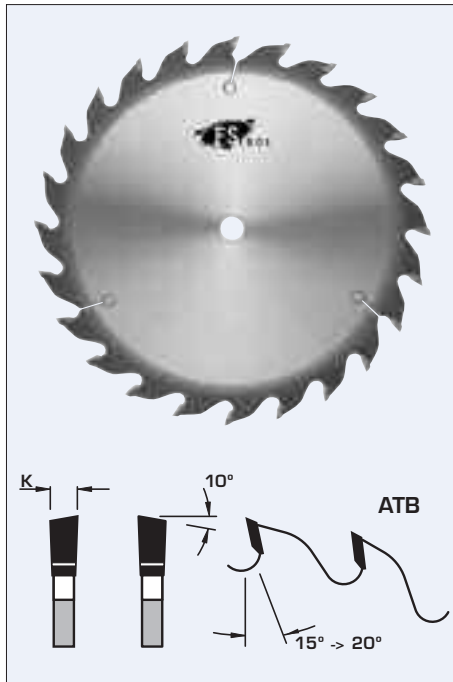
- For ripping dry soft and hardwoods
- On table saws or gang-rip saws with one or two shafts

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L21200	8"	.130"	.087"	5/8"	24
L21225	9"	.130"	.087"	5/8"	24
L21250	10"	.142"	.095"	5/8"	24
L21300	12"	.160"	.110"	1"	30
L21300-70 ▲	12"	.160"	.110"	70mm	30
L21350	14"	.170"	.118"	1"	30
L21350-70 ▲	14"	.170"	.118"	70mm	30
L21400	16"	.170"	.118"	1"	36

▲ SCM with 2 keyways 20 x 5 mm

L2A

GLUE LINE RIP SAW BLADES ATB



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

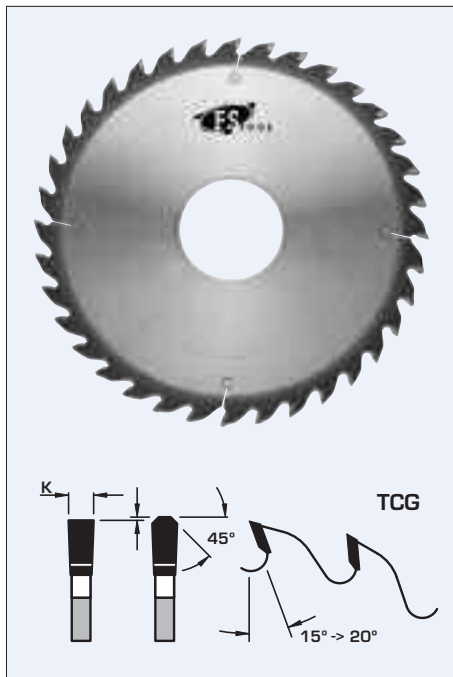
APPLICATION:

- For glue line ripping dry soft and hardwoods
- Extra smooth cut for gluing applications
- On table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L2A200	8"	.130"	.087"	5/8"	24
L2A225	9"	.135"	.087"	5/8"	24
L2A250	10"	.138"	.095"	5/8"	24

L22

GLUE LINE RIP SAW BLADES TCG



DESIGN:

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

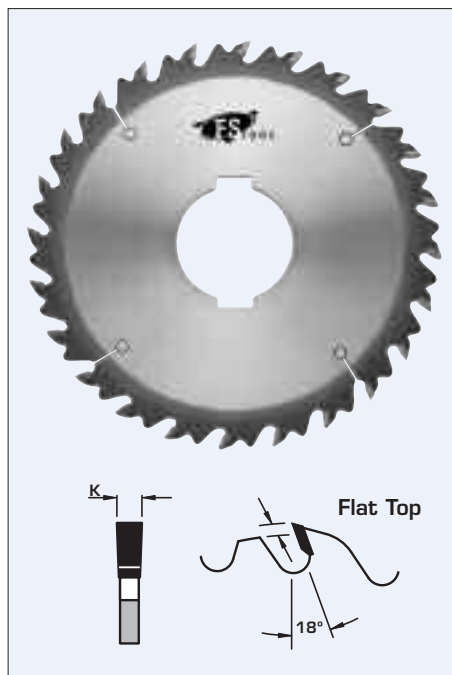
- For glue line ripping dry soft and hardwoods
- Extra smooth cut for gluing applications
- On straight line rip saws, gang-rip saws and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L22250	10"	.142"	.095"	5/8"	24
L22306	12"	.160"	.110"	1"	36
L22306-2 ▲	12"	.160"	.110"	2"	36
L22306-318 ●	12"	.160"	.110"	3-1/8"	36
L22306-70 ■	12"	.160"	.110"	70mm	36
L22350	14"	.170"	.118"	1"	36
L22350-2 ▲	14"	.169"	.118"	2"	36
L22350-318 ●	14"	.169"	.118"	3-1/8"	36
L22350-418 ●	14"	.169"	.118"	4-1/8"	36
L22350-70 ■	14"	.169"	.118"	70mm	36
L22400	16"	.174"	.118"	1"	36

- ▲ Diehl Machines with 9/16" pinhole
- Merein-Johnson
- SCM with 2 keyways 20 x 5mm

L12

GANG RIP SAW BLADES WITH CHIP LIMITERS



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged
- Saw body with chip thickness limiters

APPLICATION:

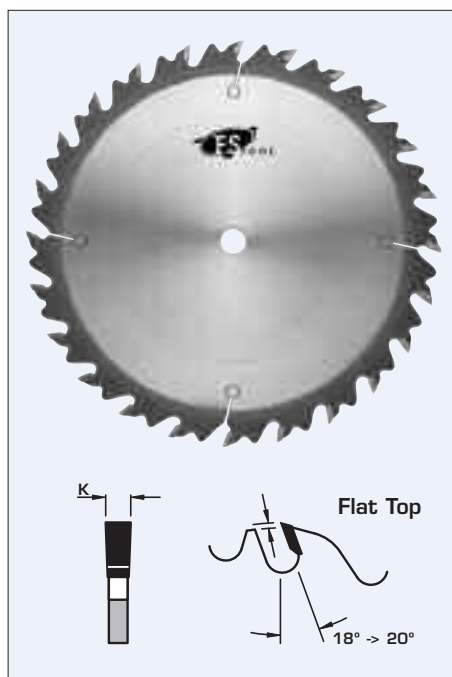
- For ripping dry soft and hardwoods
- On gang-rip saws

PART NO.	DIAM.	KERF	KEYWAY	BORE	TEETH
L12250	250mm	3.2mm	2/20x5	70mm	24
L12300	300mm	3.2mm	2/20x5	70mm	28
L12350	350mm	3.2mm	2/20x5	70mm	24

Plate Thickness = 2.2mm

L02

RIP SAW BLADES WITH CHIP LIMITERS



DESIGN:

- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged
- Saw body with chip thickness limiters

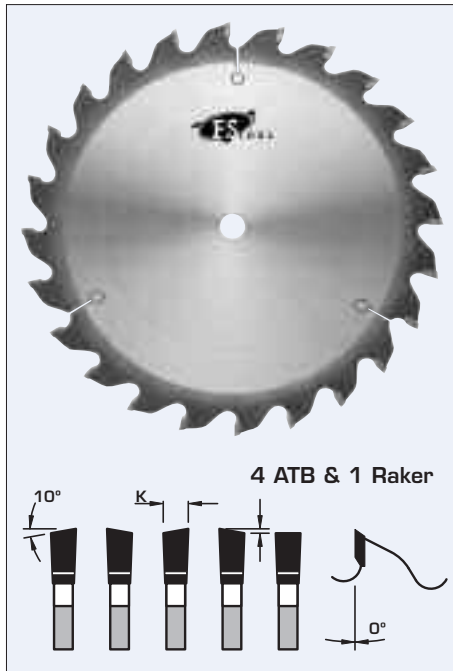
APPLICATION:

- For ripping dry soft and hardwoods
- On table saws and sliding table saws
- Ideal for hand fed operations

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L02250	250mm	3.2mm	2.2mm	5/8"	24
L02300	300mm	3.4mm	2.4mm	1"	28
L02350	350mm	3.8mm	2.8mm	1"	32
L02400	400mm	3.8mm	2.8mm	1"	36
L02450	450mm	4.0mm	2.8mm	1"	40
L02500	500mm	4.2mm	3.0mm	1"	44

L07

RADIAL ARM SAW BLADES



DESIGN:

- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC
- Expansion slots: Cu plugged
- 0° hook angle reduces the tendency of the blade grabbing the material

APPLICATION:

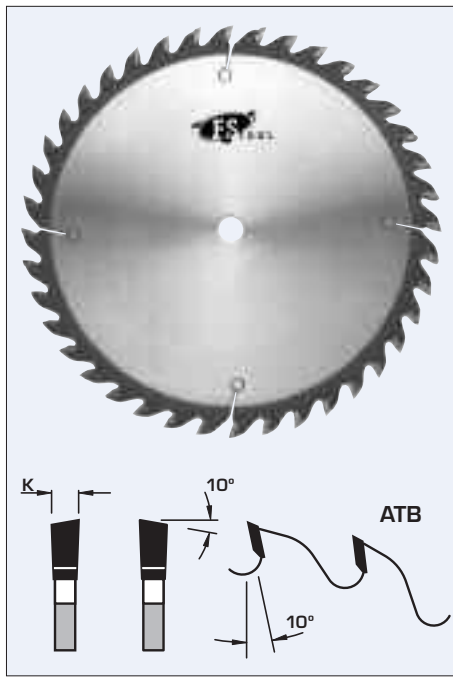
- For cross cutting and ripping dry soft and hardwoods
- On radial arm saws and other saws where the blade is above the work piece

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L07250	10"	.135"	.095"	5/8"	24
L07300	12"	.150"	.110"	1"	36
L07350	14"	.165"	.118"	1"	40
L07400	16"	.165"	.118"	1"	40

◆ 2 ATB & 1 Raker

L03

CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

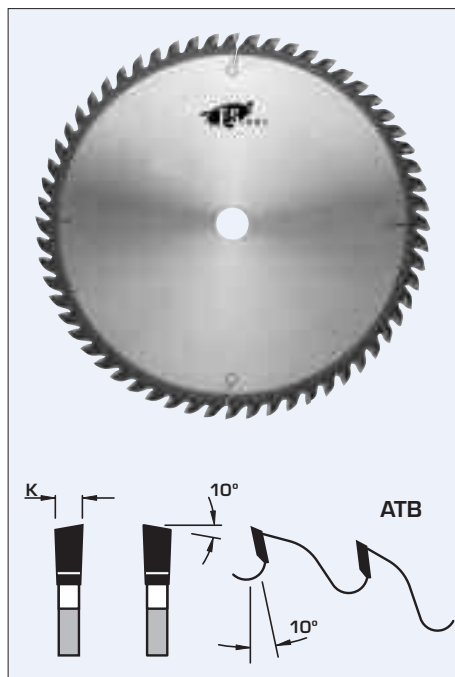
APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plywood, masonite and raw MDF panels
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L03150	6"	.125"	.087"	5/8"	30
L03180	7"	.125"	.087"	5/8"	30
L03200	8"	.125"	.087"	5/8"	40
L03225	9"	.125"	.087"	5/8"	40
L03250	10"	.125"	.087"	5/8"	40
L03300	12"	.135"	.095"	1"	48
L03350	14"	.155"	.110"	1"	60
L03400	16"	.155"	.110"	1"	60
L03450	18"	.185"	.138"	1"	60
L03500	20"	.185"	.138"	1"	80

L09

CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

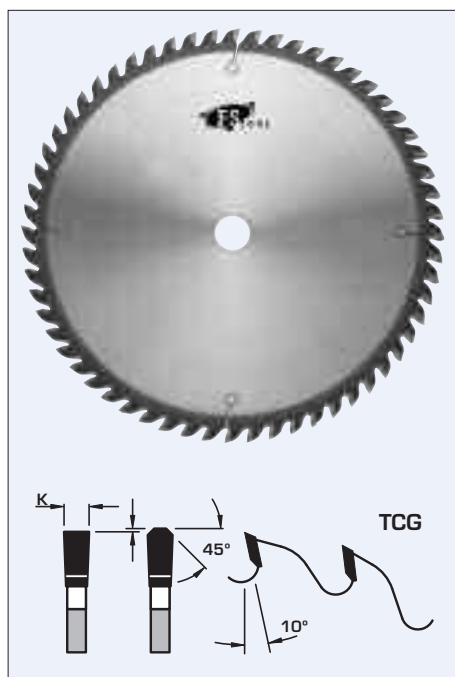
APPLICATION:

- For cross cutting and ripping soft and hardwoods, plywood, masonite and raw MDF panels
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L09300	12"	.135"	.095"	1"	60
L09400	16"	.155"	.110"	1"	80
L09450	18"	.185"	.138"	1"	80
L09500	20"	.185"	.138"	1"	100

L19

CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

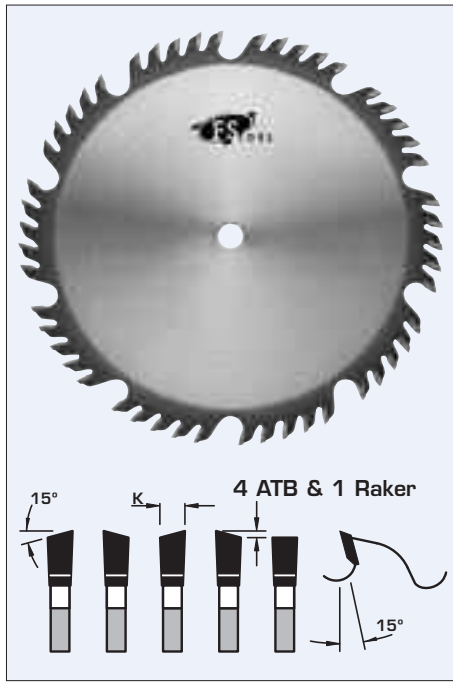
APPLICATION:

- For cross cutting and ripping soft and hardwoods, composite materials plastic laminated (single sided)
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L19225	9"	.126"	.087"	5/8"	40
L19250	10"	.126"	.087"	5/8"	40
L19301	12"	.134"	.095"	1"	48
L19300	12"	.135"	.095"	1"	60
L19350	14"	.155"	.110"	1"	60
L19400	16"	.155"	.110"	1"	80
L19450	18"	.185"	.138"	1"	80
L19500	20"	.185"	.138"	1"	100

L55

COMBINATION SAW BLADES



DESIGN:

- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC
- Four ATB teeth and one raker with deep gullet allow for deeper cuts and improved chip-flow

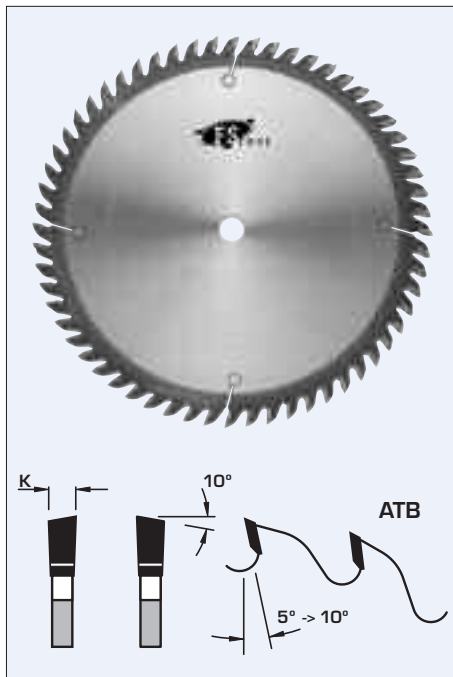
APPLICATION:

- For cross cutting and ripping soft and hardwoods, plywood and particleboard
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L55180	7"	.125"	.087"	5/8"	40
L55200	8"	.125"	.087"	5/8"	40
L55225	9"	.125"	.087"	5/8"	40
L55250	10"	.138"	.095"	5/8"	50
L55300	12"	.155"	.110"	1"	60
L55350	14"	.165"	.118"	1"	70
L55400	16"	.165"	.118"	1"	80

L04

STANDARD CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

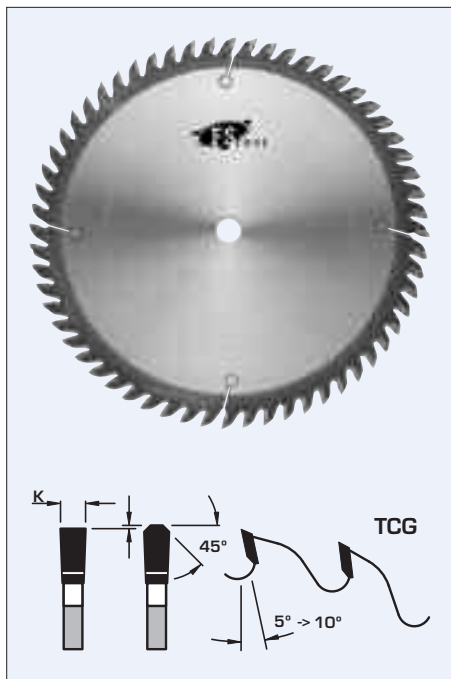
- For general cut-off and trimming of soft and hardwoods, plywood and composite panel materials, wood veneered (single sided), or (double sided) using a pre-scoring unit
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L04180	7"	.125"	.087"	5/8"	40
L04200	8"	.125"	.087"	5/8"	48
L04225	9"	.126"	.087"	5/8"	60
L04250	10"	.126"	.087"	5/8"	60
L04302	• 300mm	3.4mm	2.4mm	30mm	72
L04300	12"	.135"	.095"	1"	80
L04350	14"	.150"	.110"	1"	80
L04400	16"	.160"	.118"	1"	100
L04450	18"	.185"	.138"	1"	100
L04500	20"	.185"	.138"	1"	120

- Altendorf, Omega, SCMI, Striebig

L23

STANDARD CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

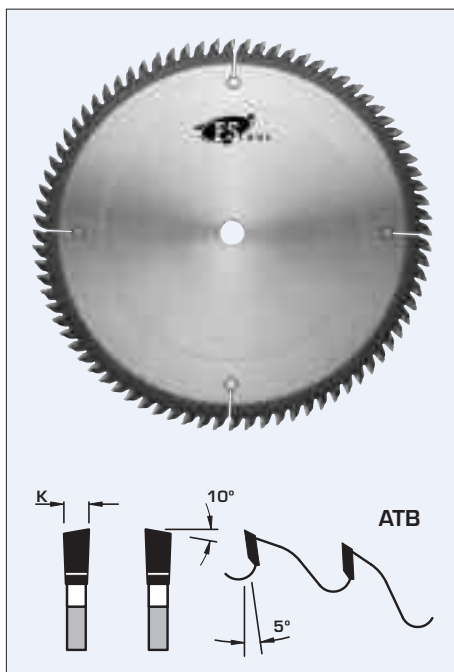
- For general cut-off and trimming of plastic laminated materials (single sided), or (double sided) using a pre-scoring unit
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L23158 ■	6-1/4"	.110"	.080"	2-11/16"	40
L23200	8"	.126"	.087"	5/8"	48
L23225	9"	.126"	.087"	5/8"	60
L23250	10"	.126"	.087"	5/8"	60
L23302 ▲	300mm	3.4mm	2.4mm	30mm	72
L23300	12"	.135"	.095"	1"	80
L23350	14"	.150"	.110"	1"	80
L23400	16"	.160"	.118"	1"	100
L23408 ●	16"	.187"	.134"	1"	100
L23450	18"	.185"	.138"	1"	100
L23500	20"	.185"	.138"	1"	120

- ▲ Altendorf, Omega, SCMI, Striebig
- Midwest Automation
- Modulus 2000

L06

FINE CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

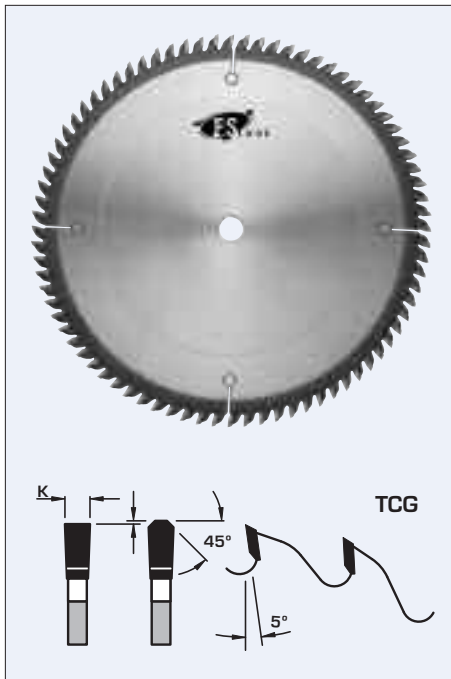
- For fine cut-off and trimming of soft and hardwoods, plywood, wood veneered and plastic laminated panel materials
- On table saws, sliding table saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L06150	6"	.126"	.087"	5/8"	40
L06180	7"	.126"	.087"	5/8"	60
L06200	8"	.126"	.087"	5/8"	60
L06250	10"	.126"	.087"	5/8"	80
L06306 ▲	300mm	3.4mm	2.4mm	30mm	96
L06300	12"	.135"	.095"	1"	100
L06350	14"	.150"	.110"	1"	100
L06400	16"	.160"	.118"	1"	120
L06450	18"	.185"	.138"	1"	120

- ▲ Altendorf, Omega, SCMI, Striebig

L10

FINE CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

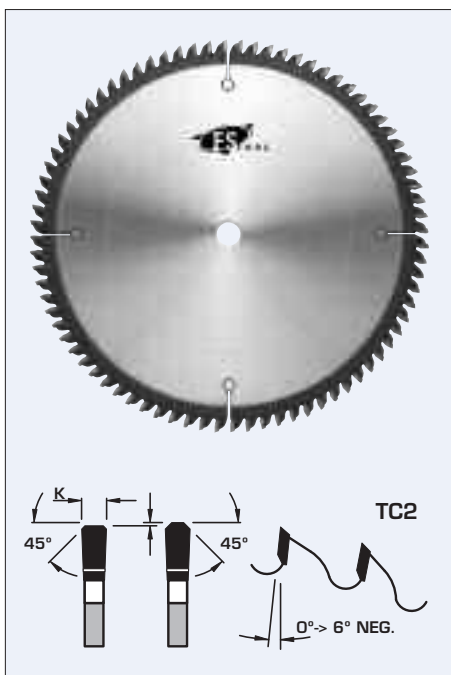
- For fine sizing cuts in single or double sided melamine panels, MDF, OSB and HDF panels
- On table saws, sliding table saws and vertical panel sizing saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L10150	6"	.126"	.087"	5/8"	40
L10180	7"	.126"	.087"	5/8"	60
L10200	8"	.126"	.087"	5/8"	60
L10220-H ▲	220mm	3.2mm	2.2mm	30mm	64
L10250	10"	.126"	.087"	5/8"	80
L10254	10"	4.0mm	.087"	5/8"	80
L10251	10"	.126"	.087"	5/8"	100
L10306 ●	300mm	3.4mm	2.4mm	30mm	96
L10300	12"	.135"	.095"	1"	100
L10350	14"	.150"	.110"	1"	100
L10400	16"	.160"	.118"	1"	120
L10450	18"	.185"	.138"	1"	120

- ▲ Holz-Her, pin holes 2/7/42
- Altendorf, Omega, SCMI, Striebig

L01

FINE CROSS CUT SAW BLADES FOR PLASTIC



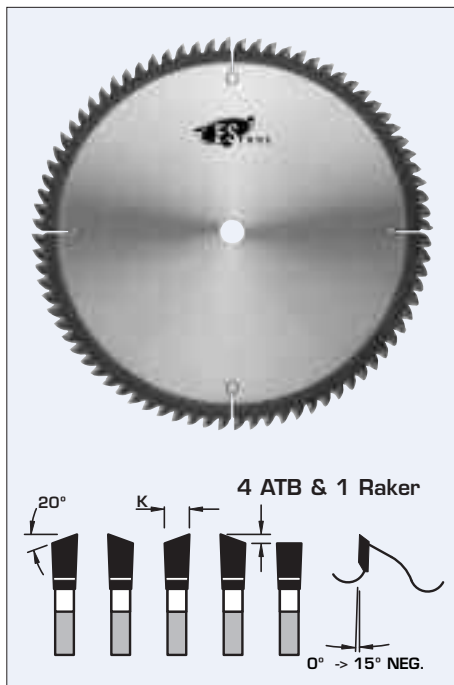
DESIGN:

- Tooth configuration: TC2
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For fine sizing cuts in single or double laminated panels, plexiglass and solid surface materials such as Wilsonart® Gibraltar®, SSV®, Corian®, Surell®, Avonite®, Fountainhead®, etc.
- On table saws, sliding table saws, radial arm saws and vertical panel sizing saws
- "Non-Melt" saw blades see LNM series pg. E22

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L01200	8"	.126"	.087"	5/8"	60
L01250	10"	.126"	.087"	5/8"	80
L01300	12"	.135"	.095"	1"	100
L01350	14"	.158"	.118"	1"	100
L01400	16"	.160"	.118"	1"	120
L01450	18"	.185"	.138"	1"	120


DESIGN:

- Tooth configuration: 4 ATB & 1 raker
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

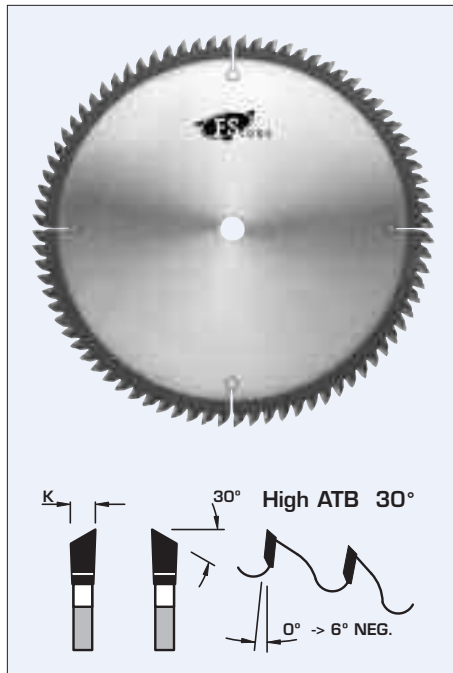
- For mitre joint cuts in soft and hardwoods, painted mouldings, gesso and other high-gloss and pre-finished picture frames and furniture mouldings as well as P.V.C. substrates
- For aluminum cuts see L1A, L1B, L1C series page E36, E37
- On single or double cut-off mitre machines and radial arm saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
LM6200	8"	.112"	.087"	5/8"	60
LM4216 (a)	8-1/2"	.110"	.071"	5/8"	24
LM6216 (a)	8-1/2"	.110"	.071"	5/8"	48
LM4225	9"	.112"	.087"	5/8"	60
LM6225 ♦	9"	.112"	.087"	5/8"	72
LM4250	10"	.116"	.087"	5/8"	60
LM6250	10"	.112"	.087"	5/8"	80
LM4300	12"	.122"	.095"	1"	80
LM4308 (b)	12"	.122"	.110"	5/8"	80
LM6300	12"	.120"	.095"	1"	100
LM6308 (b)	12"	.134"	.110"	5/8"	100
LM6330 (c)	330mm	3.3mm	2.5mm	20mm	100
LM6351 (d)	350mm	3.1mm	2.5mm	25mm	100
LM6350	14"	.142"	.118"	1"	100
LM6350-32 (g)	355mm	3.6mm	3.0mm	32mm	100
LM6353 (e)	350mm	3.2mm	2.6mm	32mm	108
LM6358 (b)	14"	.150"	.118"	5/8"	100
LM6380 (f)	15"	.120"	.098"	1"	100

- (a) Elu, Hitachi 10° ATB grind
- (b) Pistorius, CTD
- (c) Wegoma, Haffner, Salvarani
- (d) Makita (with 25mm arbor)
- (e) Brevetti
- (f) Hitachi
- (g) Brevetti (355 Diam.)
- ♦ Grind: 8 ATB & 1 Raker

LM6 30°

CHIP-FREE MELAMINE TRIM BLADES



DESIGN:

- Tooth configuration: High ATB (30°)
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

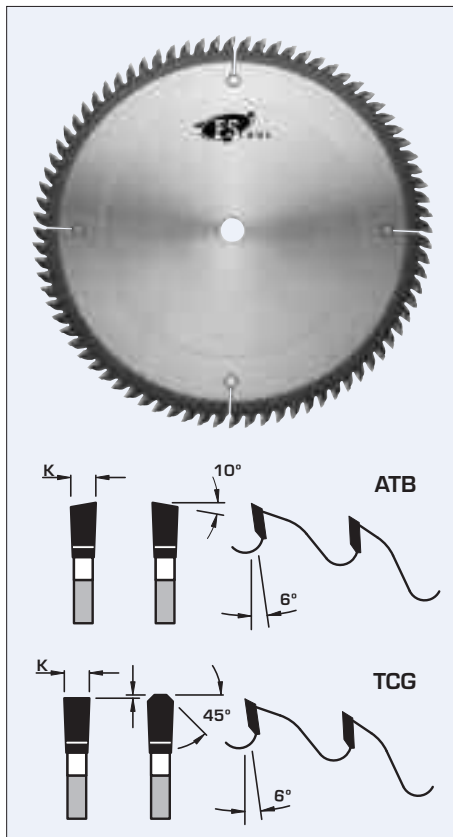
- For chip-free sizing cuts (on both sides) in melamine and wood veneered panels, without the need for pre-scoring
- For fine cross cuts in solid woods
- On table saws, sliding table saws, vertical panel sizing saws and cut-off saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
LM6201	8"	.118"	.087"	5/8"	60
LM6221-H ▲	220mm	3.2mm	2.4mm	30mm	64
LM6251	10"	.118"	.087"	5/8"	80
LM6251-30 ▲	250mm	3.0mm	2.2mm	30mm	80
LM6301-30 ●	300mm	3.2mm	2.4mm	30mm	100
LM6301	12"	.126"	.095"	1"	100
LM6352	14"	.150"	.118"	1"	100
LM6401	16"	.157"	.118"	1"	120

- ▲ Holz-Her, pin holes, 2/7/42
- Altendorf, Striebig

L05

THIN KERF SAW BLADES



DESIGN:

- Tooth configuration: refer to chart below (grind)
- Cutting material: TC
- Expansion slots: Cu plugged
- Very stable body minimizes run-out

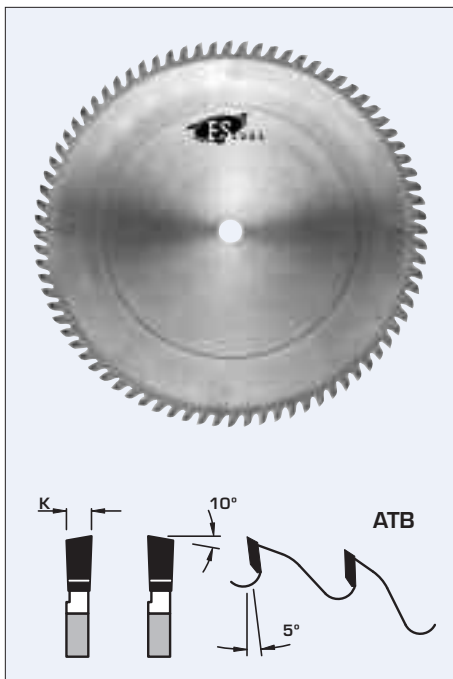
APPLICATION:

- For fine cross cuts in veneered panels, expensive woods and sheets, thin plexiglass, masonite and plastics
- On table saws, sliding table saws and vertical panel sizing saws

PART NO.	DIAM.	KERF	BORE	TEETH	GRIND
L05150	6"	.080"	5/8"	48	ATB
L05180	7"	.080"	5/8"	56	ATB
L05200	8"	.080"	5/8"	64	ATB
L05201	8"	.080"	5/8"	64	TCG
L05250	10"	.083"	5/8"	80	ATB
L05251	10"	.087"	5/8"	100	ATB
L05252	10"	.083"	5/8"	80	TCG
L05300	12"	.087"	1"	96	ATB
L05302	12"	.087"	1"	96	TCG
L05350	14"	.095"	1"	108	ATB
L05400	16"	.110"	1"	120	ATB

L15

THIN RIM SAW BLADES



DESIGN:

- Tooth configuration: ATB
- Cutting material: TC
- Expansion slots: CU plugged
- Thin rimmed body (on left side) allows for thin kerf at teeth and stability during cutting operation

APPLICATION:

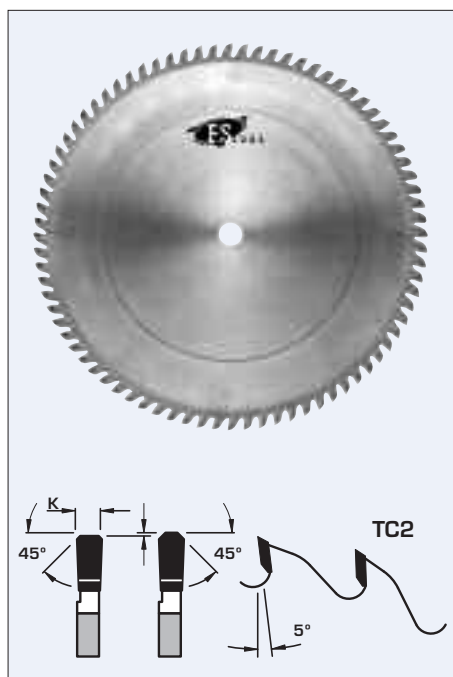
- For fine cross cuts in veneered panels, expensive woods and sheets, thin plexiglass, masonite and plastics
- On table saws and sliding table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L15200	8"	.092"	.095"	5/8"	60
L15225	9"	.092"	.095"	5/8"	60
L15250	10"	.092"	.095"	5/8"	80
L15300	12"	.092"	.095"	1"	100

Collar width 2"

L16

THIN RIM SAW BLADES



DESIGN:

- Tooth configuration: TC2
- Cutting material: TC
- Expansion slots: CU plugged
- Thin rimmed body (on left side) allows for thin kerf at teeth and stability during cutting operation

APPLICATION:

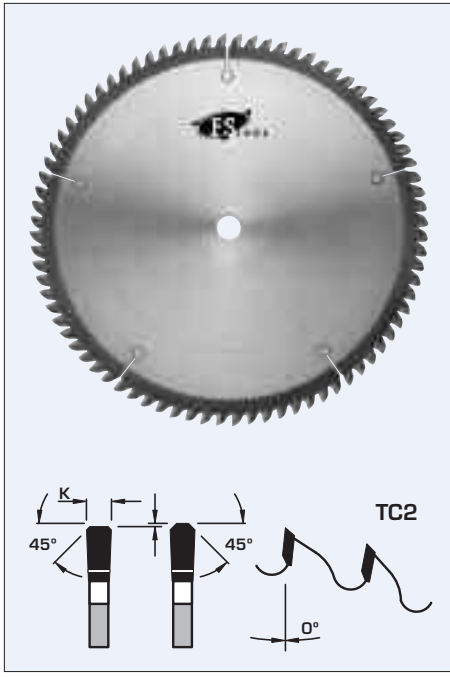
- For fine cross cuts in acrylic sheets, thin plexiglass, masonite and plastics
- On table saws and sliding table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L16200	8"	.092"	.095"	5/8"	60
L16225	9"	.092"	.095"	5/8"	60
L16250	10"	.092"	.095"	5/8"	80
L16300	12"	.092"	.095"	1"	100

Collar width 2"

LNM

NON-MELT SAW BLADES



DESIGN:

- Tooth configuration: TC2
- Tooth geometry specifically designed to minimize “melting” of material
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

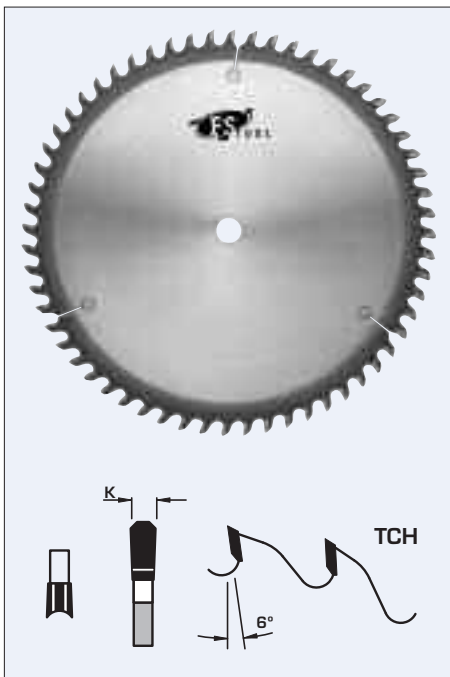
- For “non-melt” fine cuts in acrylic sheets, selrins, ABS (cycolac), Styrenes and PVC
- On table saws, sliding table saws and vertical panel sizing saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
LNM200	8"	.100"	.071"	5/8"	60
LNM220 ▲	220mm	3.2mm	2.4mm	30mm	64
LNM250A	10"	.118"	.087"	5/8"	60
LNM250	10"	.100"	.071"	5/8"	80
LNM300A	12"	.125"	.095"	1"	80
LNM300	12"	.125"	.095"	1"	100
LNM350A	14"	.145"	.118"	1"	90
LNM350	14"	.145"	.118"	1"	100
LNM350-32	14"	.145"	.118"	32mm	100

▲ Holz-Her, pin holes 2/7/42

L41

HOLLOW FACE SAW BLADES



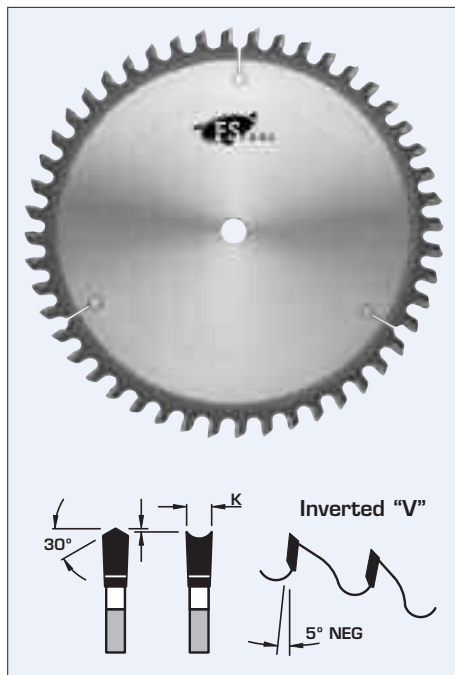
DESIGN:

- Tooth configuration: TCH (face hollow-ground)
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For exceptionally smooth cuts (on both sides) in melamine and other laminated panels, without the need for pre-scoring
- On table saws, sliding table saws and vertical panel sizing saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L41200	200mm	2.9mm	2.0mm	5/8"	48
L41250	250mm	2.9mm	2.0mm	5/8"	60
L41300	300mm	2.9mm	2.0mm	1"	72
L41350	350mm	2.9mm	2.0mm	1"	84


DESIGN:

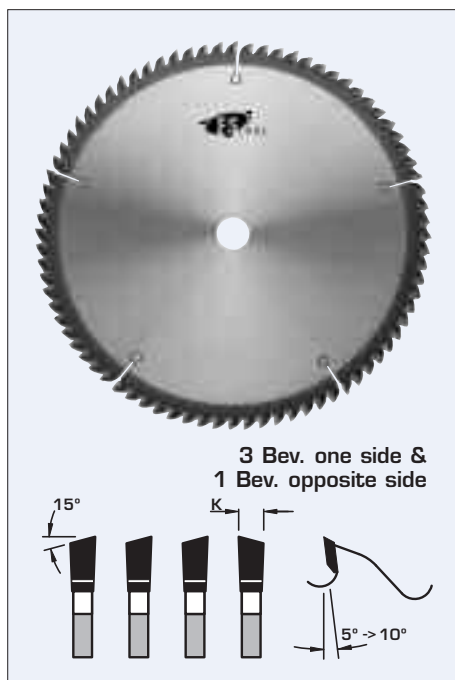
- Tooth configuration: inverted "V" (face hollow-ground)
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For exceptionally smooth cuts (on both sides) in melamine and other laminated panels, without the need for pre-scoring
- For mitre cuts in wrapped styrene picture frames
- On table saws, sliding table saws, vertical panel sizing saws and mitre saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L42220-H ▲	220mm	3.2mm	2.2mm	30mm	42
L42250	250mm	3.2mm	2.2mm	5/8"	48
L42251 ▲	250mm	3.2mm	2.2mm	30mm	48
L42300-58 ●	300mm	3.2mm	2.2mm	5/8"	60
L42300	300mm	3.2mm	2.2mm	1"	60
L42350	350mm	3.2mm	2.2mm	1"	72

- ▲ Holz-Her, Striebig, pin holes 2/7/42
- Pistorius


DESIGN:

- Tooth configuration: 3 bevelled one side & 1 bevelled opposite side. Supplied in pairs 1 LH & 1 RH (order separately)
- Cutting material: TC
- Extra heavy plate provides added stability
- Expansion slots: Cu plugged

APPLICATION:

- For fine cut-off and mitre cuts of soft and hardwoods, and trimming of plywood, wood veneered and plastic laminated panels (single sided), or (double sided) using a pre-scoring unit
- On double cut-off machines and single or double end tenoners

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L4D300-LH	12"	.160"	.118"	1"	80
L4D300-RH	12"	.160"	.118"	1"	80
L4D350-LH	14"	.180"	.138"	1"	80
L4D350-RH	14"	.180"	.138"	1"	80
L6D350-LH	14"	.180"	.138"	1"	100
L6D350-RH	14"	.180"	.138"	1"	100
L6D400-LH	16"	.180"	.138"	1"	100
L6D400-RH	16"	.180"	.138"	1"	100

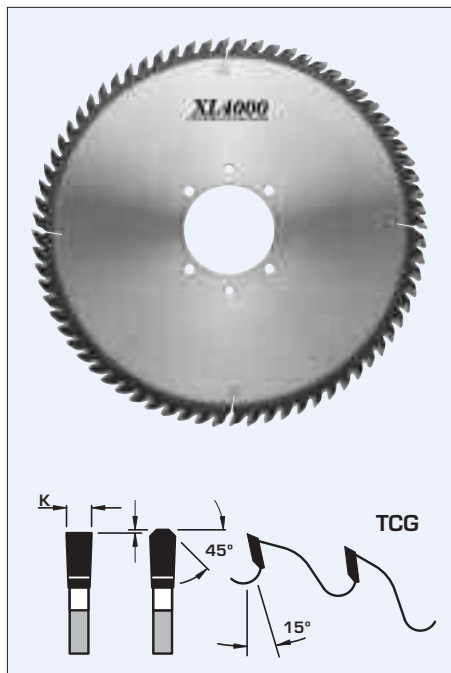
**DESIGN:**

- Tooth configuration: ATB
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For sizing cuts in veneered particleboard, hard fiberboard, raw MDF panels and high-density plywood in single sheets and stacks
- On panel sizing saws (Beam Saws)

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
L5030048-30	305	4.4	3.0	30	48	Mayer, Panhans
L5030272-30	300	4.55	3.2	30	72	Schelling Postforming FX-H430
L5035054-30	355	4.4	3.0	30	54	SCM, Panhans, Mayer
L5035154-30	350	3.6	2.5	30	54	Holz-Her
L5035054-75	355	4.4	3.0	75	54	Giben Trend
L5035072-30	355	4.4	3.0	30	72	SCM, Panhans, Mayer, Schelling
L5035072-75	355	4.4	3.0	75	72	Giben
L5035072-80	350	4.4	3.0	80 _{4/2PH}	72	Gabbiani Casadei
L5040060-30	400	4.4	3.2	30	60	Schelling, Mayer, Irion
L5040060-75	400	4.4	3.2	75	60	Giben
L5040060-80	400	4.4	3.2	80 _{4/2PH}	60	Gabbiani
L5040072-60	400	4.4	3.2	60	72	Anthon Holzma
L5040072-75	400	4.4	3.2	75	72	Giben
L5040072-80	400	4.4	3.2	80 _{4/2PH}	72	Gabbiani
L5043072-30	430	4.4	3.2	30	72	
L5043072-80	430	4.4	3.2	80 _{4/2PH}	72	Selco
L5045072-30	450	4.4	3.2	30	72	Irion, Panhans, Schelling
L5045072-60	450	4.4	3.2	60	72	Holzma
L5045072-80	450	4.4	3.2	80 _{4/2PH}	72	Selco
L5067060-40	670	6.2	4.2	40	60	Schelling


DESIGN:

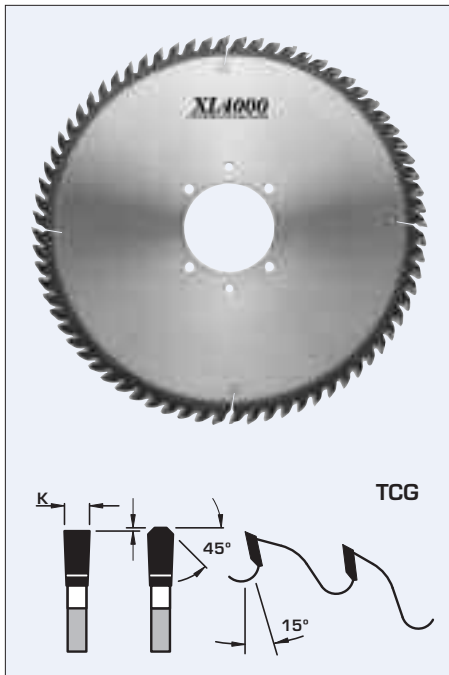
- Tooth configuration: TCG
- Cutting material: TC **XL4000**
- Expansion slots: Cu plugged

APPLICATION:

- For sizing cuts in plastic laminated panels and plywood in single sheets and stacks
- On panel sizing saws (Beam Saws)

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
L5224054-30	240	3.2	2.2	30 _{2PH}	54	Scheer FM10
L5225072-30	250	3.2	2.2	30 _{2PH}	72	Casadei Linea
L5230160-30	305	3.4	2.4	30	60	Scheer FM16
L5230048-30	305	4.4	3.0	30	48	Mayer, Panhans
L5230060-30	305	4.4	3.0	30	60	Mayer, Panhans
L5230060-65	300	4.4	3.2	65 _{2PH}	60	Selco EB70
L5230060-75	305	4.4	3.0	75	60	Giben Junior
L5230072-80	300	4.4	3.0	80 _{2PH}	72	SCM Sigma 65
L5232072-50	320	4.4	3.2	50 _{4/3PH}	72	Giben Smart 75
L5232060-75	320	4.6	3.2	75 _{3PH}	60	Giben
L5235054-30	355	4.4	3.0	30	54	SCM, Panhans, Mayer
L5235054-75	355	4.4	3.0	75	54	Giben Trend
L5235072-30	355	4.4	3.0	30	72	SCM, Panhans, Mayer, Schelling
L5235072-75	355	4.4	3.0	75	72	Giben
L5235072-114	350	4.4	3.0	1-1/4"	72	SCMI
L5235072-60	350	4.4	3.0	60 _{2PH}	72	Holzma HPP350
L5235072-80	350	4.4	3.0	80 _{4/2PH}	72	Gabbiani Casadei
L5235172-80	350	4.4	3.0	80 _{4/2PH}	72	SCM Sigma 90
L5235272-30	350	4.4	3.2	30 _{2PH}	72	Schelling FX-H430
L5235272-80	355	4.4	3.0	80 _{2/2PH}	72	Selco EB90
L5236072-50	360	4.4	3.2	50 _{4PH}	72	Giben Smart 105 SPT
L5236072-65	360	4.4	3.2	65 _{2PH}	72	Selco EB100
L5237072-30	370	4.4	3.0	30	72	Schelling
L5238060-60	380	4.4	3.2	60	60	Holzma
L5238072-50	380	4.4	3.2	50 _{4PH}	72	Giben Icon 2
L5238072-60	380	4.4	3.2	60 _{2PH}	72	Holzma
L5638872-50	380	4.8	3.5	50 _{4PH}	72	Giben Icon 2
L5238872-60	380	4.8	3.5	60 _{2PH}	72	Holzma Series 82
L5239072-50	390	4.4	3.2	50 _{4PH}	72	Giben Onix H105
L5240060-30	400	4.4	3.2	30	60	Schelling, Mayer, Irion
L5240060-75	400	4.4	3.2	75	60	Giben
L5240060-80	400	4.4	3.2	80 _{4/2PH}	60	Gabbiani
L5240072-30	400	4.4	3.2	30	72	Schelling, Mayer, Irion
L5240072-60	400	4.4	3.2	60	72	Anthon Holzma
L5240072-75	400	4.4	3.2	75	72	Giben
L5240172-75	400	4.4	3.2	75 _{4PH}	72	Giben Prismatic-1
L5240072-80	400	4.4	3.2	80 _{4/2PH}	72	Gabbiani
L5240272-80	400	4.4	3.2	80 _{4/2PH}	72	SCM Sigma 115
L5240172-80	400	4.4	3.2	80 _{4/2PH}	72	Selco
L5240860-75	400	4.8	3.5	75	60	Giben

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**DESIGN:**

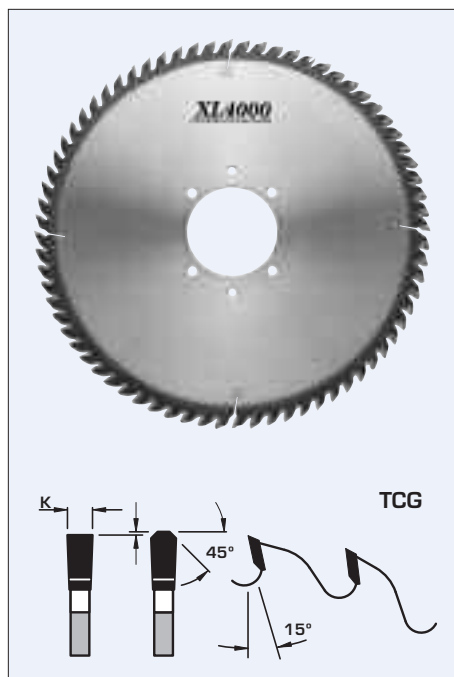
- Tooth configuration: TCG
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For sizing cuts in plastic laminated panels and plywood in single sheets and stacks
- On panel sizing saws (Beam Saws)

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
L5241072-80	380	4.4	3.2	50	72	
L5241072-80	410	4.6	3.2	80 _{4PH}	72	Gabbiani
L5242072-60	420	4.4	3.2	60	72	Holzma
L5242672-60	420	4.6	3.2	60	72	Holzma
L5242860-60	420	4.8	3.5	60	60	Holzma
L5242872-60	420	4.8	3.5	60	72	Holzma
L5243072-30	430	4.4	3.2	30	72	
L5243072-60	430	4.4	3.2	60 _{1PH}	72	Anthon
L5243072-75	430	4.4	3.2	75 _{4PH}	72	Giben Prismatic-2
L5243096-75	430	4.4	3.2	75 _{4PH}	96	Giben Prismatic-2
L5243072-80	430	4.4	3.2	80 _{4/2PH}	72	Selco
L5245072-30	450	4.4	3.2	30	72	Panhans, Irion, Schelling
L5245072-60	450	4.4	3.2	60	72	Holzma
L5245072-80	450	4.4	3.2	80 _{4/2PH}	72	Selco
L5245172-80	450	4.4	3.2	80 _{2PH}	72	Gabbiani
L5245672-80	450	4.6	3.2	80 _{4/2PH}	72	Selco
L5245872-60	450	4.8	3.5	60 _{2PH}	72	Holzma
L5245872-80	450	4.8	3.5	80 _{4/2PH}	72	Selco
L5246060-30	460	4.4	3.2	30	60	Schelling
L5246072-30	460	4.4	3.2	30	72	Schelling
L5247072-30	470	4.4	3.2	30	72	Schelling
L5247096-75	470	4.4	3.2	75 _{4PH}	96	Giben Prismatic-3
L5248072-30	480	4.4	3.2	30	72	Schelling
L5248872-30	480	4.8	3.5	30 _{2PH}	72	Schelling fh6
L5248872-80	480	4.8	3.5	80 _{4/2PH}	72	Selco
L5250060-30	500	4.4	3.2	30	60	Schelling, Irion
L5250060-75	500	4.4	3.2	75	60	Giben
L5250060-80	500	4.4	3.2	80 _{2PH}	60	Gabbiani, Teutomatic
L5250072-60	500	4.4	3.2	60	72	Holzma
L5250072-75	500	4.4	3.2	75	72	Giben
L5250860-60	500	4.8	3.5	60	60	Holzma Type 21
L5250860-75	500	4.8	3.5	75	60	Giben
L5250872-60	500	4.8	3.5	60	72	Holzma Type 22
L5250872-75	500	4.8	3.5	75	72	Giben
L5250872-80	500	4.8	3.5	80 _{2PH}	72	Gabbiani
L5250572-60	500	5.0	3.5	60	72	Holzma Type 22
L5252060-60	520	4.8	3.5	60	60	Holzma
L5252072-60	520	4.8	3.5	60	72	Holzma

Cont'd...

**DESIGN:**

- Tooth configuration: TCG
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

APPLICATION:

- For sizing cuts in plastic laminated panels and plywood in single sheets and stacks
- On panel sizing saws (Beam Saws)

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
L5253060-30	530	5.0	3.5	30	60	Schelling
L5253060-60	530	5.8	4.0	60 _{1PH}	60	Anthon
L5254060-60	540	4.8	3.5	60 _{2PH}	60	Holzma
L5254084-60	540	4.8	3.5	60 _{2PH}	84	Holzma
L5255060-40	550	5.0	3.5	40	60	Schelling
L5255260-60	550	5.2	3.5	60	60	Holzma
L5255060-80	550	5.0	3.5	80	60	Teutomatic
L5255272-100	550	5.2	3.5	100	72	Giben
L5256560-100	565	5.0	3.5	100	60	Giben
L5256572-100	565	5.0	3.5	100	72	Giben
L5257860-60	570	5.8	4.3	60	60	Holzma
L5258060-40	580	5.5	4.0	40 _{2/1PH}	60	Schelling
L5260060-60	600	5.8	4.2	60 _{2PH}	60	Holzma
L5260072-60	600	5.8	4.2	60 _{2PH}	72	Holzma
L5263060-40	630	6.2	4.2	40	60	Schelling
L5265060-100	650	6.0	4.2	100 _{2PH}	60	Giben
L5265072-40	650	6.2	4.0	40	72	Schelling
L5267072-40	670	6.2	4.2	40	72	Schelling
L5267060-60	670	6.0	4.0	60	60	Holzma
L5267072-60	670	6.0	4.0	60	72	Holzma Type 61
L5268060-40	680	6.2	4.2	40 _{2/2PH}	60	Schelling
L5270060-80	700	6.2	4.4	80 _{2PH}	60	Anthon

DESIGN:

- Tooth configuration: Conic
- Cutting material: TC *XL4000*
- Expansion slots: Cu plugged

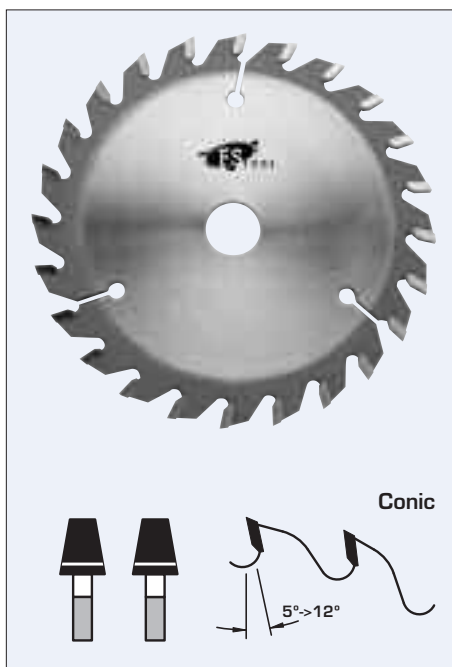
APPLICATION:

- For pre-scoring in plastic laminated sheets
- On panel sizing saws with pre-scoring units



PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
52712500	125	3.2/4.2	2.4	20	24	Casadei Linea
52712503	125	4.4/5.4	3.2	45	24	Giben
52712503-22	125	4.4/5.4	3.2	22	24	Martin
52712504	125	4.8/5.8	3.5	45	24	Giben
52712701	127	4.4/5.4	3.2	45	24	Giben
52714001	140	3.2/4.2	2.4	16	32	Scheer
52714002	140	4.4/5.4	3.0	45	24	Euromac
52715003-20	150	4.4/5.4	3.0	20	24	Schelling
52715003	150	4.4/5.4	3.0	30	24	Irion, Mayer
52715003-114	150	4.4/5.4	3.0	1-1/4"	24	SCMI
52715005	150	4.4/5.4	3.0	55 ^{3PH}	36	Gabbiani
52716003	160	4.4/5.4	3.2	45 ^{3PH}	28	Giben Prismatic
52716005	160	4.4/5.4	3.0	55 ^{3+3PH}	36	Gabbiani, SCM
52716006	160	4.8/5.8	3.5	55 ^{3+3PH}	36	Gabbiani
52717501	175	4.4/5.4	3.0	45	28	Holzma
52717502	175	4.8/5.8	3.0	45	28	Holzma
52718001-20	180	4.4/5.4	3.0	20	28	Schelling, Anthon
52718001-30	180	4.4/5.4	3.0	30	28	Panhans
52718001-45	180	4.4/5.4	3.0	45	28	Holzma
52718001-50	180	4.4/5.4	3.2	50 ^{3PH}	36	Giben Smart 75 Onix H105
52718002	180	4.8/5.8	3.5	45	36	Holzma Series 82
52718002ATB	180	4.8/5.8	3.5	45	36	Holzma Series 82
52718002-55	180	5.2/6.2	3.5	55	30	Giben
52718003	180	5.8/6.8	4.0	20	30	Anthon
52718004	180	6.2/7.2	4.4	20	30	Anthon
52718005	180	4.4/5.4	3.5	50 ^{3PH}	44	Giben Smart 105 SPT
52718501	185	4.8/5.8	3.5	45	30	Holzma
52720004	200	3.3/4.3	2.2	30	60	Scheer
52720000-20	200	4.4/5.4	3.2	20	24	Schelling
52720001-20	200	4.4/5.4	3.0	20	34	Schelling
52720001-30	200	4.4/5.4	3.0	30	34	Panhans, Scheer
52720001-45	200	4.4/5.4	3.0	45	34	Holzma
52720001-65	200	4.4/5.4	3.2	65 ^{2PH}	34	Selco
52720001-80	200	4.4/5.4	3.2	80 ^{2PH}	34	SCM Sigma
52720005-65	200	4.4/5.4	3.5	65 ^{2PH}	34	Selco EB100/EB70
52720006	200	4.6/5.6	3.5	45	34	Holzma
52720006-50	200	4.6/5.6	3.6	50 ^{3PH}	44	Giben
52720006-65	200	4.6/5.6	3.5	65 ^{2PH}	34	Selco
52720002	200	4.8/5.8	3.5	45	34	Holzma
52720002-20	200	4.8/5.8	3.5	20	34	Schelling fh6
52720002-65	200	4.8/5.8	3.5	65 ^{2PH}	34	Selco
52720003	200	5.0/6.0	3.5	20	34	Schelling
52720005	200	5.5/6.5	4.0	20	36	Schelling
52720007	200	5.8/6.8	4.2	45	24	Holzma
52720008	200	5.8/6.8	4.2	45	34	Holzma

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MACHINE
52720008-50	200	4.8/5.8	3.5	50 _{3PH}	44	Giben Icon 2
52720009	200	6.2/7.2	4.2	20	34	Schelling
52721501	215	4.4/5.4	3.2	50 _{3PH}	42	Giben Prismatic
52725001	250	4.4/5.4	3.2	50 _{3PH}	40	Giben Icon 2
52728002	280	4.8/5.8	3.5	45	72	Holzma
52729001	290	4.4/5.4	2.8	45	42	Holzma
52729002	290	4.8/5.8	3.4	45	42	Holzma
52730001	300	4.4/5.4	3.2	50 _{3PH}	48	Giben Prismatic
52730002	300	4.4/5.4	3.2	65 _{2PH}	48	Selco
52732001	320	4.4/5.4	3.2	45	48	Holzma
52732002	320	4.8/5.8	3.5	45	48	Holzma

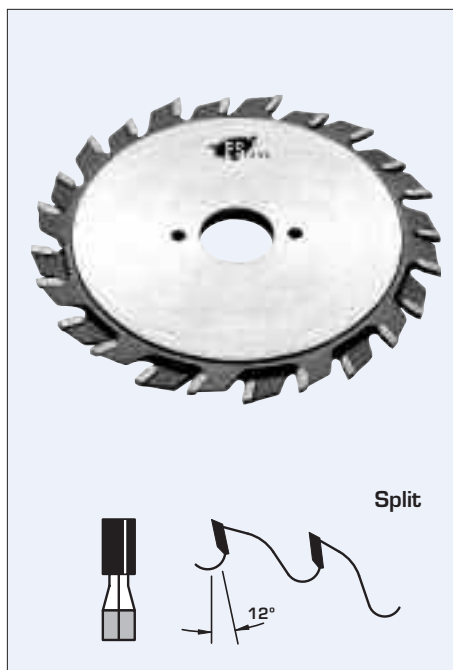

DESIGN:

- Tooth configuration: Conic
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For pre-scoring in plastic laminated sheets
- On table saws and sliding table saws with pre-scoring units

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	MAIN SAW DIAM.
52705401	54	2.85/3.6	2.0	1"	14	For Modulus 2000
52708001	80	3.1/4.1	2.2	20	20	For 10" Main
52710000	100	3.1/4.1	2.4	1"	24	For 10" Main
52710001	100	3.4/4.4	2.4	20	24	For 12" Main
52710002	100	3.8/4.8	2.8	20	24	For 14"-16" Main
52711001	110	3.4/4.4	2.4	20	24	For 12" Main
52711002	110	3.8/4.8	2.8	20	24	For 14"-16" Main
52711501	115	3.4/4.4	2.4	20	24	For 12" Main
52711502	115	3.8/4.8	2.8	20	24	For 14"-16" Main
52712001	120	3.4/4.4	2.4	20	24	For 12" Main
52712001-34	120	3.4/4.4	2.4	3/4"	24	For 12" Main
52712002	120	3.8/4.8	2.8	20	24	For 14"-16" Main
52712002-34	120	3.8/4.8	2.8	3/4"	24	For 14"-16" Main
52712501	125	3.4/4.4	2.4	20	24	For 12" Main
52712501-34	125	3.4/4.4	2.4	3/4"	24	For 12" Main
52712501-22	125	3.4/4.4	2.4	22	24	For 12" Main
52712502	125	3.8/4.8	2.8	20	24	For 14"-16" Main
52715001	150	3.4/4.4	2.4	20	24	For 12" Main
52715002	150	3.8/4.8	3.0	20	24	For 14"-16" Main

**DESIGN:**

- Tooth configuration: Flat Top
- Cutting material: TC
- Two piece unit adjustable to the kerf of the main saw blade with the use of shims

APPLICATION:

- For pre-scoring in plastic laminated sheets
- On table saws, sliding table saws and panel sizing saws with controllable pre-scoring units

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE	TEETH	MACHINE
528080001-20	80	2.8/3.6	2.0	20	2x10	EMA Casadei, Minimax
52810001-34	100	2.8/3.6	2.0	3/4"	2x12	SCMI, Delta
52810001-20	100	2.8/3.6	2.0	20	2x12	Schelling
52810001-22	100	2.8/3.6	2.0	22	2x12	Altendorf, Martin, Panhans
52810001-1	100	2.8/3.6	2.0	1"	2x12	Delta
52810501-20	105	2.8/3.6	2.0	20	2x12	Wadkin-CP320
52812001-34	120	2.8/3.6	2.0	3/4"	2x12	SCMI
52812001-20	120	2.8/3.6	2.0	20	2x12	SCM, Holz-Her
52812001-22	120	2.8/3.6	2.0	22	2x12	Altendorf, Martin, Panhans
52812001-50 ▲	120	2.8/3.6	2.2	50	2x12	Altendorf - Rapido
52812001-1300 ■	120	2.8/3.6	2.2	50	2x12	Casolin - Rapido
52812501-22	125	2.8/3.6	2.0	22	2x12	Holz-Her
52812501	125	2.8/3.6	2.0	30	2x12	Steton
52815001-45	150	3.9/5.2	2.2	45	2x20	
52817501	175	4.4/5.0	2.0	45	2x20	Holzma
52818001-30	180	4.4/5.0	2.0	30	2x18	Koelle
52818001	180	4.4/5.2	2.0	45	2x20	Holzma
52818002	180	4.8/5.4	2.0	45	2x20	Holzma
52822001-20	220	4.4/5.6	2.2	20	2x24	Schelling
52822001	220	4.4/5.6	2.4	45	2x24	Holzma(postforming)
52829001	290	4.4/5.6	2.8	45	2x24	Holzma(postforming)
52832001	320	4.4/5.6	3.5	45	2x24	Holzma(postforming)
52834001	340	4.4/5.6	3.5	45	2x24	Holzma(postforming)

▲ 50mm bore, 4 pin-holes counter-sunk, no shims required.
For Altendorf with RAPIDO adjustable flange

■ 50mm bore, 4 pin-holes counter-sunk, no shims required.
For Casolin Model 1300 ASTRA 3200 DIGIT with RAPIDO adjustable flange.

L50-L52 XL4000 PANEL SIZING SAW BLADES

COMBINATION MAIN SAW/SCORING SAW

MACHINE TYPE	MAIN SAW						SCORING SAW					
	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.
Anthon LNA	L5240072-60	400	4.4	60	72	TCG	52718001-20	180	4.4/5.4	20	28	Conic
	L5040072-60	400	4.4	60	72	ATB	52718001-20	180	4.4/5.4	20	28	Conic
Anthon CP	L5243072-60	430	4.4	60	72	TCG	52718001-20	180	4.4/5.4	20	28	Conic
Anthon LNB	L5253060-60	530	5.8	60	60	TCG	52718003	180	5.8/6.8	20	30	Conic
Anthon LNC	L5270060-80	700	6.2	80	60	TCG	52718004	180	6.2/7.2	20	30	Conic
Casadei Linea	L5225072-30	250	3.2	30	72	TCG	52712500	125	3.2/4.2	20	24	Conic
Gabbiani	L5235072-80	350	4.4	80	72	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5035072-80	350	4.4	80	72	ATB	52716005	160	4.4/5.4	55	36	Conic
	L5240060-80	400	4.4	80	60	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5040060-80	400	4.4	80	60	ATB	52716005	160	4.4/5.4	55	36	Conic
	L5240072-80	400	4.4	80	72	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5040072-80	400	4.4	80	72	ATB	52716005	160	4.4/5.4	55	36	Conic
Gabbiani Galaxy	L5245172-80	450	4.4	80	72	TCG	52720001-80	200	4.4/5.4	80	34	Conic
Gabbiani Elite	L52451-72-80	450	4.4	80	72	TCG	52720001-80	200	4.4/5.4	80	34	Conic
Gabbiani	L5250060-80	500	4.4	80	60	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5250872-80	500	4.8	80	72	TCG	52716006	160	4.8/5.8	55	36	Conic
Giben Junior	L5230060-75	305	4.4	75	60	TCG	52712503	125	4.4/5.4	45	24	Conic
Giben Smart 75	L5232072-50	320	4.4	50	72	TCG	52718001-50	180	4.4/5.4	50	36	Conic
Giben	L5232060-75	320	4.6	75	60	TCG	52720006-50	200	4.6/5.6	50	44	Conic
Giben Trend	L5235054-75	355	4.4	75	54	TCG	52712503	125	4.4/5.4	45	24	Conic
	L5035054-75	355	4.4	75	54	ATB	52712503	125	4.4/5.4	45	24	Conic
Giben	L5235072-75	355	4.4	75	72	TCG	52712503	125	4.4/5.4	45	24	Conic
	L5035072-75	355	4.4	75	72	ATB	52712503	125	4.4/5.4	45	24	Conic
Giben Smart 105 SPT	L5236072-50	360	4.4	50	72	TCG	52718005	180	4.4/5.4	50	44	Conic
Giben Icon 2	L5238072-50	380	4.4	50	72	TCG	52725001	250	4.4/5.4	50	40	Conic
	L5638872-50	380	4.8	50	72	TCG	52720008-50	200	4.8/5.8	50	34	Conic
Giben Onix H105	L5239072-50	390	4.4	50	72	TCG	52718001-50	180	4.4/5.4	50	36	Conic
Giben	L5240060-75	400	4.4	75	60	TCG	52712503	125	4.4/5.4	45	24	Conic
	L5040060-75	400	4.4	75	60	ATB	52712503	125	4.4/5.4	45	24	Conic
	L5240860-75	400	4.8	75	60	TCG	52712504	125	4.8/5.8	45	24	Conic
	L5240072-75	400	4.4	75	72	TCG	52712503	125	4.4/5.4	45	24	Conic
	L5040072-75	400	4.4	75	72	ATB	52712503	125	4.4/5.4	45	24	Conic
Giben Prismatic-1	L5240172-75	400	4.4	75	72	TCG	52716003	160	4.4/5.4	45	28	Conic
Giben Prismatic-2	L5243072-75	430	4.4	75	72	TCG	52721501	215	4.4/5.4	50	42	Conic
	L5243096-75	430	4.4	75	96	TCG	52721501	215	4.4/5.4	50	42	Conic
Giben Prismatic-3	L5247096-75	470	4.4	75	96	TCG	52721501	215	4.4/5.4	50	42	Conic
Giben	L5250060-75	500	4.4	75	60	TCG	52712503	125	4.4/5.4	45	24	Conic
	L5250072-75	500	4.4	75	72	TCG	52712701	127	4.4/5.4	45	24	Conic
	L5250860-75	500	4.8	75	60	TCG	52712504	125	4.8/5.8	45	24	Conic
	L5250872-75	500	4.8	75	72	TCG	52712504	125	4.8/5.8	45	24	Conic

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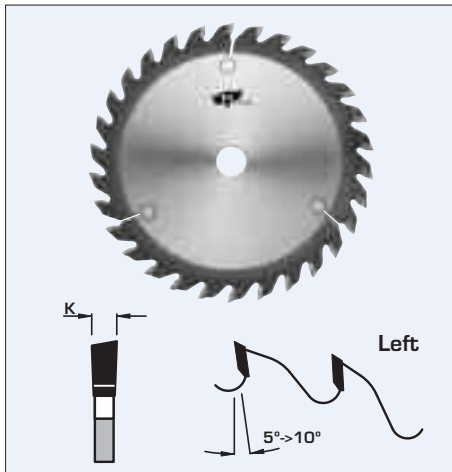
COMBINATION MAIN SAW/SCORING SAW

MACHINE TYPE	MAIN SAW						SCORING SAW					
	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.
Giben Matic	L5255272-100	550	5.2	100	72	TCG	52718002-55	180	5.2/6.2	55	30	Conic
	L5256560-100	565	5.0	100	60	TCG	52718002-55	180	5.2/6.2	55	30	Conic
	L5256572-100	565	5.0	100	72	TCG	52718002-55	180	5.2/6.2	55	30	Conic
Holz-Her	L5035154-30	350	3.6	30	54	ATB	52812501-22	125	2.8/3.6	22	2x20	Split
Holzma HPP350	L5235072-60	350	4.4	60	72	TCG	52718001-45	180	4.4/5.4	45	28	Conic
Holzma	L5238060-60	380	4.4	60	60	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5238072-60	380	4.4	60	72	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5238872-60	380	4.8	60	72	TCG	52718002	180	4.8/5.8	45	36	Conic
	L5240072-60	400	4.4	60	72	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5040072-60	400	4.4	60	72	ATB	52720001-45	200	4.4/5.4	45	34	Conic
	L5242072-60	420	4.4	60	72	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5242672-60	420	4.6	60	72	TCG	52720006	200	4.6/5.6	45	34	Conic
	L5242860-60	420	4.8	60	60	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5242872-60	420	4.8	60	72	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5245072-60	450	4.4	60	72	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5045072-60	450	4.4	60	72	ATB	52720001-45	200	4.4/5.4	45	34	Conic
	L5245872-60	450	4.8	60	72	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5245872-60	450	4.8	60	72	TCG	52718002	180	4.8/5.8	45	36	Conic
	L5250072-60	500	4.4	60	72	TCG	52720001-45	200	4.4/5.4	45	34	Conic
	L5250860-60	500	4.8	60	60	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5250872-60	500	4.8	60	72	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5250572-60	500	5.0	60	72	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5252060-60	520	4.8	60	60	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5252072-60	520	4.8	60	72	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5254060-60	540	4.8	60	60	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5254084-60	540	4.8	60	84	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5255260-60	550	5.2	60	60	TCG	52720002	200	4.8/5.8	45	34	Conic
	L5257860-60	570	5.8	60	60	TCG	52720008	200	5.8/6.8	45	34	Conic
L5260060-60	600	5.8	60	60	TCG	52720008	200	5.8/6.8	45	34	Conic	
L5260072-60	600	5.8	60	72	TCG	52720008	200	5.8/6.8	45	34	Conic	
L5267060-60	670	6.0	60	60	TCG	52720008	200	5.8/6.8	45	34	Conic	
L5267072-60	670	6.0	60	72	TCG	52720008	200	5.8/6.8	45	34	Conic	
Schelling	L5235072-30	355	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
Schelling FX H430	L5235272-30	350	4.4	30	72	TCG	L5030272-30	300	4.55	30	72	ATB
Schelling	L5237072-30	370	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5240060-30	400	4.4	30	60	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5040060-30	400	4.4	30	60	ATB	52720001-20	200	4.4/5.4	20	34	Conic
	L5240072-30	400	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5240072-30	400	4.4	30	72	TCG	52715003-20	150	4.4/5.4	20	24	Conic
	L5245072-30	450	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic

Cont'd...

COMBINATION MAIN SAW/SCORING SAW

MACHINE TYPE	MAIN SAW						SCORING SAW					
	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.	PART NO.	DIAM. mm	KERF mm	BORE mm	NO. TEETH	TOOTH CONF.
Schelling	L5045072-30	450	4.4	30	72	ATB	52720001-20	200	4.4/5.4	20	34	Conic
	L5246060-30	460	4.4	30	60	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5246072-30	460	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5247072-30	470	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5248072-30	480	4.4	30	72	TCG	52720001-20	200	4.4/5.4	20	34	Conic
	L5248872-30	488	4.8	30	72	TCG	52720002-20	200	4.8/5.8	20	34	Conic
	L5250060-30	500	4.4	30	60	TCG	52718001-20	180	4.4/5.4	20	28	Conic
	L5253060-30	530	5.0	30	60	TCG	52720003	200	5.0/6.0	20	34	Conic
	L5255060-40	550	5.0	40	60	TCG	52720003	200	5.0/6.0	20	34	Conic
	L5258060-40	580	5.5	40	60	TCG	52720005	200	5.5/6.5	20	36	Conic
							52822001-20	220	4.4/5.6	20	24+24	Split
	L5263060-40	630	6.2	40	60	TCG	52720009	200	6.2/7.2	20	34	Conic
	L5265072-40	650	6.2	40	72	TCG	52720009	200	6.2/7.2	20	34	Conic
	L5267060-40	670	6.2	40	60	TCG	52720009	200	6.2/7.2	20	34	Conic
	L5067060-40	670	6.2	40	60	ATB	52720009	200	6.2/7.2	20	34	Conic
L5268060-40	680	6.2	40	60	TCG	52720009	200	6.2/7.2	20	34	Conic	
Scheer	L5224054-30	240	3.2	30	54	TCG	52714001	140	3.2/4.2	16	32	Conic
	L5230160-30	305	3.4	30	60	TCG	52720004	200	3.3/4.3	30	60	Conic
SCM	L5235054-30	355	4.4	30	54	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5035054-30	355	4.4	30	54	ATB	52716005	160	4.4/5.4	55	36	Conic
	L5235072-30	355	4.4	30	72	TCG	52716005	160	4.4/5.4	55	36	Conic
	L5035072-30	355	4.4	30	72	ATB	52716005	160	4.4/5.4	55	36	Conic
SCMI	L5235072-114	350	4.4	1-1/4"	72	TCG	52715003-114	150	4.4/5.4	1-1/4"	24	Conic
SCM Sigma 65	L5230072-80	300	4.4	80	72	TCG	52716005	160	4.4/5.4	55	36	Conic
Sigma 65 New	L5230072-80	300	4.4	80	72	TCG	52720001-80	200	4.4/5.4	80	34	Conic
SCM Sigma 90	L5235172-80	350	4.4	80	72	TCG	52716005	160	4.4/5.4	55	36	Conic
Sigma 90 New	L5235172-80	350	4.4	80	72	TCG	52720001-80	200	4.4/5.4	80	34	Conic
SCM Sigma 115	L5240272-80	400	4.4	80	72	TCG	52720001-80	200	4.4/5.4	80	34	Conic
Selco EB70	L5230060-65	300	4.4	65	60	TCG	52720005-65	200	4.4/5.4	65	34	Conic
Selco EB90	L5235272-80	355	4.4	80	72	TCG	52720001-65	200	4.4/5.4	65	34	Conic
Selco EB100	L5236072-65	360	4.4	65	72	TCG	52720005-65	200	4.4/5.4	65	34	Conic
Selco	L5240172-80	400	4.4	80	72	TCG	52720001-65	200	4.4/5.4	65	34	Conic
	L5243072-80	430	4.4	80	72	TCG	52720001-65	200	4.4/5.4	65	34	Conic
	L5043072-80	430	4.4	80	72	ATB	52720001-65	200	4.4/5.4	65	34	Conic
	L5245072-80	450	4.4	80	72	TCG	52720001-65	200	4.4/5.4	65	34	Conic
	L5045072-80	450	4.4	80	72	ATB	52720001-65	200	4.4/5.4	65	34	Conic
	L5245672-80	450	4.6	80	72	TCG	52720006-65	200	4.6/5.6	65	34	Conic
	L5245872-80	450	4.8	80	72	TCG	52720002-65	200	4.8/5.8	65	34	Conic
L5248872-80	480	4.8	80	72	TCG	52720002-65	200	4.8/5.8	65	34	Conic	


DESIGN:

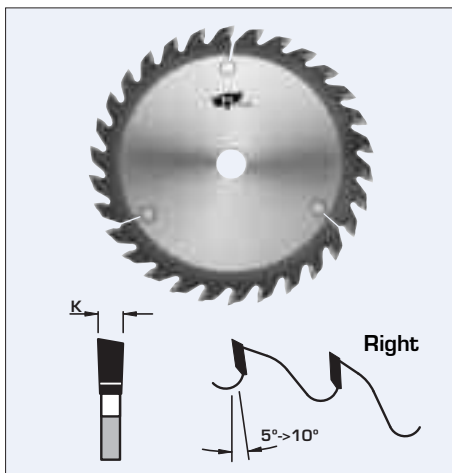
- Tooth configuration: Unilaterally right
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For pre-scoring in solid wood, veneered and plastic laminated sheets
- On single or double end tenoners with pre-scoring units, in combination with hogging units

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
529150	6"	.126"	.087"	5/8"	30
529154	6"	.126"	.087"	5/8"	40
529180	7"	.126"	.087"	5/8"	30
529184	7"	.126"	.087"	5/8"	40
529186	7"	.126"	.087"	5/8"	60
529200	8"	.126"	.087"	5/8"	40
529206	8"	.126"	.087"	5/8"	60

Bore size modified according to flange or spindle size of machine


DESIGN:

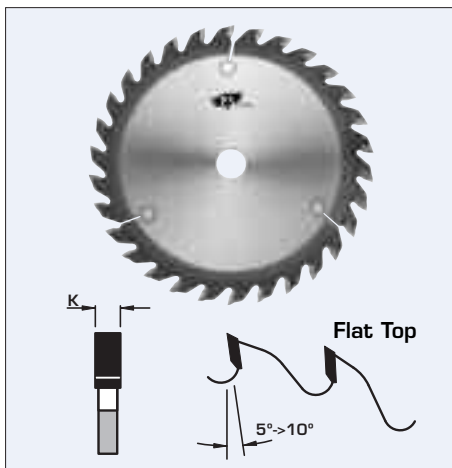
- Tooth configuration: Unilaterally left
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For pre-scoring in solid wood, veneered and plastic laminated sheets
- On single or double end tenoners with pre-scoring units, in combination with hogging units

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
530150	6"	.126"	.087"	5/8"	30
530154	6"	.126"	.087"	5/8"	40
530180	7"	.126"	.087"	5/8"	30
530184	7"	.126"	.087"	5/8"	40
530186	7"	.126"	.087"	5/8"	60
530200	8"	.126"	.087"	5/8"	40
530206	8"	.126"	.087"	5/8"	60

Bore size modified according to flange or spindle size of machine


DESIGN:

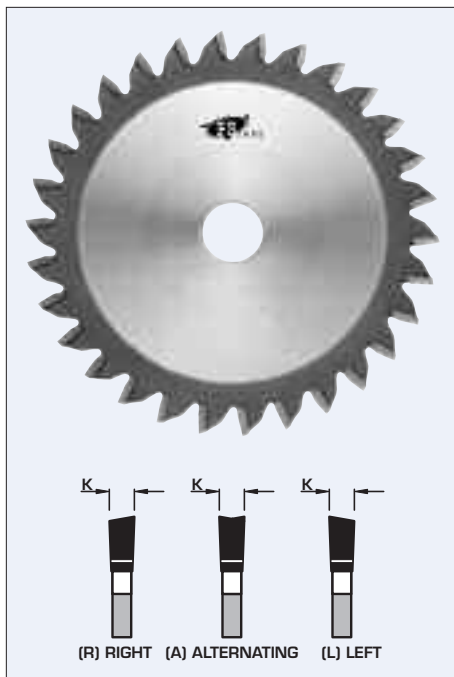
- Tooth configuration: Flat Top
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For pre-scoring in plastic laminated sheets
- On single or double end tenoners with pre-scoring units, in combination with hogging units

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
531150	6"	.126"	.087"	5/8"	30
531154	6"	.126"	.087"	5/8"	40
531180	7"	.126"	.087"	5/8"	30
531184	7"	.126"	.087"	5/8"	40
531186	7"	.126"	.087"	5/8"	60
531200	8"	.126"	.087"	5/8"	40
531206	8"	.126"	.087"	5/8"	60

Bore size modified according to flange or spindle size of machine

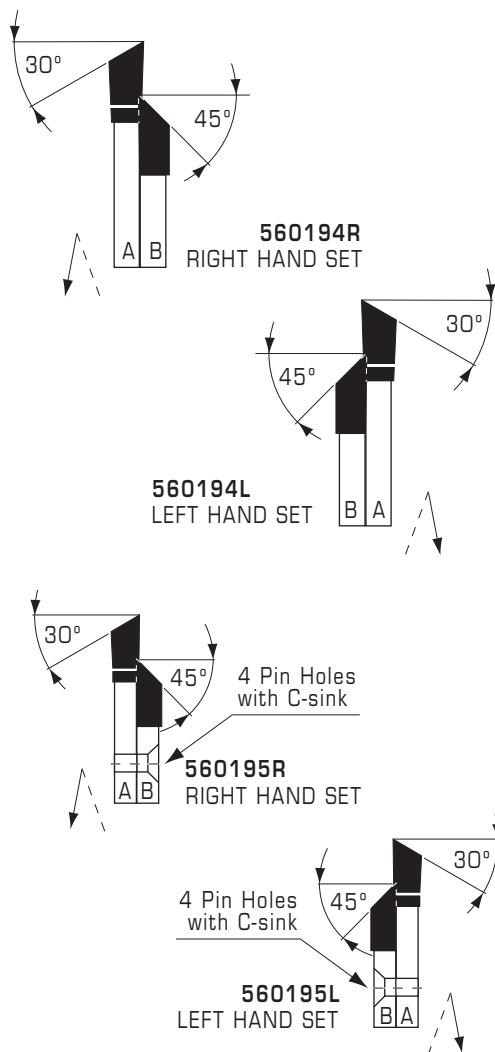

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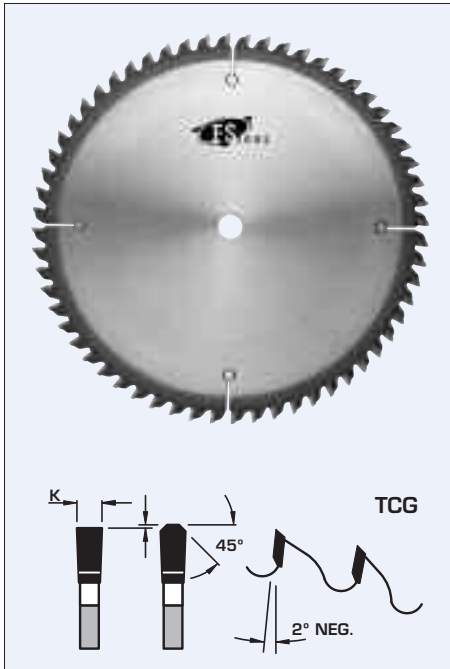
- Tooth configuration: see chart below (tooth shape & hook angle)
- Cutting material: TC

APPLICATION:

- For trimming projecting edge bandings of solid wood, wood veneer and plastics
- On single and double-sided edge-banding machines

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH	TOOTH SHAPE & HOOK ANGLE
560 090 A	90	3.0	2.0	30	24	Alt. Bev. Positive
560 100 L	100	3.0	2.0	32	20	One Side Positive
560 100 L-32	100	3.2	2.2	32	20	One Side Negative
560 100 R-32	100	3.2	2.2	32	20	One Side Negative
560 100 R	100	3.0	2.0	32	20	One Side Positive
560 101 L	100	3.0	2.0	32	20	One Side Negative
560 101 R	100	3.0	2.0	32	20	One Side Negative
560 100 L-32	100	3.2	2.0	32	20	One Side Negative
560 100 R-32	100	3.2	2.0	32	20	One Side Negative
560 100 A	100	3.6	2.6	32	20	Alt. Bev. Positive
560 194 L	100/92	5.6	2.5	32	20/20	Trimming-Bev. Set One Side Bev. Neg.
560 194 R	100/92	5.6	2.5	32	20/20	Trimming-Bev. Set One Side Bev. Neg.
560 195 L	110/92	5.7	2.2	40	20/20	Trimming-Bev. Set One Side Bev. Pos.
560 195 R	110/92	5.7	2.2	40	20/20	Trimming-Bev. Set One Side Bev. Pos.
560 110 A	110	3.6	2.6	32	20	Alt. Bev. Positive
560 110 A-22	110	3.6	2.6	22	20	Alt. Bev. Positive
560 120 A	120	3.2	2.2	20	24	Alt. Bev. Positive
560 125 L	125	3.2	2.2	20	40	One Side Positive
560 125 R	125	3.2	2.2	20	40	One Side Positive
560 150 L	150	3.5	2.3	22	30	One Side Positive
560 150 R	150	3.5	2.3	22	30	One Side Positive
560 151 L	150	3.5	2.3	22	30	One Side Negative
560 151 R	150	3.5	2.3	22	30	One Side Negative
560 154 L	150	3.5	2.3	20	36	One Side Positive
560 154 R	150	3.5	2.3	20	36	One Side Positive
560 150 A	150	3.5	2.3	22	48	Alt. Bev. Positive
560 160 A	160	2.8	2.0	30	24	Alt. Bev. Positive
560 160 B	160	3.2	2.2	20	48	Alt. Bev. Positive
570 170 L	170	3.2	2.2	20	48	One Side Positive
570 170 R	170	3.2	2.2	20	48	One Side Positive
570 170 L-30	170	3.2	2.2	30	48	One Side Positive
570 170 R-30	170	3.2	2.2	30	48	One Side Positive



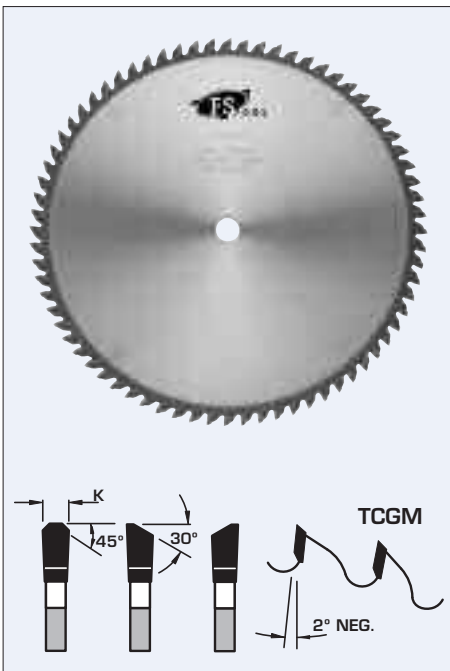
**DESIGN:**

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For splitting and mitre jointing non-ferrous extrusions, sheets and light bars
- On mitre joint, splitting, trimming, double cross-cutting and sizing machines
- Material to be cut must be clamped firmly
- Use of spray lubrication recommended

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L1A180	7"	.112"	.087"	5/8"	44
L1A200	8"	.112"	.087"	5/8"	48
L1A225	9"	.112"	.087"	5/8"	60
L1A250	10"	.112"	.087"	5/8"	60
L1A252	10"	.126"	.102"	5/8"	60
L1A308	12"	.124"	.110"	5/8"	80
L1A300	12"	.122"	.095"	1"	80
L1A350	14"	.145"	.118"	1"	90
L1A400	16"	.145"	.118"	1"	100
L1A450	18"	.174"	.138"	1"	100
L1A500	20"	.174"	.138"	1"	100

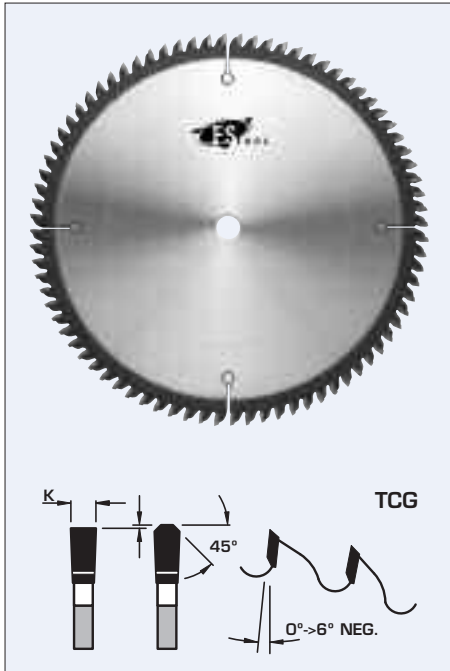
**DESIGN:**

- Tooth configuration: TCGM
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

- For splitting and mitre jointing thin non-ferrous extrusions, thin sheets and light non-ferrous bars
- On mitre joint, splitting, trimming, double cross-cutting and sizing machines
- Material to be cut must be clamped firmly
- Use of spray lubrication recommended

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L1C250	10"	.118"	.095"	5/8"	72
L1C300	12"	.126"	.102"	1"	90
L1C308	12"	.126"	.102"	5/8"	90

**DESIGN:**

- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: Cu plugged

APPLICATION:

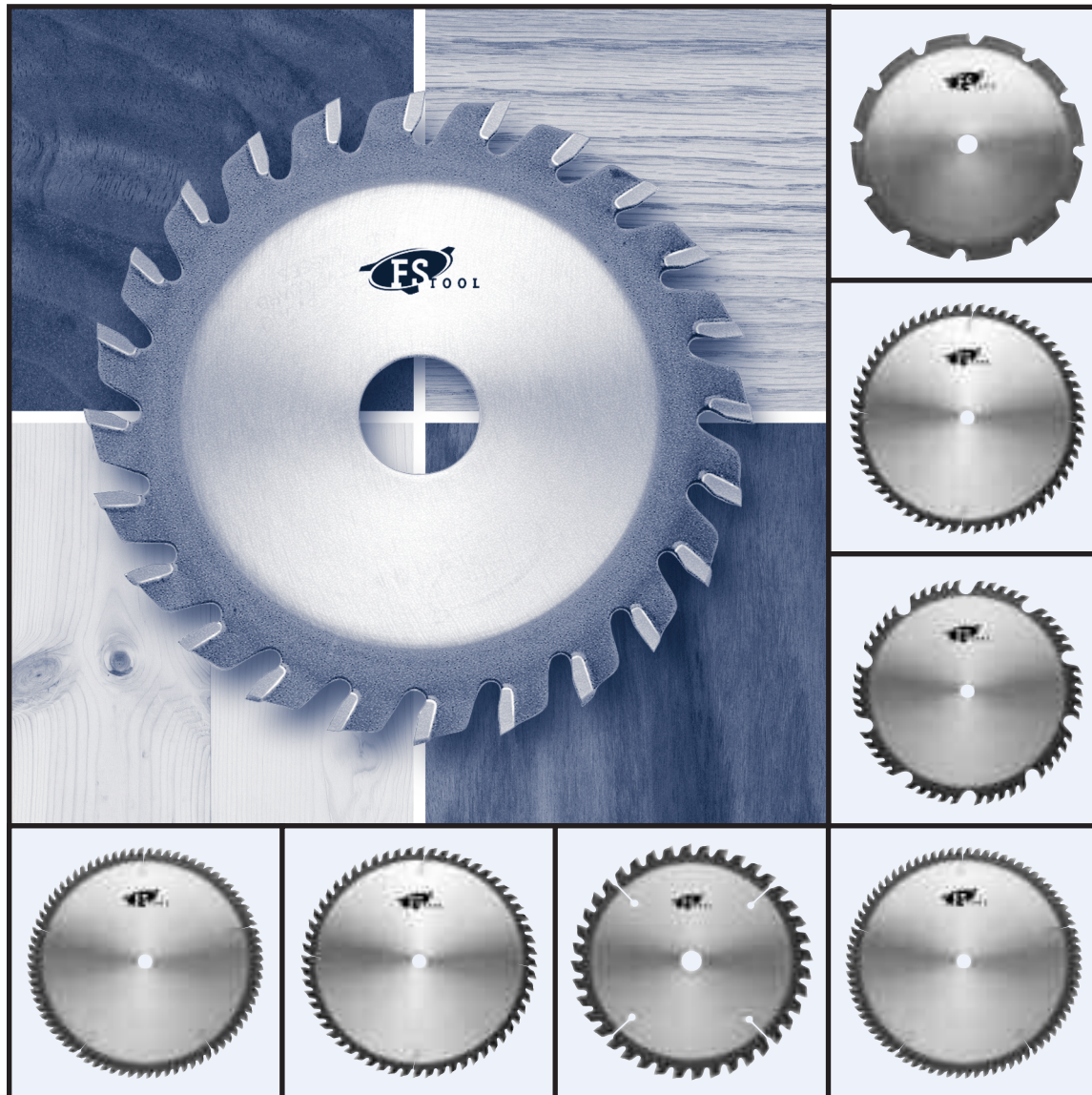
- For splitting and mitre jointing thin non-ferrous extrusions, thin sheets and light non-ferrous bars
- On mitre joint, splitting, trimming, double cross-cutting and sizing machines
- Material to be cut must be clamped firmly
- Use of spray lubrication recommended

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
L1B200	8"	.112"	.087"	5/8"	60
L1B250	10"	.112"	.087"	5/8"	80
L1B252	10"	.126"	.102"	5/8"	80
L1B251	10"	.112"	.087"	5/8"	100
L1B306-30	300mm	3.2mm	2.6mm	30mm	96
L1B308 ▲	12"	.134"	.110"	5/8"	100
L1B300	12"	.120"	.095"	1"	100
L1B301	12"	.126"	.102"	1"	100
L1B330-32	330mm	3.2mm	2.5mm	32mm	100
L1B351 ●	350mm	3.1mm	2.5mm	25mm	100
L1B350	14"	.145"	.118"	1"	100
L1B353	350mm	3.3mm	2.6mm	32mm	108
L1B358 ▲	14"	.146"	.118"	5/8"	100
L1B380 ■	15"	.120"	.098"	1"	100
L1B400	16"	.145"	.118"	1"	120
L1B500	20"	.174"	.138"	1"	120
L1B501	500mm	4.4mm	3.8mm	30mm	120

- ▲ Pistorius Mitre Saw
- Makita Mitre Saw (with 25mm arbor)
- Hitachi Mitre Saw

PROFESSIONAL LINE SAW BLADES

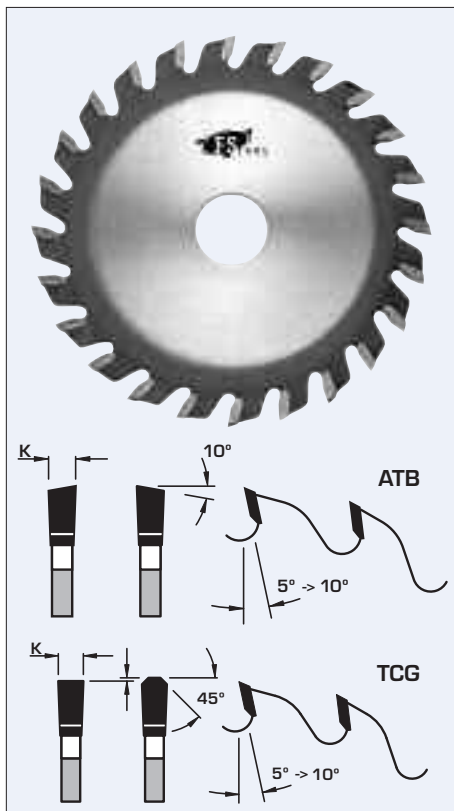
FS Tools wide range of **Pro-Line** Saw Blades have been specifically designed for portable machines and stationary table saws. Our **Pro-Line** Saw Blades are manufactured using the same state of the art machinery used to manufacture our famous high quality industrial and *XL4000* extended life saw blades.



FEATURES:

- Hardened, surface ground and roll-tensioned steel body
- Induction brazed tungsten carbide tips
- Precision Ground
- Laser cut expansion slots, self plugged for noise reduction
- Skill knockout where indicated

LHCS SAW BLADES FOR CORDLESS MACHINES



DESIGN:

- Tooth configuration: refer to chart below (grind)
- Cutting material: TC
- Expansion slots: laser, self plug

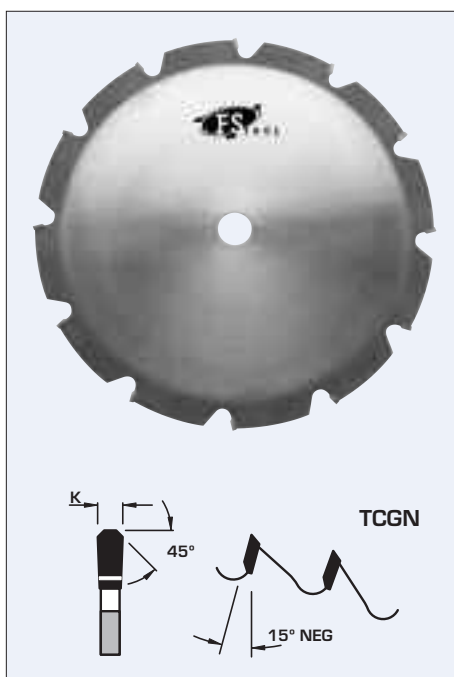
APPLICATION:

- For cross cutting solid wood, veneered and plastic laminated sheets
- On portable machines

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LH424	4-3/8"	.115"	.070"	20mm	24	ATB
LH426	4-3/8"	.115"	.070"	20mm	24	TCG
LH440	4-3/8"	.115"	.070"	20mm	40	ATB
LH442	4-3/8"	.115"	.070"	20mm	40	TCG
LH530	5-1/2"	.115"	.070"	5/8"	40	TCG

- For Porter cable, Makita, supplied with reducing bushing for 3/8" arbor
- For Makita and others, supplied with reducing bushing for 1/2" and 10mm arbors

LHRS DEMOLITION - FIREMAN'S SAW BLADES



DESIGN:

- Tooth configuration: TCGN
- Cutting material: TC
- Modified grind and 15° negative hook reduces the possibility of tooth damage

APPLICATION:

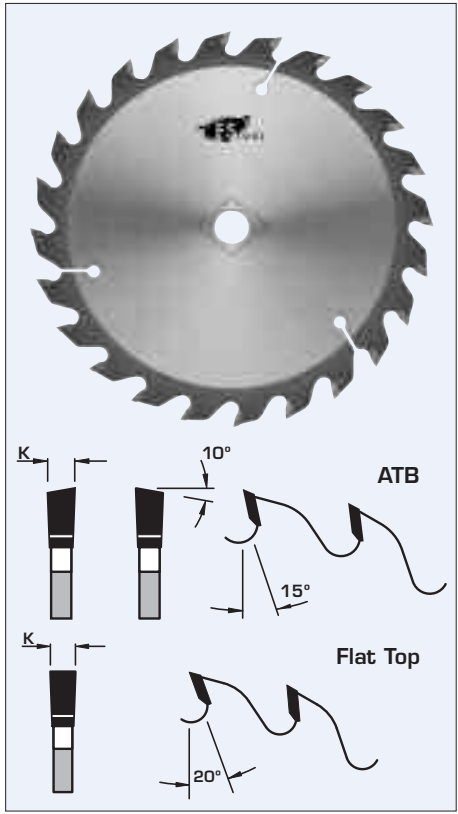
- For rough cutting applications
- On gasoline powered machines

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LHR1212	12"	.165"	.093"	20mm	12	TCGN
LHR1224	12"	.165"	.093"	20mm	24	TCGN
LHR1212-78	12"	.165"	.093"	7/8"	12	TCGN
LHR1212-1	12"	.165"	.093"	1"	12	TCGN
LHR1224-1	12"	.165"	.093"	1"	24	TCGN

Note: Due to the rough applications for which these blades may be used, they are **not guaranteed**

LHGA

GENERAL APPLICATION SAW BLADES



DESIGN:

- Tooth configuration: refer to chart below (grind)
- Cutting material: TC
- Expansion slots: laser, self plug

APPLICATION:

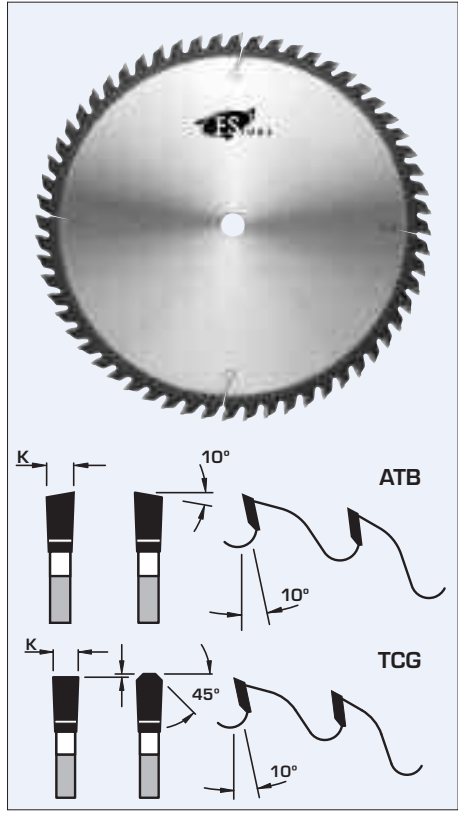
- For ripping and general cross cutting dry solid woods
- On portable machines and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LH624 ♦	6-1/2"	.115"	.070"	5/8"	24	ATB
LH708 ♦	7-1/4"	.115"	.070"	5/8"	8	FLAT
LH712 ♦	7-1/4"	.115"	.070"	5/8"	12	FLAT
LH724 ♦	7-1/4"	.115"	.070"	5/8"	24	ATB
LH726 ♦	7-1/4"	.115"	.070"	5/8"	24	TCG
LH824 ♦	8"	.115"	.070"	5/8"	24	ATB
LH924	9"	.125"	.080"	5/8"	24	ATB
LH112	10"	.125"	.080"	5/8"	12	FLAT
LH118	10"	.125"	.080"	5/8"	18	FLAT
LH130	10"	.125"	.080"	5/8"	30	ATB
LH1224	12"	.125"	.087"	1"	24	FLAT
LH1436	14"	.140"	.095"	1"	36	FLAT

♦ Diamond arbor knockout

LHSC

STANDARD CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: refer to chart below (grind)
- Cutting material: TC
- Expansion slots: laser, self plug

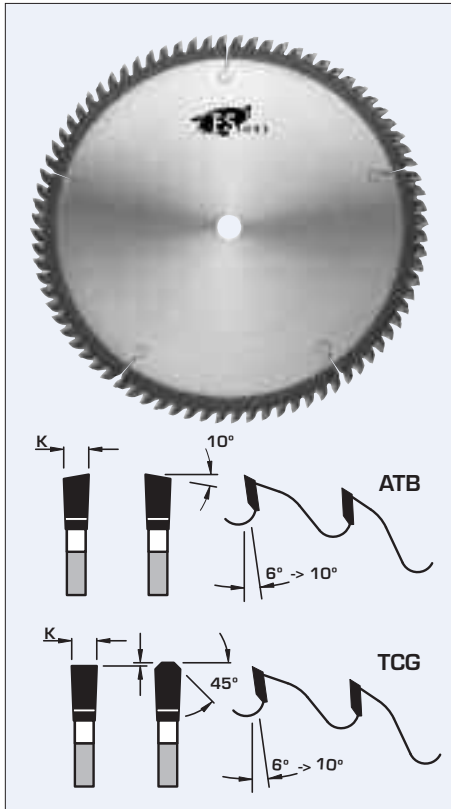
APPLICATION:

- For cut-off and trimming of solid woods, plywood and plastic laminated sheets
- On portable machines and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LH640 ♦	6-1/2"	.115"	.070"	5/8"	40	ATB
LH740 ♦	7-1/4"	.115"	.070"	5/8"	40	ATB
LH742 ♦	7-1/4"	.115"	.070"	5/8"	40	TCG
LH840 ♦	8"	.115"	.070"	5/8"	40	ATB
LH842 ♦	8"	.115"	.070"	5/8"	40	TCG
LH940	9"	.125"	.080"	5/8"	40	ATB
LH140	10"	.125"	.080"	5/8"	40	ATB
LH160	10"	.125"	.080"	5/8"	60	ATB
LH161	10"	.125"	.080"	5/8"	60	TCG
LH1272	12"	.125"	.087"	1"	72	ATB
LH1274	12"	.125"	.087"	1"	72	TCG
LH1484	14"	.140"	.098"	1"	84	ATB
LH1486	14"	.140"	.098"	1"	84	TCG

♦ Diamond arbor knockout

LHFC FINE CROSS CUT SAW BLADES



DESIGN:

- Tooth configuration: refer to chart below (grind)
- Cutting material: TC
- Expansion slots: laser, self plug

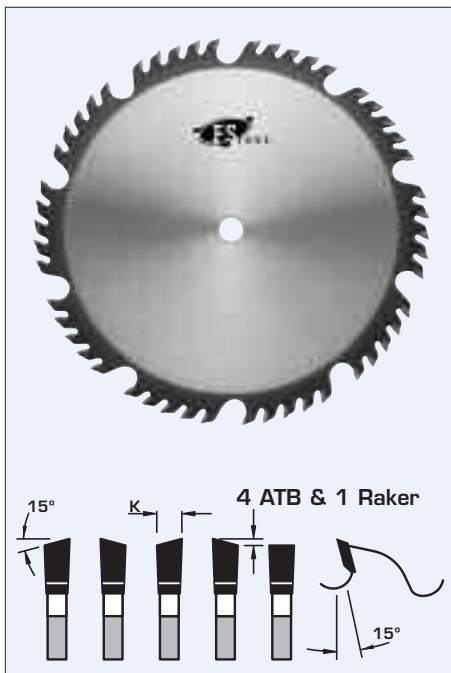
APPLICATION:

- For fine cut-off and trimming of solid woods, plywood, wood veneered and plastic laminated panel materials
- On portable machines and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LH860 ♦	8"	.115"	.070"	5/8"	60	ATB
LH862 ♦	8"	.115"	.070"	5/8"	60	TCG
LH960	9"	.125"	.080"	5/8"	60	ATB
LH962	9"	.125"	.080"	5/8"	60	TCG
LH180	10"	.125"	.080"	5/8"	80	ATB
LH181	10"	.125"	.080"	5/8"	80	TCG
LH12096	12"	.125"	.087"	1"	96	ATB
LH12097	12"	.125"	.087"	1"	96	TCG
LH14108	14"	.140"	.098"	1"	108	ATB
LH14109	14"	.140"	.098"	1"	108	TCG

♦ Diamond arbor knockout

LHCP COMBINATION/PLANER SAW BLADES



DESIGN:

- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC
- Four ATB teeth and one Raker with deep gullet allow for deeper cuts and improved chip-flow

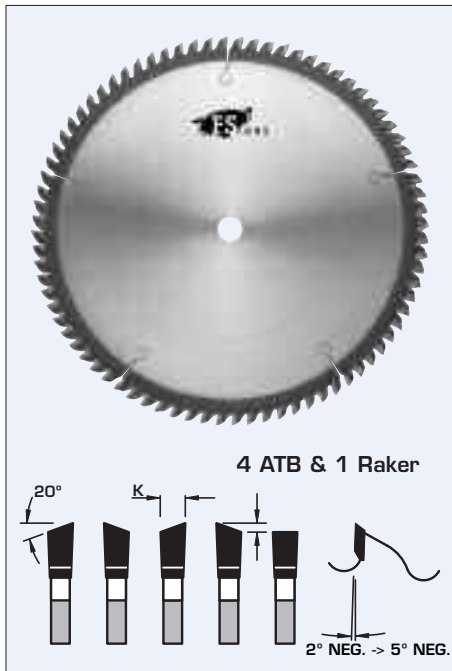
APPLICATION:

- For cross cutting and ripping dry soft and hardwoods, plywood and particleboard
- On portable machines and table saws

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH	GRIND
LH407 ♦	7-1/4"	.120"	.070"	5/8"	40	4 ATB+R
LH408 ♦	8"	.120"	.070"	5/8"	40	4 ATB+R
LH409	9"	.125"	.080"	5/8"	40	4 ATB+R
LH501	10"	.135"	.087"	5/8"	50	4 ATB+R
LH502	12"	.135"	.087"	1"	60	4 ATB+R

♦ Diamond arbor knockout

LHMJ MITRE JOINT SAW BLADES



DESIGN:

- Tooth configuration: 4 ATB & 1 Raker
- Cutting material: TC
- Expansion slots: laser, self plug

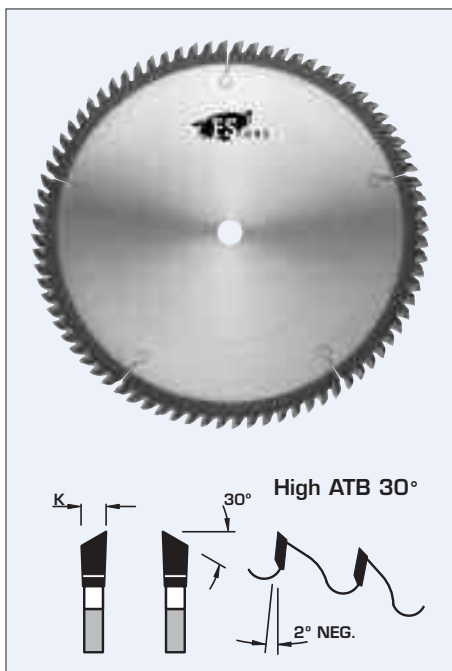
APPLICATION:

- For mitre joint cuts in soft and hardwood picture frames and furniture mouldings
- On cut-off mitre machines, compound mitre machines, radial arm saws and table saws

PART NO.		DIAM.	KERF	PLATE	BORE	TEETH
LH864	▲	8-1/4"	.100"	.070"	5/8"	60
LH863	●	8-1/2"	.100"	.070"	5/8"	60
LH162		10"	.110"	.080"	5/8"	60
LH182		10"	.110"	.080"	5/8"	80

- ▲ Black & Decker Mitre, Delta Compound Mitre, Ryobi Radial Arm
- Elu Mitre, Hitachi Mitre

LHCF CHIP-FREE MELAMINE TRIM BLADES



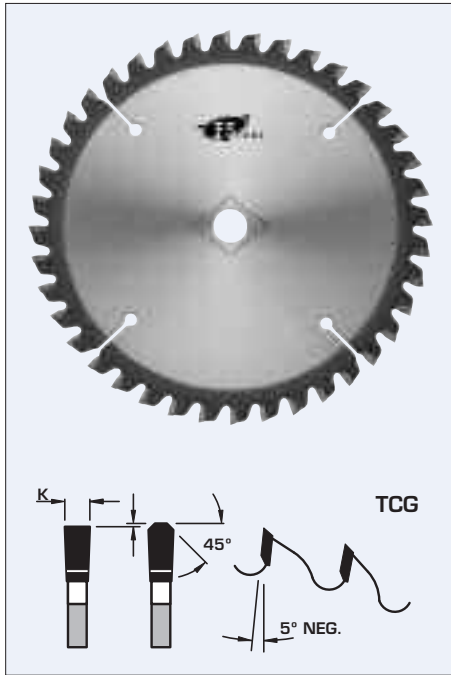
DESIGN:

- Tooth configuration: High ATB (30°)
- Cutting material: TC
- Expansion slots: laser, self plug

APPLICATION:

- For chip-free sizing cuts (on both sides) in melamine and wood veneered panels, without the need for pre-scoring
- For fine cross-cuts in solid woods
- On table saws, sliding table saws, vertical panel sizing saws and cut-off saws

PART NO.		DIAM.	KERF	PLATE	BORE	TEETH
LH184		10"	.112"	.080"	5/8"	80
LH1210		12"	.125"	.087"	1"	100
LH3096		300mm	3.2mm	2.2mm	30mm	96

**DESIGN:**

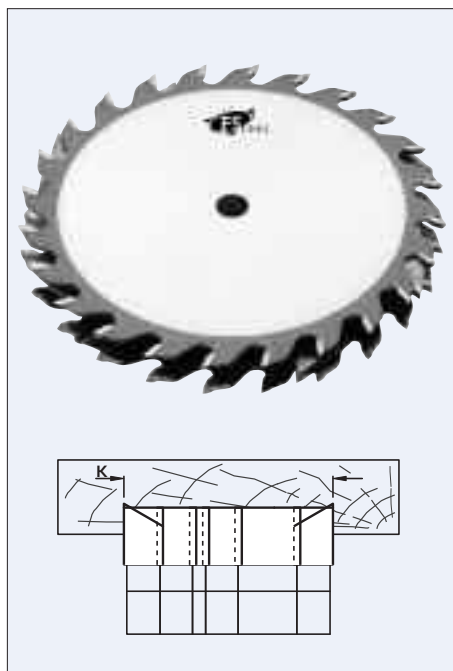
- Tooth configuration: TCG
- Cutting material: TC
- Expansion slots: laser, self plug

APPLICATION:

- For splitting and mitre jointing non-ferrous extrusions, thin sheets and light non-ferrous bars
- On mitre and compound mitre saws
- Material to be cut must be clamped firmly
- Use of spray lubrication recommended

PART NO.		DIAM.	KERF	PLATE	BORE	TEETH
LH743	◆	7-1/4"	.100"	.070"	5/8"	40
LH866	▲	8-1/4"	.100"	.070"	5/8"	60
LH868	●	8-1/2"	.100"	.070"	5/8"	60

- ◆ Diamond arbor knockout
- ▲ Black & Decker Mitre, Delta Compound Mitre, Ryobi Radial Arm
- Elu Mitre, Hitachi Mitre

**DESIGN:**

- Standard set consists of two outside saws blades 1/8" kerf, one 1/4" chipper, two 1/8" chippers and one 1/16" chipper
- Cutting material: TC

APPLICATION:

- To cut grooves and dados in soft and hardwoods, plywood and veneered panels
- Groove widths adjustable from 1/4" to 13/16" maximum width in 1/16" increments. Wider grooves can be obtained by adding spare chippers
- On table saws, sliding table saws and single or double end tenoners

PART NO.	DIAM.	MAX. WIDTH	BORE	TEETH
53DL06	6"	13/16"	5/8"	24
53DL08	8"	13/16"	5/8"	24
53DL08-1	8"	13/16"	1"	24
53DL10	10"	13/16"	5/8"	24
53DL10-1	10"	13/16"	1"	24
53DL12	12"	13/16"	1"	24
53DL14	14"	13/16"	1"	40

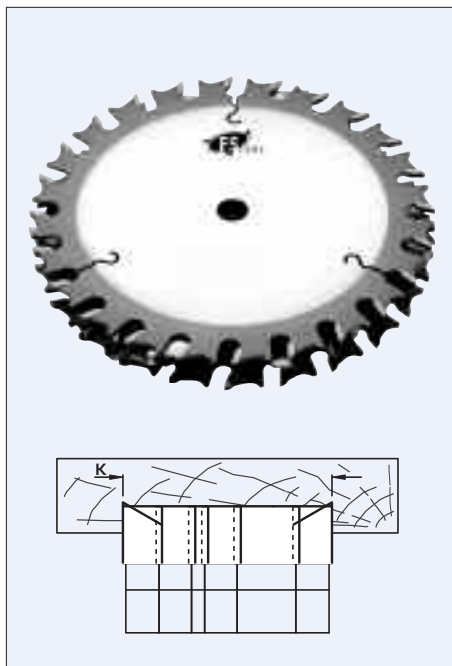
OUTSIDE SAW BLADES ONLY

PART NO.	DIAM.	KERF	BORE	TEETH
53DL06-LH/RH	6"	1/8"	5/8"	24
53DL08-LH/RH	8"	1/8"	5/8"	24
53DL08-1-LH/RH	8"	1/8"	1"	24
53DL10-LH/RH	10"	1/8"	5/8"	24
53DL10-1-LH/RH	10"	1/8"	1"	24
53DL12-LH/RH	12"	1/8"	1"	24
53DL14-LH/RH	14"	1/8"	1"	40

SPARE CHIPPERS 2-TEETH

PART NO.	KERF	PART NO.	KERF	PART NO.	KERF	DIAM.	BORE
5306-16	1/16"	5306-18	1/8"	5306-14	1/4"	6"	5/8"
5308-16	1/16"	5308-18	1/8"	5308-14	1/4"	8"	5/8"
5308-16-1	1/16"	5308-18-1	1/8"	5308-14-1	1/4"	8"	1"
5310-16	1/16"	5310-18	1/8"	5310-14	1/4"	10"	5/8"
5310-16-1	1/16"	5310-18-1	1/8"	5310-14-1	1/4"	10"	1"
5312-16	1/16"	5312-18	1/8"	5312-14	1/4"	12"	1"
5314-16	1/16"	5314-18	1/8"	5314-14	1/4"	14"	1"

53DLS SAFETY DADO SETS "ANTI-KICKBACK" DESIGN



DESIGN:

- Standard set consists of two outside saw blades 1/8" kerf, one 1/4" chipper, two 1/8" chippers and one 1/16" chipper
- "Anti-kickback" design reduces the risk of kick-back
- Cutting material: TC

APPLICATION:

- To cut grooves and dados in soft and hardwoods, plywood and veneered panels
- Groove widths adjustable from 1/4" to 13/16" maximum width in 1/16" increments. Wider grooves can be obtained by adding spare chippers
- On table saws, sliding table saws and single or double end tenoners

PART NO.	DIAM.	MAX.WIDTH	BORE	TEETH
53DL08S	8"	13/16"	5/8"	24

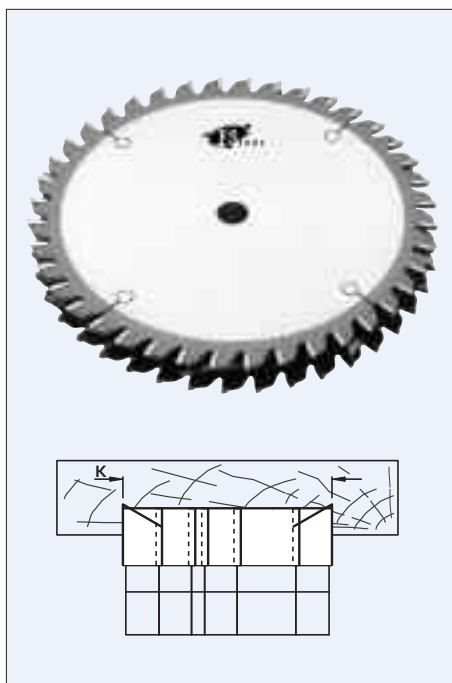
OUTSIDE SAW BLADES ONLY

PART NO.	DIAM.	KERF	BORE	TEETH
53DL08S-LH/RH	8"	1/8"	5/8"	24

SPARE CHIPPERS 2-TEETH

PART NO.	KERF	PART NO.	KERF	PART NO.	KERF.	DIAM.	BORE
5308-16S	1/16"	5308-18S	1/8"	5308-14S	1/4"	8"	5/8"

54DL FINE DADO SETS



DESIGN:

- Standard set consists of two outside saw blades 1/8" kerf, one 1/4" chipper, two 1/8" chippers and one 1/16" chipper
- Cutting material: TC
- Hook angle: 0°

APPLICATION:

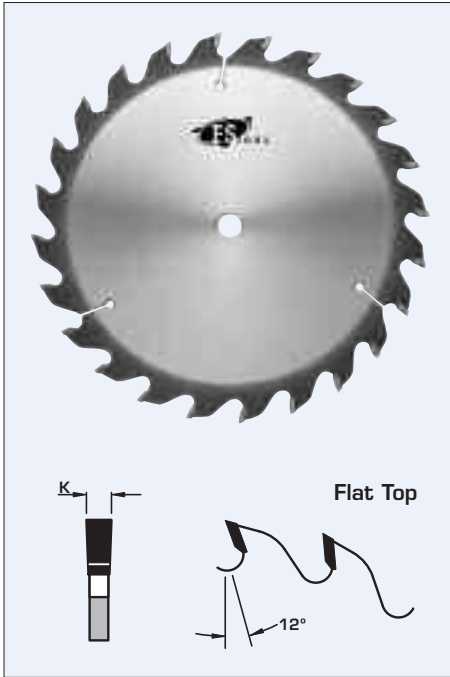
- To cut grooves and dados in plastic laminated panels
- Groove widths adjustable from 1/4" to 13/16" maximum width in 1/16" increments. Wider grooves can be obtained by adding spare chippers
- On table saws, sliding table saws and single or double end tenoners

PART NO.	DIAM.	MAX.WIDTH	BORE	TEETH
54DL08	8"	13/16"	5/8"	40
54DL08-1	8"	13/16"	1"	40
54DL10	10"	13/16"	5/8"	60
54DL10-1	10"	13/16"	1"	60

OUTSIDE SAW BLADES ONLY

PART NO.	DIAM.	KERF	BORE	TEETH
54DL08-LH/RH	8"	1/8"	5/8"	40
54DL08-1-LH/RH	8"	1/8"	1"	40
54DL10-LH/RH	10"	1/8"	5/8"	60
54DL10-1-LH/RH	10"	1/8"	1"	60

Spare Chippers: see page E44

**DESIGN:**

- Tooth configuration: Flat Top
- Cutting material: TC

APPLICATION:

- For cutting grooves in solid wood, plywood, veneered and plastic laminated panels
- On table saws, sliding table saws, single or double end tenoners and CNC routers

PART NO.	DIAM.	KERF	PLATE	BORE	TEETH
5G6116	6"	1/16"	.087"/.040"	5/8"	12
5G6332	6"	3/32"	.087"/.065"	5/8"	12
5G6018	6"	1/8"	.087"	5/8"	12
5G6316	6"	3/16"	.134"	5/8"	12
5G6014	6"	1/4"	.180"	5/8"	12
5G6516	6"	5/16"	.180"	5/8"	12
5G6038	6"	3/8"	.250"	5/8"	12
5G7332	7"	3/32"	.087"/.065"	5/8"	18
5G7316	7"	3/16"	.134"	5/8"	18
5G7014	7"	1/4"	.180"	5/8"	18
5G7516	7"	5/16"	.180"	5/8"	18
5G7038	7"	3/8"	.250"	5/8"	18
5G8316	8"	3/16"	.134"	5/8"	24
5G8014	8"	1/4"	.180"	5/8"	24
5G8516	8"	5/16"	.180"	5/8"	24
5G8038	8"	3/8"	.250"	5/8"	24
5G0316	10"	3/16"	.134"	5/8"	24
5G0014	10"	1/4"	.180"	5/8"	24
5G0516	10"	5/16"	.180"	5/8"	24
5G0038	10"	3/8"	.250"	5/8"	24

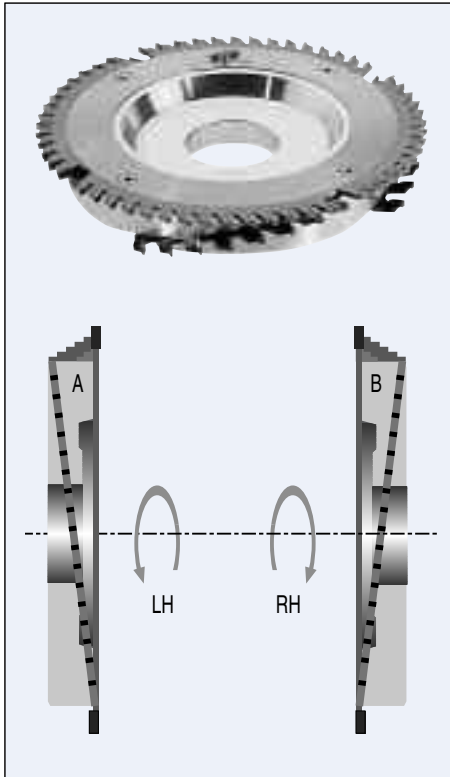
METRIC SIZES

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH
5G4M32	100	3.2	2.2	20	20
5G6M18	150	1.8	2.2/1.0	30	12
5G6M25	150	2.5	2.2/1.6	30	12
5G6M35	150	3.5	2.4	30	12
5G6M50	150	5.0	3.8	30	12
5G6M60	150	6.0	4.6	30	12
5G6M70	150	7.0	4.6	30	12
5G6M80	150	8.0	4.6	30	12
5G7M25	180	2.5/1.6	2.2	30	18
5G7M50	180	5.0	3.8	30	18
5G7M60	180	6.0	4.6	30	18
5G7M70	180	7.0	4.6	30	18
5G7M80	180	8.0	4.6	30	18

METRIC SIZES

PART NO.	DIAM. mm	KERF mm	PLATE mm	BORE mm	TEETH
5G8M50	200	5.0	3.8	30	24
5G8M60	200	6.0	4.6	30	24
5G8M70	200	7.0	4.6	30	24
5G8M80	200	8.0	4.6	30	24
5G0M50	250	5.0	3.8	30	24
5G0M60	250	6.0	4.6	30	24
5G0M70	250	7.0	4.6	30	24
5G0M80	250	8.0	4.6	30	24
5G0M01	250	10.0	6.35	30	24

Other sizes manufactured to customers specifications

**DESIGN:**

- Hogger body made of light alloy equipped with 4 or 6 segments and 1 saw blade, all TC tipped, replaceable and resharpenable
- Standard chipping width 30mm, wider chipping widths in multiples of 30mm can be achieved by adding multiple elements which must be specified when ordering

APPLICATION:

- For chip-free sizing of panel materials on double-end tenoners and trimming machines

PART NO.	ROTATION	DIAM. mm	KERF mm	BORE mm	NO. TEETH SAWS	NO. TEETH SEGMENTS
1TL504	LH	255	30	60	40	4x8
1TL514	RH	255	30	60	40	4x8
1TL506	LH	255	30	60	60	4x8
1TL516	RH	255	30	60	60	4x8
1TL524	LH	255	30	80	40	4x8
1TL534	RH	255	30	80	40	4x8
1TL526	LH	255	30	80	60	4x8
1TL536	RH	255	30	80	60	4x8
1TL804	LH	300	30	60	48	6x7
1TL814	RH	300	30	60	48	6x7
1TL806	LH	300	30	60	72	6x7
1TL816	RH	300	30	60	72	6x7
1TL824	LH	300	30	80	48	6x7
1TL834	RH	300	30	80	48	6x7
1TL826	LH	300	30	80	72	6x7
1TL836	RH	300	30	80	72	6x7
1TL906	LH	350	30	60	84	6x8
1TL916	RH	350	30	60	84	6x8
1TL926	LH	350	30	80	84	6x8
1TL936	RH	350	30	80	84	6x8

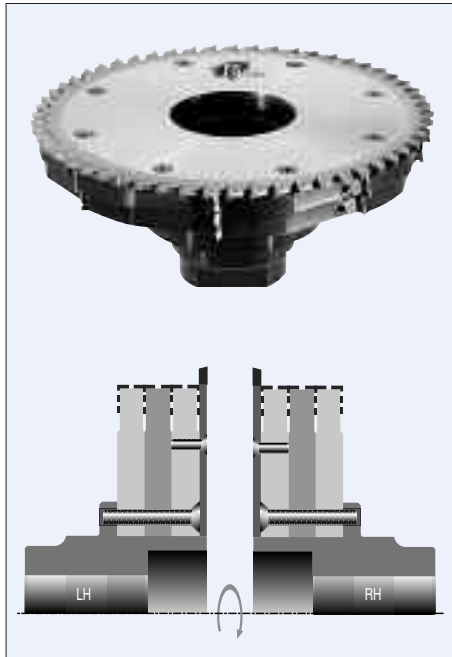
SPARE SAWS (one side bevel)

PART NO. LEFT	PART NO. RIGHT	DIAM. mm	KERF mm	BORE mm	NO. OF TEETH	TOOTH SHAPE
525240	525340	255	4.2	155	40	BEV.
525260	525360	255	4.2	155	60	BEV.
530248	530348	300	4.2	155	48	BEV.
530272	530372	300	4.2	155	72	BEV.
535084	535384	350	4.2	200	84	BEV.

- W500605 Spare screw for saws
- W500701 Spare screw for segments

SPARE SEGMENTS

PART NO.	DIAM. mm	TEETH
525008	245	8
530008	295	7
535008	345	8

**DESIGN:**

- High tensile strength steel body with solid carbide reversible inserts
- Inserts have 4 cutting edges with chip breaker
- Hogger set consists of elements which can be of three different diameters (234, 242 and 250mm). This allows for different profile solutions as per drawing examples
- Chipping width available from 19.2mm and wider, in increments of 15mm

APPLICATION:

- For chip-free sizing of panel materials on double-end tenoners and trimming machines

HOGGING UNIT BODY

PART NO.	DIAM. mm	KERF mm	BORE mm	NO.OF TEETH	HOGGER NO.	ROTATION
1TL250LH	250	15	80	8	1	LEFT HAND (1)
1TL250RH	250	15	80	8	1	RIGHT HAND (1)
1TL242LH	242	15	80	8	2	LEFT HAND (2)
1TL242RH	242	15	80	8	2	RIGHT HAND (2)
1TL234LH	234	15	80	8	3	LEFT HAND (3)
1TL234RH	234	15	80	8	3	RIGHT HAND (3)

SAW BLADE

PART NO.	DIAM. mm	KERF mm	BORE mm	NO.OF TEETH	ROTATION
1TL255LH	255	4.2	80	56	LEFT HAND
1TL255RH	255	4.2	80	56	RIGHT HAND

SLEEVE-STANDARD PRODUCTION

PART NO.	DIAM. mm	LENGTH mm	BORE mm	KEYWAY (one) mm
1TL115-35	115	92	35	10 x 4
1TL115-40	115	92	40	12 x 5

SPACER

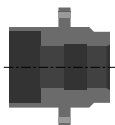
PART NO.	DIAM. mm	THICKNESS mm	BORE mm
1TL116	115	14	80

REPLACEMENT PARTS

PART NO.	DESCRIPTION
301505	Insert with chip breaker 15 x 15 x 2mm
W500601	Bolt for mounting hogger body M8 x 50mm
W500605	Bolt for mounting saw blade M6 x 16mm
W350064	Gib for left hand hogger body
W350065	Gib for right hand hogger body
W502402	Bolt for gibs M7 x 21mm



301505

1TL115-35
1TL115-40

1TL116

W350064
W350065

W502402

W500601
W500605



TCT ROUTER BITS
Standard & Solid Surface

Pam's
divider
page prints
here
sec. f

INDUSTRIAL QUALITY CARBIDE TIPPED ROUTER BITS

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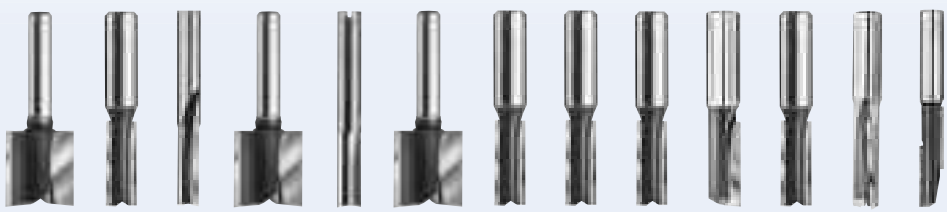
INDUSTRIAL QUALITY CARBIDE TIPPED ROUTER BITS INDEX

ALPHA-NUMERIC INDEX

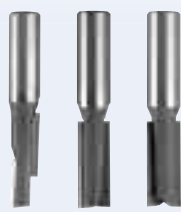
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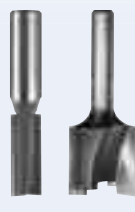
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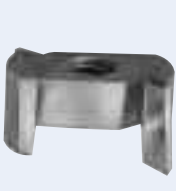
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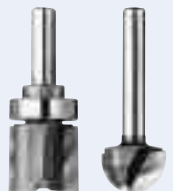
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PG. F7



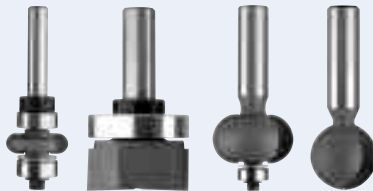
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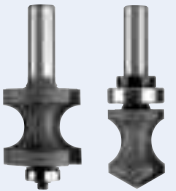
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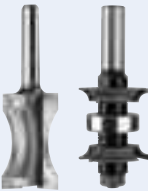
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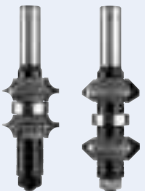
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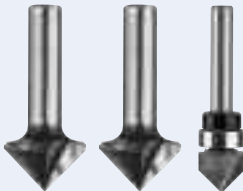
PG. F12



PG. F13



PG. F14



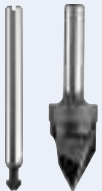
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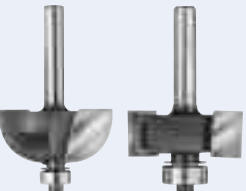
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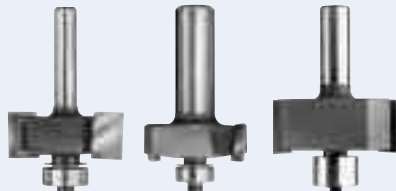
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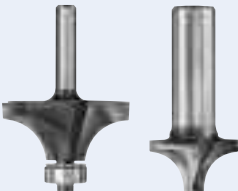
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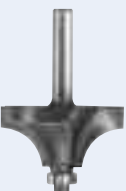
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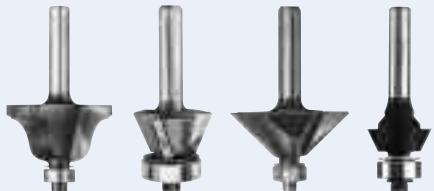
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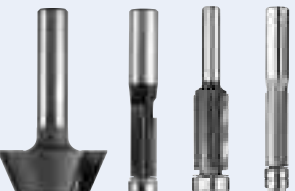
PG. F22



PG. F23



PG. F24

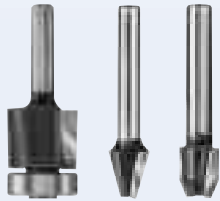


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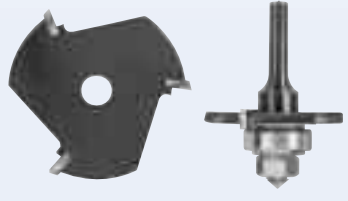


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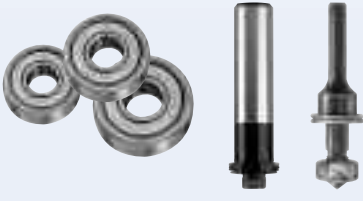
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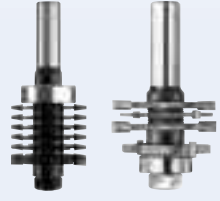
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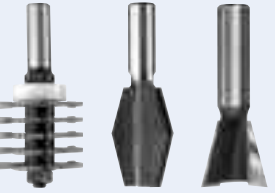
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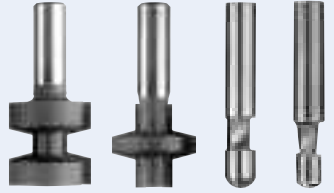
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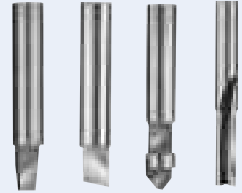
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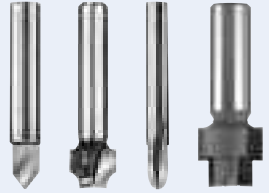
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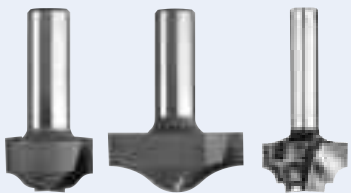
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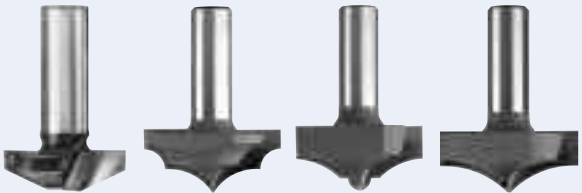
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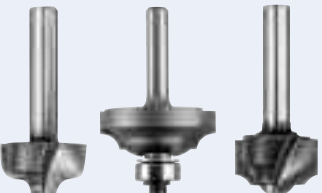
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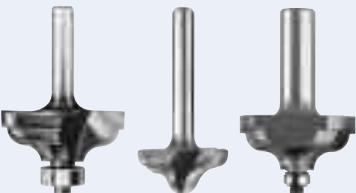
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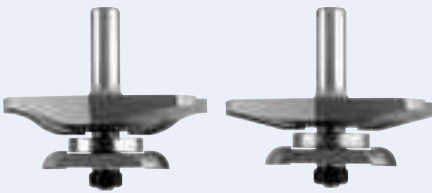
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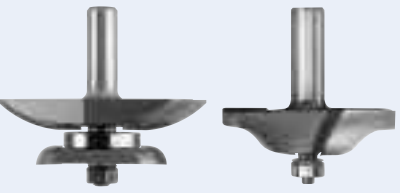
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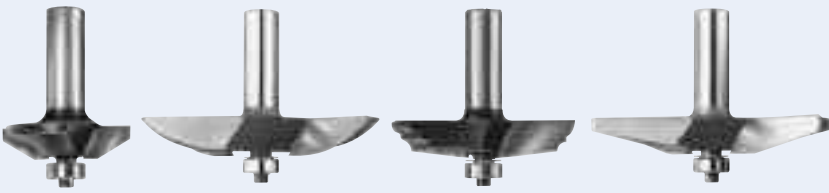
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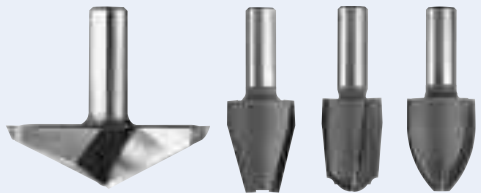
PG. F39



PG. F40

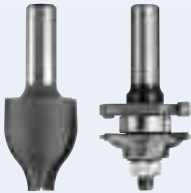


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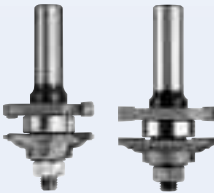


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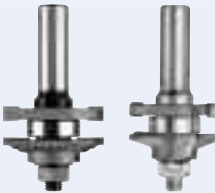
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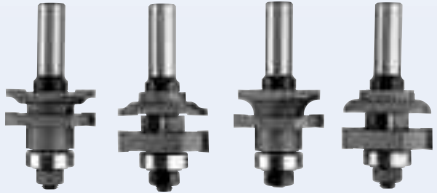
PG. F43



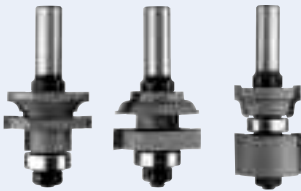
PG. F44



PG. F45



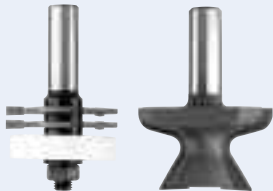
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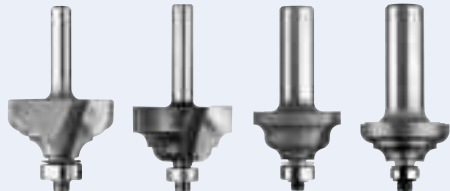
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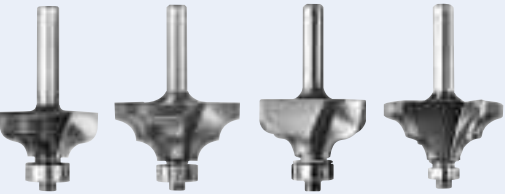
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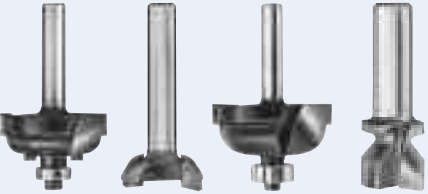
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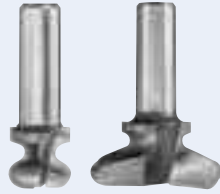
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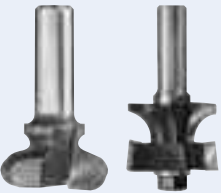
PG. F51



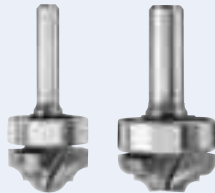
PG. F52



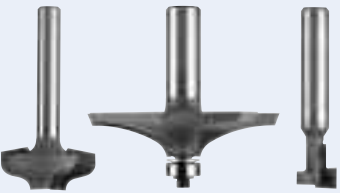
PG. F52



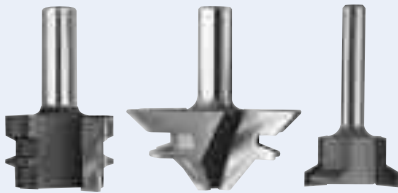
PG. F53



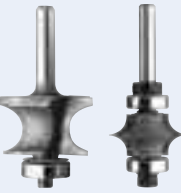
PG. F54



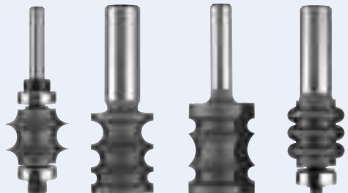
PG. F55



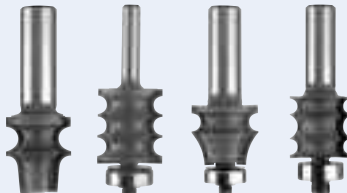
PG. F56



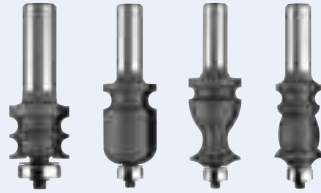
PG. F57



PG. F58

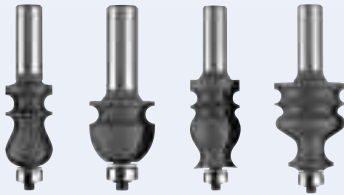


PG. F59

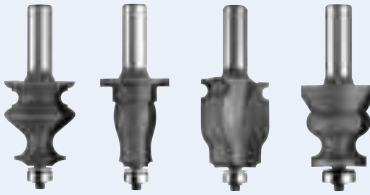


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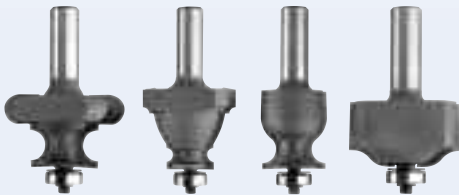
PG. F60



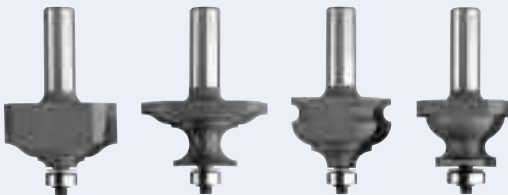
PG. F61



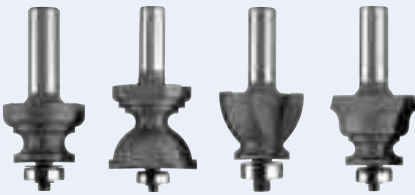
PG. F62



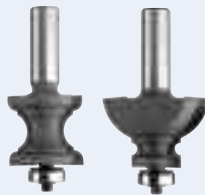
PG. F63



PG. F64



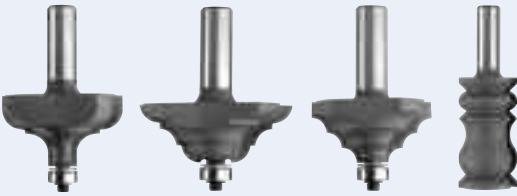
PG. F65



PG. F65



PG. F66



PG. F67



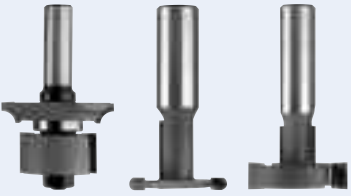
PG. F68



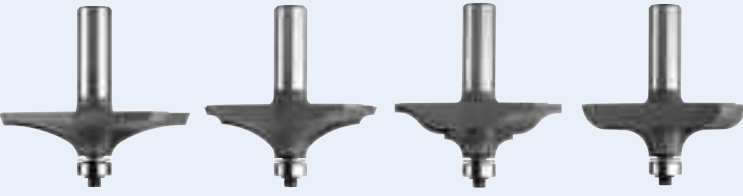
PG. F68



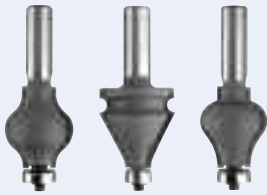
PG. F69



PG. F71



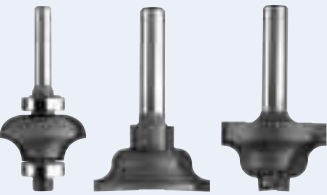
PG. F72



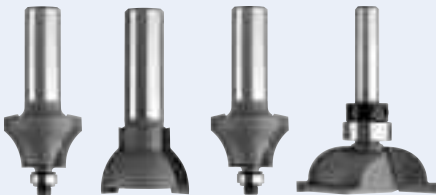
PG. F73



PG. F74

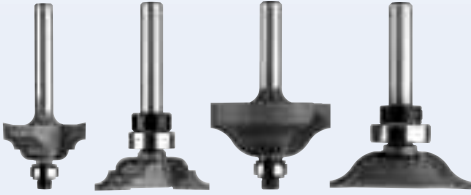


PG. F75

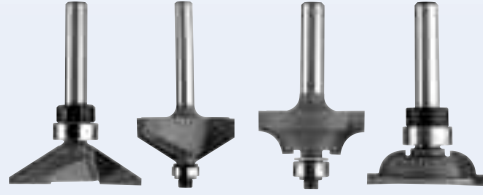


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PG. F76

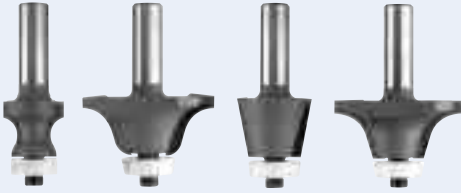


PG. F77



SOLID SURFACE ROUTER BITS

PG. F79



PG. F80



PG. F81



PG. F81



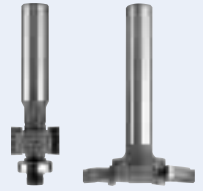
PG. F82



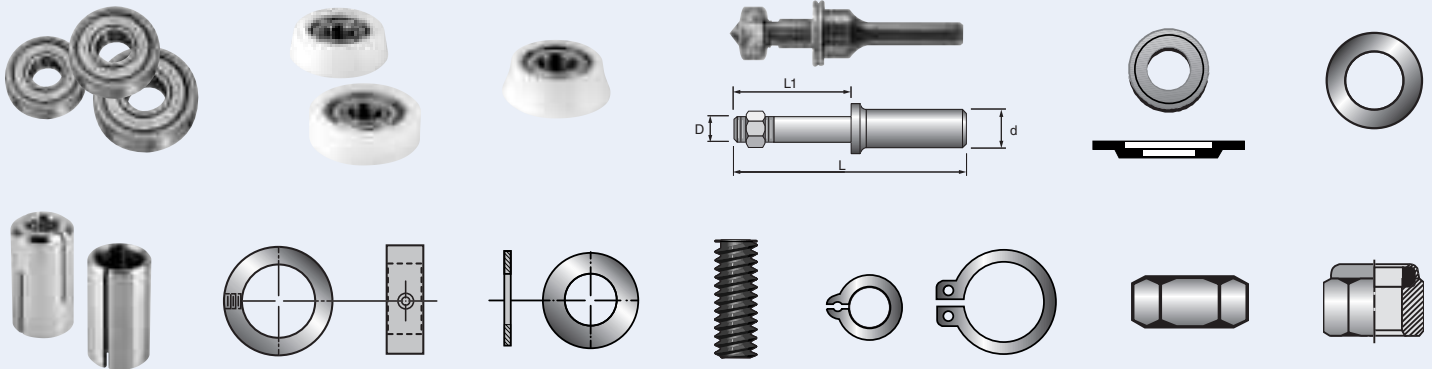
PG. F83

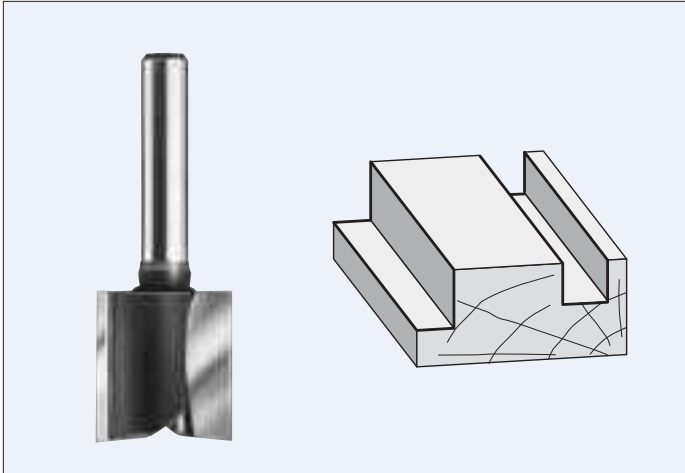


PG. F84

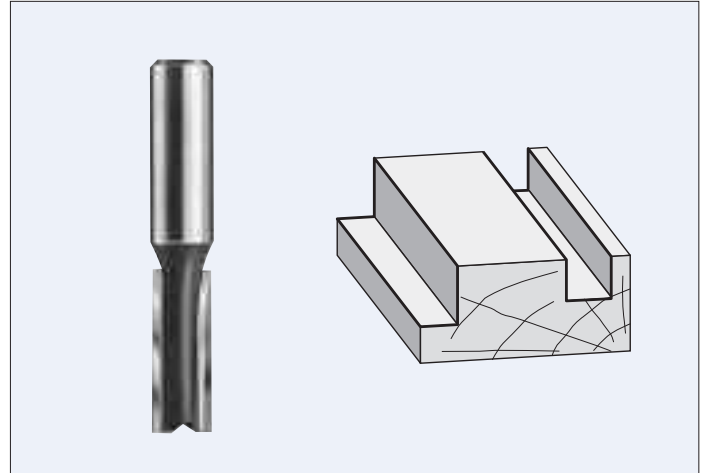


PG. F88 - F90 SPARE PARTS



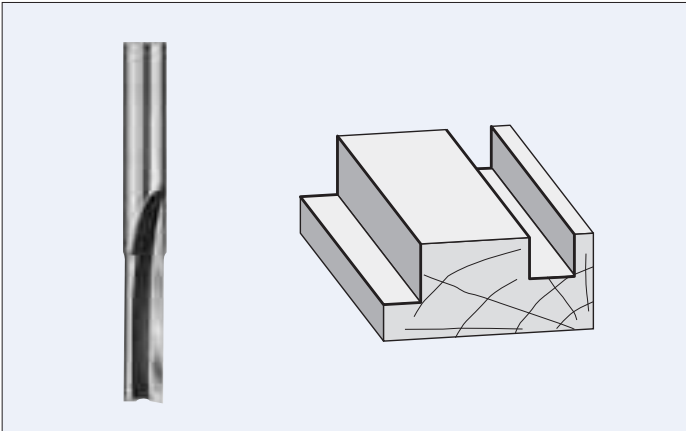
RM100
**STRAIGHT BITS
"METRIC" SIZES TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
RM100	3mm	5/16"	1/4"	1-9/16"
RM101	4mm	7/16"	1/4"	2"
RM102	5mm	7/16"	1/4"	2"
RM103	6mm	3/4"	1/4"	2"
RM104	7mm	3/4"	1/4"	2"
RM105	8mm	3/4"	1/4"	2"
RM106	8mm	1"	1/4"	2-1/4"
RM107	9mm	3/4"	1/4"	2"
RM108	10mm	3/4"	1/4"	2"
RM109	11mm	3/4"	1/4"	2"
RM110	12mm	3/4"	1/4"	2"
RM111	13mm	3/4"	1/4"	2"
RM112	14mm	3/4"	1/4"	2"
RM113	15mm	3/4"	1/4"	2"
RM114	16mm	3/4"	1/4"	2"
RM115	16mm	1-1/4"	1/4"	2-1/4"
RM116	17mm	3/4"	1/4"	2"
RM117	18mm	3/4"	1/4"	2"
RM118	19mm	3/4"	1/4"	2"
RM119	20mm	3/4"	1/4"	2"
RM120	21mm	3/4"	1/4"	2"
RM121	22mm	3/4"	1/4"	2"
RM122	25mm	3/4"	1/4"	2"

RM130
**STRAIGHT BITS
"METRIC" SIZES TWO FLUTES**


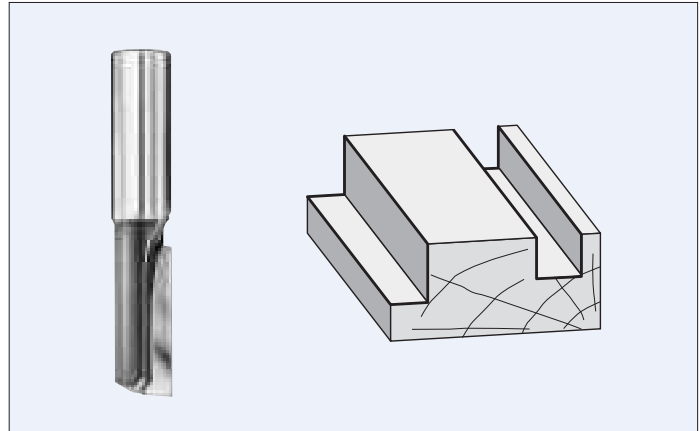
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
RM130	6mm	3/4"	1/2"	2-1/2"
RM131	8mm	1"	1/2"	2-5/8"
RM132	10mm	1"	1/2"	2-1/2"
RM133	10mm	1-1/4"	1/2"	3"
RM134	12mm	1"	1/2"	2-5/8"
RM135	12mm	1-1/4"	1/2"	2-7/8"
RM136	12mm	1-1/2"	1/2"	3"
RM137	12mm	2"	1/2"	4-1/4"
RM138	14mm	1"	1/2"	2-5/8"
RM140	16mm	1"	1/2"	2-5/8"
RM141	16mm	1-1/4"	1/2"	2-7/8"
RM142	16mm	1-1/2"	1/2"	3-1/8"
RM143	18mm	1-1/4"	1/2"	2-7/8"
RM144	19mm	1"	1/2"	2-5/8"
RM145	19mm	1-1/4"	1/2"	2-7/8"
RM146	19mm	1-1/2"	1/2"	3-1/8"
RM147	20mm	1"	1/2"	2-5/8"
RM148	20mm	1-1/4"	1/2"	2-7/8"
RM149	22mm	1"	1/2"	2-5/8"
RM150	25mm	1-1/4"	1/2"	2-7/8"
RM151	25mm	1-1/2"	1/2"	3-1/8"
RM152	27mm	1-1/4"	1/2"	2-7/8"
RM153	30mm	1"	1/2"	2-5/8"
RM154	35mm	1"	1/2"	2-5/8"
RM155	40mm	1-1/4"	1/2"	2-7/8"
RM156	51mm	1-1/4"	1/2"	2-7/8"

R1000 1/4" SHANK STRAIGHT
ROUTER BITS SOLID CARBIDE



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	NO. FLUTE	OVERALL LENGTH
R1000	1/8"	3/8"	1"	1	1-1/2"
R1008	7/32"	3/4"	1"	1	2"
R1100	1/8"	3/8"	1"	2	1-1/2"
R1104	5/32"	5/8"	7/8"	2	1-1/2"
R1106	3/16"	5/8"	1-1/4"	2	2"
R1108	7/32"	3/4"	1-1/4"	2	2"
R1110	1/4"	3/4"	1-1/4"	2	2"
R1112	1/4"	1"	1-1/4"	2	2-1/2"

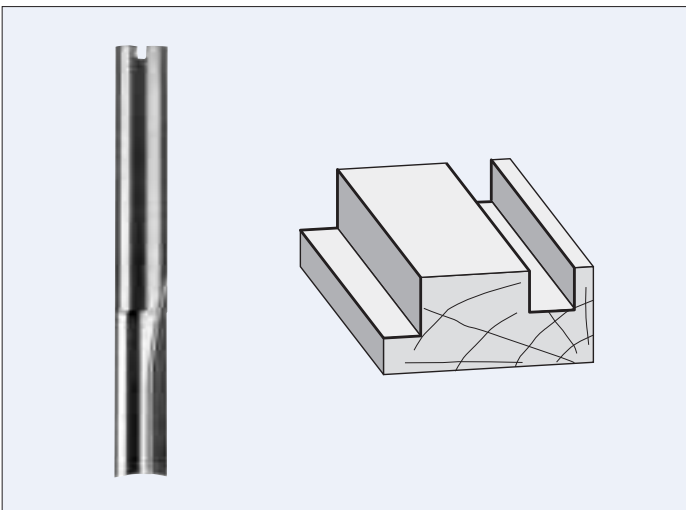
R2000 1/4" SHANK
STRAIGHT ROUTER BITS ONE FLUTE



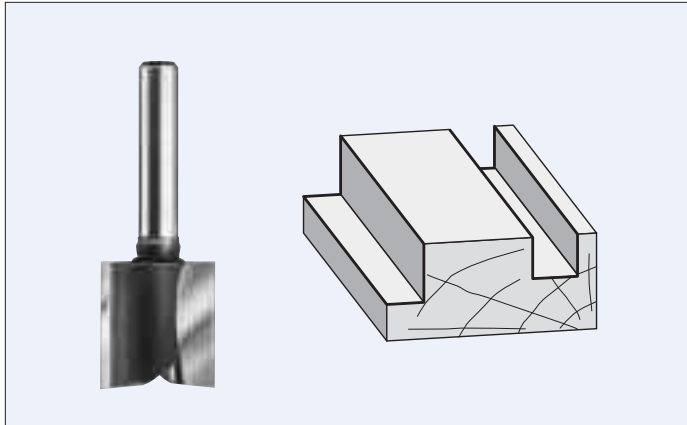
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2000	1/8"	7/16"	1-1/4"	2"
R2000-1	5/32"	7/16"	1-5/16"	2"
R2001 *	3/16"	7/16"	1-1/4"	2"
R2003	1/4"	1/2"	1-5/16"	2"
R2004	1/4"	3/4"	1-1/4"	2"
R2005 *	1/4"	1"	1-1/4"	2-1/4"
R2006	9/32"	3/4"	1"	2"
R2008	5/16"	1"	1"	2-1/4"
R2008-1	3/8"	3/4"	1"	1-15/16"
R2008-2	3/8"	1"	1-1/8"	2-3/8"
R2008-3	1/2"	3/4"	1"	1-3/4"
R2008-4	1/2"	1"	1"	2-1/8"
R2008-5	5/8"	3/4"	1"	1-15/16"
R2008-6	3/4"	3/4"	1"	1-3/4"

* Not guaranteed due to extreme length and/or fragility

R1302 STRAIGHT ROUTER BITS
TWO FLUTES SOLID CARBIDE

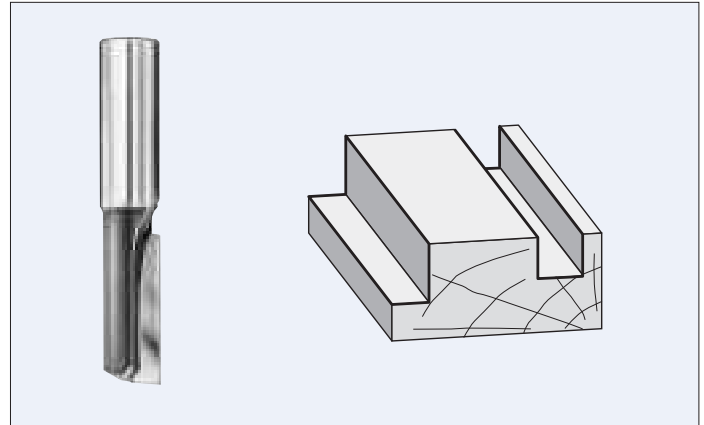


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	SHANK LENGTH	OVERALL LENGTH
R1302	3/8"	1"	3/8"	1-3/4"	3"
R1304	1/4"	3/4"	1/2"	1-1/4"	3"
R1306	1/4"	1"	1/2"	2"	3"
R1308	5/16"	1"	1/2"	2"	3"
R1310	1/2"	1-1/4"	1/2"	1-1/2"	3"

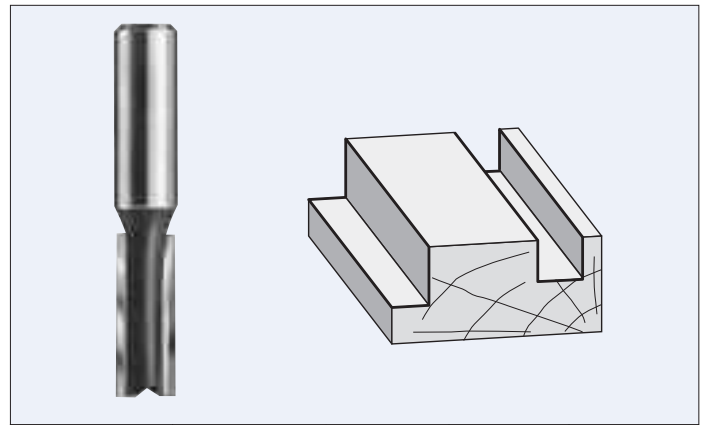
R2009
**1/4" SHANK STRAIGHT ROUTER BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2009-1 *	1/16"	3/16"	1-3/8"	1-7/8"
R2009-2	3/32"	1/4"	1-5/8"	1-7/8"
R2010	1/8"	7/16"	1-1/4"	2"
R2010-1	5/32"	7/16"	1-5/16"	2"
R2011	3/16"	7/16"	1-1/4"	2"
R2011-1	3/16"	5/8"	1-1/8"	2-1/8"
R2011-2	7/32"	3/4"	1-1/8"	1-7/8"
R2012	1/4"	1/2"	1-1/4"	2"
R2013	1/4"	3/4"	1-1/4"	2"
R2014 *	1/4"	1"	1-1/4"	2-1/4"
R2017	9/32"	3/4"	1-1/4"	2"
R2017-1	9/32"	1"	1-1/8"	2-1/4"
R2018	5/16"	3/4"	1-1/8"	2"
R2019	5/16"	1"	1-1/4"	2-1/4"
R2021	3/8"	3/4"	1-1/4"	2"
R2022	3/8"	1"	1-1/4"	2-1/4"
R2023	3/8"	1-1/4"	1-1/4"	2-1/2"
R2023-1	7/16"	3/4"	1-1/8"	2"
R2024	7/16"	1"	1-1/8"	2-1/4"
R2025	1/2"	3/4"	1-1/4"	2"
R2026	1/2"	1"	1"	2-1/4"
R2026-1	1/2"	1-1/4"	1-1/8"	2-1/2"
R2027	9/16"	3/4"	1-1/4"	2-1/8"
R2027-1	9/16"	1"	1-3/8"	2-1/2"
R2028	5/8"	3/4"	1-1/4"	2"
R2028-1	5/8"	1"	1-1/8"	2-1/4"
R2029	11/16"	3/4"	1-1/4"	2"
R2029-1	11/16"	1"	1-1/8"	2-1/4"
R2030	3/4"	3/4"	1"	2"
R2030-1	3/4"	1"	1-1/8"	2-1/4"
R2031	13/16"	3/4"	1-1/4"	2"
R2032	7/8"	3/4"	1-1/4"	2"
R2032-1	15/16"	3/4"	1-1/8"	2"
R2033	1"	3/4"	1-1/4"	2"

* Not guaranteed due to extreme length and/or fragility

R2034
**3/8" SHANK
STRAIGHT ROUTER BITS ONE FLUTE**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2034	1/4"	3/4"	1-1/4"	2-1/4"
R2034-1	3/8"	1"	1-1/4"	2-11/16"
R2034-2	3/8"	1-1/4"	1-1/4"	2-5/8"

R2035
**3/8" SHANK STRAIGHT ROUTER BITS
TWO FLUTES**


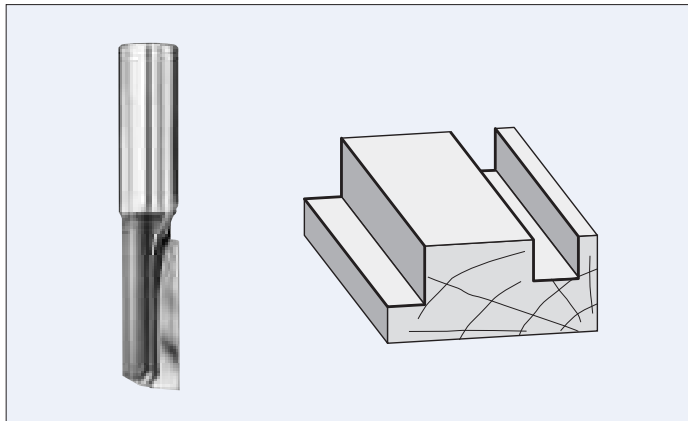
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2035	1/8"	7/16"	1-1/4"	2"
R2035-1	5/32"	7/16"	1-1/4"	2"
R2037	1/4"	3/4"	1-3/8"	2-1/4"
R2038	5/16"	1"	1-3/8"	2-1/2"

3/8" Shank Router Bits cont'd...

R2038-1 3/8" SHANK STRAIGHT ROUTER BITS TWO FLUTES cont'd...

PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2038-1	3/8"	3/4"	1-1/2"	2-1/4"
R2039	3/8"	1"	1-3/8"	2-1/2"
R2040	3/8"	1-1/4"	1-3/8"	2-3/4"
R2042	7/16"	1"	1-1/4"	2-1/2"
R2043	1/2"	1"	1-1/4"	2-1/2"
R2043-1	1/2"	1-1/4"	1-1/4"	2-1/2"
R2043-3	5/8"	3/4"	1-1/4"	2-1/4"
R2043-5	13/16"	3/4"	1-1/4"	2-1/4"
R2043-6	7/8"	3/4"	1-1/4"	2-1/4"
R2043-7	1"	3/4"	1-1/4"	2-1/4"

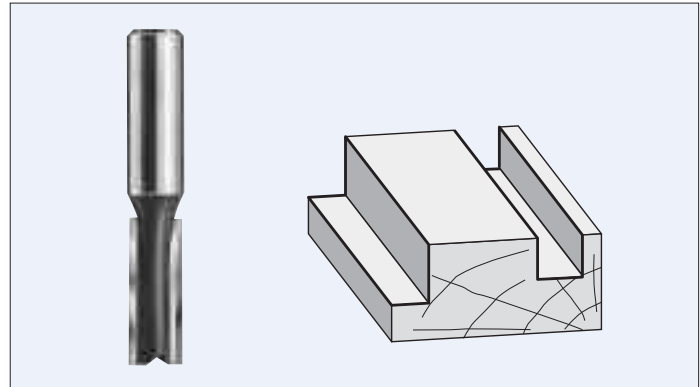
R2044 1/2" SHANK STRAIGHT ROUTER BITS ONE FLUTE



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2044*	1/4"	3/4"	1-3/8"	2-1/2"
R2045*	1/4"	1"	1-1/4"	2-1/2"
R2047	5/16"	1"	1-1/2"	2-3/4"
R2049	3/8"	1"	1-3/8"	2-1/2"
R2050*	3/8"	1-1/4"	1-3/8"	2-3/4"
R2051	1/2"	1"	1-1/4"	2-1/2"
R2052	1/2"	1-1/4"	1-3/8"	2-7/8"
R2054	1/2"	1-1/2"	1-3/8"	3-1/8"
R2055	1/2"	2"	1-7/8"	4-1/4"
R2056	9/16"	1-1/4"	1-1/4"	2-7/8"
R2057	5/8"	1-1/4"	1-1/4"	2-7/8"

* Not guaranteed due to extreme length and/or fragility

R2057 1/2" SHANK STRAIGHT ROUTER BITS TWO FLUTES



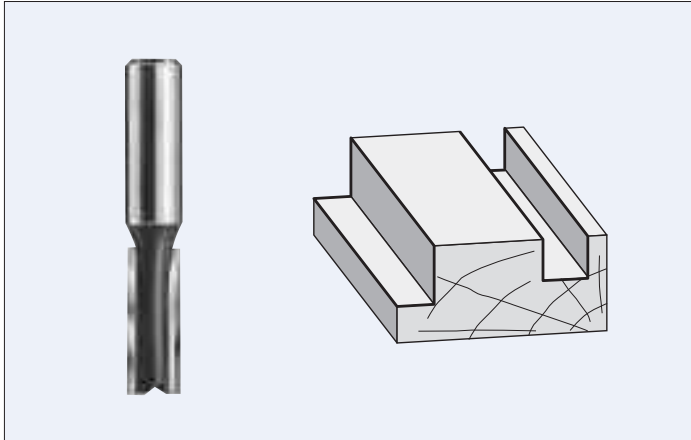
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2057-0	15/64"	3/4"	1-3/8"	2-1/2"
R2057-1*	1/4"	1/2"	1-3/8"	2"
R2058*	1/4"	3/4"	1-3/8"	2-1/2"
R2058-1*	1/4"	1"	1-3/8"	2-1/2"
R2059	5/16"	3/4"	1-3/8"	2-1/2"
R2060*	5/16"	1"	1-3/8"	2-1/2"
R2061	3/8"	3/4"	1-3/8"	2-1/2"
R2062	3/8"	1"	1-3/8"	2-1/2"
R2063*	3/8"	1-1/4"	1-3/8"	2-3/4"
R2063A	13/32"	1"	1-3/8"	2-3/4"
R2064	7/16"	1"	1-1/4"	2-5/8"
R2065	7/16"	1-1/4"	1-3/8"	2-3/4"
R2065-1	31/64"	1"	1-3/8"	2-5/8"
R2066	1/2"	1"	1-3/8"	2-5/8"
R2067	1/2"	1-1/4"	1-3/8"	2-7/8"
R2069	1/2"	1-1/2"	1-3/8"	3"
R2070	1/2"	1-1/2"	2-1/2"	4-1/4"
R2071*	1/2"	2"	1-7/8"	4-1/4"
R2072*	1/2"	2-1/2"	1-7/8"	4-1/2"
R2074	17/32"	1-1/4"	1-3/8"	2-7/8"
R2074-1	9/16"	1"	1-3/8"	2-5/8"
R2075	9/16"	1-1/4"	1-3/8"	2-7/8"
R2076	5/8"	1"	1-3/8"	2-5/8"
R2077	5/8"	1-1/4"	1-3/8"	2-7/8"
R2078	5/8"	1-1/2"	1-3/8"	3"
R2079	5/8"	2"	1-1/4"	3-5/8"
R2081	21/32"	1-1/4"	1-3/8"	2-7/8"
R2083	11/16"	1-1/4"	1-3/8"	2-7/8"
R2083-1	23/32"	1-1/4"	1-3/8"	2-7/8"
R2084	3/4"	1"	1-3/8"	2-5/8"
R2085	3/4"	1-1/4"	1-3/8"	2-7/8"
R2086	3/4"	1-1/2"	1-3/8"	3"
R2087	3/4"	2"	1-3/8"	3-5/8"
R2088	25/32"	1-1/4"	1-3/8"	2-7/8"

1/2" Shank Router Bits cont'd...

R2089 1/2" SHANK STRAIGHT ROUTER BITS TWO FLUTES cont'd

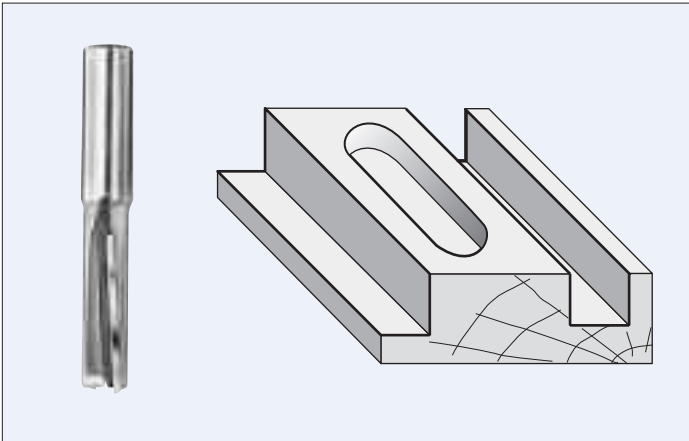
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2089	13/16"	1"	1-3/8"	2-5/8"
R2090	13/16"	1-1/4"	1-3/8"	2-7/8"
R2090-1	7/8"	1"	1-3/8"	2-5/8"
R2091	7/8"	1-1/4"	1-3/8"	2-7/8"
R2092-1	1"	1"	1-3/8"	3"
R2093	1"	1-1/4"	1-3/8"	2-7/8"
R2093-1	1"	1-1/2"	1-1/4"	3"
R2093-2	1"	2"	1-3/8"	3-5/8"
R2094	1-1/16"	1-1/4"	1-3/8"	2-7/8"
R2095	1-3/16"	1-1/4"	1-3/8"	2-7/8"
R2096	1-1/8"	1-1/4"	1-3/8"	2-7/8"
R2097	1-1/4"	1-1/4"	1-3/8"	2-7/8"
R2098	1-3/8"	1-1/4"	1-3/8"	2-7/8"
R2099	1-1/2"	1-1/4"	1-3/8"	2-7/8"
R2099-1	1-5/8"	1-1/4"	1-3/8"	2-7/8"
R2100	1-3/4"	1-1/4"	1-3/8"	2-7/8"
R2100-1	1-7/8"	1-1/4"	1-3/8"	2-7/8"
R2101	2"	1-1/4"	1-3/8"	2-7/8"

R2150 3/4" SHANK STRAIGHT ROUTER BITS TWO FLUTES



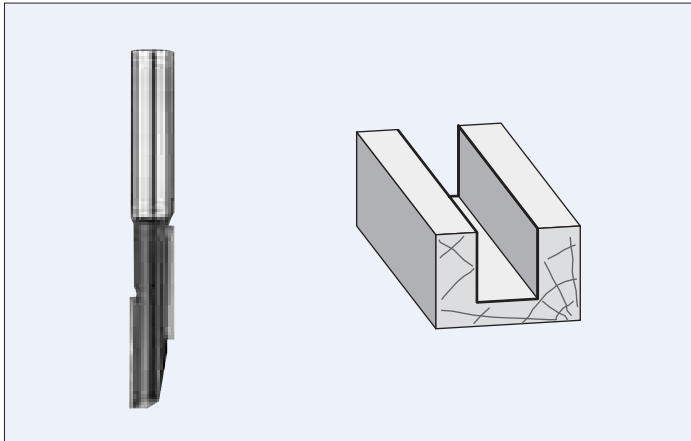
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2150	3/4"	1-1/4"	1-1/2"	3"
R2151	3/4"	1-1/2"	1-1/2"	3-1/4"
R2152	3/4"	2"	1-3/4"	4"
R2153	3/4"	2-1/2"	2"	4-1/2"
R2158	1"	1-1/2"	1-1/2"	3-1/4"
R2160	1"	2"	2"	4-1/4"

R2110 1/2" SHANK STRAIGHT ROUTER BITS TWO FLUTES DOWN SHEAR

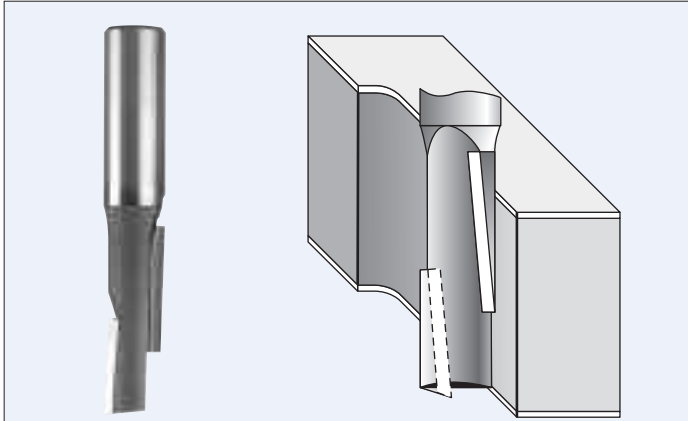


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2110	3/8"	1"	1-1/2"	2-3/4"
R2111	1/2"	1-1/4"	1-1/4"	2-7/8"
R2112	1/2"	1-1/2"	1-3/8"	3-1/8"
R2113	1/2"	2"	2"	4-1/4"

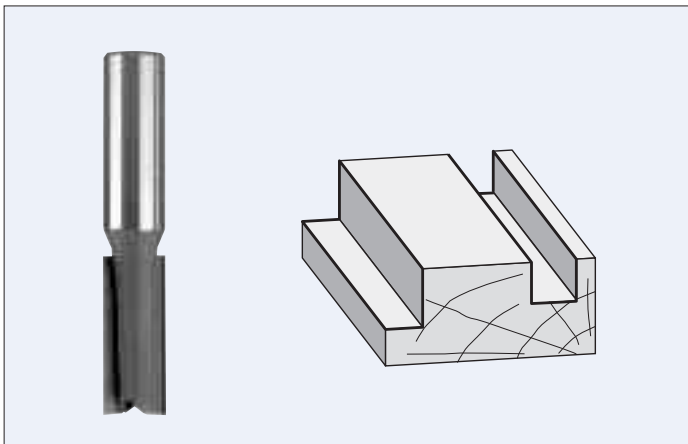
R2200 STAGGER TOOTH STRAIGHT ROUTER BITS



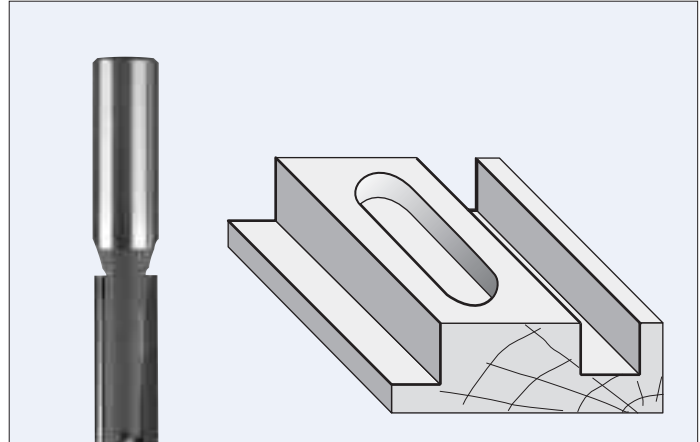
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	SHANK LENGTH	OVERALL LENGTH
R2200S	1/4"	1"	1/4"	1-1/2"	2-1/4"
R2200	3/8"	1-3/8"	3/8"	1-1/4"	3"
R2201	3/8"	1-1/2"	1/2"	1-3/8"	3-1/8"
R2202	1/2"	1-1/2"	1/2"	1-3/8"	3-1/8"
R2203	1/2"	2"	1/2"	1-5/8"	4-1/4"
R2203-1	1/2"	2-1/8"	1/2"	1-5/8"	4-1/4"

R2206
**STAGGER TOOTH BITS
WITH COMPRESSION SHEAR**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	SHANK LENGTH	OVERALL LENGTH
R2206	1/2"	1-1/2"	1/2"	1-5/8"	3-1/8"
R2207	1/2"	2"	1/2"	2"	4-1/4"

R2210
**LEFT HAND ROUTER BITS
1/2" SHANK TWO FLUTES**


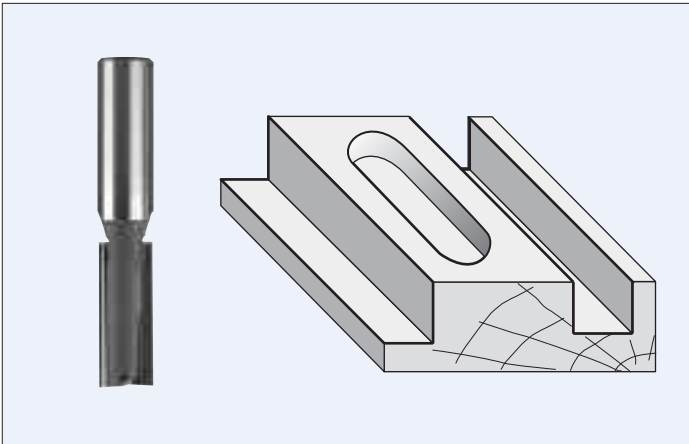
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2210	5/16"	3/4"	1-3/8"	2-1/2"
R2211	5/16"	1"	1-3/8"	2-3/4"
R2212	3/8"	1"	1-3/8"	2-3/4"
R2213	7/16"	1-1/4"	1-1/4"	3"
R2214	1/2"	1-1/4"	1-3/8"	2-7/8"
R2215	1/2"	1-1/2"	1-3/8"	3"
R2216	1/2"	2"	1-7/8"	4-1/4"
R2217	9/16"	1-1/4"	1-3/8"	2-7/8"
R2218	5/8"	1-1/4"	1-3/8"	2-7/8"
R2219	3/4"	1-1/4"	1-3/8"	2-7/8"
R2220	3/4"	2"	1-3/8"	3-5/8"
R2221	13/16"	1-1/4"	1-3/8"	2-7/8"
R2222	7/8"	1-1/4"	1-3/8"	2-7/8"
R2223	1"	1-1/4"	1-3/8"	2-7/8"

R2230
**PLUNGE POINT BITS
1/4" SHANK TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2230	5/16"	3/4"	1-1/8"	2"
R2232	3/8"	1"	1-1/8"	2-1/4"
R2233	1/2"	3/4"	1-1/8"	2"
R2234	1/2"	1"	1-1/8"	2-1/8"
R2235	5/8"	3/4"	1-3/8"	2-1/8"
R2236	7/8"	3/4"	1-1/8"	2"
R2237	1"	3/4"	1-1/8"	2"

All above bits supplied with **bottom carbide** for **plunging** operations.

R2240 PLUNGE POINT BITS
1/2" SHANK TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK LENGTH	OVERALL LENGTH
R2240	5/16"	3/4"	1-3/8"	2-1/2"
R2241	3/8"	1-1/4"	1-1/2"	3"
R2242	7/16"	1"	1-1/4"	2-3/4"
R2243	1/2"	1"	1-3/8"	2-5/8"
R2244	1/2"	1-1/4"	1-3/8"	2-7/8"
R2245	1/2"	1-1/2"	1-3/8"	3-1/8"
R2246	1/2"	2"	1-7/8"	4-1/4"
R2247	5/8"	1-1/4"	1-3/8"	2-7/8"
R2248	5/8"	2"	1-7/8"	3-3/4"
R2249	3/4"	1"	1-3/8"	2-5/8"
R2250	7/8"	1-1/4"	1-3/8"	2-7/8"
R2251	1"	1"	1-3/8"	2-5/8"
R2252	1-5/8"	1"	1-3/8"	2-5/8"
R2253	1-3/4"	1-1/4"	1-3/8"	2-7/8"
R2254	1-7/8"	1-1/4"	1-3/8"	2-7/8"

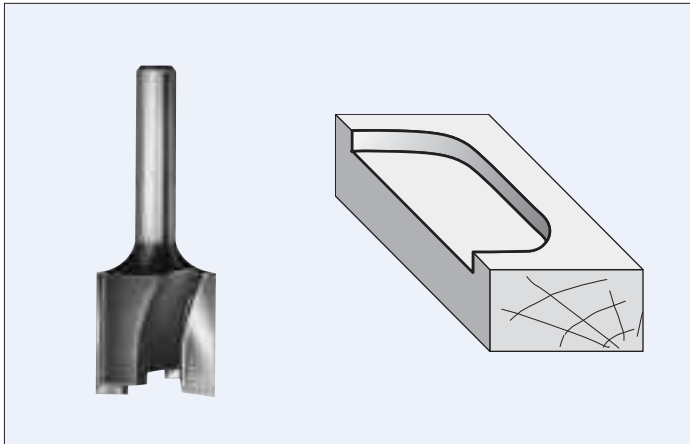
AR15MB THREADED ARBOR
FOR MORTISING BITS



PART NO.	SHANK DIAM.	TYPE OF THREAD	OVERALL LENGTH
AR12MB	1/2"	1/4-28	2-3/8"
AR14MB	1/4"	1/4-28	1-3/4"

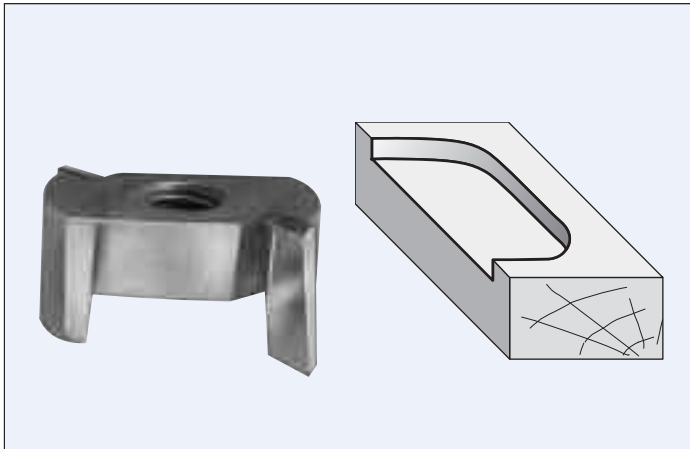
Fits R2310 to R2314 mortising bits, screw type.

R2300 MORTISING BITS
TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	SHANK LENGTH	OVERALL LENGTH
R2300	1/2"	3/4"	1/4"	1-1/4"	2"
R2301	5/8"	3/4"	1/4"	1-1/4"	2"
R2302	3/4"	3/4"	1/4"	1-1/4"	2"
R2303	1"	3/4"	1/4"	1-1/8"	2"
R2304	1-1/4"	1/2"	1/4"	1-1/4"	1-3/4"
R2305	1-1/4"	1-1/4"	1/2"	1-1/4"	2-7/8"

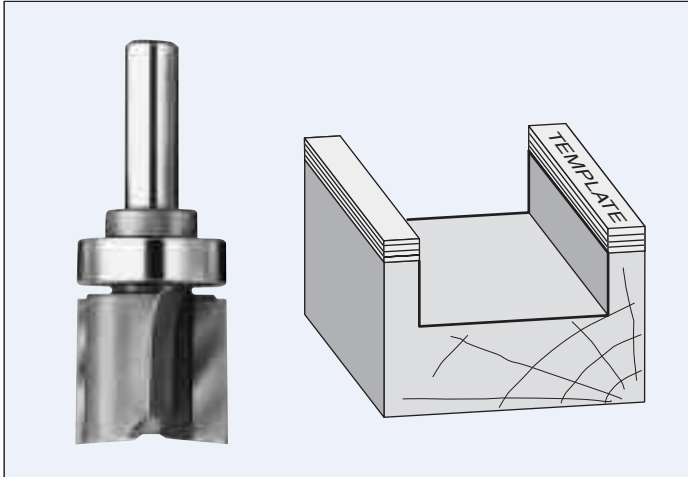
R2310 MORTISING BITS
SCREW TYPE TWO FLUTES



PART NO.	CUTTING DIAM.	THREADED HOLE	CUTTING LENGTH
R2310	3/4"	1/4-28 Thread	1/2"
R2311	7/8"	1/4-28 Thread	1/2"
R2312	1"	1/4-28 Thread	1/2"
R2313	1-1/8"	1/4-28 Thread	9/16"
R2314	1-1/4"	1/4-28 Thread	5/8"

R2320

STRAIGHT PLUNGE BITS WITH CENTRE
BALL BEARING GUIDE TWO FLUTES



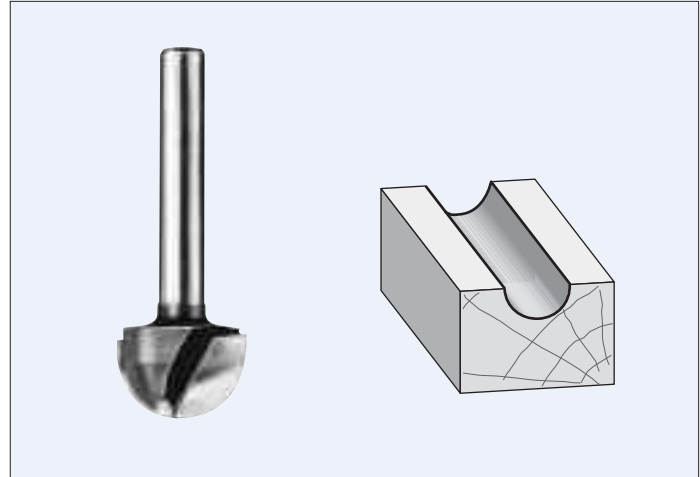
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2320 (A)	1/2"	1"	1/4"	2-1/2"
R2320-1(A)	1/2"	1-1/4"	1/4"	2-3/4"
R2320-2(A)	1/2"	1/2"	1/4"	2-3/4"
R2321 (B)	5/8"	1"	1/4"	2-1/2"
R2322 (C)	3/4"	1"	1/4"	2-1/2"
R2322-1(E)	3/4"	1"	1/2"	3"
R2322-2(E)	3/4"	2"	1/2"	3-5/8"
R2323 (D)	1"	1"	3/8"	2-3/4"
R2324 (H)	1"	1-3/4"	1/2"	3-3/4"
R2325 (F)	1-1/8"	1-1/2"	1/2"	3-5/8"
R2326 (G)	1-1/4"	1-3/4"	1/2"	3-1/4"

Replacement Parts

(A)	Ball Bearing B3-1	Lock Ring WO1	Screw WNC525
(B)	Ball Bearing B3-3	Lock Ring WO1	Screw WNC525
(C)	Ball Bearing B4	Lock Ring WO1	Screw WNC525
(D)	Ball Bearing B6-1	Lock Ring WO2	Screw WNC525
(E)	Ball Bearing B4-1A	Lock Ring WO4	Screw WNC518
(F)	Ball Bearing B6-4	Lock Ring WO3	Screw WNC518
(G)	Ball Bearing B6-5	Lock Ring WO3	Screw WNC518
(H)	Ball Bearing B6-1A	Lock Ring WO4	Screw WNC518

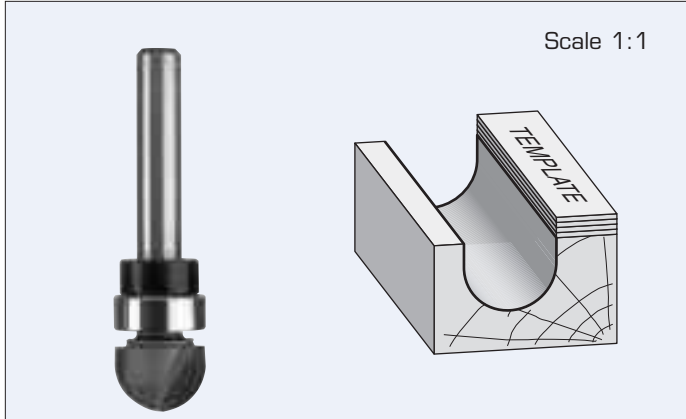
R2400

ROUND NOSE BITS
SHALLOW PROFILE



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2400	1/8"	1/16"	3/8"	1/4"	1-3/4"
R2401	3/16"	3/32"	1/2"	1/4"	1-3/4"
R2402	1/4"	1/8"	1/2"	1/4"	1-3/4"
R2402-1	5/16"	5/32"	1/2"	1/4"	1-1/2"
R2403	3/8"	3/16"	1/4"	1/4"	1-1/2"
R2403-1	3/8"	3/16"	1/4"	1/2"	1-7/8"
R2403-2	7/16"	7/32"	5/8"	1/4"	1-3/4"
R2403-3	7/16"	7/32"	5/8"	1/2"	2-3/8"
R2404	1/2"	1/4"	5/16"	1/4"	1-1/2"
R2404-1	1/2"	1/4"	5/16"	1/2"	2"
R2405	5/8"	5/16"	3/8"	1/4"	1-1/2"
R2405-1	5/8"	5/16"	3/8"	1/2"	2"
R2406	3/4"	3/8"	1/2"	1/4"	1-1/2"
R2406-1	3/4"	3/8"	1/2"	1/2"	2"
R2406-2	7/8"	7/16"	5/8"	1/4"	1-3/4"
R2406-3	7/8"	7/16"	5/8"	1/2"	2"
R2406-4	1"	1/2"	5/8"	1/4"	1-3/4"
R2406-5	1"	1/2"	5/8"	1/2"	2-3/16"
R2406-6	1-1/4"	5/8"	3/4"	1/2"	2-3/16"

R2406-9 CORE BOX BIT WITH BEARING GUIDE TWO FLUTES

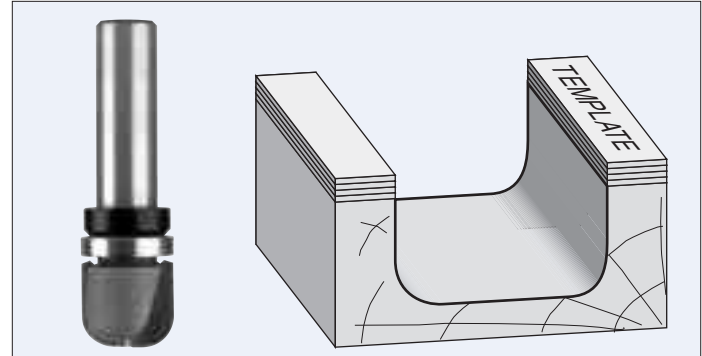


PART NO.	CUTTING DIAM.	RADIUS	SHANK DIAM.	CUTTING DEPTH	OVERALL LENGTH
R2406-9	1/2"	1/4"	1/4"	1/2"	2"

Replacement Parts

Ball Bearing B3-1 Lock Ring W01 Screw WNC525

R2420 COVE PLUNGE BITS WITH CENTRE BALL BEARING

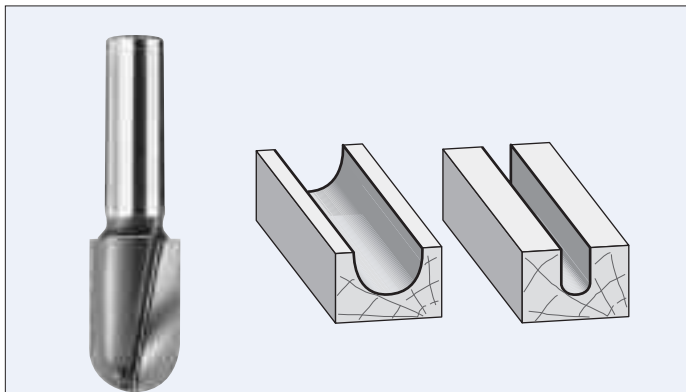


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2420 (A)	1/2"	1/8"	1/2"	1/4"	2-1/8"
R2421 (B)	3/4"	1/4"	5/8"	1/4"	2-5/16"
R2422 (C)	3/4"	1/4"	5/8"	1/2"	2-5/16"
R2423 (D)	1-1/8"	1/4"	5/8"	1/2"	2-5/8"

Replacement Parts

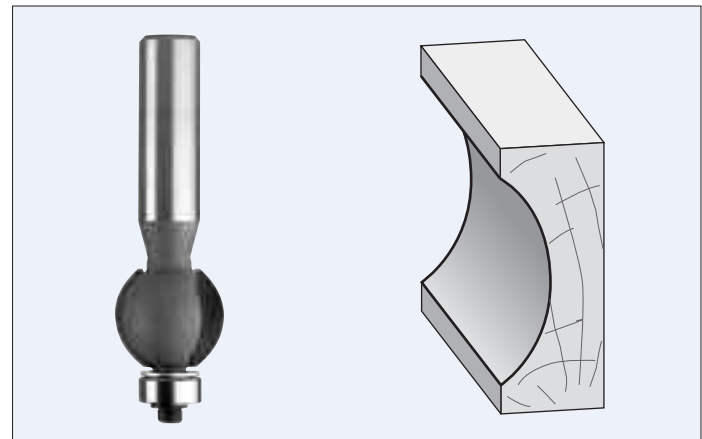
(A) Ball Bearing B3-1 Lock Ring W01 Screw WNC525
 (B) Ball Bearing B4 Lock Ring W01 Screw WNC525
 (C) Ball Bearing B4-1A Lock Ring W04 Screw WNC518
 (D) Ball Bearing B6-4 Lock Ring W03 Screw WNC518

R2407 ROUND NOSE BITS DEEP PROFILE



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2407	3/8"	3/16"	1"	1/2"	2-3/4"
R2408	1/2"	1/4"	1-1/4"	1/2"	2-3/4"
R2409	9/16"	9/32"	1-1/4"	1/2"	2-3/4"
R2410	5/8"	5/16"	1-1/4"	1/2"	2-3/4"
R2411	3/4"	3/8"	1-1/4"	1/2"	2-3/4"
R2412	7/8"	7/16"	1-1/4"	1/2"	2-3/4"
R2413	1"	1/2"	1-1/4"	1/2"	2-3/4"
R2414	1-1/4"	5/8"	1-1/4"	1/2"	2-3/4"
R2415	1-1/2"	3/4"	1-1/4"	1/2"	2-3/4"
R2416	2"	1"	1-1/4"	1/2"	2-3/4"

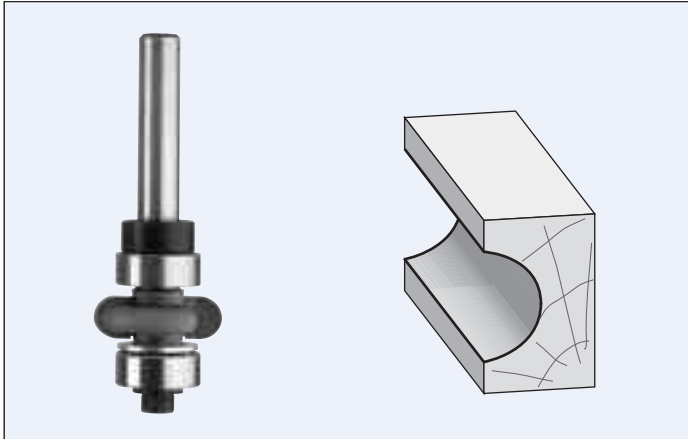
R2430 CONVEX BEADING BITS WITH BEARING GUIDE



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2430	3/4"	3/16"	3/8"	1/2"	2-5/8"
R2431	3/4"	5/16"	1/2"	1/2"	2-3/4"
R2432	7/8"	15/32"	3/4"	1/2"	3-1/16"
R2433	7/8"	3/4"	1"	1/2"	3-3/8"
R2434	1"	1-1/4"	1-1/2"	1/2"	3-7/8"

Replacement Parts

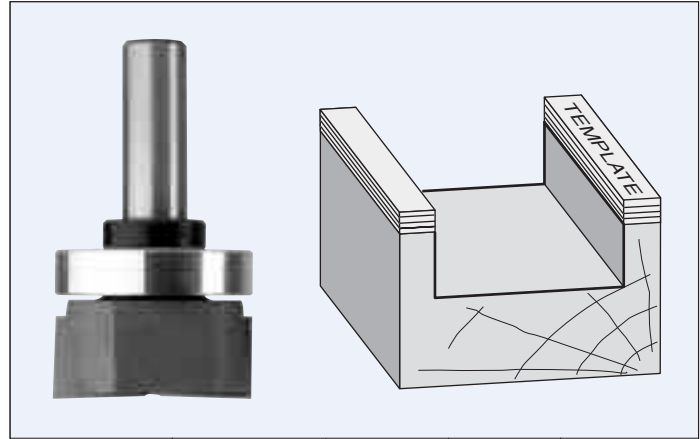
Ball Bearing B3 Washer WR58
 Spring Washer WFS506 Screw WNC538

R2436
**CONVEX BEADING BITS
WITH TWO BALL BEARINGS**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2436	3/4"	1/8"	1/4"	1/4"	2-1/4"
R2437	7/8"	13/64"	25/64"	1/4"	2-3/8"

Replacement Parts

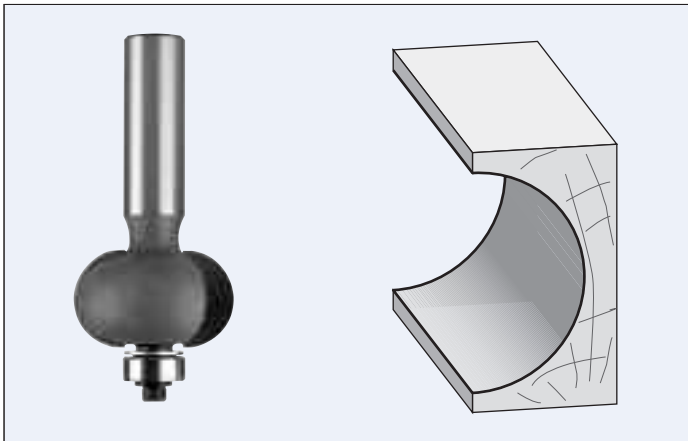
Lock Ring WO1 Centre Ball Bearing B3-1
 Washer WR58 Lower Ball Bearing B3
 Spring Washer WFS506 Screw for Bearing WNC538

R2450
**BOTTOM CLEANING
BITS WITH UPPER BALL BEARING**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2450 (A)	3/4"	7/16"	1/4"	2-3/16"
R2451 (B)	1"	7/16"	1/2"	2-1/2"
R2452 (C)	1-1/2"	5/8"	1/2"	2-3/4"

Replacement Parts

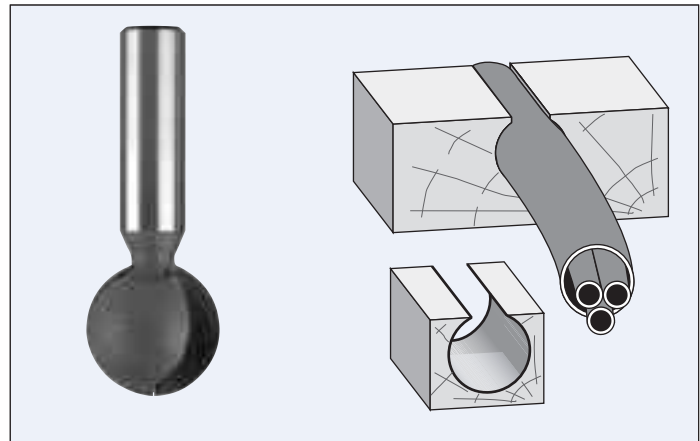
(A) Ball Bearing B4 Lock Ring WO1 Screw WNC525
 (B) Ball Bearing B6-1A Lock Ring WO4 Screw WNC518
 (C) Ball Bearing B10 Lock Ring WO3 Screw WNC518

R2440
**CONVEX BEADING BITS
WITH BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R2440	13/16"	5/32"	5/16"	1/4"	1-7/8"
R2441	7/8"	3/16"	3/8"	1/4"	2"
R2442	31/32"	15/64"	15/32"	1/4"	2"
R2444	1-1/4"	25/64"	25/32"	1/2"	3"

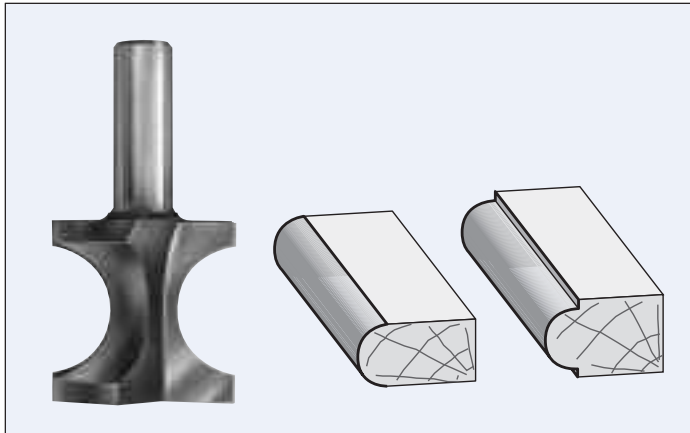
Replacement Parts

Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

R2455
**BALL GROOVING BITS
TWO FLUTES**


PART NO.	LARGE DIAM.	SMALL DIAM.	SHANK DIAM.	OVERALL LENGTH
R2455	1/2"	1/4"	1/2"	2-1/4"
R2456	5/8"	9/32"	1/2"	2-7/16"
R2457	3/4"	5/16"	1/2"	2-1/2"
R2458	7/8"	5/16"	1/2"	2-5/8"
R2459	1"	11/32"	1/2"	2-3/4"
R2460	1-1/8"	13/32"	1/2"	2-7/8"
R2461	1-1/4"	7/16"	1/2"	3"

R2500 HALF ROUND BITS (BULL NOSE)

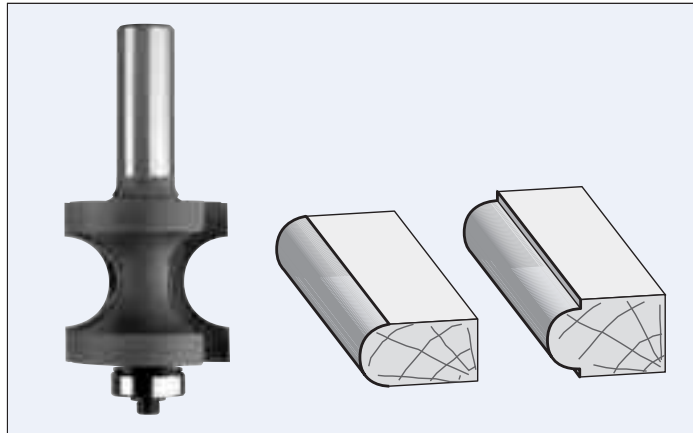


PART NO.	LARGE DIAM.	RADIUS	CUTTER OPENING	CARBIDE HEIGHT	SHANK DIAM.
R2500-1	17/32"	5/64"	5/32"	1/2"	1/4"
R2500-2	17/32"	5/64"	5/32"	1/2"	1/2"
R2500	19/32"	7/64"	7/32"	1/2"	1/4"
R2501	21/32"	9/64"	9/32"	3/4"	1/4"
R2502	7/8"	13/64"	13/32"	3/4"	1/4"
R2503	1-1/32"	17/64"	35/64"	1"	1/4"
R2504	19/32"	7/64"	7/32"	1/2"	1/2"
R2505	21/32"	9/64"	9/32"	3/4"	1/2"
R2506	7/8"	13/64"	13/32"	3/4"	1/2"
R2507	1-1/32"	17/64"	35/64"	1"	1/2"
R2507-1	1-1/16"	5/16"	5/8"	1-1/8"	1/2"
R2508	1-5/16"	3/8"	3/4"	1-3/8"	1/2"
R2509	1-11/16"	1/2"	1"	1-9/16"	1/2"
R2510	2"	5/8"	1-1/4"	2"	1/2"
R2511	2-3/8"	3/4"	1-1/2"	2"	1/2"
R2511-1*	2-3/8"	3/4"	1-1/2"	2"	1/2"

* Max. RPM 16,000

* This router bit has 3 flutes and is suitable for cutting solid surface materials, solid woods and composite materials

R2512 HALF ROUND BITS (BULL NOSE) WITH BEARING

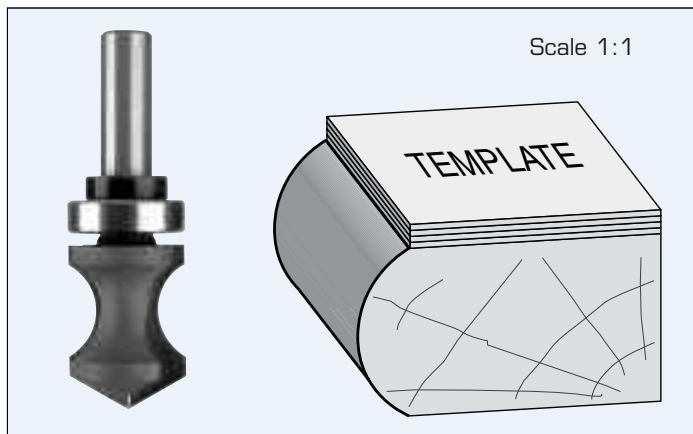


PART NO.	LARGE DIAM.	RADIUS	CUTTER OPENING	CARBIDE HEIGHT	SHANK DIAM.
R2512(A)	25/32"	9/64"	17/64"	3/4"	1/2"
R2513(A)	29/32"	13/64"	25/64"	3/4"	1/2"
R2514(A)	1-1/32"	17/64"	35/64"	1"	1/2"
R2515(B)	1-3/8"	3/8"	3/4"	1-1/4"	1/2"
R2516(C)	1-3/4"	1/2"	1"	1-9/16"	1/2"
R2517(D)	2"	5/8"	1-1/4"	2"	1/2"

Replacement Parts

- (A) Ball Bearing B3 Washer WR58
Spring washer WFS506 Screw WNC538
- (B) Ball Bearing B3-4 Washer WR59
Spring Washer WFS506 Screw WNC512
- (C) Ball Bearing B4 Washer WR59
Spring Washer WFS508 Screw WNF1012
- (D) Ball Bearing B4 Washer WR59
Spring Washer WFS508 Screw WNF1012

R2519 BULL NOSE BIT WITH UPPER BALL BEARING - PLUNGE TYPE



PART NO.	LARGE DIAM.	RADIUS	CUTTER OPENING	CUTTING LENGTH	SHANK DIAM.
R2519	1-1/8"	1/2"	7/8"	1-9/16"	1/2"

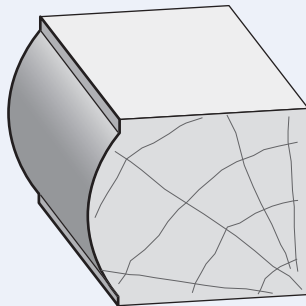
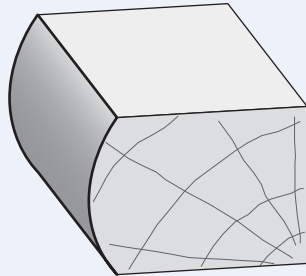
Overall length of bit 3-5/8"

Replacement Parts

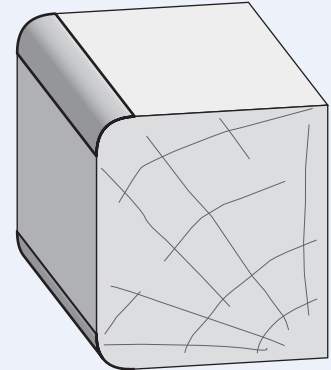
- Ball Bearing B6-4 Lock Ring W03 Screw WNC518

R2520**TRUE BULL NOSE BIT
TWO FLUTES**

Scale 1:1



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH.	SHANK DIAM.	OVERALL LENGTH
R2520	13/16"	23/32"	1-1/4"	1/4"	2-1/2"
R2521	13/16"	23/32"	1-1/4"	1/2"	2-3/4"

R2525**ADJUSTABLE
ROUNDING OVER SET 3 WINGS**

PART NO.	LARGE DIAM.	RADIUS	SHANK DIAM.	OVERALL LENGTH
R2525	1-1/2"	3/16"	1/2"	3-5/8"
R2526	1-5/8"	1/4"	1/2"	3-5/8"
R2527	1-7/8"	3/8"	1/2"	3-5/8"

Fully adjustable set for corner rounding top and bottom in just one pass.

R 3/16" Adjustable from 3/8" to 1-1/4" wood thickness
 R 1/4" Adjustable from 1/2" to 1-1/4" wood thickness
 R 3/8" Adjustable from 3/4" to 1-1/4" wood thickness

Replacement Cutters

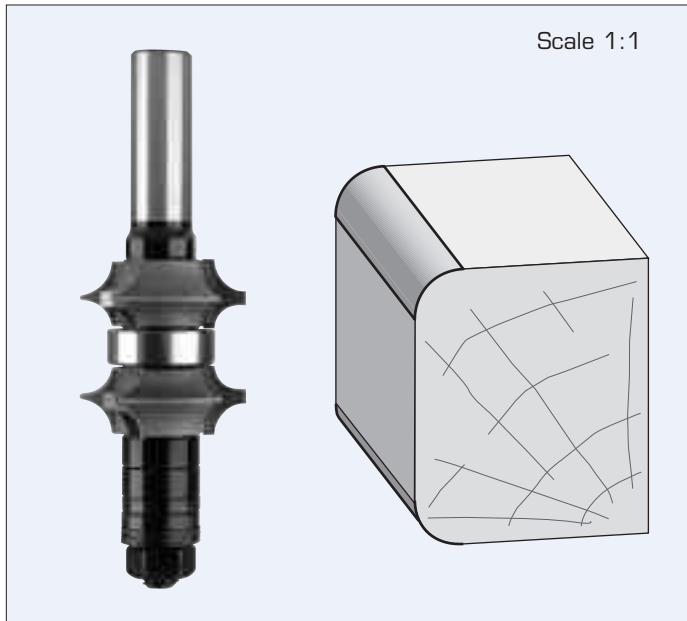
R 3/16"	Top cutter	(right)	R2525CR
R 3/16"	Bottom cutter	(left)	R2525CL
R 1/4"	Top cutter	(right)	R2526CR
R 1/4"	Bottom cutter	(left)	R2526CL
R 3/8"	Top cutter	(right)	R2527CR
R 3/8"	Bottom cutter	(left)	R2527CL

Replacement Parts

Ball Bearing B6-3
 Arbor and nut AR20
 Nut only WNF516
 Spacer A (6.0mm 2 pcs.) WF618
 Spacer B (3.0mm 1 pc.) WF610
 Spacer C (1.0mm 2 pcs.) WF608
 Spacer D (0.5mm 2 pcs.) WF606
 Spacer E (0.1mm 6 pcs.) WF604

R2530

ADJUSTABLE ROUNDING OVER SET 3 WINGS DOUBLE RADIUS



PART NO.	LARGE DIAM.	RADIUS R1	RADIUS R2	SHANK DIAM.	OVERALL LENGTH
R2530	1-3/8"	1/4"	3/16"	1/2"	4-1/4"

Fully adjustable set for corner rounding top and bottom in just one pass.

R 3/16" Adjustable from 3/8" to 1-3/8" wood thickness
R 1/4" Adjustable from 1/2" to 1-1/2" wood thickness

Replacement Cutters

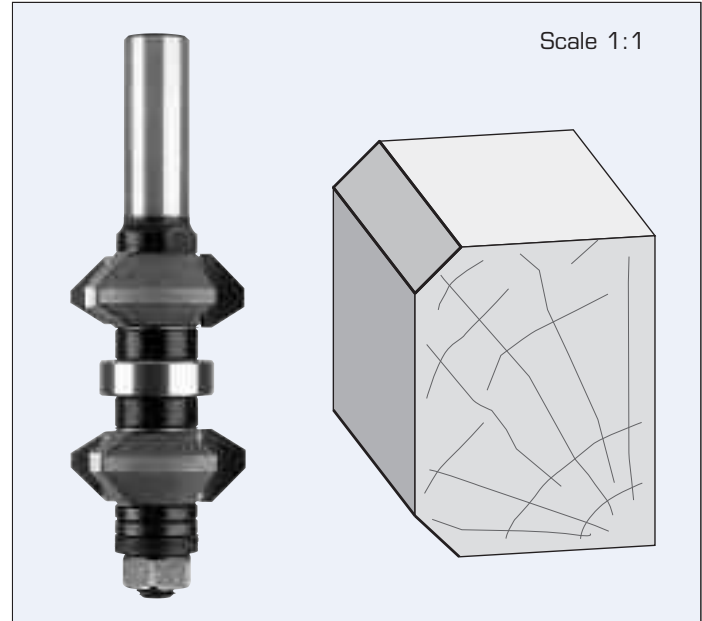
Top cutter (right) R2530CR
Bottom cutter (left) R2530CL

Replacement Parts

Ball Bearing B5
Arbor and nut AR22
Nut only WNF516
Spacer (6.0mm 2 pcs.) WF618
Spacer (3.0mm 2 pcs.) WF610
Spacer (1.0mm 3 pcs.) WF608
Spacer (0.5mm 1 pc.) WF606
Spacer (0.1mm 4 pcs.) WF604

R2535

ADJUSTABLE 3 WINGS CHAMFERING SET DOUBLE ANGLE



PART NO.	LARGE DIAM.	DEGREES BEVEL-1	DEGREES BEVEL-2	SHANK DIAM.	OVERALL LENGTH
R2535	1-3/8"	30°	45°	1/2"	4-1/4"

Fully adjustable set for corner bevelling top and bottom in just one pass.

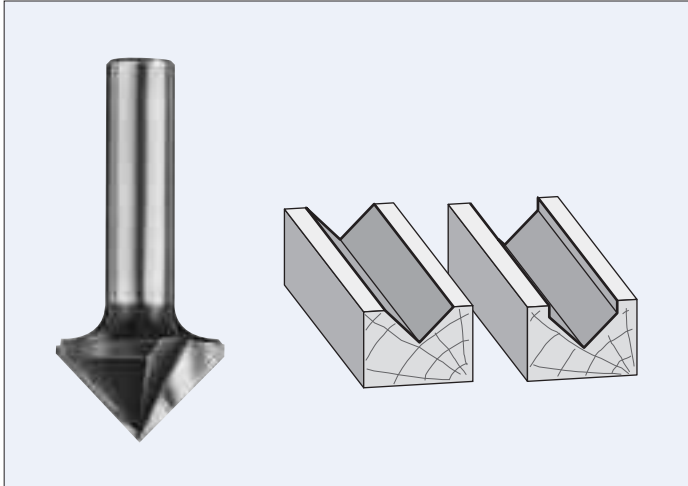
Bevel 30° adjustable from 3/8" to 1-3/8" wood thickness
Bevel 45° adjustable from 1/2" to 1-5/8" wood thickness

Replacement Cutters

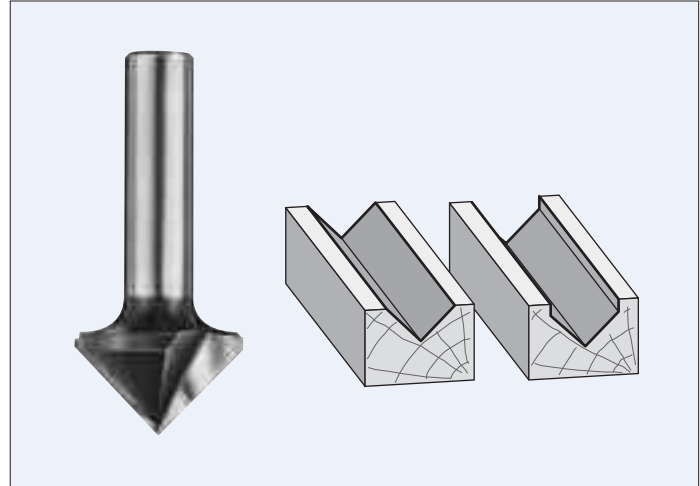
Top cutter (right) R2535CR
Bottom cutter (left) R2535CL

Replacement Parts

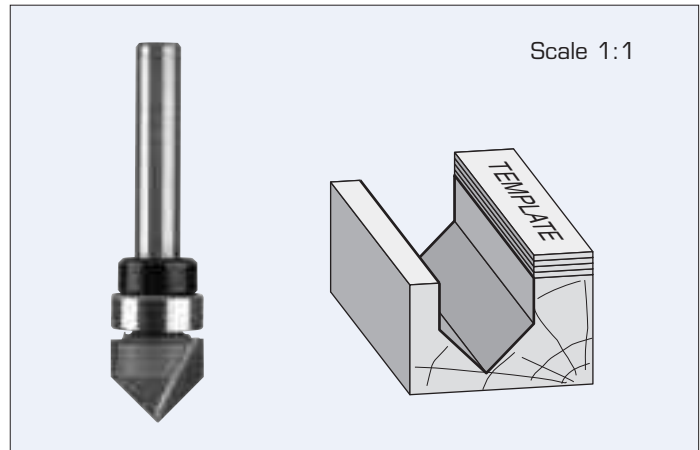
Ball Bearing B5
Arbor and nut AR22
Nut only WNF516
Spacer (6.0mm 2 pcs.) WF618
Spacer (3.0mm 2 pcs.) WF610
Spacer (1.0mm 4 pcs.) WF608
Spacer (0.5mm 1 pc.) WF606
Spacer (0.1mm 4 pcs.) WF604

R2541
**"V" GROOVING BITS
90° INCLUDED ANGLE**


PART NO.	CUTTING DIAM.	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2541	3/8"	1/2"	1/4"	1-3/4"
R2541-1	3/8"	1/2"	1/2"	1-3/4"
R2542	1/2"	1/2"	1/4"	1-3/4"
R2542-1	1/2"	1/2"	1/2"	2-1/8"
R2543	5/8"	1/2"	1/4"	1-3/4"
R2543-1	5/8"	1/2"	1/2"	2-1/8"
R2543-2	3/4"	5/8"	1/4"	1-3/4"
R2544	3/4"	5/8"	1/2"	2-1/4"
R2544-1	7/8"	5/8"	1/4"	2"
R2544-2	7/8"	5/8"	1/2"	2-1/4"
R2545	1"	3/4"	1/4"	1-3/4"
R2545-1	1"	3/4"	1/2"	2-3/8"
R2546	1-1/4"	1"	1/2"	2-1/2"
R2547	1-1/2"	1-1/4"	1/2"	2-7/8"
R2548	1-3/4"	1-1/2"	1/2"	3"
R2549	2"	1-3/4"	1/2"	3"

R2550
**"V" GROOVING BITS
60°/70° INCLUDED ANGLE**


PART NO.	CUTTING DIAM.	INCLUDED ANGLE	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2550	1/2"	60°	1/2"	1/4"	1-3/4"

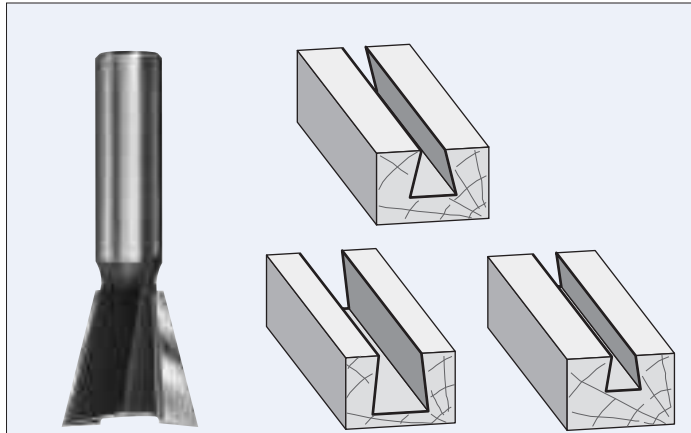
R2560
**"V" GROOVING BITS
WITH BEARING GUIDE 90°**


PART NO.	CUTTING DIAM.	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2560	1/2"	1/2"	1/4"	2"

Replacement Parts

(A) Ball Bearing B3-1 Lock Ring W01 Screw WNC525

R2600 DOVETAIL BITS TWO FLUTES

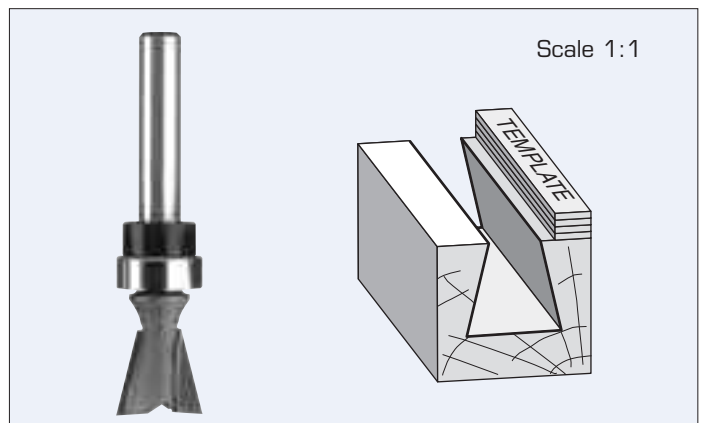


PART NO.	DEGREE EA. SIDE	LARGE DIAM.	DEPTH OF CUT	SHANK DIAM.	OVERALL LENGTH
R2600	9°	5/16"	3/8"	1/4"	2-1/2"
R2600-1	25°	13/64"	5/32"	1/4"	2-3/8"
R2600-2	7.5°	1/4"	5/16"	1/4"	2-1/2"
R2601	9°	3/8"	3/8"	1/4"	1-5/8"
R2602	14°	1/2"	1/2"	1/4"	1-3/4"
R2602-1	14°	17/32"	1/2"	1/4"	1-3/4"
R2603	9°	3/8"	3/8"	3/8"	2"
R2604	7°	1/2"	1/2"	3/8"	2"
R2604-1	9°	5/16"	3/8"	1/2"	2-1/2"
R2605	9°	3/8"	3/8"	1/2"	1-5/8"
R2606	14°	1/2"	1/2"	1/2"	2-3/16"
R2606-1	7°	5/8"	5/8"	1/2"	2-3/8"
R2607	7°	5/8"	7/8"	1/2"	2-1/16"
R2608	7°	3/4"	7/8"	1/2"	2-1/2"
R2608-1	14°	3/4"	3/4"	1/2"	2-1/2"
R2609	7°	7/8"	7/8"	1/2"	2-5/8"
R2609-1	14°	7/8"	7/8"	1/2"	2-5/8"
R2610	14°	1"	1"	1/2"	2-5/8"
R2610-1	7°	1-1/8"	3/4"	1/2"	2-3/8"
R2611	14°	1-1/4"	1"	1/2"	2-5/16"

LEFT HAND DOVETAIL BITS

PART NO.	DEGREE EA. SIDE	LARGE DIAM.	DEPTH OF CUT	SHANK DIAM.	OVERALL LENGTH
R2600L	9°	5/16"	3/8"	1/4"	2-1/2"
R2605L	9°	3/8"	3/8"	1/2"	1-5/8"
R2606L	14°	1/2"	1/2"	1/2"	2-1/4"
R2607L	7°	5/8"	7/8"	1/2"	2-1/16"
R2608L	7°	3/4"	7/8"	1/2"	2-1/2"
R2609L	7°	7/8"	7/8"	1/2"	2-5/8"
R2609-1L	14°	7/8"	7/8"	1/2"	2-5/8"
R2610L	14°	1"	1"	1/2"	2-5/8"

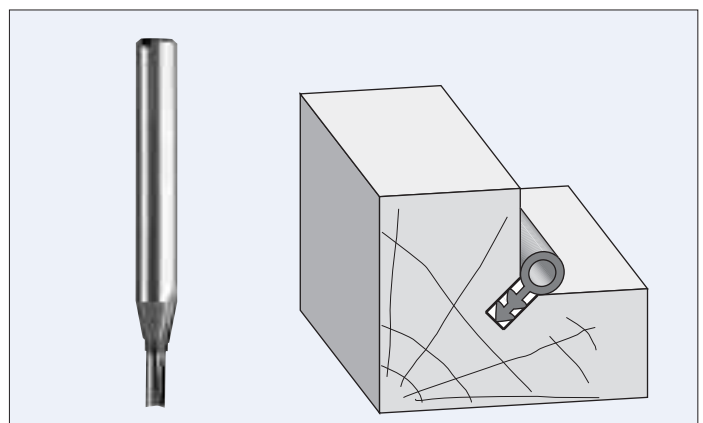
R2620 DOVETAIL BIT WITH BEARING GUIDE TWO FLUTES, 14 DEGREES



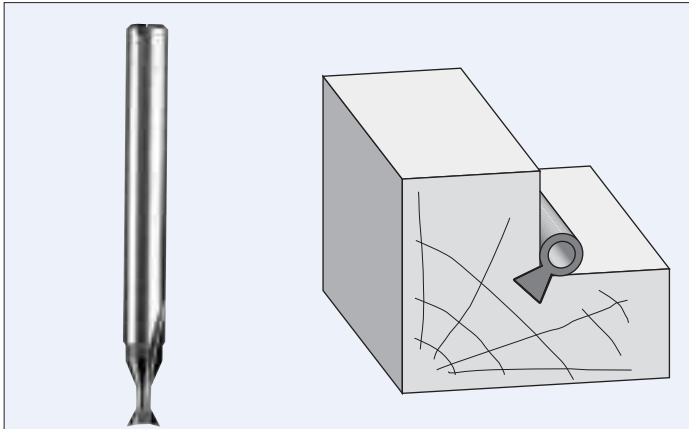
PART NO.	DEGREE EA. SIDE	CUTTING DIAM.	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2620	14°	1/2"	1/2"	1/4"	2-1/4"

Replacement Parts
 Ball Bearing B3-1 Lock Ring W01 Screw WNC525

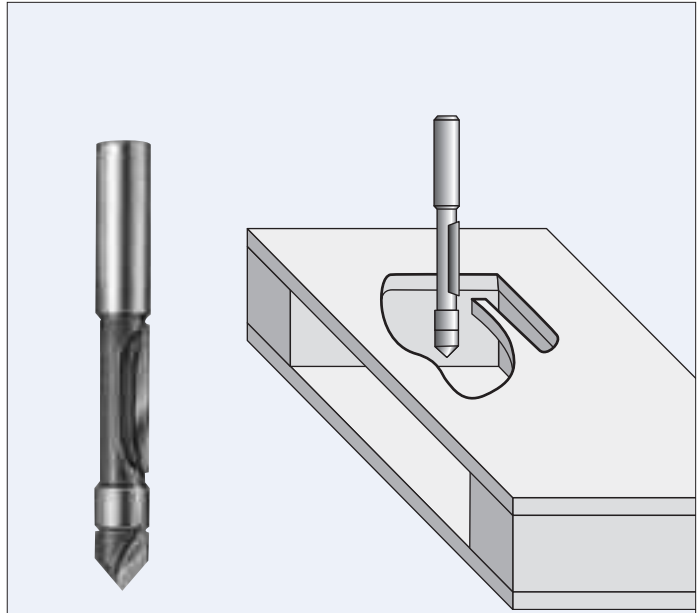
R2630 TEE/BUMPER MOULDING GROOVING BITS TWO FLUTES



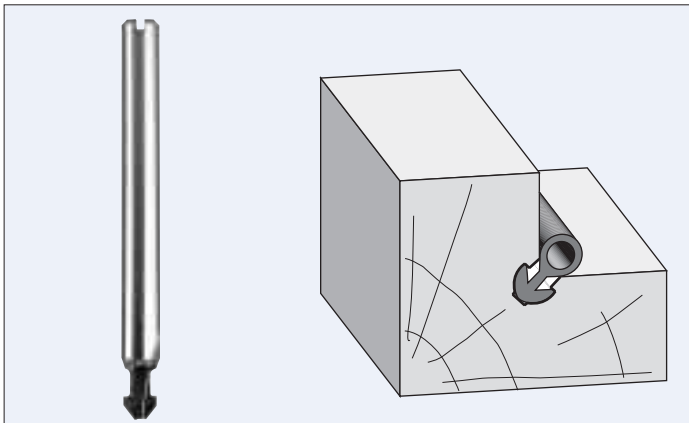
PART NO.	CUTTING DIAM.	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2630	1/8"	5/16"	1/4"	2-3/16"

R2631
**TEE/BUMPER MOULDING
GROOVING BITS TWO FLUTES**


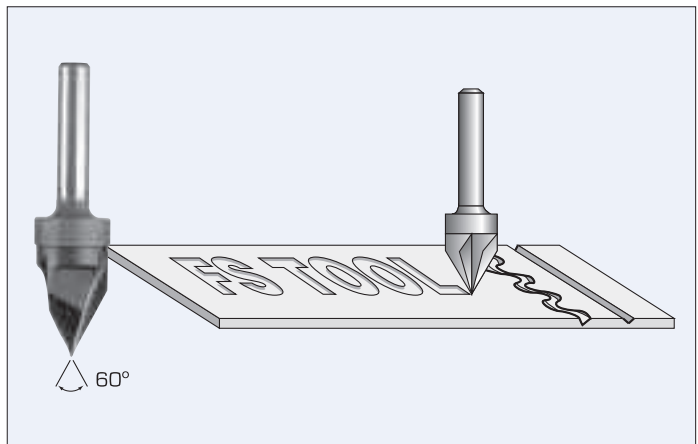
PART NO.	LARGE DIAM.	DEGREES EA. SIDE	DEPTH OF CUT	SHANK DIAM.	OVERALL LENGTH
R2631	13/64"	25°	5/32"	1/4"	2-3/8"

R2700
**PANEL PILOT BITS
WITH PLUNGE POINT**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	FLUTES	OVERALL LENGTH
R2700	1/4"	3/4"	1/4"	1	2-1/2"
R2701	3/8"	1"	3/8"	1	3"
R2702	1/2"	1-3/16"	1/2"	1	3-1/2"
R2703	1/2"	2"	1/2"	1	4-1/2"
R2704	3/8"	1"	1/4"	2	3"
R2705	3/8"	1"	3/8"	2	3"
R2706	1/2"	1-1/4"	1/2"	2	3-3/4"
R2707	1/2"	2"	1/2"	2	4-1/2"

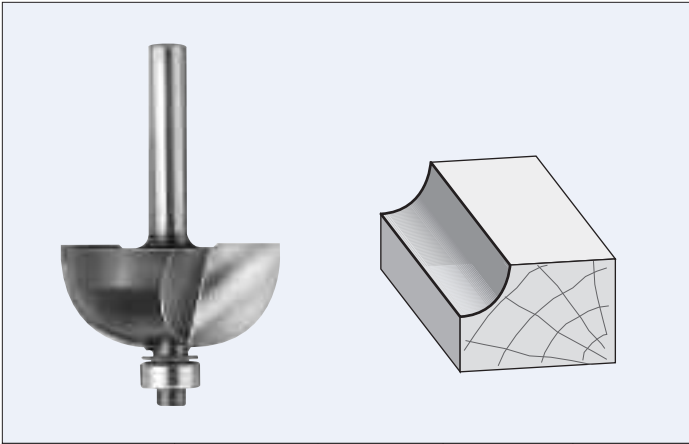
R2632
**TEE/BUMPER MOULDING
GROOVING BITS TWO FLUTES**


PART NO.	LARGE DIAM.	SMALL DIAM.	DEGREES EA. SIDE	DEPTH OF CUT	SHANK DIAM.	OVERALL LENGTH
R2632	7/32"	5/64"	38°	5/16"	1/4"	2-9/16"

R2710
**SOLID CARBIDE
ENGRAVING BITS THREE FLUTES**


PART NO.	CUTTING DIAM.	CUTTING DEPTH	SHANK DIAM.	OVERALL LENGTH
R2710	9/16"	7/8"	1/4"	2-1/4"

R2800 COVE BITS WITH BALL BEARING GUIDE



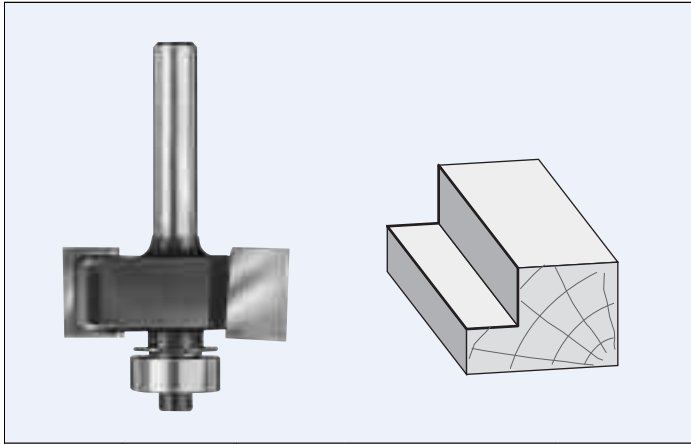
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
R2800-1 (A)	1/2"	1/16"	1/2"	1/4"
R2800-2 (A)	1/2"	1/16"	1/2"	1/2"
R2800-3 (A)	5/8"	1/8"	1/2"	1/4"
R2800-4 (A)	5/8"	1/8"	1/2"	1/2"
R2800-A (A)	3/4"	3/16"	9/16"	1/4"
R2803-A (A)	3/4"	3/16"	9/16"	1/2"
R2800 (A)	7/8"	1/4"	9/16"	1/4"
R2803 (A)	7/8"	1/4"	9/16"	1/2"
R2803-1 (A)	1"	5/16"	9/16"	1/4"
R2803-2 (A)	1"	5/16"	9/16"	1/2"
R2801 (A)	1-1/8"	3/8"	9/16"	1/4"
R2804 (A)	1-1/8"	3/8"	9/16"	1/2"
R2802 (A)	1-3/8"	1/2"	3/4"	1/4"
R2805 (A)	1-3/8"	1/2"	3/4"	1/2"
R2806 (A)	1-5/8"	5/8"	3/4"	1/2"
R2807 (B)	1-7/8"	3/4"	1"	1/2"
R2808 (B)	2-3/8"	7/8"	1-1/4"	1/2"
R2809 (B)	2-3/8"	1"	1-1/4"	1/2"
R2810* (B)	3"	1-1/4"	1-1/2"	1/2"

*Max. RPM 18,000

Replacement Parts

- (A) Ball Bearing B1 Washer WR12
Spring Washer WFS504 Screw WNC338
- (B) Ball Bearing B3 Washer WR58
Spring Washer WFS506 Screw WNC538

R2900 RABBETING BITS WITH 1/2" DIAMETER BALL BEARING GUIDE



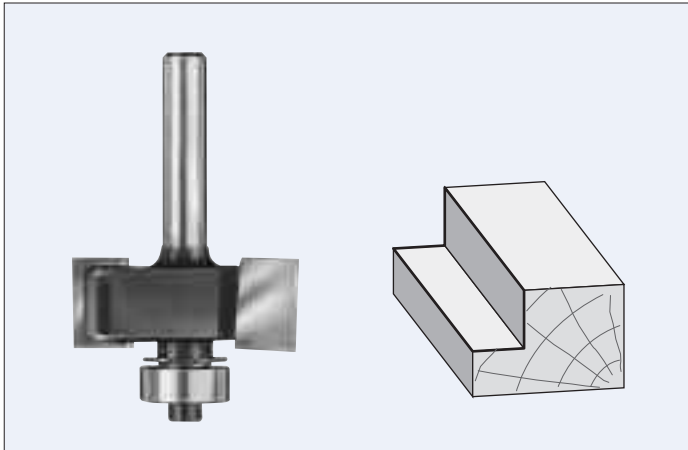
PART NO.	LARGE DIAM.	RABBET DEPTH	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R2900	1-1/4"	3/8"	1/2"	1/4"	2"
R2901	1-1/4"	3/8"	1/2"	1/2"	2-3/8"
R2902	1-3/8"	7/16"	1/2"	1/4"	2"
R2903	1-3/8"	7/16"	1/2"	1/2"	2-3/8"

Replacement Parts

- Ball Bearing B3 Washer WR58
- Spring Washer WFS506 screw WNC538

R2905

RABBETING BITS WITH 3/8" DIAMETER BALL BEARING GUIDE



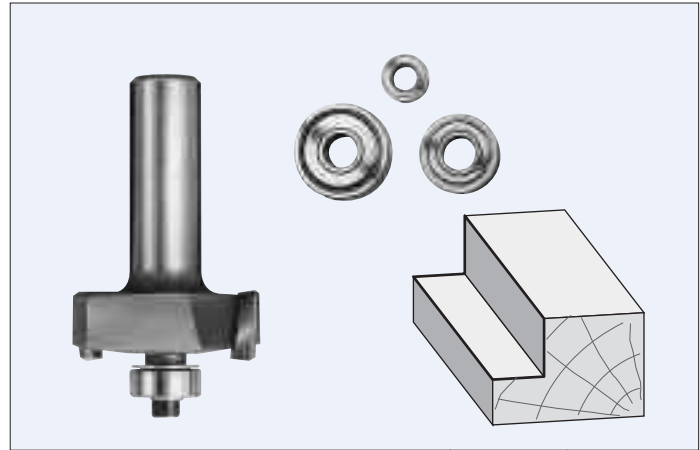
PART NO.	LARGE DIAM.	RABBET DEPTH	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R2905	1-1/4"	7/16"	1/2"	1/4"	2"
R2906	1-1/4"	7/16"	1/2"	1/2"	2-3/8"
R2907	1-3/8"	1/2"	1/2"	1/4"	2"
R2908	1-3/8"	1/2"	1/2"	1/2"	2-3/8"

Replacement Parts

Ball Bearing B2 Washer WFS500
Spring Washer WFS506 Screw WNC538

R2950

RABBETING BITS WITH 4 BALL BEARINGS FOR 4 DIFFERENT RABBET DEPTHS



PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R2950 (complete set)	1-3/8"	1/2"	1/4"	2"
R2951 (complete set)	1-3/8"	1/2"	1/2"	2-3/8"

TYPICAL ASSEMBLY

1/2" RABBET DEPTH

PART NO.	DESCRIPTION
WFS500	Flat Washer 5/16" - 3/16"
B2	Ball Bearing 3/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

7/16" RABBET DEPTH

PART NO.	DESCRIPTION
WR58	Raised Washer 1/2" - 3/16"
B3	Ball Bearing 1/2" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

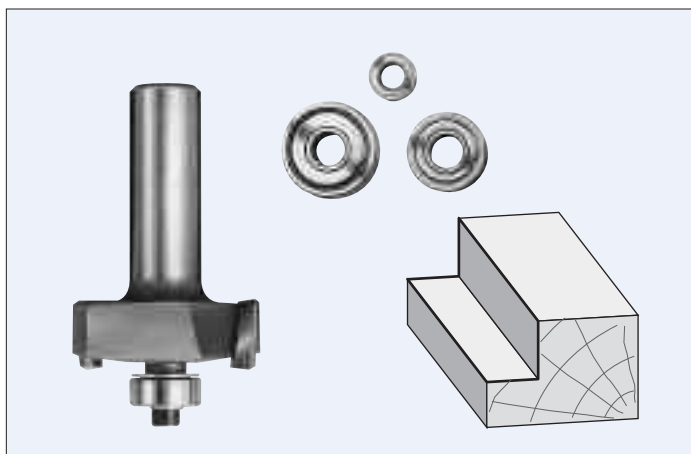
3/8" RABBET DEPTH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B3-2	Ball Bearing 5/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

5/16" RABBET DEPTH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B3-5	Ball Bearing 3/4" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

R2960 RABBETING BITS WITH 7 BALL BEARINGS FOR 7 DIFFERENT RABBET DEPTHS



PART NO.	CUTTING DIAM.	CUTTING EDGE	SHANK DIAM.	OVERALL LENGTH
R2960 (complete set)	1-3/8"	1/2"	1/4"	2"
R2961 (complete set)	1-3/8"	1/2"	1/2"	2-3/8"

TYPICAL ASSEMBLY

1/2" RABBET DEPTH

PART NO.	DESCRIPTION
WFS500	Flat Washer 5/16" - 3/16"
B2	Ball Bearing 3/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

7/16" RABBET DEPTH

PART NO.	DESCRIPTION
WR58	Raised Washer 1/2" - 3/16"
B3	Ball Bearing 1/2" - 3/16"
WFS506	Flat Washer 5/16" - 1/8"
WNC512	Screw NC5 - 1/2"

3/8" RABBET DEPTH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B3-2	Ball Bearing 5/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

5/16" RABBET DEPTH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B3-5	Ball Bearing 3/4" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

Typical assembly cont'd...

R2960 TYPICAL ASSEMBLY Cont'd...

1/4" RABBET DEPTH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B6	Ball Bearing 7/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

1/8" RABBET DEPTH

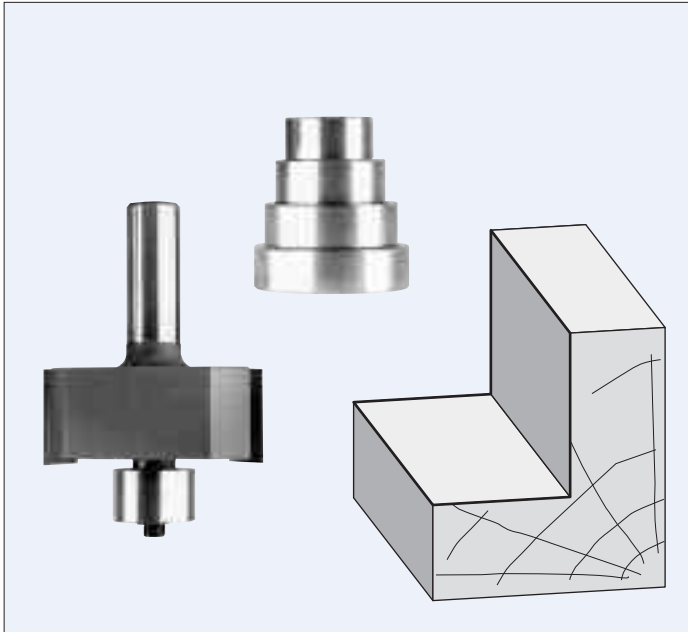
PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B6-2	Ball Bearing 1-1/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

FLUSH

PART NO.	DESCRIPTION
WR59	Raised Washer 16mm - 5mm
B8	Ball Bearing 1-3/8" - 3/16"
WFS506	Spring Washer 1/4" - 1/8"
WNC512	Screw NC5 - 1/2"

R2970

MULTI RABBETING ROUTER SETS TWO FLUTES



CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
2"	7/8"	1/2"	3-5/64"

PART NO.	DESCRIPTION/DEPTH OF RABBET
R2970	6 piece rabbeting set 1/8", 1/4", 3/8", 1/2", 5/8", 3/4"
R2971	12 piece rabbeting set 1/16", 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 9/16", 5/8", 11/16", 3/4"
R2972	17 piece rabbeting set 1/16", 1/8", 3/16", 15/64", 1/4", 5/16", 23/64", 3/8", 7/16", 15/32", 1/2", 9/16", 19/32", 5/8", 11/16", 23/32", 3/4"

This multi rabbeting set produces rabbet cuts from 1/16" through to 3/4", in 1/16" increments, plus five precision rabbets in 1/64" and 1/32" increments.

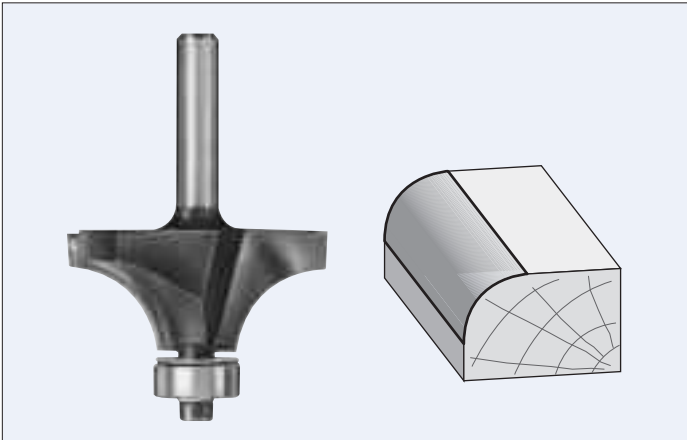


R2970

REPLACEMENT PARTS

PART NO.	DESCRIPTION/DEPTH OF RABBET
R2973	Rabbeting bit with two 1/2" bearing
B3-1	Ball Bearing
WFS506	Washer
WRS220	Spacer 2.2mm
WNC512	Screw
WRC476	Collar 47.6mm Diam. 1/16" rabbet depth
WRC444	Collar 44.4mm Diam. 1/8" rabbet depth
WRC413	Collar 41.3mm Diam. 3/16" rabbet depth
WRC399	Collar 39.9mm Diam. 15/64" rabbet depth
WRC381	Collar 38.1mm Diam. 1/4" rabbet depth
WRC349	Collar 34.9mm Diam. 5/16" rabbet depth
WRC325	Collar 32.5mm Diam. 23/64" rabbet depth
WRC317	Collar 31.7mm Diam. 3/8" rabbet depth
WRC286	Collar 28.6mm Diam. 7/16" rabbet depth
WRC270	Collar 27.0mm Diam. 15/32" rabbet depth
WRC254	Collar 25.4mm Diam. 1/2" rabbet depth
WRC222	Collar 22.2mm Diam. 9/16" rabbet depth
WRC206	Collar 20.6mm Diam. 19/32" rabbet depth
WRC190	Collar 19.0mm Diam. 5/8" rabbet depth
WRC159	Collar 15.9mm Diam. 11/16" rabbet depth
WRC143	Collar 14.3mm Diam. 23/32" rabbet depth
B3-1	Bearing 1/2" Diam. 3/4" rabbet depth

R3000 ROUNDING OVER BITS W/BALL BEARING GUIDE TWO FLUTES



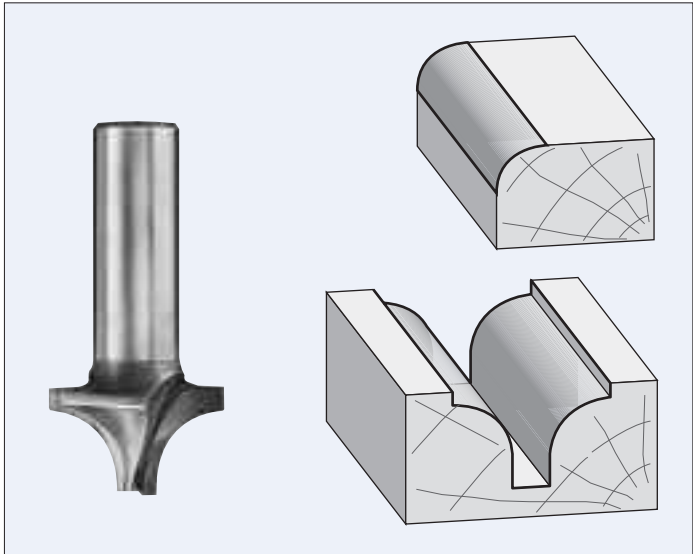
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
R3000-1	5/8"	1/16"	5/16"	1/4"
R3000-2	3/4"	1/8"	3/8"	1/4"
R3000-3	3/4"	5/32"	3/8"	1/4"
R3000	7/8"	3/16"	1/2"	1/4"
R3001	1"	1/4"	1/2"	1/4"
R3002	1-1/8"	5/16"	1/2"	1/4"
R3003	1-1/4"	3/8"	5/8"	1/4"
R3004	1-1/2"	1/2"	3/4"	1/4"
R3004-1	1-3/4"	5/8"	7/8"	1/4"
R3005-1	5/8"	1/16"	5/16"	1/2"
R3005-2	3/4"	1/8"	3/8"	1/2"
R3005-3	3/4"	5/32"	3/8"	1/2"
R3005	7/8"	3/16"	1/2"	1/2"
R3006	1"	1/4"	1/2"	1/2"
R3007	1-1/8"	5/16"	1/2"	1/2"
R3008	1-1/4"	3/8"	5/8"	1/2"
R3009	1-1/2"	1/2"	3/4"	1/2"
R3009-1	1-3/4"	5/8"	7/8"	1/2"
R3010	2"	3/4"	1"	1/2"
R3010-1	2-1/4"	7/8"	1-1/4"	1/2"
R3011	2-1/2"	1"	1-1/4"	1/2"
R3011-1 *	2-3/4"	1-1/8"	1-3/8"	1/2"
R3012 *	3"	1-1/4"	1-1/2"	1/2"
R3012-1 **	3-1/4"	1-3/8"	1-9/16"	1/2"
R3013 **	3-1/2"	1-1/2"	1-3/4"	1/2"

* Max. RPM 18,000
 ** Max. RPM 16,000

Replacement Parts
 Ball Bearing B3
 Spring Washer WFS506

Washer WR58
 Screw WNC538

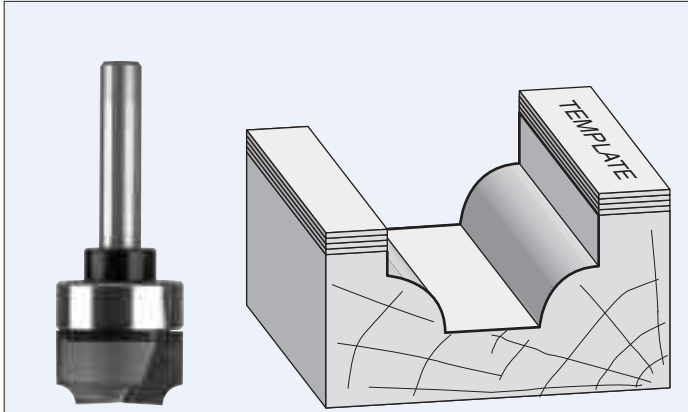
R3020 PLUNGING ROUNDING OVER BITS



PART NO.	LARGE DIAM.	RADIUS	SMALL DIAM.	CARBIDE HEIGHT	SHANK DIAM.
R3020-1	3/8"	1/8"	1/8"	5/16"	1/4"
R3020	5/8"	3/16"	1/4"	5/16"	1/2"
R3021	3/4"	1/4"	1/4"	1/2"	1/4"
R3022	3/4"	1/4"	1/4"	1/2"	1/2"
R3023	7/8"	5/16"	1/4"	9/16"	1/4"
R3024	7/8"	5/16"	1/4"	9/16"	1/2"
R3025	1"	3/8"	1/4"	5/8"	1/4"
R3026	1"	3/8"	1/4"	5/8"	1/2"
R3027	1-3/8"	1/2"	3/8"	1"	1/2"
R3028	1-3/4"	5/8"	1/2"	1-1/4"	1/2"
R3029	2"	3/4"	1/2"	1-7/16"	1/2"

R3030

CORNER ROUNDING BITS PLUNGE TYPE WITH CENTER BALL BEARING



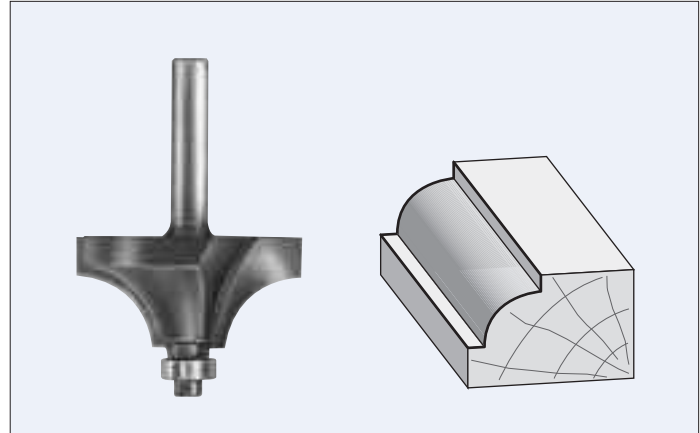
PART NO.	LARGE DIAM.	RADIUS	SMALL DIAM.	CARBIDE HEIGHT	SHANK DIAM.
R3030 (A)	1/2"	1/8"	1/4"	3/8"	1/4"
R3032 (B)	3/4"	1/8"	1/2"	3/8"	1/4"
R3034 (C)	7/8"	5/16"	1/2"	1/2"	1/4"
R3036 (D)	1-1/8"	5/16"	1/2"	9/16"	1/2"

Replacement Parts

(A) Ball Bearing B3-1	Lock ring W01	Screw WNC525
(B) Ball Bearing B4	Lock ring W01	Screw WNC525
(C) Ball Bearing B5	Lock ring W01	Screw WNC525
(D) Ball Bearing B6-4	Lock ring W03	Screw WNC518

R3100

BEADING BITS WITH BALL BEARING GUIDE



PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
R3100-1	5/8"	1/16"	5/16"	1/4"
R3100-2	3/4"	1/8"	3/8"	1/4"
R3100-3	3/4"	5/32"	3/8"	1/4"
R3100	7/8"	3/16"	1/2"	1/4"
R3101	1"	1/4"	1/2"	1/4"
R3102	1-1/8"	5/16"	1/2"	1/4"
R3103	1-1/4"	3/8"	5/8"	1/4"
R3104	1-1/2"	1/2"	3/4"	1/4"
R3105-1	5/8"	1/16"	5/16"	1/2"
R3105-2	3/4"	1/8"	3/8"	1/2"
R3105-3	3/4"	5/32"	3/8"	1/2"
R3105	7/8"	3/16"	1/2"	1/2"
R3106	1"	1/4"	1/2"	1/2"
R3107	1-1/8"	5/16"	1/2"	1/2"
R3108	1-1/4"	3/8"	5/8"	1/2"
R3109	1-1/2"	1/2"	3/4"	1/2"
R3109-1	1-3/4"	5/8"	7/8"	1/2"
R3110	2"	3/4"	1"	1/2"
R3111	2-1/4"	7/8"	1-1/4"	1/2"
R3112	2-1/2"	1"	1-1/4"	1/2"
R3112-1 *	2-3/4"	1-1/8"	1-3/8"	1/2"
R3113 *	3"	1-1/4"	1-1/2"	1/2"
R3113-1 **	3-1/4"	1-3/8"	1-9/16"	1/2"
R3114 **	3-1/2"	1-1/2"	1-3/4"	1/2"

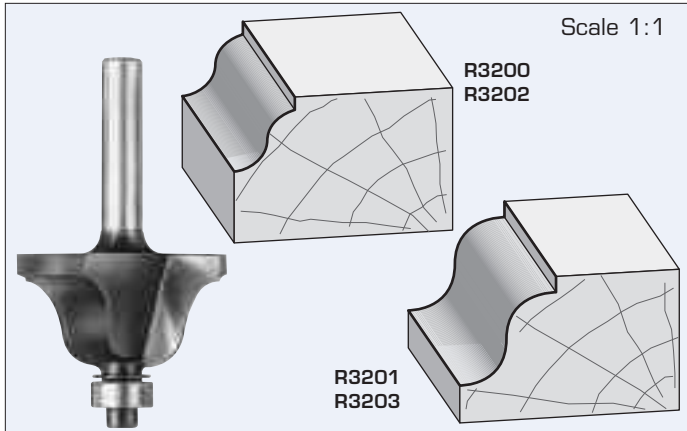
* Max. RPM 18,000

** Max. RPM 16,000

Replacement Parts

Ball Bearing B2	Spring Washer WFS506
Washer WFS500	Screw WNC538

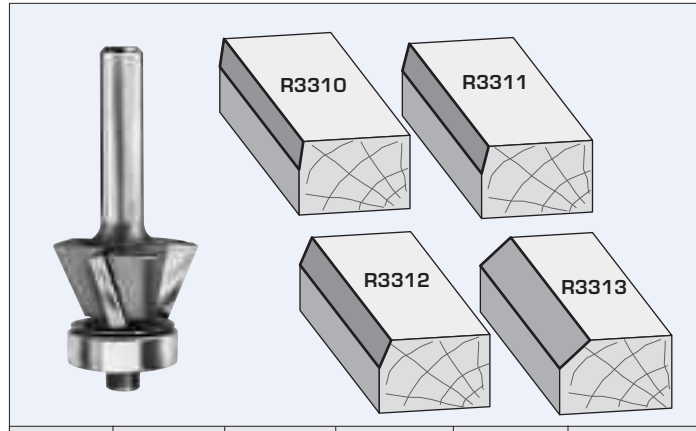
R3200 ROMAN OGEE BITS WITH BALL BEARING GUIDE



PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
R3200	1"	5/32"	5/8"	1/4"
R3201	1-3/8"	1/4"	3/4"	1/4"
R3202	1"	5/32"	5/8"	1/2"
R3203	1-3/8"	1/4"	3/4"	1/2"

Replacement Parts Ball Bearing B1
Spring Washer WFS504 Washer WR12 Screw WNC338

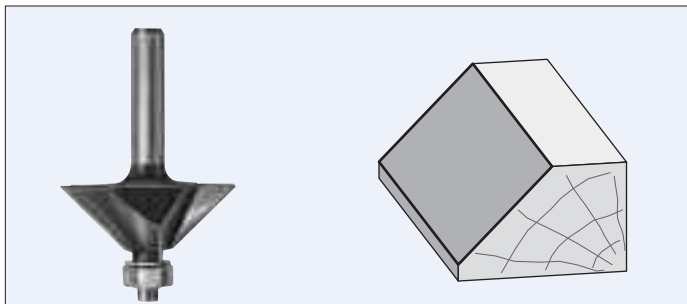
R3310 BEVEL TRIM BITS WITH BALL BEARING GUIDE THREE FLUTES



PART NO.	CUTTING DIAM.	DEGREE BEVEL	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R3310	3/4"	10°	3/8"	1/4"	1-7/8"
R3311	13/16"	15°	3/8"	1/4"	1-7/8"
R3312	15/16"	25°	3/8"	1/4"	1-7/8"
R3313	1-7/16"	45°	3/8"	1/4"	1-7/8"

Replacement Parts Ball Bearing B3-4
Spring Washer WFS506 Washer WR59 Screw WNC538

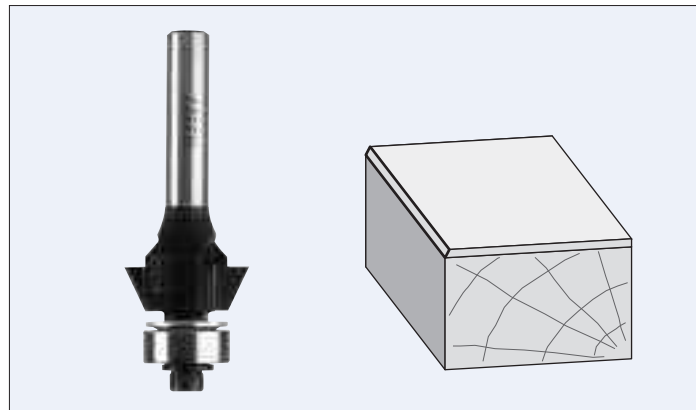
R3300 CHAMFER BITS WITH BALL BEARING GUIDE



PART NO.	CUTTING DIAM.	DEGREE BEVEL	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R3300 (A)	1/2"	15°	1/4"	1/4"	1-3/4"
R3300-1 (A)	17/32"	15°	1/2"	1/4"	2-1/16"
R3301 (A)	27/32"	25°	1/2"	1/4"	2"
R3302 (B)	1-1/2"	45°	1/2"	1/4"	2-1/8"
R3302-1 (C)	1-1/4"	45°	1/2"	1/4"	2"
R3303 (B)	3/4"	15°	1/2"	1/2"	2-3/8"
R3304 (B)	1"	25°	1/2"	1/2"	2-3/8"
R3304-1 (C)	1-1/4"	45°	1/2"	1/2"	2-3/8"
R3305 (B)	1-1/2"	45°	1/2"	1/2"	2-3/8"
R3305-1 (B)	2"	45°	3/4"	1/2"	2-5/8"
R3306 (B)	2-1/2"	45°	1"	1/2"	2-13/16"
R3307* (B)	3-1/64"	45°	1-1/4"	1/2"	3-1/8"

Replacement Parts * Max. RPM 18,000
(A) Ball bearing B2 Washer WFS500 Spr. Wshr. WFS506 Screw WNC 538
(B) Ball bearing B3 Washer WR58 Spr. Wshr. WFS506 Screw WNC538
(C) Ball bearing B1 Washer WR58 Spr. Wshr. WFS506 Screw WNC538

R3320 BEVEL TRIM BITS WITH BALL BEARING GUIDE TWO FLUTES

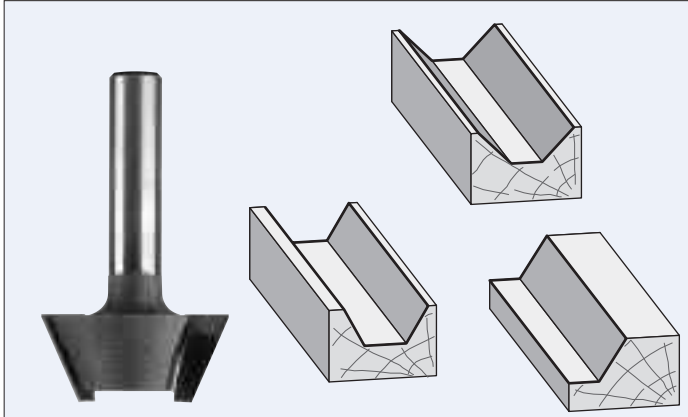


PART NO.	CUTTING DIAM.	DEGREE BEVEL	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
R3320 (B)	1/2"	0°	1/4"	1/4"	2-1/8"
R3321 (B)	5/8"	15°	1/4"	1/4"	2-1/8"
R3322 (B)	3/4"	25°	1/4"	1/4"	2-1/8"
R3323 (B)	1"	45°	1/4"	1/4"	2-1/8"
R3324 (A)	1"	15°	3/8"	1/4"	2"
R3325 (C)	5/8"	15°	1/2"	1/4"	2"

Replacement Parts
(A) Ball Bearing B4 Spring Washer WFS508 Screw WNF1012
(B) Ball Bearing B3 Spring Washer WFS506 Washer WR58 Screw WNC538
(C) Ball Bearing B1 Spring Washer WFS504 Washer WR12 Screw WNC338

R3330

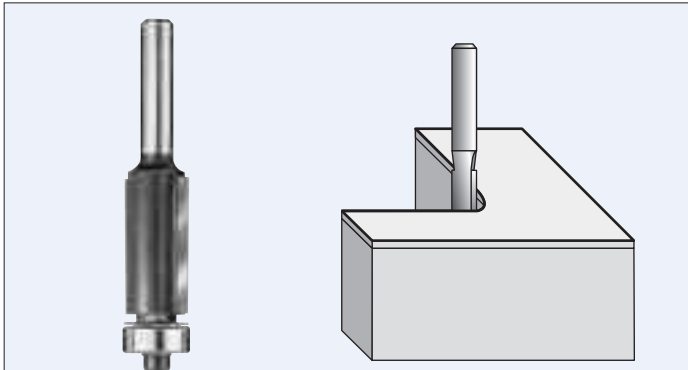
BEVEL BITS PLUNGE TYPE TWO FLUTES



PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	DEGREE BEVEL	OVERALL LENGTH
R3330-1	9/16"	5/8"	1/4"	10°	1-3/4"
R3330-2	1/2"	1/2"	1/4"	15°	2"
R3330	7/8"	3/8"	1/4"	23°	1-5/8"
R3331	1"	3/8"	1/4"	30°	1-5/8"
R3332	1-3/8"	3/8"	1/4"	45°	1-5/8"

R3400

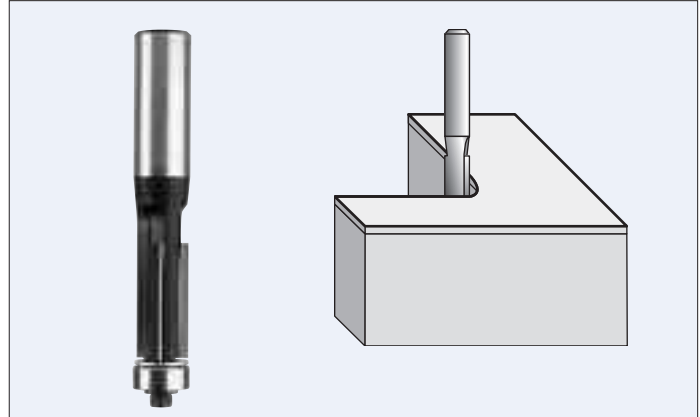
BALL BEARING FLUSH TRIMMING BITS TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R3400-1 (E)	1/4"	1/2"	1/4"	2"
R3400-2 (E)	1/4"	1"	1/4"	2-1/2"
R3400 (A)	3/8"	1"	1/4"	2-5/8"
R3401 (A)	3/8"	1/2"	1/4"	2-1/4"
R3402 (B)	1/2"	1"	1/4"	2-5/8"
R3403 (B)	1/2"	1/2"	1/4"	2-1/4"
R3403-1 (C)	5/8"	5/8"	1/4"	2-1/4"
R3404 (B)	1/2"	1"	3/8"	2-3/4"
R3404-1 (B)	1/2"	1/2"	1/2"	2-3/4"
R3405 (B)	1/2"	1"	1/2"	3-1/4"
R3407 (B)	1/2"	1-1/2"	1/2"	3-7/8"
R3408 (B)	1/2"	2"	1/2"	4-1/4"
R3409 (F)	3/4"	1"	1/2"	3"

R3500

BALL BEARING FLUSH TRIMMING BITS THREE FLUTES



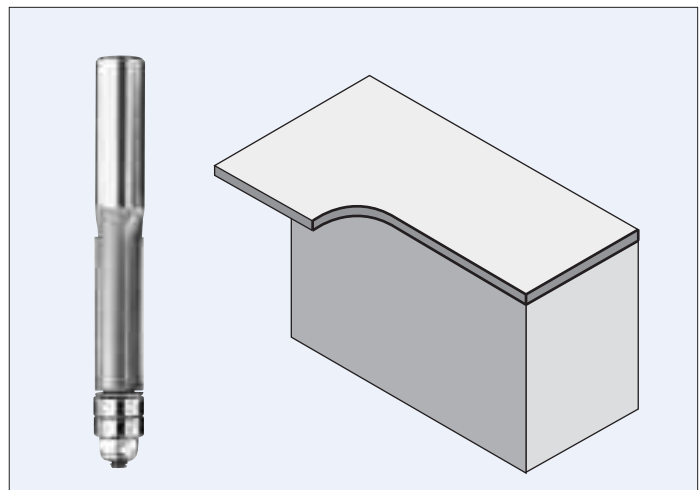
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R3500 (B)	1/2"	1"	1/4"	2-5/8"
R3501 (B)	1/2"	1/2"	1/4"	2-1/4"
R3501-1 (D)	7/8"	1/2"	1/4"	2-1/4"
R3502 (B)	1/2"	1"	1/2"	3-1/4"
R3503 (B)	1/2"	1/2"	1/2"	2-3/4"
R3504 (B)	1/2"	1-1/2"	1/2"	3-7/8"

Replacement Parts for R3400 to R3504

(A) Ball Bearing B2 (C) Ball Bearing B3-4 (E) Ball Bearing BO1
(B) Ball Bearing B3 (D) Ball Bearing B4-1 (F) Ball Bearing B4

R3510

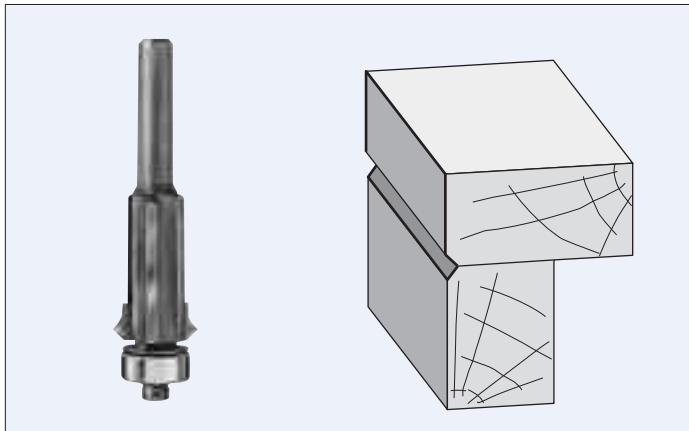
FLUSH TRIM BITS WITH DOUBLE BALL BEARING GUIDE TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH	NO. OF FLUTES
R3510	1/2"	1-1/2"	1/2"	4-1/16"	2
R3511	1/2"	2"	1/2"	4-1/2"	2
R3512	1/2"	1-1/2"	1/2"	4-1/16"	3

Replacement Parts

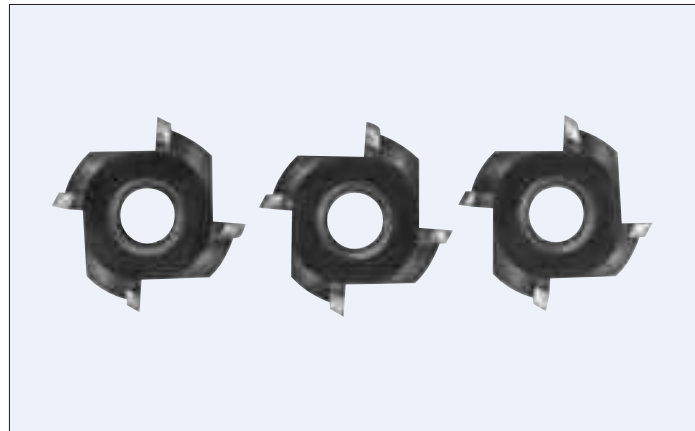
Ball Bearing B3 Washer WR58
Nut WN1024 Spring Washer WFS508

R3520
**FLUSH TRIM "V" GROOVE BITS
WITH BALL BEARING GUIDE**


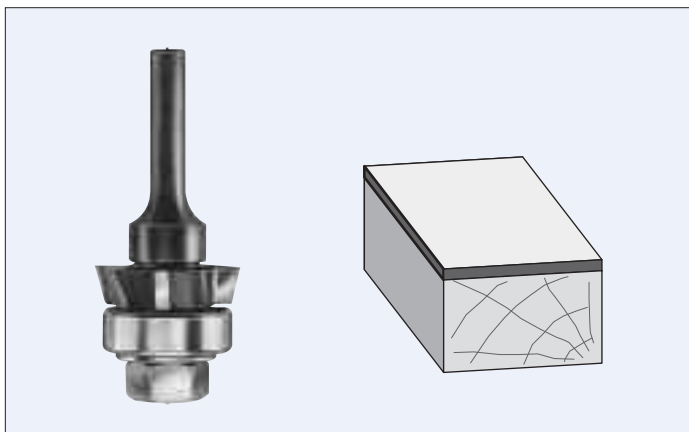
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R3520	5/8"	1"	1/4"	2-1/2"
R3521	5/8"	1"	1/2"	3"

Replacement Parts

Ball Bearing B3 Washer WR58
Spring Washer WFS506 Screw WNC538

R3609
**FOUR WING
CUTTERS ONLY**


PART NO.	CUTTING DIAM.	TYPE OF CUT	CARBIDE HEIGHT
R3609	7/8"	Flush	1/4"
R3610	1"	15°	1/4"
R3611	1-1/16"	25°	1/4"

R3600
**FOUR WING
CUTTER ASSEMBLY**


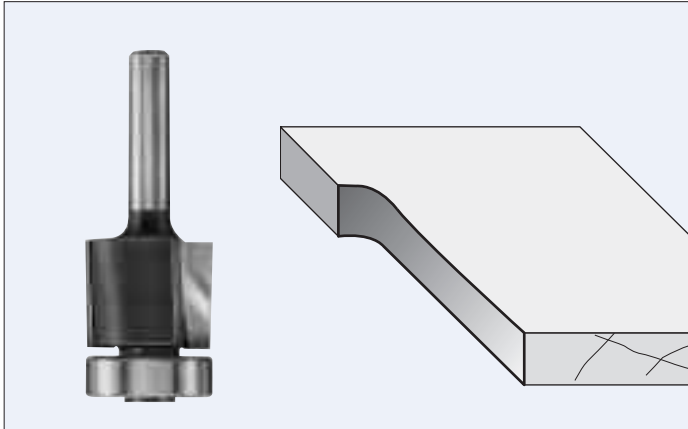
PART NO.	TYPE OF CUT	SHANK DIAM.
R3600	Flush	1/4"
R3602	Flush	1/2"
R3603	15°	1/4"
R3605	15°	1/2"
R3606	25°	1/4"
R3608	25°	1/2"

Replacement Parts

Ball Bearing B5 Arbor 3/8" Shank AR13
Arbor 1/4" Shank AR14 Arbor 1/2" Shank AR12
Nut only WNF516 Spring Washer WF608

R3700

HELIX LAMINATE TRIM BITS



PART NO.	CUTTING DIAM.	TYPE OF CUT	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R3700-1(A)	5/8"	Flush	5/8"	1/4"	2-3/16"
R3700 (B)	3/4"	Flush	5/8"	1/4"	2-3/8"
R3700-2(B)	3/4"	Flush	1"	1/4"	2-7/8"
R3701 (B)	3/4"	Flush	5/8"	1/2"	2-1/2"
R3703 (B)	3/4"	15°	3/8"	1/2"	2-1/4"

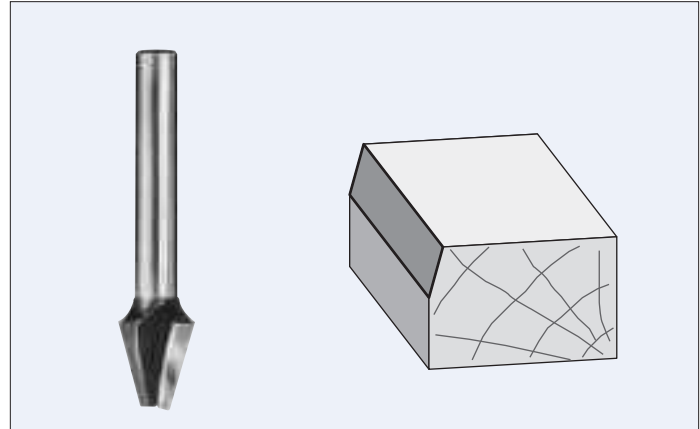
Replacement Parts

(A) Ball Bearing B3-3 Screw W103214

(B) Ball Bearing B4 Washer WFS500 Screw WNF1012

R3840

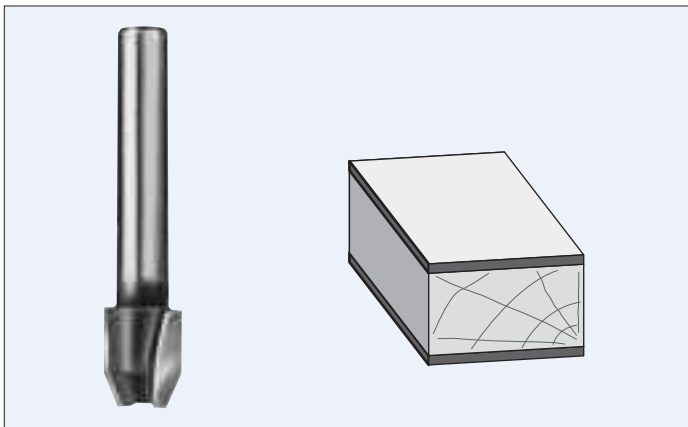
BEVEL TRIM BITS



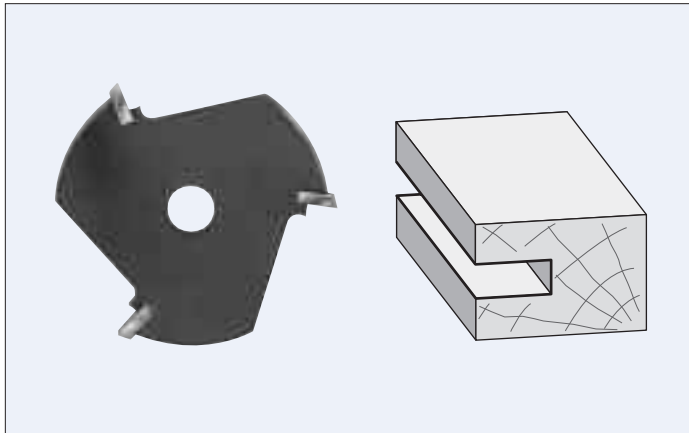
PART NO.	DEGREE BEVEL	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R3840	7°	1/2"	1/4"	2"
R3841	15°	1/2"	1/4"	2"
R3842	15°	1/2"	1/2"	2"
R3843	25°	1/2"	1/4"	2"
R3844	25°	1/2"	1/2"	2"

R3800

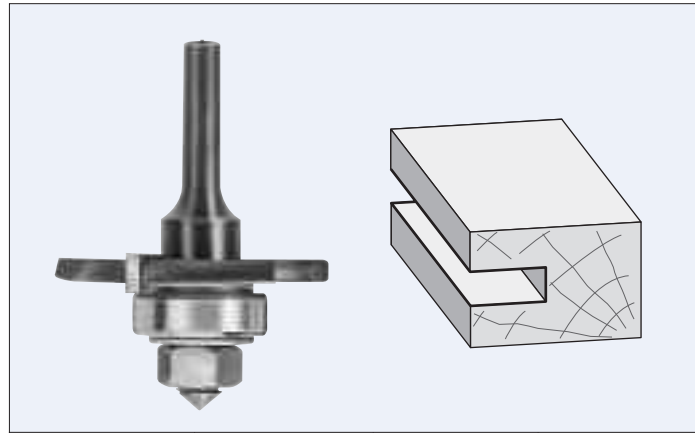
1/4" SHANK COMBINATION BEVEL & FLUSH LAMINATE TRIM BITS



PART NO.	CUTTING DIAM.	CARBIDE LENGTH	NO. OF FLUTES	DEGREE BEVEL	OVERALL LENGTH
R3800	3/8"	1/2"	2	23°	1-1/8"
R3801	3/8"	1/2"	2	23°	1-5/8"
R3802	1/2"	1/2"	2	23°	1-5/8"
R3803	1/2"	1/2"	2	30°	1-5/8"
R3804	1/2"	1/2"	2	35°	1-5/8"
R3805	1/2"	1/2"	2	45°	5/8"

R3900
**SLOTING CUTTERS ONLY
1-7/8" DIAMETER**


PART NO.	KERF (inch)	KERF (mm)	NO. WINGS
R3900	1/16"	1.6	2
R3900-1	.065"	1.65	2
R3900-3	.075"	1.9	2
R3901	5/64"	1.98	2
R3902	3/32"	2.4	2
R3902-1	.110"	2.8	2
R3903	1/8"	3.2	2
R3903-1	5/32"	4.0	2
R3903-2	3/16"	4.8	2
R3904	1/4"	6.35	2
R4000A	.055"	1.4	3
R4000	1/16"	1.6	3
R4000-1	.065"	1.65	3
R4001	.070"	1.8	3
R4001-1	.075"	1.9	3
R4002	5/64"	1.98	3
R4002-1	.085"	2.16	3
R4003	3/32"	2.4	3
R4003-1	.110"	2.8	3
R4005	1/8"	3.2	3
R4005-A	.140"	3.6	3
R4005-1	5/32"	4.0	3
R4006	3/16"	4.8	3
R4007	1/4"	6.35	3
R4100	1/16"	1.6	4
R4101	.070"	1.8	4
R4102	.080"	2.0	4
R4103	3/32"	2.4	4
R4104	1/8"	3.2	4
R4105	3/16"	4.8	4
R4106	1/4"	6.35	4

R4120
**SLOTING CUTTER
ASSEMBLY**


2 WING PART NO.	3 WING PART NO.	KERF (inch)	KERF (mm)
R4120	R4140	1/16"	1.6
R4121	R4141	.065"	1.65
N/A	R4141-1	.070"	1.8
R4121-2	R4141-2	.075"	1.9
R4122	R4142	5/64"	1.98
N/A	R4143	.085"	2.16
R4124	R4144	3/32"	2.4
R4125	R4145	.110"	2.8
R4126	R4146	1/8"	3.2
N/A	R4147	.140"	3.6
R4128	R4148	5/32"	4.0
R4130	R4150	3/16"	4.8
R4132	R4152	1/4"	6.35

Note:

Assemblies available with 1/4", 3/8" and 1/2" shank sizes. To indicate shank diameter when ordering, add following numbers at the end of tool part number: NO. 14 for 1/4" shank
NO. 12 for 1/2" shank
NO. 13 for 3/8" shank

All above use Ball Bearing Part No. B5

B01

BALL BEARING GUIDES



PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS
B01	1/4"	1/8"	7/64"
B1	3/8"	1/8"	5/32"
B2	3/8"	3/16"	1/8"
B2-1	1/2"	1/8"	11/64"
B3	1/2"	3/16"	5.0mm
B3-1	1/2"	1/4"	3/16"
B3-1A	14mm	7.0mm	5.0mm
B3-1B	14mm	8.0mm	4.0mm
B3-2	5/8"	3/16"	5.0mm
B3-3	5/8"	1/4"	5.0mm
B3-4	16mm	5.0mm	5.0mm
B3-4A	16mm	8.0mm	5.0mm
B3-5	3/4"	3/16"	3/16"
B3-6	19mm	6.0mm	6.0mm
B4	3/4"	1/4"	9/32"
B4-1A	3/4"	1/2"	5/32"
B4-1	22mm	7.0mm	7.0mm
B5	7/8" (22.20mm)	5/16" (7.94mm)	7.0mm
B6	7/8"	3/16"	6.6mm
B6-1	26mm	10mm	8.0mm
B6-1A	1"	15mm	5.5mm
B6-2	1-1/8"	3/16"	6.6mm
B6-3	28mm	8.0mm	9.0mm
B6-4	1-1/8"	1/2"	5/16"
B6-4A	1-7/32"	5/16"	8.6mm
B6-5	1-1/4"	15mm	8.5mm
B6-5A	1-1/4"	8.0mm	5.0mm
B6-6	1-5/16"	5/16"	8.6mm
B7	35mm	15mm	11.0mm
B8	1-3/8"	3/16"	6.6mm
B10	1-1/2"	15mm	8.5mm
B12	2"	15mm	12.5mm

ARCNC

ARBOR FOR CNC ROUTERS



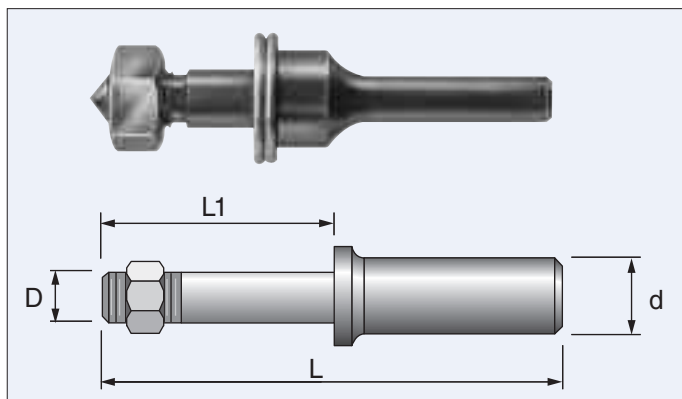
PART NO.	DESCRIPTION
ARCNC	5/16" x 1/2" x 2" Overall Length

Arbor includes:

- 2 Washers 1.0mm WF608 1 Washer 0.5mm WF606
- 1 Screw WNF1012 1 Raised Washer WR59

AR14

ARBORS - ROUTER CUTTER ARBORS WITH NUT & WASHER

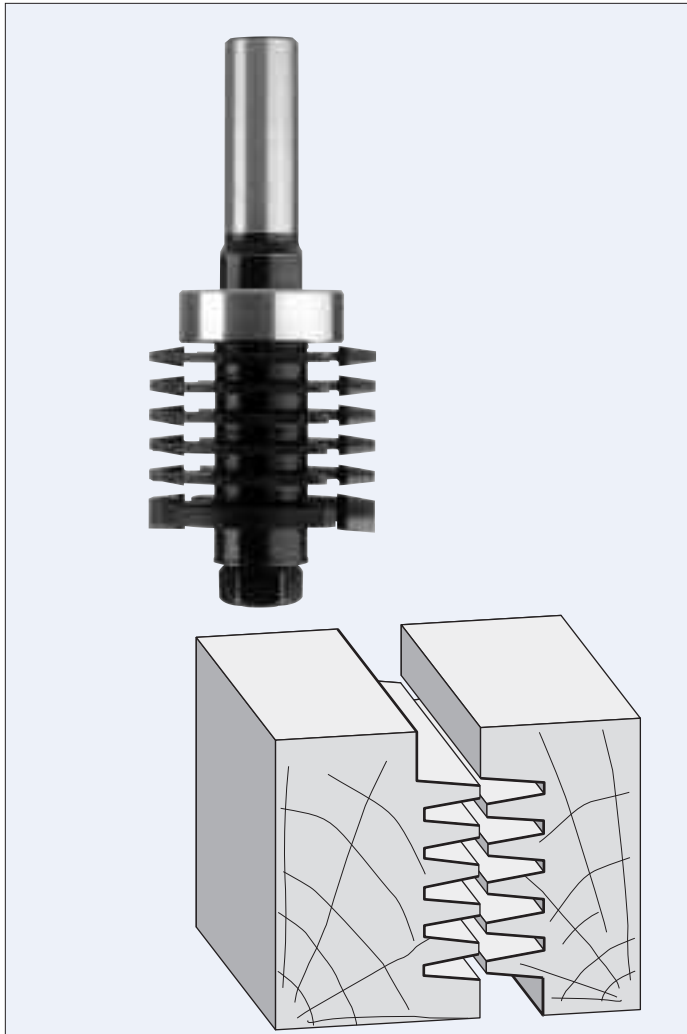


PART NO.	SPINDLE DIAM.(D)	SHANK DIAM.(d)	LENGTH (L1)	OVERALL LENGTH(L)
AR14	5/16"	1/4"	7/8"	2-3/8"
AR13	5/16"	3/8"	1-7/16"	3"
AR12	5/16"	1/2"	1"	2-3/8"
AR11	5/16"	1/2"	1-3/8"	3"
AR20	5/16"	1/2"	2-1/8"	3-3/4"
AR21	5/16"	1/2"	1-1/2"	3-1/8"
AR22	5/16"	1/2"	2-5/8"	4-1/4"
AR23	5/16"	1/2"	1-3/4"	3-5/16"

For Additional Replacement Parts
see pages F88 to F90

R4160

FINGER JOINT ROUTER CUTTER SET



PART NO.	CUTTING DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	NO. OF TEETH
R4160	1-9/16"	1-3/8"	1/2"	2

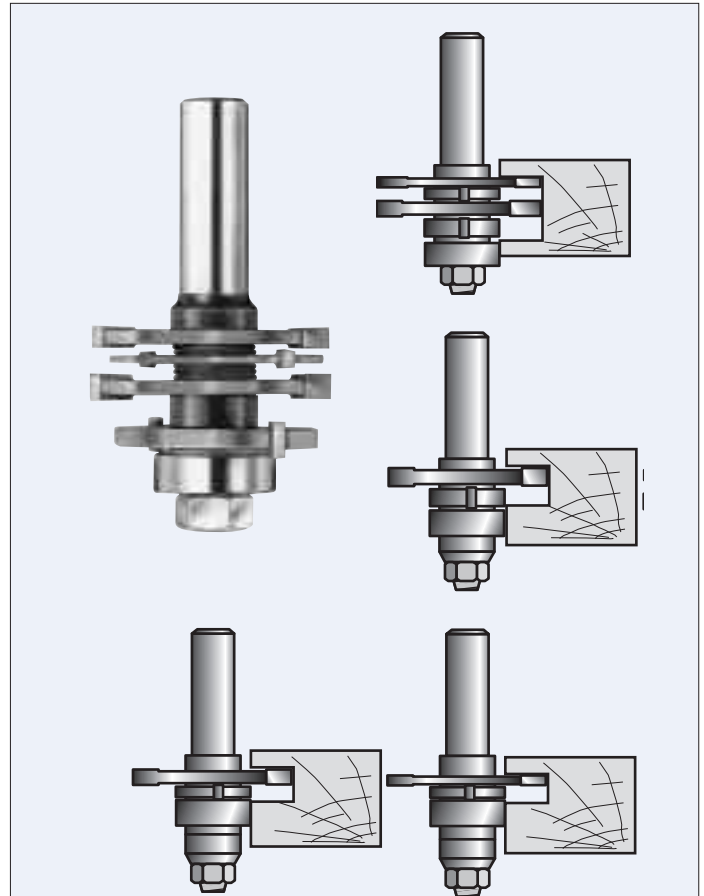
- Cutter assembly allows you to cut from one-finger to five-fingers in one pass and above five-fingers in multiple passes
- Both cuts are performed with same router setting. Simply turn over the counter-cut for a perfect fit (see diagram)
- Cutters feature European style "Chip Breakers" allowing for a safer cut

STANDARD SET CONSISTS OF:

Arbor with nut (1 piece)	AR20
Ball bearing (1 piece)	B6-3
Finger joint cutter (5 pieces)	R4160-1
Straight cutter (1 piece)	R4160-2
Spacer 3.4mm (6 pieces)	WF612
Washer 1.0mm (2 pieces)	WF608
Shim 0.5mm (1 piece)	WF606
Shim 0.1mm (10 pieces)	WF604

R4162

MULTI PURPOSE SLOTING CUTTER SET



PART NO.	CUTTING DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	NO. OF TEETH
R4162	1-7/8"	1/8" to 23/32"	1/2"	2

Complete Set

- Multi-purpose cutter set with four cutters and bearing guide enables you to cut grooves and dados from 1/8" to 23/32" wide, in increments of 0.1mm (0.004")
- Tongue and groove can also be achieved with proper set-up

STANDARD SET CONSISTS OF:

FOUR SINGLE CUTTERS MARKED:

A - width 1/8" (3.2mm)	R3903
B - width 5/32" (4.0mm)	R3903-1
C - width 3/16" (4.8mm)	R3903-2
D - width 1/4" (6.35mm)	R3904
Arbor with nut (1 piece)	AR11
Ball bearing	B5

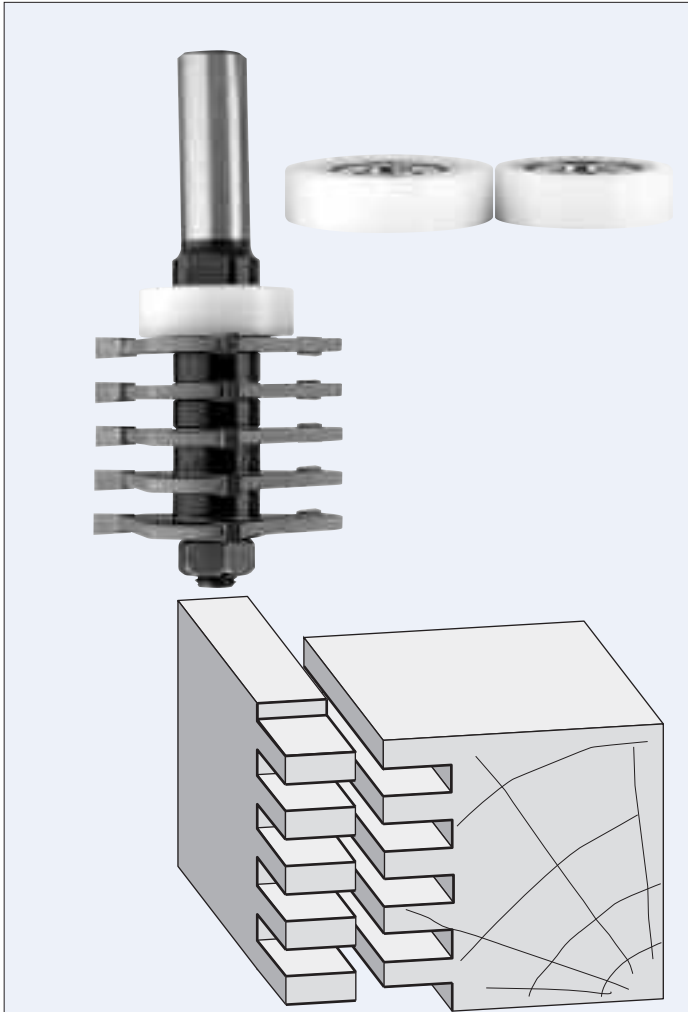
SPACERS, WASHERS AND SHIMS:

Spacer 6.0mm (3 pieces)	WF618
Spacer 1.0mm (5 pieces)	WF608
Shim 0.5mm (4 pieces)	WF606
Shim 0.1mm (10 pieces)	WF604

All washers and shims are 5/8" diam. x 5/16" bore.
A full 3/4" cut can be achieved using one additional cutter 5/32" width (cutter B) R3903-1 (sold separately)

R4164

"BOX JOINT" SLOTTING CUTTER SET THREE WINGS



PART NO.	CUTTING DIAM.	GROOVE WIDTH	SHANK DIAM.	NO. OF TEETH
R4164 Complete Set	1-7/8"	5/32"	1/2"	3

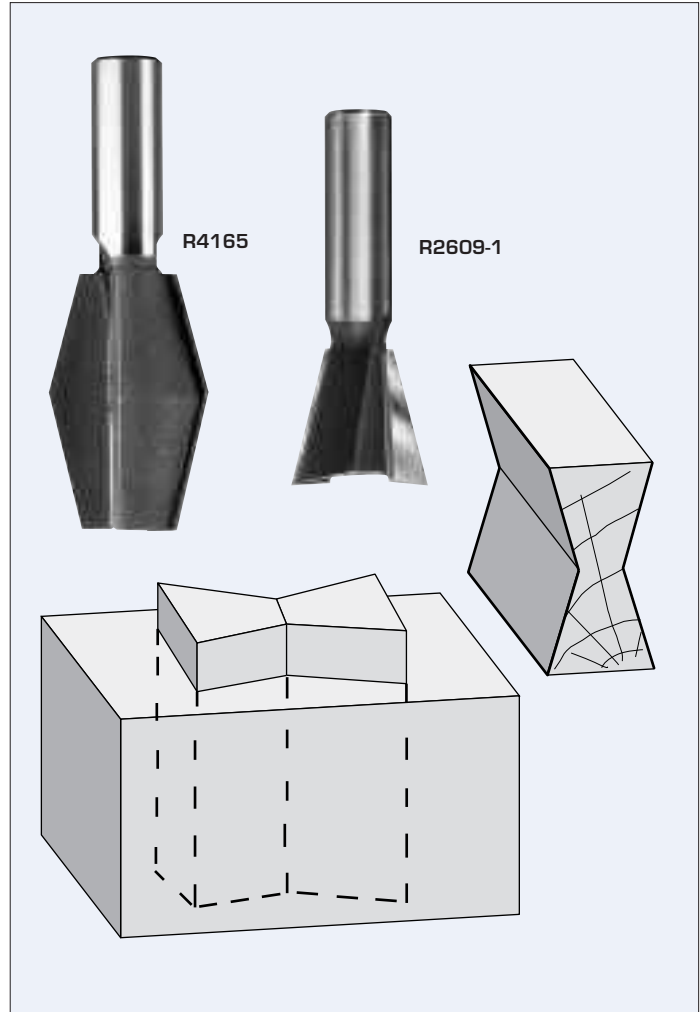
- New "Box Joint" cutter set is ideally suited for producing instrument cases, jewelry boxes, drawers, etc.
- Maximum material width 1-9/16"
- Three ball bearing guides offer alternative cutting depths
- Each set is supplied with an instruction sheet

STANDARD SET CONSISTS OF:

Cutters (5 pieces)	R4005-1
Arbor and nut (1 piece)	AR20
Washer (1 piece)	WR59
Spacer 5.5mm (4 pieces)	WF616
Spacer 1.0mm (1 piece)	WF608
Shim 0.5mm (1 piece)	WF606
Super glide bearing 28mm (1 piece)	B28
Super glide bearing 29mm (1 piece)	B32
Super glide bearing 34mm (1 piece)	B34

R4165

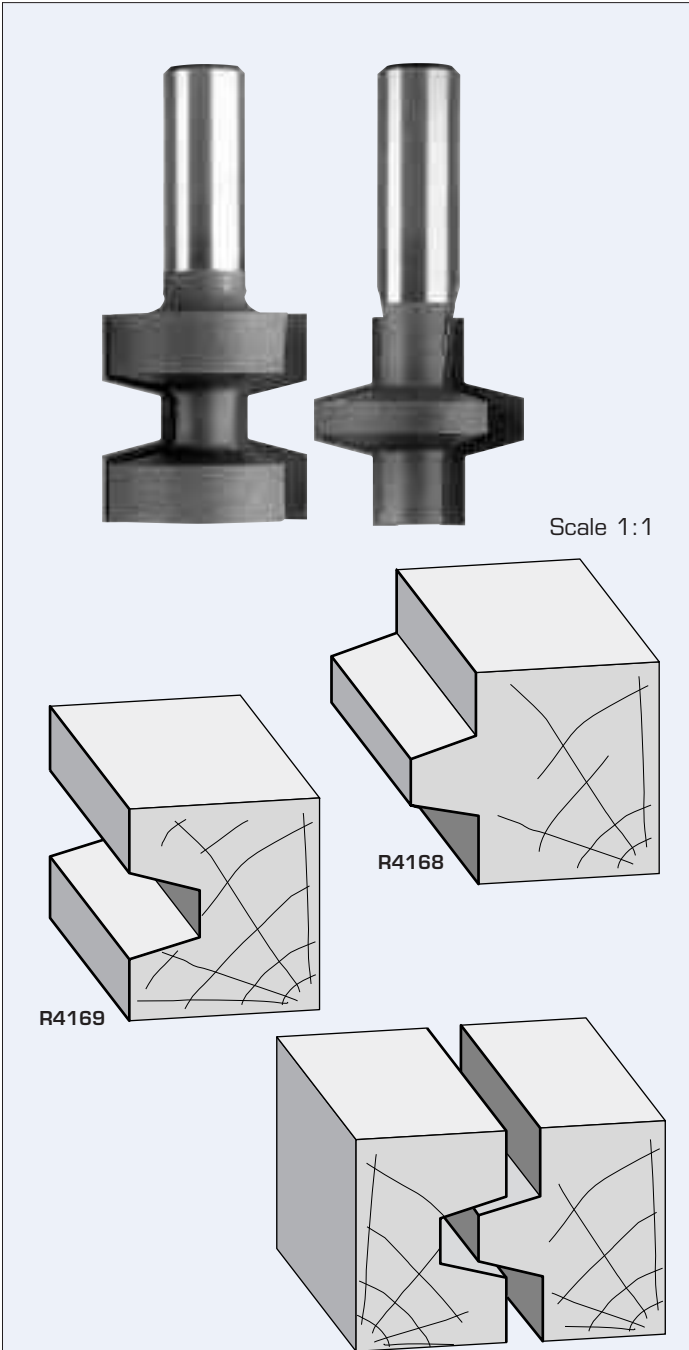
SPLINE GLUE JOINT BITS TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	DEGREE EA. SIDE	SHANK DIAM.	OVERALL LENGTH
R4165(A)	1-7/64"	1-13/16"	14°	1/2"	3-5/16"
R2609-1	7/8"	7/8"	14°	1/2"	2-5/8"

- (A) Above bit can be used with other Dovetail bits R2602, R2606, R2608-1, R2610 (page F15)

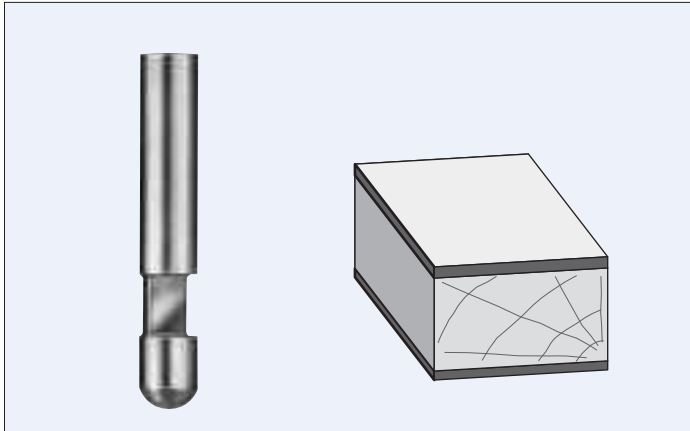
**R4167 BEVEL GLUE JOINT BITS
TWO FLUTES**



Scale 1:1

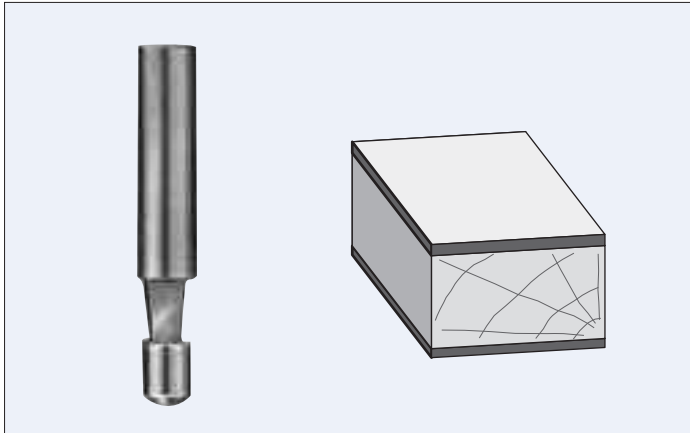
PART NO.	CUTTING DIAM.	CUTTING LENGTH	DEGREE EA. SIDE	SHANK DIAM.	OVERALL LENGTH
R4167	Complete set (2-Bits)				
R4168	1-1/4"	1-1/4"	15°	1/2"	2-3/4"
R4169	1-1/4"	1-1/4"	15°	1/2"	2-3/4"

**R5000 FLUSH TRIMMER
SOLID CARBIDE**

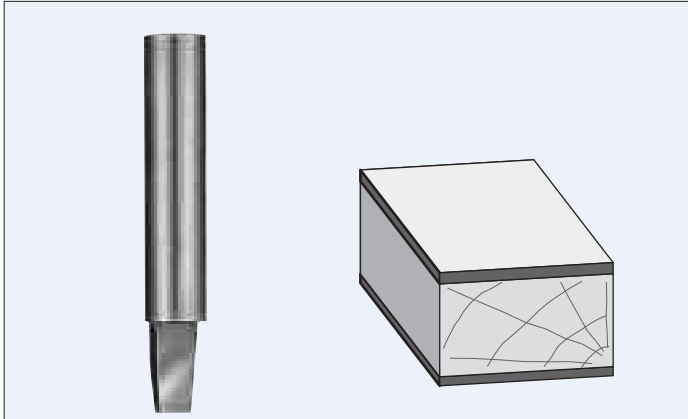


PART NO.	CUTTING EDGE	SHANK DIAM.	OVERALL LENGTH	TYPE OF CUT
R5000	3/8"	1/4"	1-1/2"	Flush
R5000-1	1/4"	1/4"	1-1/2"	Flush

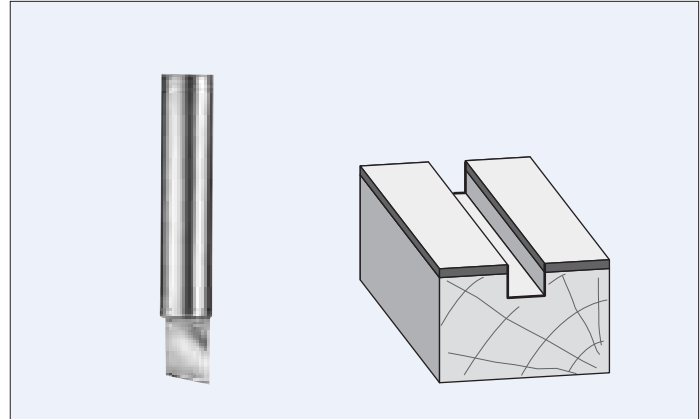
**R5001 BEVEL TRIMMER 1/4" CUTTING
EDGE SOLID CARBIDE**



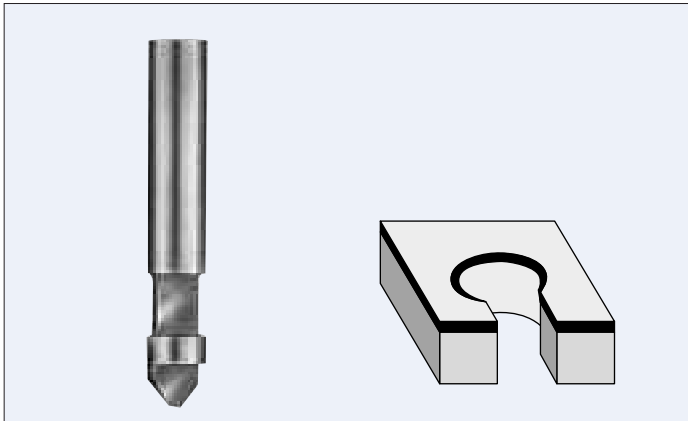
PART NO.	SHANK DIAM.	OVERALL LENGTH	DEGREE OF BEVEL
R5001	1/4"	1-1/2"	7°

R5002
**FLUSH & BEVEL TRIMMER
3/8" CUTTING EDGE SOLID CARBIDE**


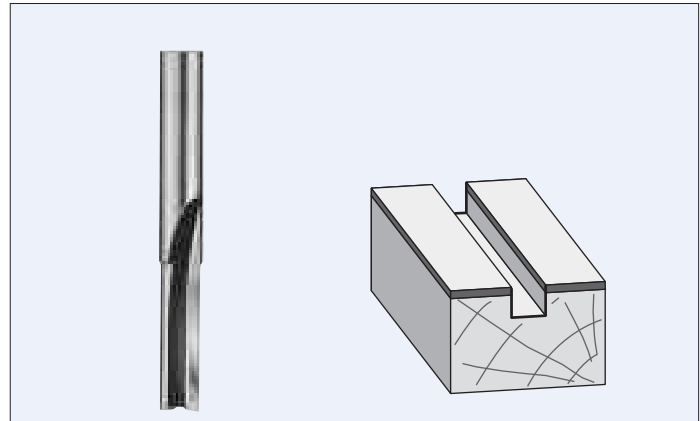
PART NO.	SHANK DIAM.	OVERALL LENGTH	DEGREE OF BEVEL
R5002	1/4"	1-1/2"	7°

R5004
**RIP & SLOTTING BITS
3/8" CUTTING EDGE SOLID CARBIDE**


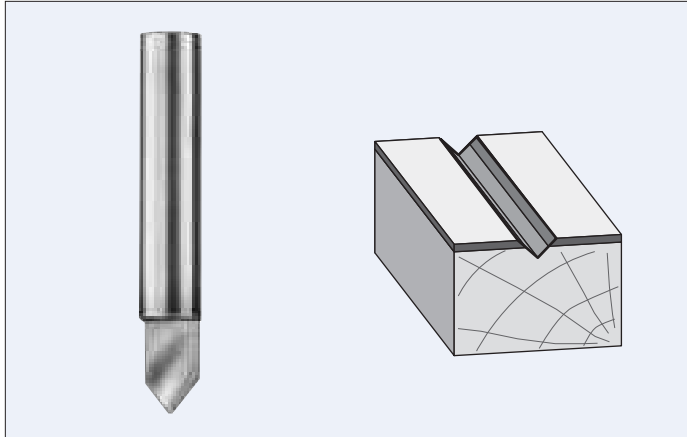
PART NO.	SHANK DIAM.	OVERALL LENGTH
R5004	1/4"	1-1/2"

R5003
**FLUSH TRIMMER WITH
PLUNGE POINT SOLID CARBIDE**


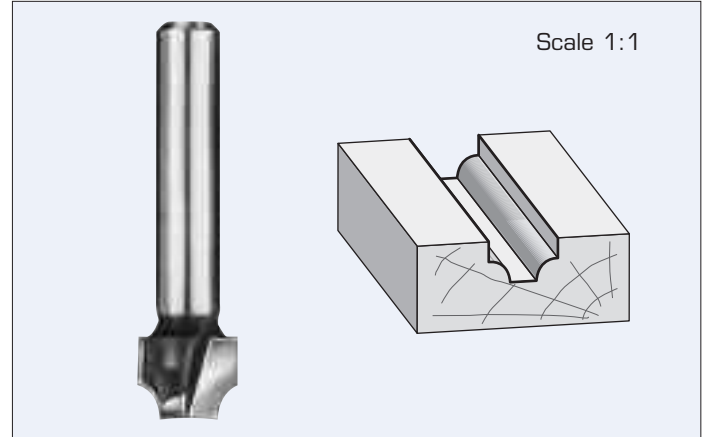
PART NO.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R5003	1/4"	1/4"	1-1/2"
R5003-1	3/8"	1/4"	1-1/2"

R6001
**FLAT BOTTOM VEINING BITS
SOLID CARBIDE TWO FLUTES**


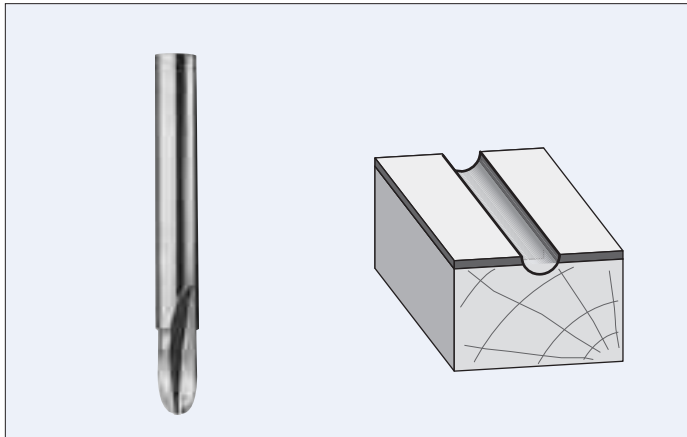
PART NO.	WIDTH OF CUT	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
R6001	1/8"	1/4"	1/4"	2"
R6002	3/16"	3/8"	1/4"	2"
R6003	1/4"	1/2"	1/4"	2"

R6005
**"V" GROOVING VEINING BITS
SOLID CARBIDE 90° INCL. ANGLE**


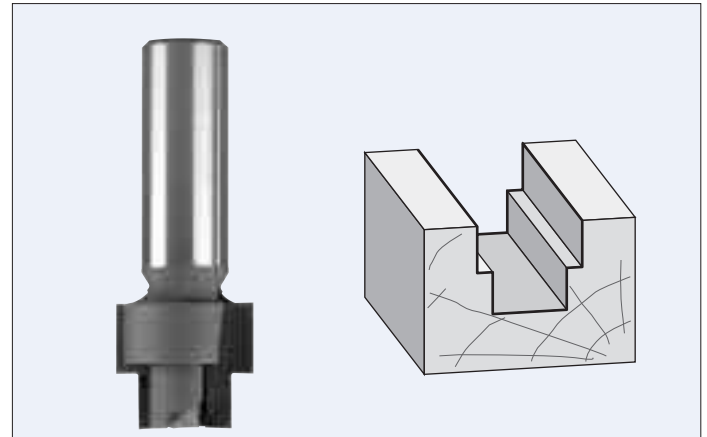
PART NO.	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
R6005	1/4"	1/4"	1-1/2"

FRB01
**BEADING BIT
TWO FLUTES**


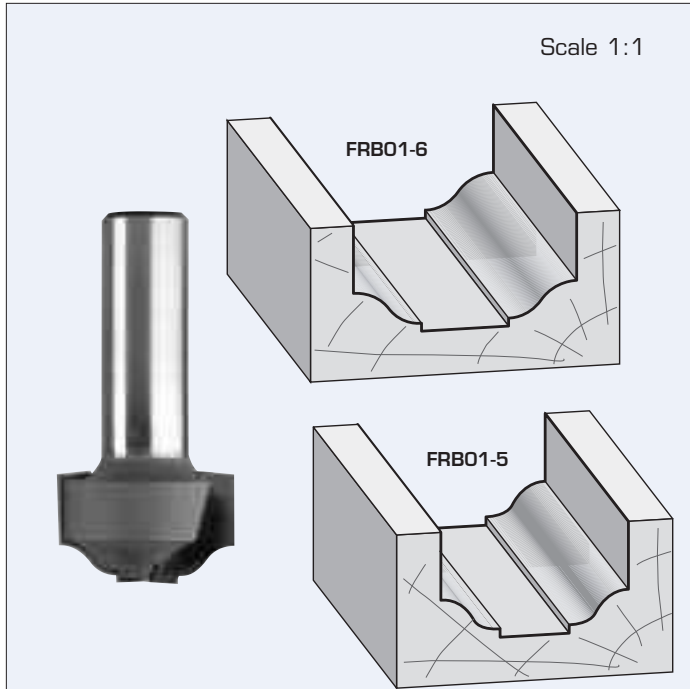
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB01	3/8"	1/8"	5/16"	1/4"

R6007
**ROUND BOTTOM VEINING BITS
SOLID CARBIDE TWO FLUTES**


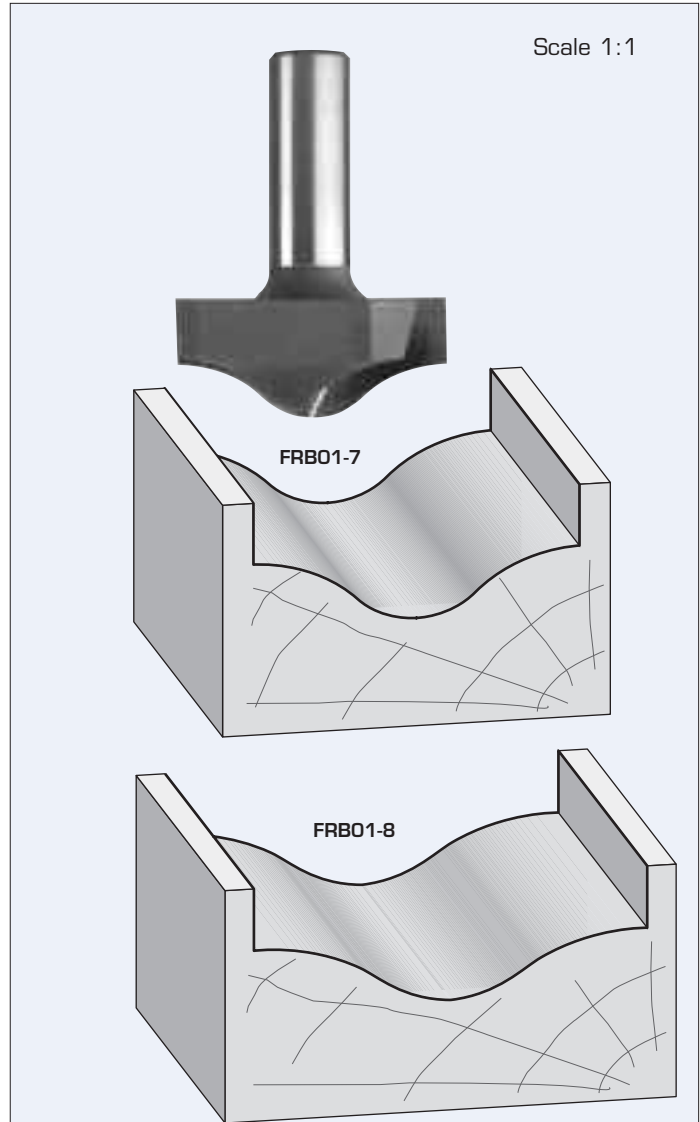
PART NO.	RADIUS	WIDTH OF CUT	SHANK DIAM.	OVERALL LENGTH
R6007	1/16"	1/8"	1/4"	2"
R6008	3/32"	3/16"	1/4"	2"
R6009	1/8"	1/4"	1/4"	2"

FRB01-2
**STEPPED RABBETING BITS
TWO FLUTES**


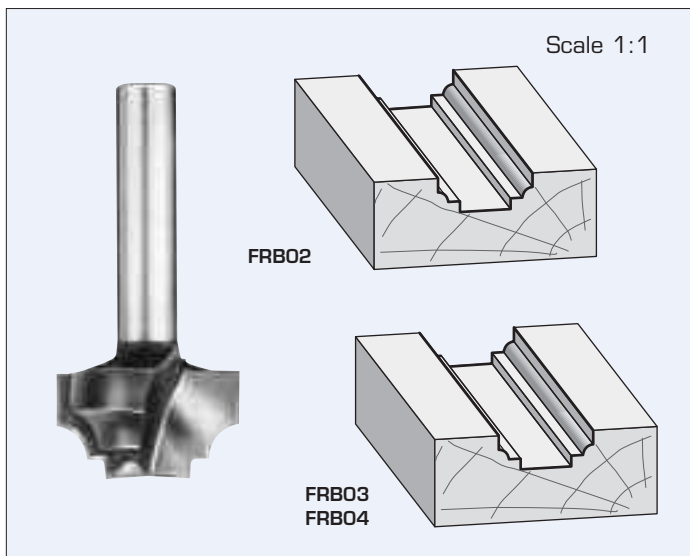
PART NO.	LARGE DIAM.	DEPTH OF CUT	SMALL DIAM.	DEPTH OF CUT	SHANK DIAM.
FRB01-2	3/4"	1/2"	3/8"	1/4"	1/4"
FRB01-3	3/4"	3/8"	1/2"	1/4"	1/4"
FRB01-4	7/8"	5/16"	9/16"	3/8"	1/2"

FRB01-5
**PLUNGE TYPE
OGEE BITS**


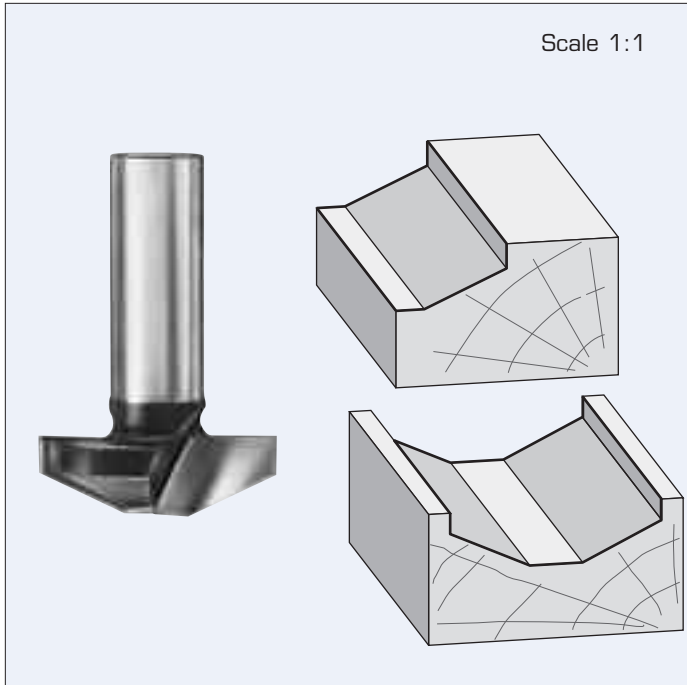
PART NO.	LARGE DIAM.	SMALL DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB01-5	1"	3/8"	19/32"	1/2"	2-3/32"
FRB01-6	1-3/16"	15/32"	19/32"	1/2"	2-3/32"

FRB01-7
**ROUND AND OGEE
PLUNGE TYPE BITS**


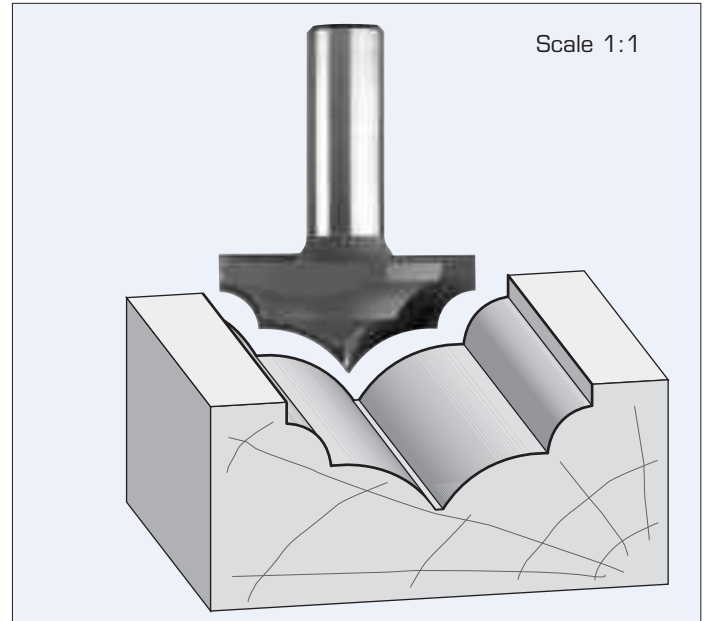
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB01-7	1-5/8"	23/32"	1/2"	2-13/64"
FRB01-8	1-31/32"	23/32"	1/2"	2-13/64"

FRB02
**TRADITIONAL
BITS**


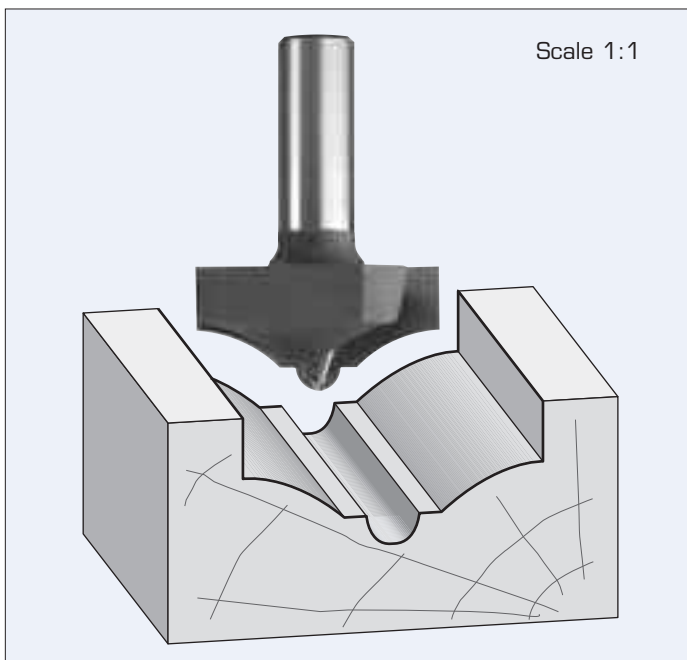
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB02	1/2"	3/64"	3/8"	1/4"
FRB03	3/4"	1/16"	7/16"	1/4"
FRB04	3/4"	1/16"	7/16"	1/2"

FRB05
**RAISED PANEL BIT
PLUNGE TYPE TWO FLUTES**


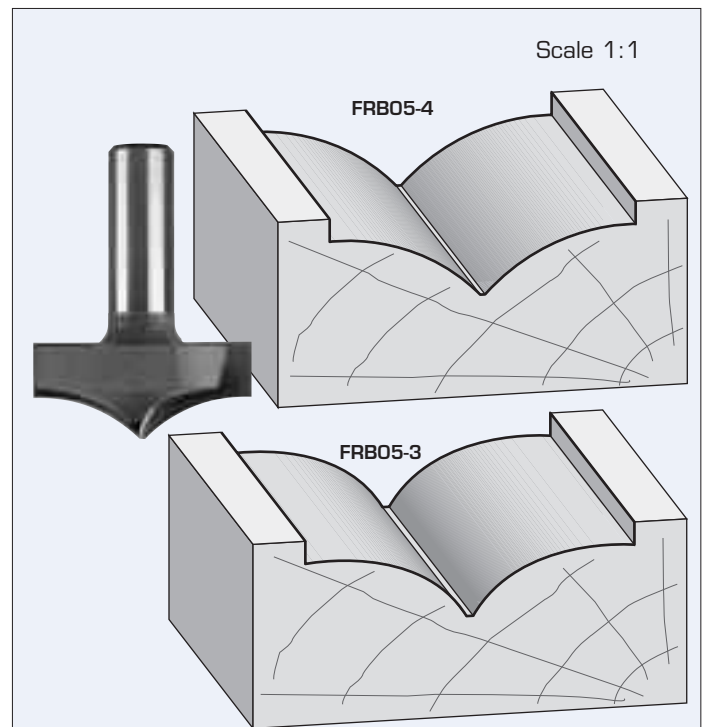
PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.	DEGREE BEVEL	OVERALL LENGTH
FRB05	1-1/8"	1/2"	1/2"	30°	2-3/4"

FRB05-2
**ROUNDING OVER
PLUNGE BITS**


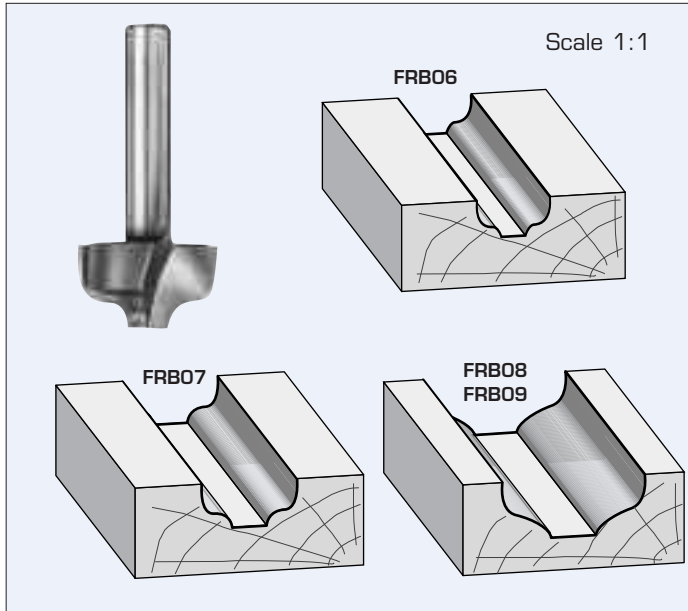
PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB05-2	1-5/8"	23/32"	1/2"	2-7/32"

FRB05-1
**ROUND AND OGEE
PLUNGE TYPE BITS**


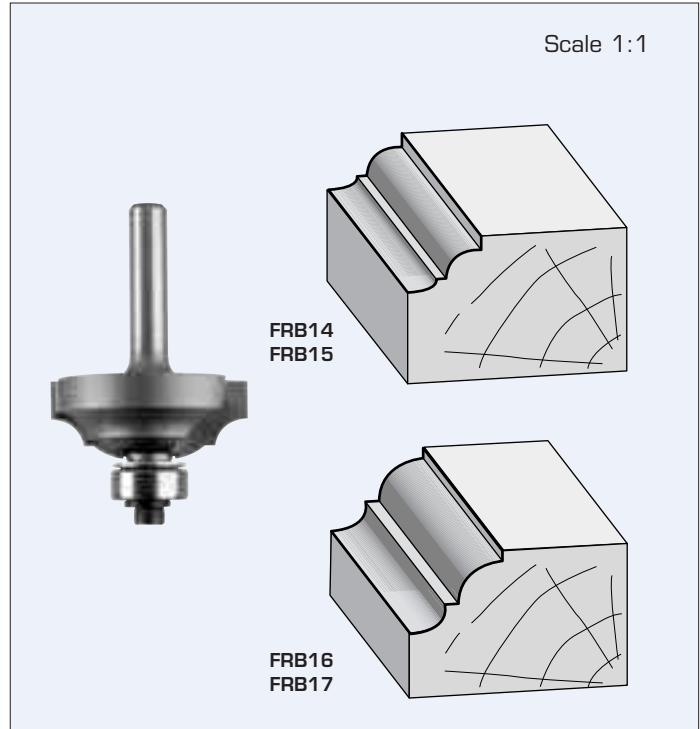
PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB05-1	1-9/16"	25/32"	1/2"	2-9/32"

FRB05-3
**ROUNDING OVER
PLUNGE BITS**


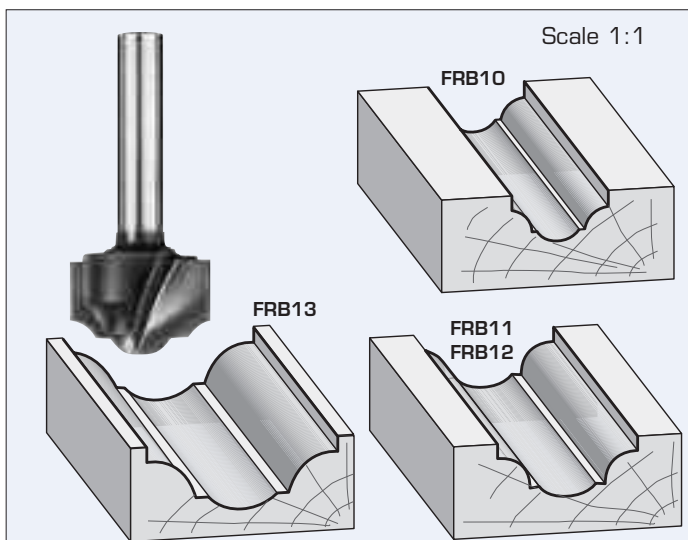
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB05-3	1-3/4"	23/32"	23/32"	1/2"	2-7/32"
FRB05-4	1-5/8"	1"	23/32"	1/2"	2-7/32"

FRB06
**OGEE BITS
TWO FLUTES**


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB06	3/8"	1/16"	5/16"	1/4"
FRB07	1/2"	5/64"	3/8"	1/4"
FRB08	3/4"	1/8"	7/16"	1/4"
FRB09	3/4"	1/8"	7/16"	1/2"

FRB14
**CLASSICAL BITS
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.
FRB14	1-1/4"	1/2"	1/4"
FRB15	1-1/4"	1/2"	1/2"
FRB16	1-1/2"	5/8"	1/4"
FRB17	1-1/2"	5/8"	1/2"

FRB10
**CLASSICAL BITS
TWO FLUTES**


PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.
FRB10	1/2"	3/8"	1/4"
FRB11	3/4"	1/2"	1/4"
FRB12	3/4"	1/2"	1/2"
FRB13	1"	5/8"	1/2"

Replacement Parts

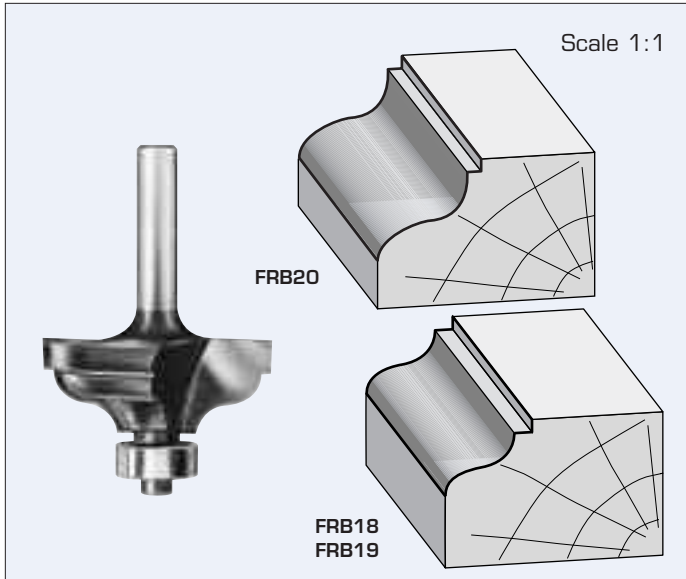
Ball Bearing B3

Spring Washer WFS506

Washer WR58

Screw WNC538

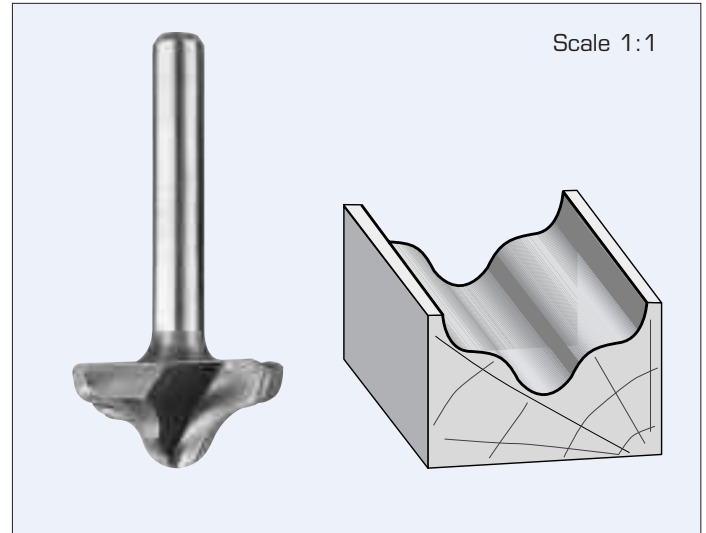
FRB18 OGEE BITS
WITH BALL BEARING GUIDE



PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB18	1-3/8"	5/32"	9/16"	1/4"
FRB19	1-3/8"	5/32"	9/16"	1/2"
FRB20	1-5/8"	1/4"	3/4"	1/2"

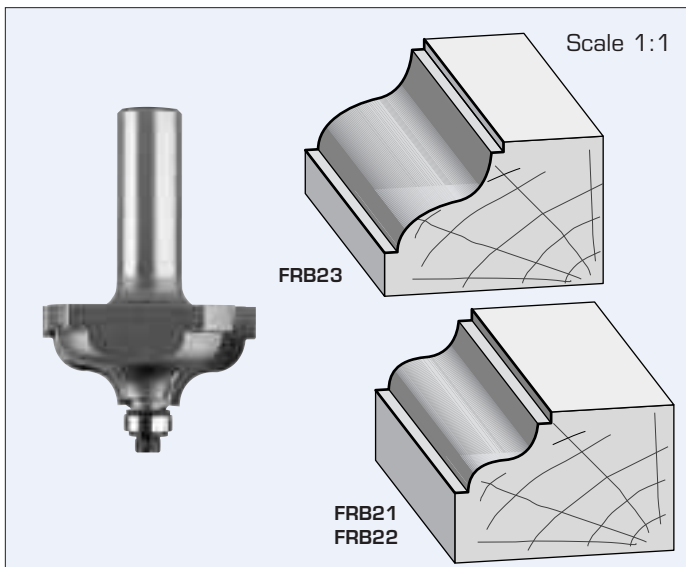
Replacement Parts Ball Bearing B3
Spring Washer WFS506 Washer WR58 Screw WNC538

FRB23-1 OGEE BITS
PLUNGE TYPE



PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB23-1	1-1/16"	15/64"	7/16"	1/4"
FRB23-2	1-1/16"	15/64"	7/16"	1/2"

FRB21 OGEE BITS
WITH BALL BEARING GUIDE

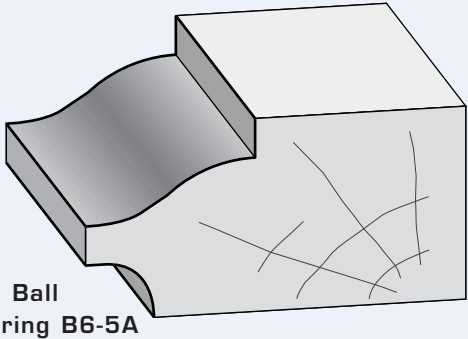
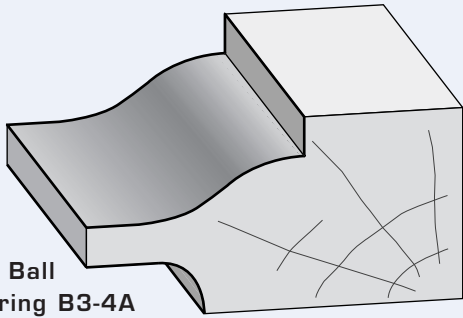


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB21	1-3/8"	5/32"	9/16"	1/4"
FRB22	1-3/8"	5/32"	9/16"	1/2"
FRB23	1-5/8"	1/4"	3/4"	1/2"

Replacement Parts Ball Bearing B2
Spring Washer WFS506 Washer WFS500 Screw WNC538

FRB23-5
**RAISED PANEL BIT
WITH BACK CUTTER**

Scale 1:1

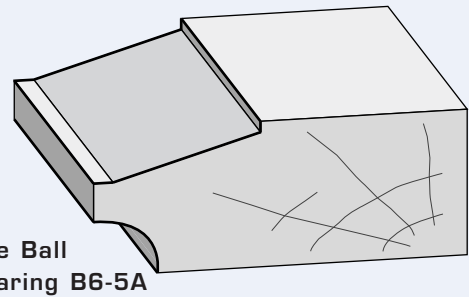
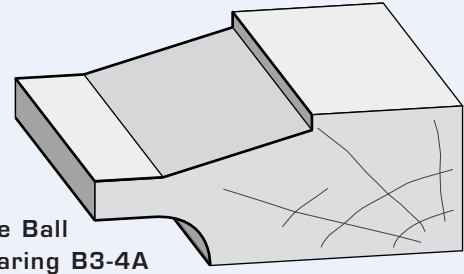


PART NO.	LARGE DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	OVERALL LENGTH
FRB23-5	3-3/8"	1-3/16"	1/2"	3-1/16"

Max. RPM 12,000

FRB23-6
**RAISED PANEL BIT
WITH BACK CUTTER**

Scale 1:1



PART NO.	LARGE DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	OVERALL LENGTH
FRB23-6	3-3/8"	1-1/16"	1/2"	2-15/16"

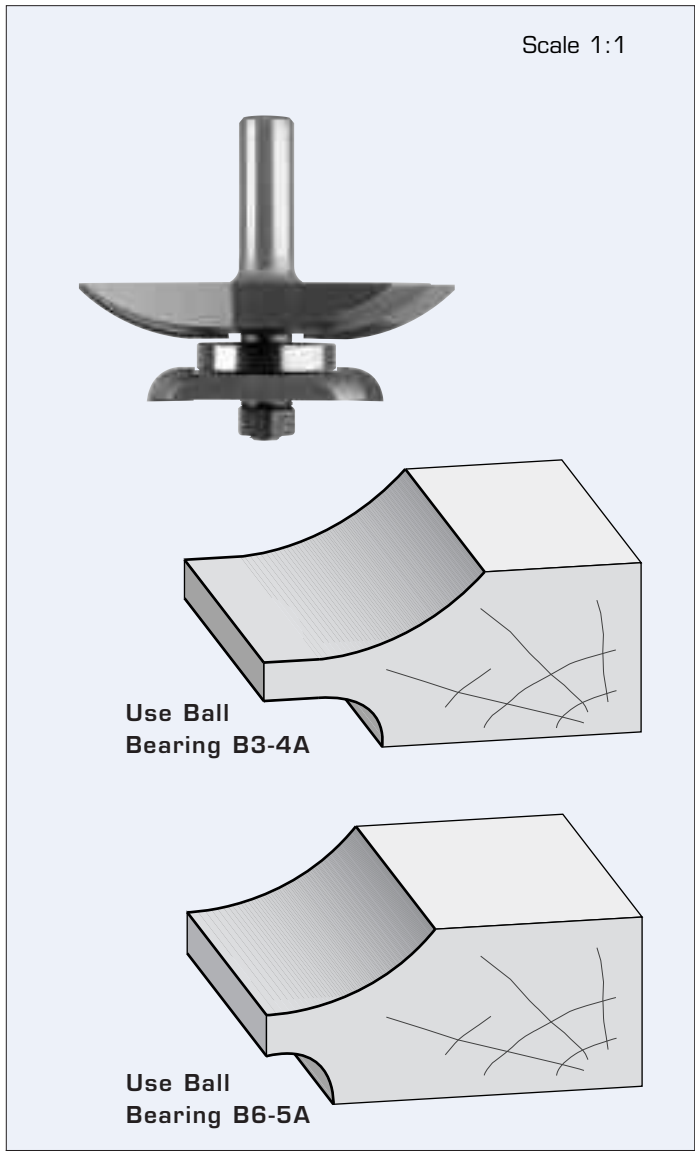
Max. RPM 12,000

STANDARD SET CONSISTS OF:

Raised Panel Bit	FRB23-5RP
Back Cutter	FRB23-5BC
Ball Bearing 16x8x5mm	B3-4A
Ball Bearing 1-1/4"x8mmx5mm	B6-5A
Washer 12x8x1.0mm	WF510
Shim 12x8x0.1mm (2 pieces)	WF501
Shim 12x8x0.2mm (2 pieces)	WF502
Shim 12x8x0.5mm (2 pieces)	WF505
Lock Washer	WFS510
Nut NF5/16	WNF516

STANDARD SET CONSISTS OF:

Raised Panel Bit	FRB23-6RP
Back Cutter	FRB23-5BC
Ball Bearing 16x8x5mm	B3-4A
Ball Bearing 1-1/4"x8mmx5mm	B6-5A
Washer 12x8x1.0mm	WF510
Shim 12x8x0.1mm (2 pieces)	WF501
Shim 12x8x0.2mm (2 pieces)	WF502
Shim 12x8x0.5mm (2 pieces)	WF505
Lock Washer	WFS510
Nut NF5/16	WNF516

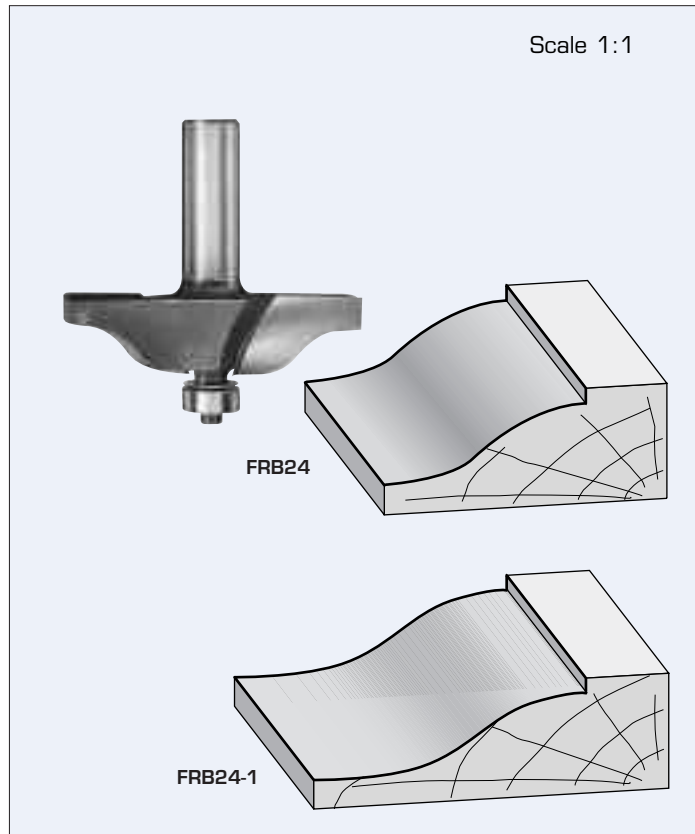
FRB23-7
RAISED PANEL BIT WITH BACK CUTTER


Scale 1:1

PART NO.	LARGE DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	OVERALL LENGTH
FRB23-7	3-3/8"	1-1/16"	1/2"	2-15/16"

Max. RPM 12,000
STANDARD SET CONSISTS OF:

- | | |
|-----------------------------|-----------|
| Raised Panel Bit | FRB23-7RP |
| Back Cutter | FRB23-5BC |
| Ball Bearing 16x8x5mm | B3-4A |
| Ball Bearing 1-1/4"x8mmx5mm | B6-5A |
| Washer 12x8x1.0mm | WF510 |
| Shim 12x8x0.1mm (2 pieces) | WF501 |
| Shim 12x8x0.2mm (2 pieces) | WF502 |
| Shim 12x8x0.5mm (2 pieces) | WF505 |
| Lock Washer | WFS510 |
| Nut NF5/16 | WNF516 |

FRB24
OGEE RAISED PANEL BIT WITH BALL BEARING GUIDE


Scale 1:1

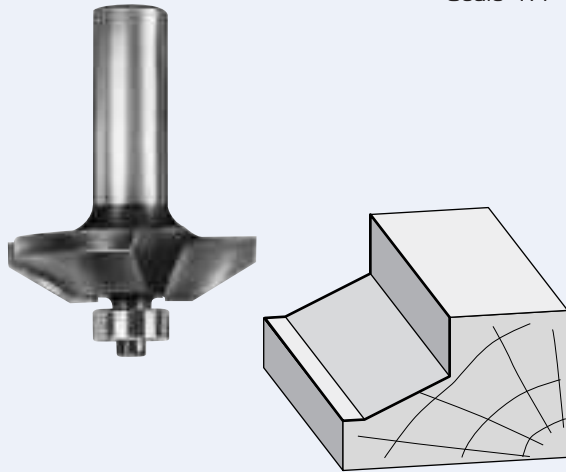
PART NO.	LARGE DIAM.	CARBIDE HEIGHT	SHANK DIAM.
FRB24	2-5/8	11/16"	1/2"
FRB24-1	3-3/8	5/8"	1/2"

Max. RPM 16,000
Replacement Parts

- | | |
|-----------------|----------------------|
| Ball Bearing B3 | Spring Washer WFS506 |
| Washer WR58 | Screw WNC538 |

FRB25
**RAISED PANEL BIT
TWO FLUTES**

Scale 1:1



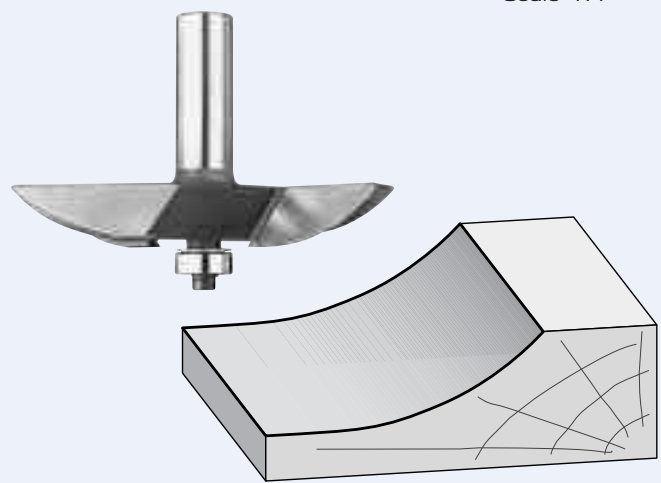
PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH	DEGREE BEVEL
FRB25	1-5/8"	1/2"	1/2"	2-1/2"	25°

Replacement Parts

 Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB25-2
**COVE RAISED
PANEL BIT**

Scale 1:1



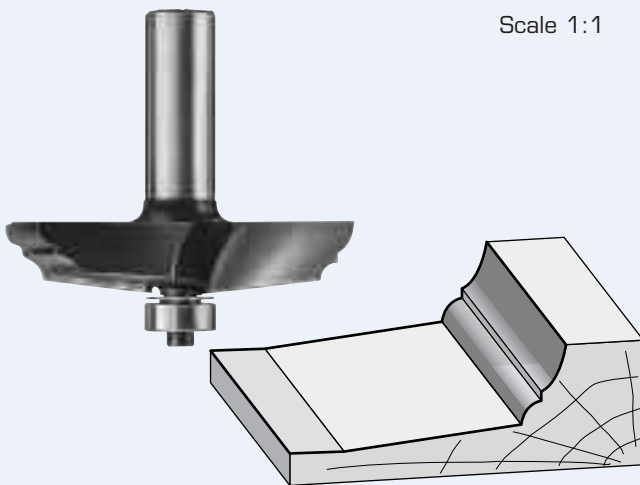
PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH	RADIUS
FRB25-2	3-3/8"	1/2"	1/2"	2-3/8"	1-9/16"

Max. RPM 16,000
Replacement Parts

 Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB25-1
**CLASSICAL RAISED
PANEL BIT**

Scale 1:1



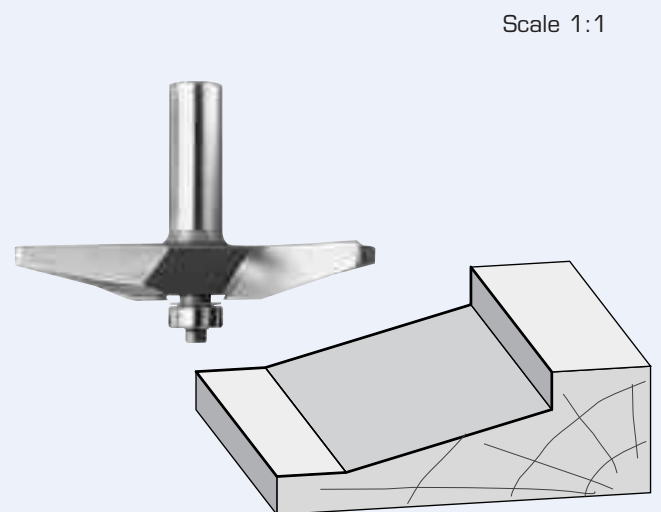
PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH	RADIUS
FRB25-1	2-1/2"	1/2"	1/2"	2-3/8"	1/4"

Replacement Parts

 Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB25-3
**PROVINCIAL RAISED
PANEL BIT**

Scale 1:1

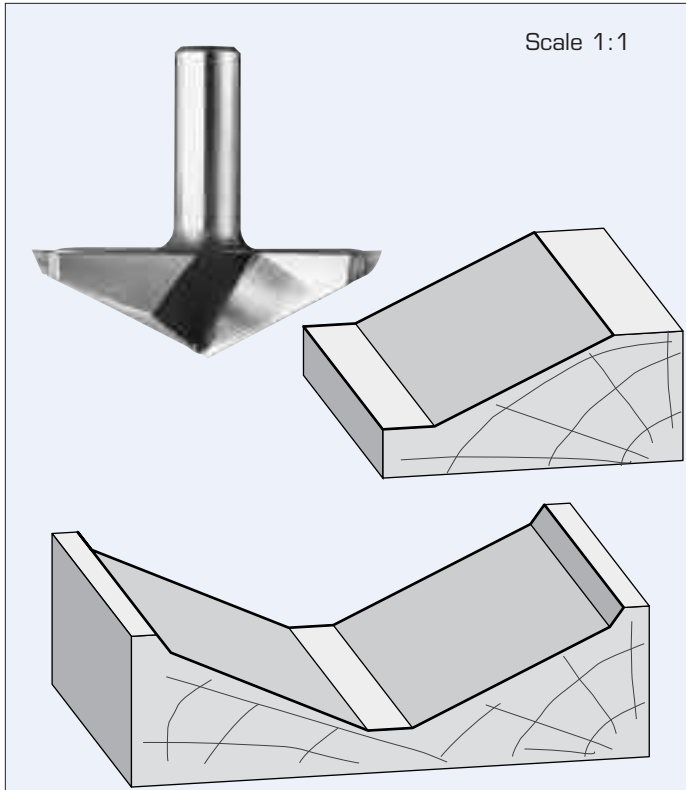


PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH	DEGREE BEVEL
FRB25-3	3-3/8"	1/2"	1/2"	2-3/8"	15°

Max. RPM 16,000
Replacement Parts

 Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

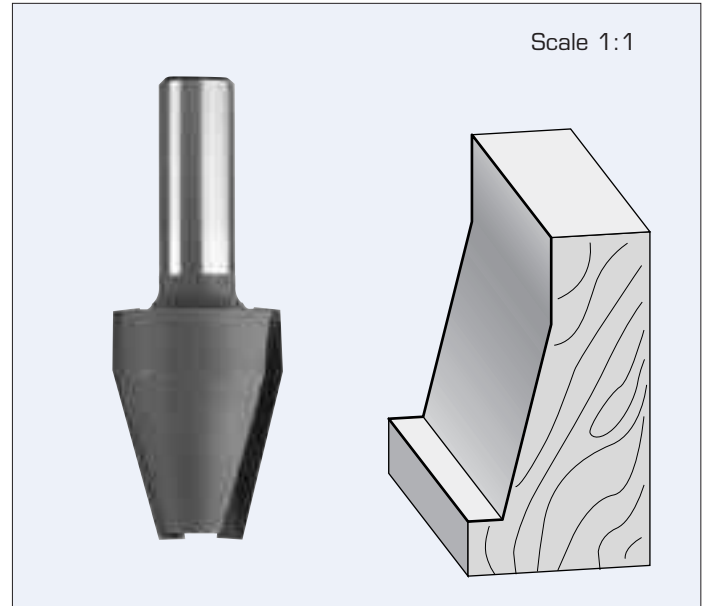
FRB25-4 PROVINCIAL RAISED
PANEL BIT TWO FLUTES



PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	DEGREE OF BEVEL	OVERALL LENGTH
FRB25-4	2-3/4"	3/4"	1/2"	25°	2-1/4"

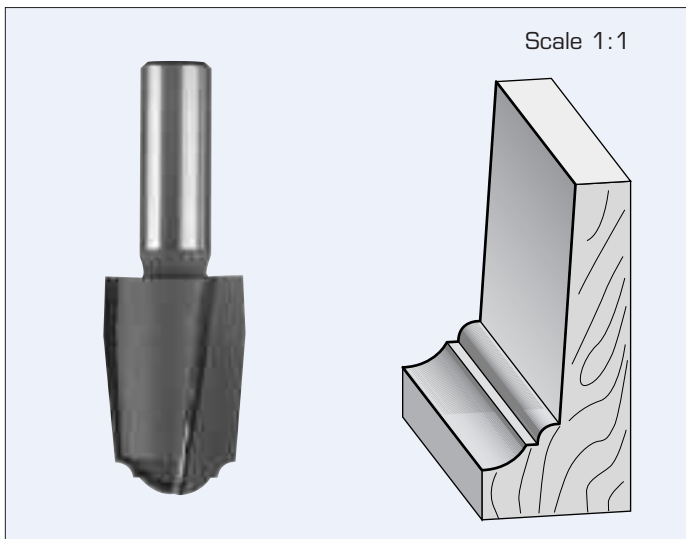
Max. RPM 18,000

FRB25-6 VERTICAL RAISED
PANEL BITS TWO FLUTES



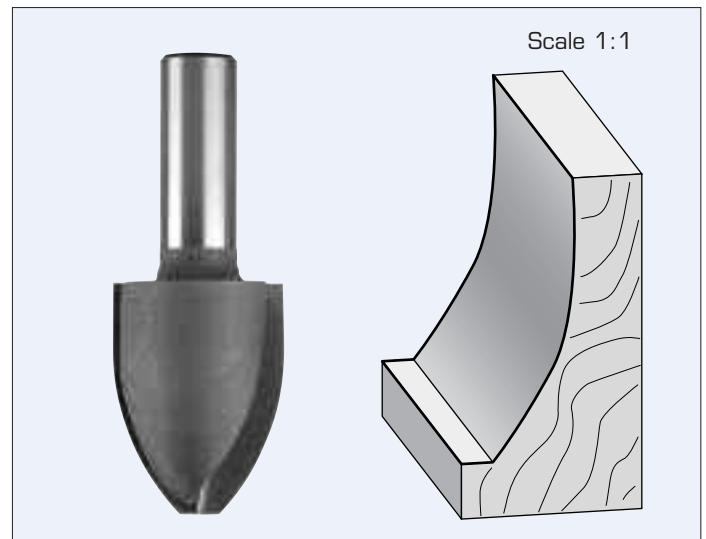
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB25-6	1-1/8"	1-1/2"	1/2"	2-7/8"

FRB25-5 VERTICAL RAISED PANEL BITS
TWO FLUTES



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB25-5	1"	1-1/2"	1/2"	2-7/8"

FRB25-7 VERTICAL RAISED PANEL BITS
TWO FLUTES

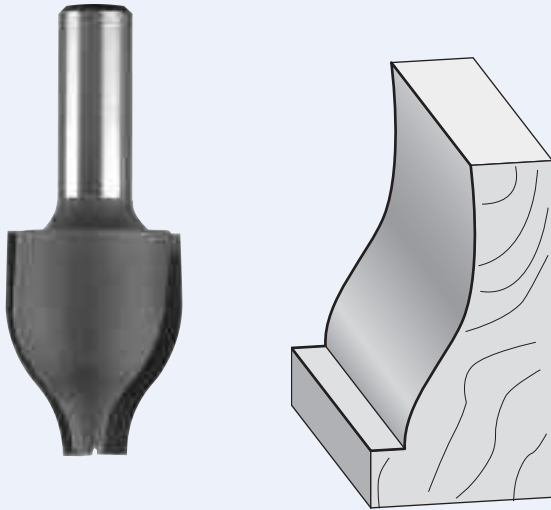


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB25-7	1-1/8"	1-1/2"	1/2"	2-7/8"

FRB25-8

**VERTICAL RAISED PANEL BITS
TWO FLUTES**

Scale 1:1



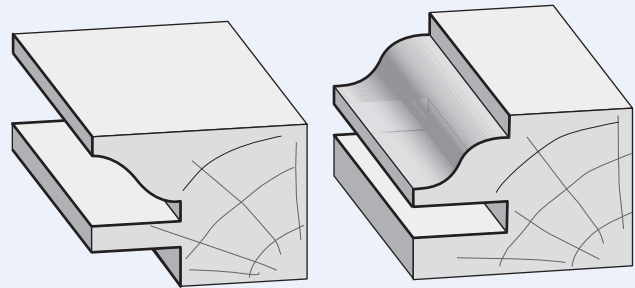
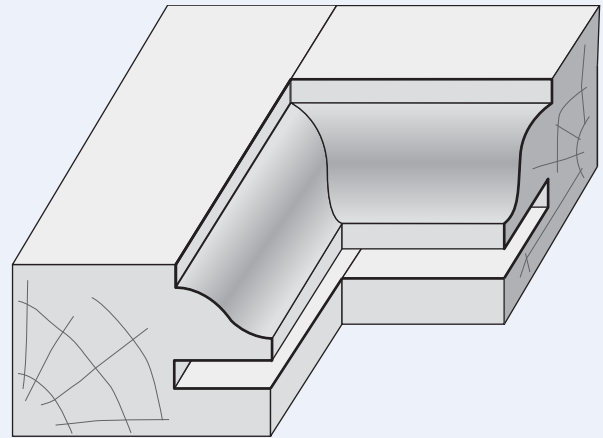
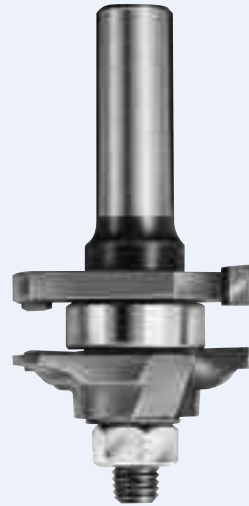
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB25-8	1-3/16"	1-1/2"	1/2"	2-7/8"



FRB27

**STILE AND RAIL
REVERSIBLE ONE PIECE SET**

Scale 1:1



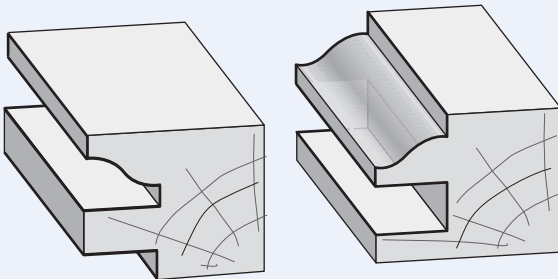
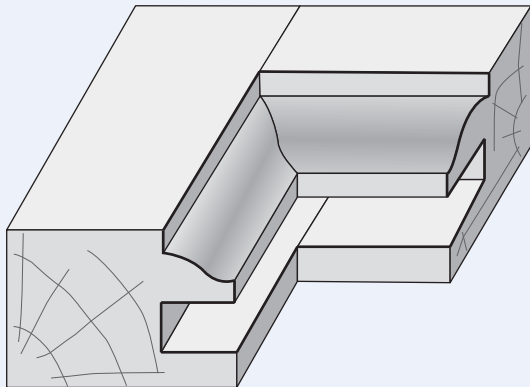
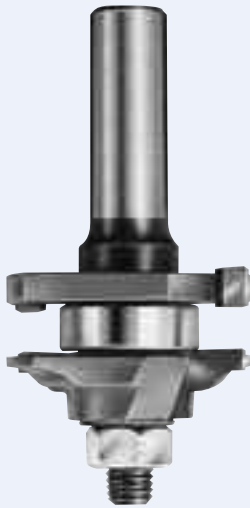
PART NO.	LARGE DIAM.	WOOD THICKNESS	OVERALL LENGTH	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB27	1-13/16"	3/4" to 7/8"	3"	1/2"	5/32"	1/2"

Replacement Parts

Profile cutter only	FRB27P
Groover only	FRB27G
Arbor and nut	AR11
Nut only	WNF516
Ball Bearing	B5
Washer	WF608
Spacer 0.05mm	WF600
Spacer 0.01mm	WF604

FRB28
**STILE AND RAIL
REVERSIBLE ONE PIECE SET**

Scale 1:1



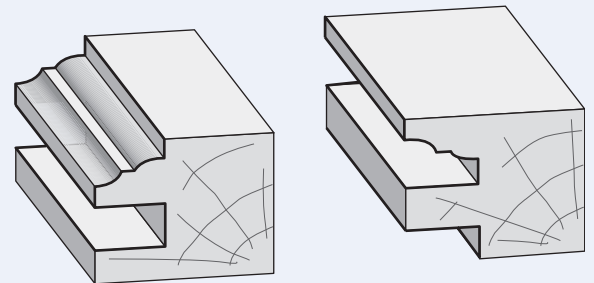
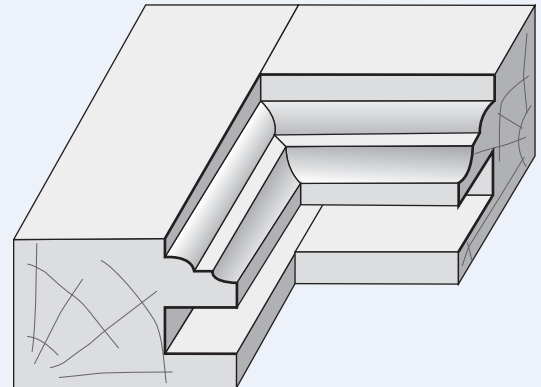
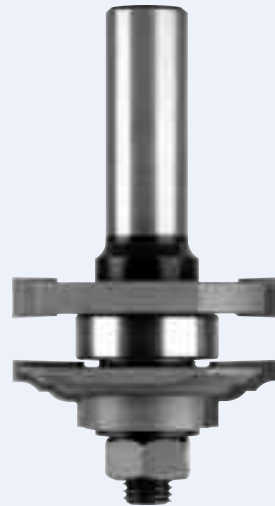
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB28	1-5/8"	3/4" to 7/8"	1/2"	1/4"	3/8"

Replacement Parts

Profile cutter only	FRB28P
Groover only	FRB28G
Arbor and nut	AR11
Nut only	WNF516
Ball Bearing	B5
Washer	WF608
Spacer 0.05mm	WF600
Spacer 0.01mm	WF604

FRB30
**STILE AND RAIL
REVERSIBLE ONE PIECE SET**

Scale 1:1



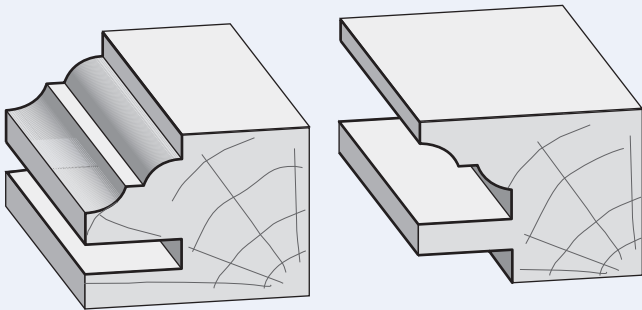
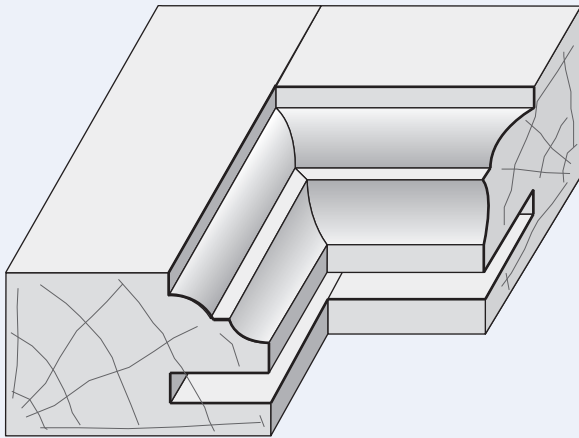
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB30	1-5/8"	3/4" to 7/8"	1/2"	1/4"	3/8"

Replacement Parts

Profile cutter only	FRB30P
Groover only	FRB28G
Arbor and nut	AR11
Nut only	WNF516
Ball Bearing	B5
Washer	WF608
Spacer 0.05mm	WF600
Spacer 0.01mm	WF604

FRB31
**STILE AND RAIL
REVERSIBLE ONE PIECE SET**

Scale 1:1



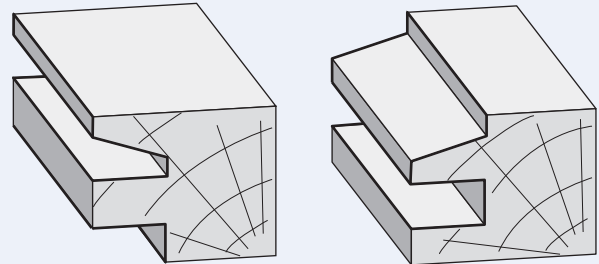
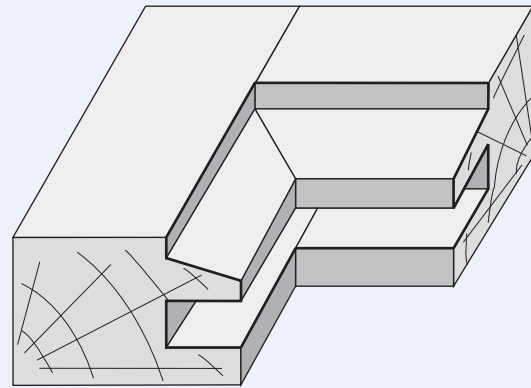
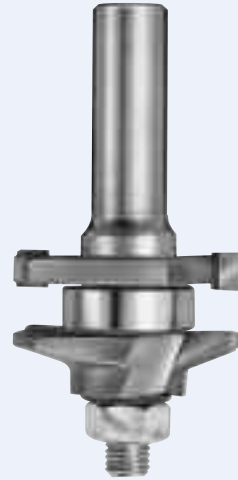
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB31	1-13/16"	3/4" to 7/8"	1/2"	5/32"	1/2"

Replacement Parts

Profile cutter only	FRB31P
Groover only	FRB27G
Arbor and nut	AR11
Nut only	WNF516
Ball Bearing	B5
Washer	WF608
Spacer 0.05mm	WF600
Spacer 0.01mm	WF604

FRB31-1
**STILE AND RAIL
REVERSIBLE ONE PIECE SET**

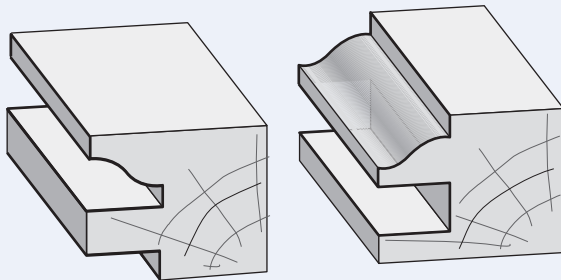
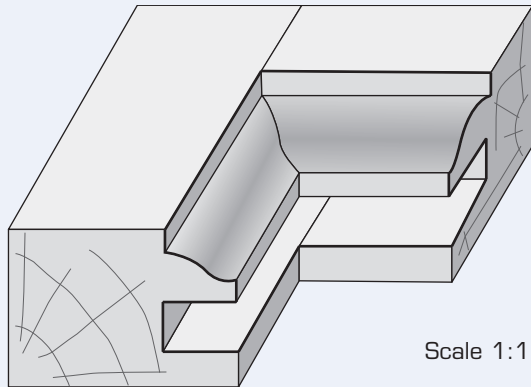
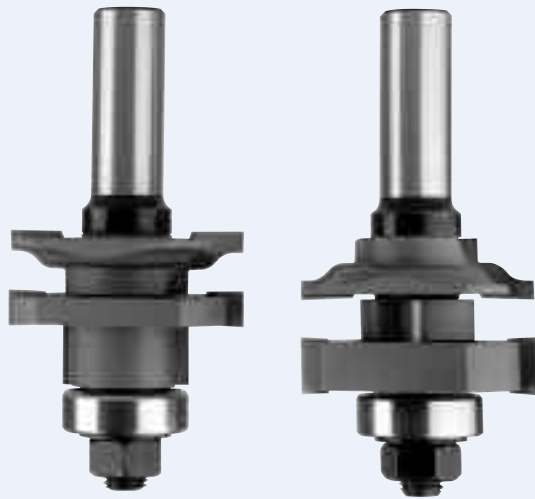
Scale 1:1



PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB31-1	1-5/8"	3/4" to 7/8"	1/2"	1/4"	3/8"

Replacement Parts

Profile cutter only	FRB31-1P
Groover only	FRB28G
Arbor and nut	AR11
Nut only	WNF516
Ball Bearing	B5
Washer	WF608
Spacer 0.05mm	WF600
Spacer 0.01mm	WF604

FRB31-2
**STILE AND RAIL
TWO PIECE SET**


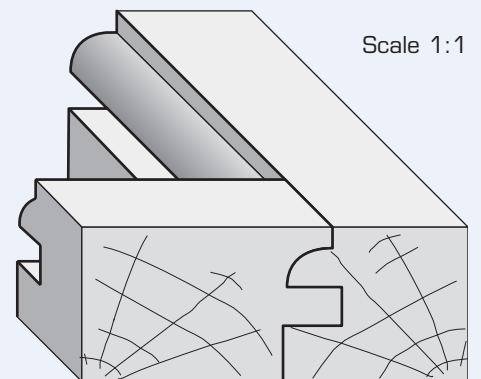
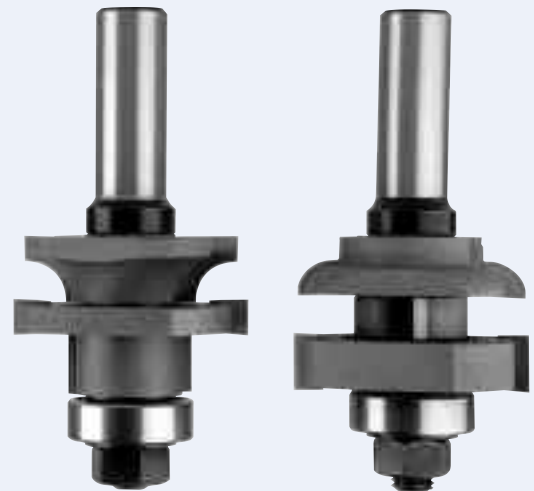
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB31-2	1-5/8"	3/4" to 1"	1/2"	1/4"	3/8"

Replacement Parts for Stile

Profile cutter	FRB28P	Spacers 1.0mm (2pcs.)	WF608
Groover	FRB28G	Shims 0.1mm (3 pcs.)	WF604
Straight cutter	FRB31-2C	Shim 0.05mm (1pc.)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

Replacement Parts for Rail

Profile cutter	FRB31-2PR	Spacers 1.0mm (4pcs.)	WF608
Straight cutter	FRB31-2CR	Shims 0.1mm (2pcs.)	WF604
Rabbeting cutter	FRB31-2R	Shims 0.05mm (2pcs.)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

FRB31-3
**STILE AND RAIL
TWO PIECE SET**


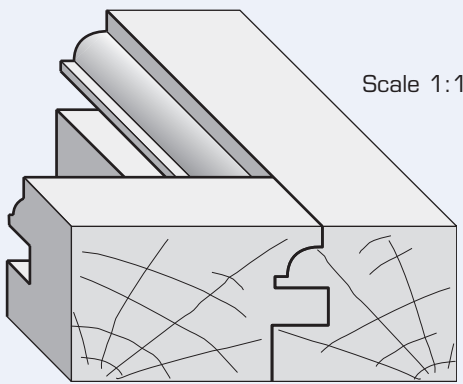
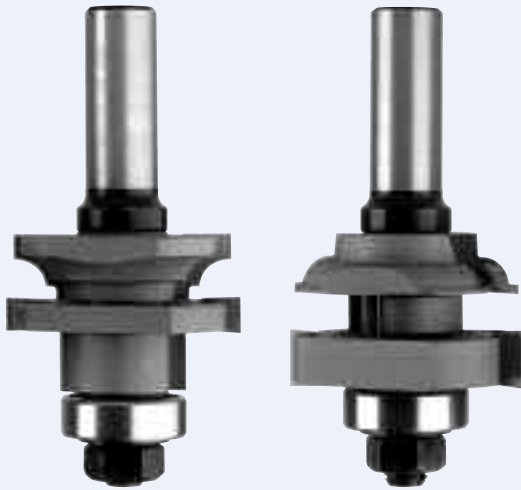
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB31-3	1-5/8"	3/4" to 1"	1/2"	1/4"	3/8"

Replacement Parts for Stile

Profile cutter	FRB31-3P	Spacers 1.0mm (2pcs.)	WF608
Groover	FRB28G	Shims 0.1mm (3 pcs.)	WF604
Straight cutter	FRB31-2C	Shim 0.05mm (1pc.)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

Replacement Parts for Rail

Profile cutter	FRB31-3PR	Spacers 1.0mm (4pcs.)	WF608
Straight cutter	FRB31-2CR	Shims 0.1mm (2pcs.)	WF604
Rabbeting cutter	FRB31-2R	Shims 0.05mm (2pcs.)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

FRB31-4
**STILE AND RAIL
TWO PIECE SET**


Scale 1:1

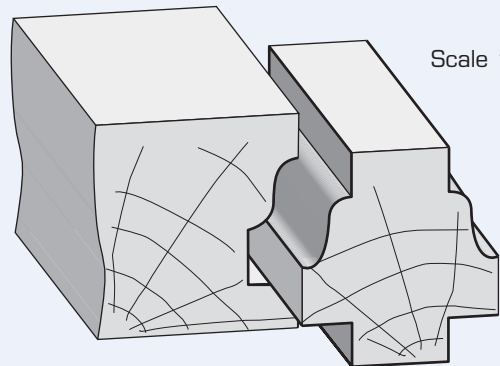
PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	GROOVE WIDTH	GROOVE DEPTH
FRB31-4	1-5/8"	3/4" to 1"	1/2"	1/4"	3/8"

Replacement Parts for Stile

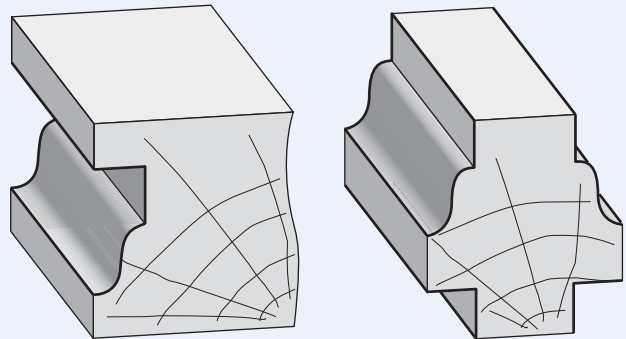
Profile cutter	FRB31-4P	Spacers 1.0mm (2pcs.)	WF608
Groover	FRB28G	Shims 0.1mm (3 pcs.)	WF604
Straight cutter	FRB31-2C	Shim 0.05mm (1pc.)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

Replacement Parts for Rail

Profile cutter	FRB31-4PR	Spacers 1.0mm (4pcs)	WF608
Straight cutter	FRB31-2CR	Shims 0.1mm (2pcs)	WF604
Rabbeting cutter	FRB31-2R	Shims 0.05mm (2pcs)	WF600
Arbor and nut	AR23		
Nut only	WNF516		
Ball Bearing	B5		

FRB31-5
**REVERSIBLE OGEE
WINDOW SASH ASSEMBLY**


Scale 1:1



PART NO.	LARGE DIAM.	WOOD THICKNESS	SHANK DIAM.	OVERALL LENGTH
FRB31-5	1-3/8"	1-1/8" to 1-3/4"	1/2"	3-3/4"

Replacement Parts

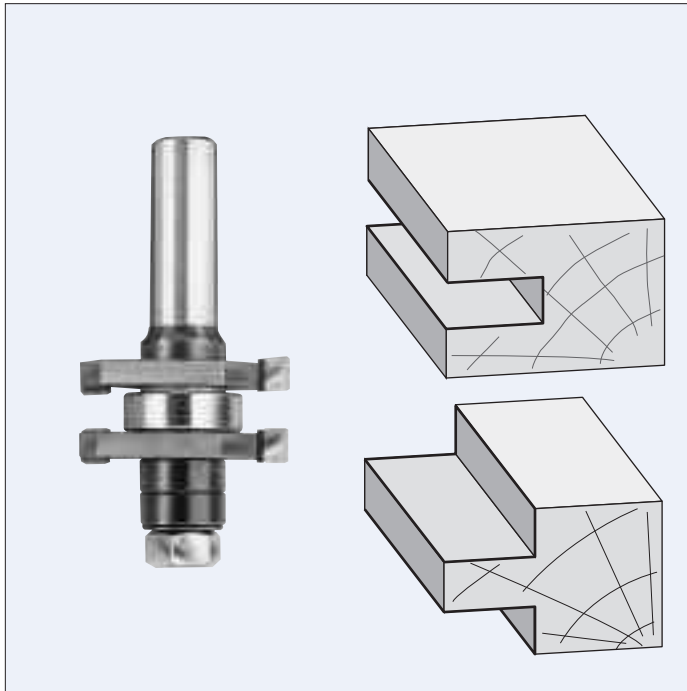
Profile cutter	FRB31-5C	Spacer 6.0mm (3 pcs.)	WF618
Rabbeting cutter	FRB31-5R	Spacer 3.0mm (1 pc.)	WF610
Arbor and nut	AR20	Spacer 1.0mm (1 pc.)	WF608
Nut only	WNF516	Spacer 0.5mm (2 pcs.)	WF606
Ball Bearing	B5	Spacer 0.1mm (3 pcs.)	WF604

FRB31-6

ANGULAR TONGUE AND GROOVE CUTTER SET

FRB31-6

TYPICAL ASSEMBLY



PART NO.	CUTTING DIAM.	MAX. WOOD THICKNESS	SHANK DIAM.	OVERALL LENGTH
FRB31-6	1-5/8"	3/4"	1/2"	3"

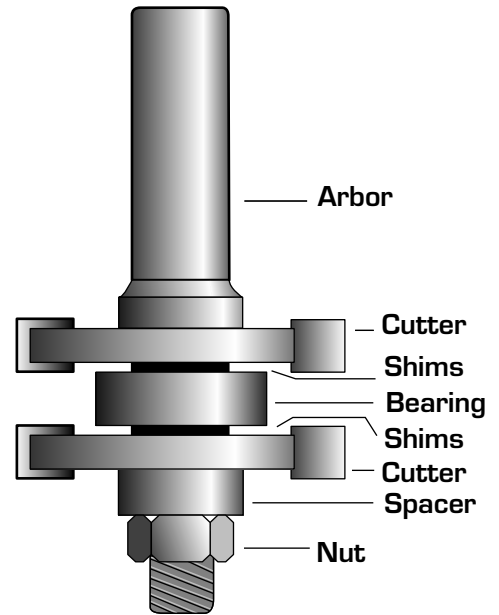
STANDARD SET CONSISTS OF:

- Arbor and nut AR11
- Ball Bearing B5
- Spacers 6.0mm (2 pcs.) WF618
- Washer 1.0mm (1 pc.) WF608
- Shims 0.5mm (2 pcs.) WF606
- Shims 0.1mm (4 pcs.) WF604
- Cutters 1-5/8" diam. FRB28G
- 1/4" kerf x 2 Teeth (2 pcs.) FRB28G

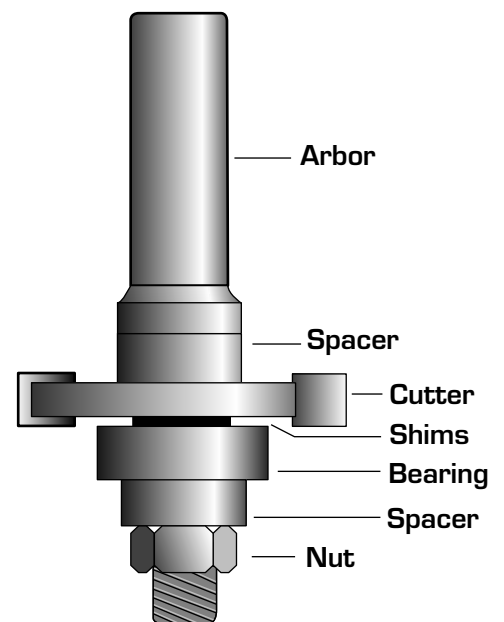
Angular Tongue and Groove Cutter Set

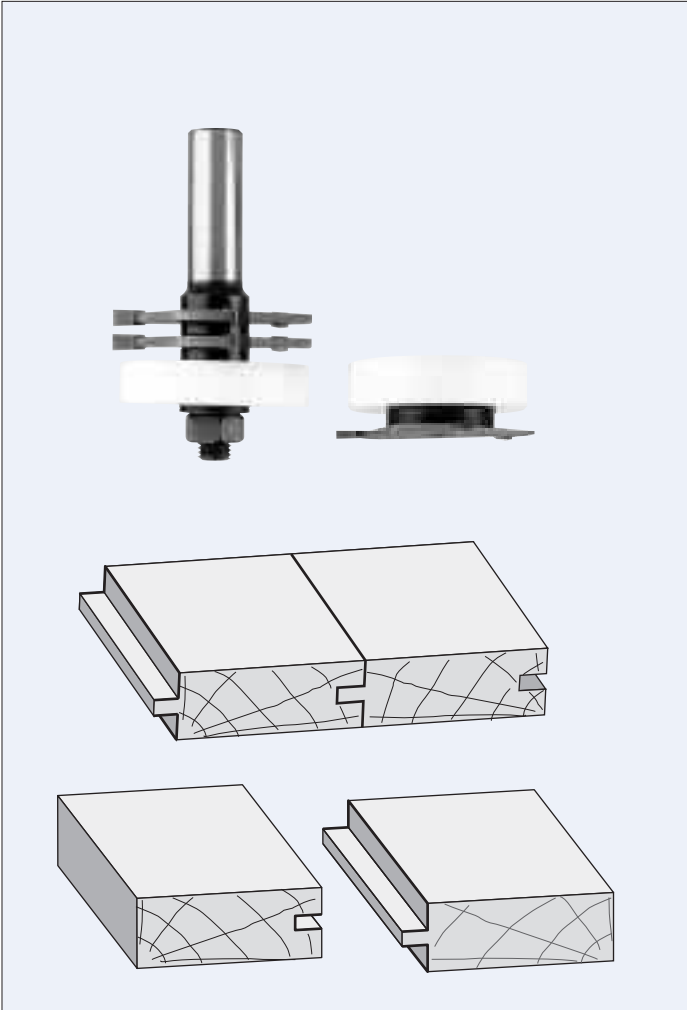
This newly developed Tongue and Groove Cutter enables perfect results in stock up to 18mm (apx. 3/4"). The groove is of 1/4" (6.35mm) in width and of 3/8" (9.5mm) in depth. When changing over from assembly (A) to assembly (B), according to the drawings on the right, the centre of the groove is automatically adjusted and there is no need to raise or lower the router. With the aid of the supplied shims, there is always the possibility to achieve the required tightness of the joint, even after resharpening groovers.

Typical Assembly (A)
(tongue)



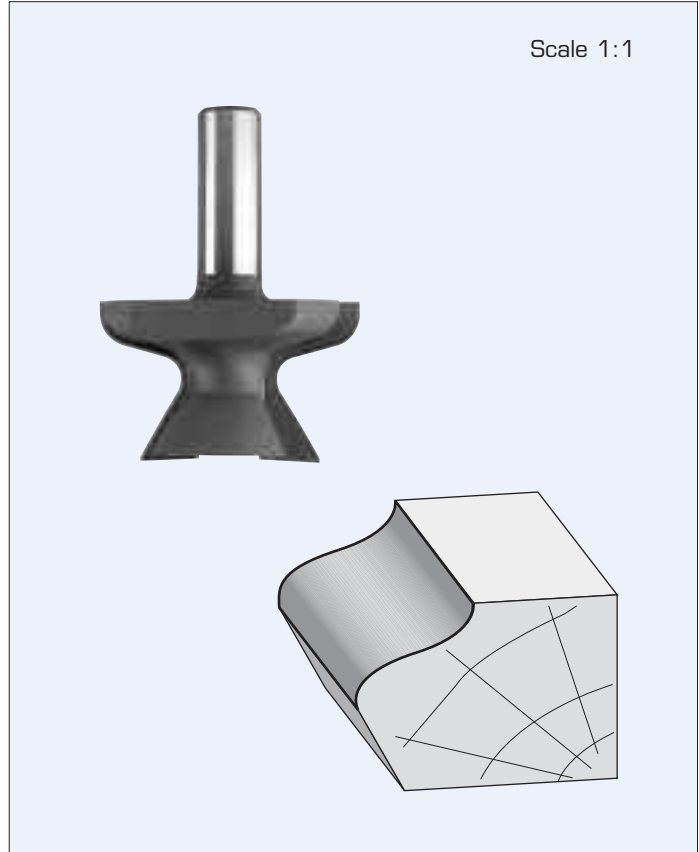
Typical Assembly (B)
(groove)



FRB31-7
TONGUE AND GROOVE CUTTER SET


PART NO.	CUTTING DIAM.	GROOVE WIDTH	GROOVE DEPTH.	SHANK DIAM.	OVERALL LENGTH
FRB31-7	1-7/8"	5/64"	1/8"	1/2"	3"

MAXIMUM WOOD THICKNESS 3/8"

FRB31-8
OUTER EDGE DOOR TRIMMER BIT


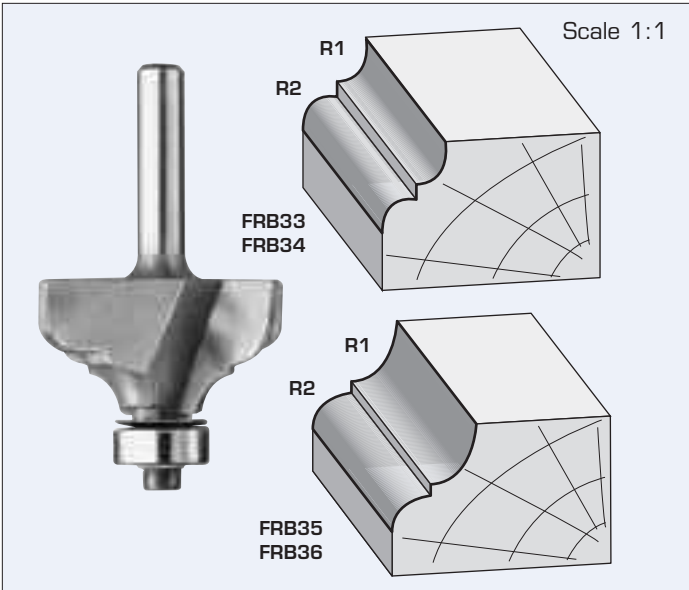
Scale 1:1

PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB31-8	2"	3/16"	1/4"	1-1/4"	1/2"	2-3/4"

STANDARD SET CONSISTS OF:

- Arbor & nut (1 piece) AR11
- Groover 5/64" (1 piece) R4005-1
- Rabbeting Cutter 5.32" (2 pieces) R4002
- Super Glide Bearing 40.8mm B36
- Super Glide Bearing 43mm B38
- Spacer 6.0mm (1 piece) WF618
- Spacer 3.15mm (1 piece) WF611
- Spacer 1.0mm (2 pieces) WF608
- Shim 0.1mm (1 piece) WF604
- Shim 0.05mm (1 piece) WF600

FRB33 OGEE FILLET BIT
WITH 1/2" BEARING



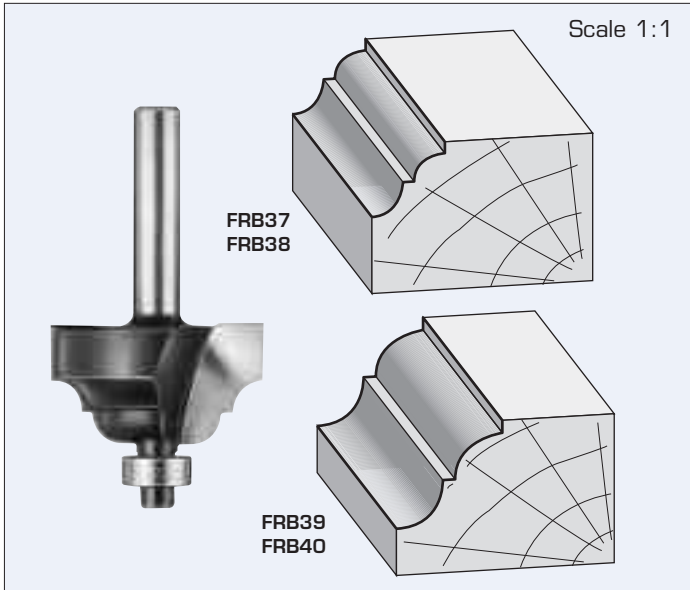
PART NO.	LARGE DIAM.	RADIUS R1	RADIUS R2	CARBIDE HEIGHT	SHANK DIAM.
FRB33	1-1/8"	5/32"	5/32"	1/2"	1/4"
FRB34	1-1/8"	5/32"	5/32"	1/2"	1/2"
FRB35	1-3/8"	1/4"	3/16"	11/16"	1/4"
FRB36	1-3/8"	1/4"	3/16"	11/16"	1/2"

Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

FRB37 ROMAN OGEE BIT
WITH 3/8" BEARING



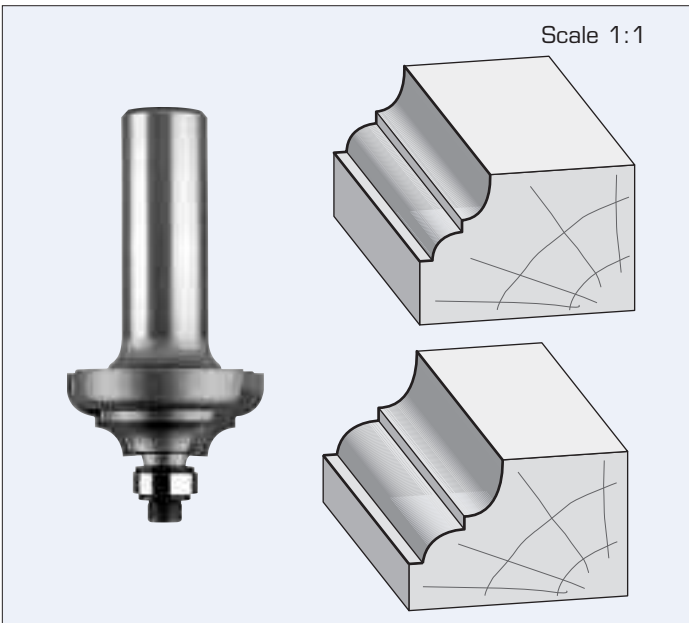
PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB37	1"	5/32"	5/8"	1/4"
FRB38	1"	5/32"	5/8"	1/2"
FRB39	1-3/8"	1/4"	3/4"	1/4"
FRB40	1-3/8"	1/4"	3/4"	1/2"

Replacement Parts

Ball Bearing B1
Washer WR12

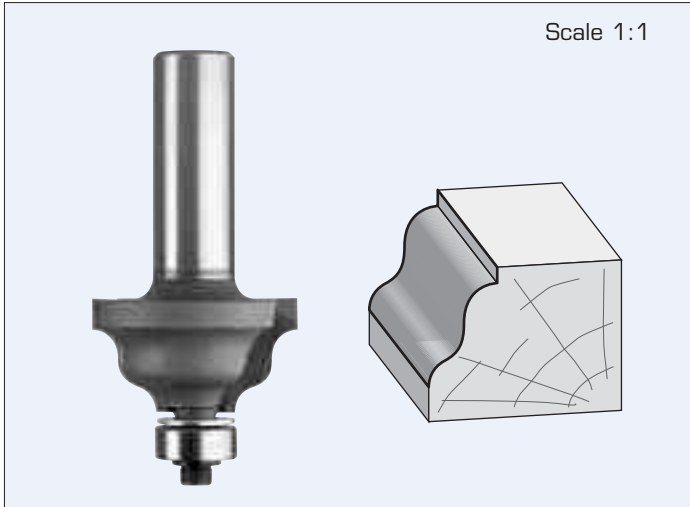
Spring Washer WFS504
Screw WNC338

FRB33 OGEE FILLET BIT
USING 3/8" BEARING



Profiles produced by using FRB33 to FRB36 with additional 3/8" Ball Bearing (Part No. B2) and Washer (WFS500)

FRB40-1 WAVY EDGE BIT
WITH 1/2" BEARING

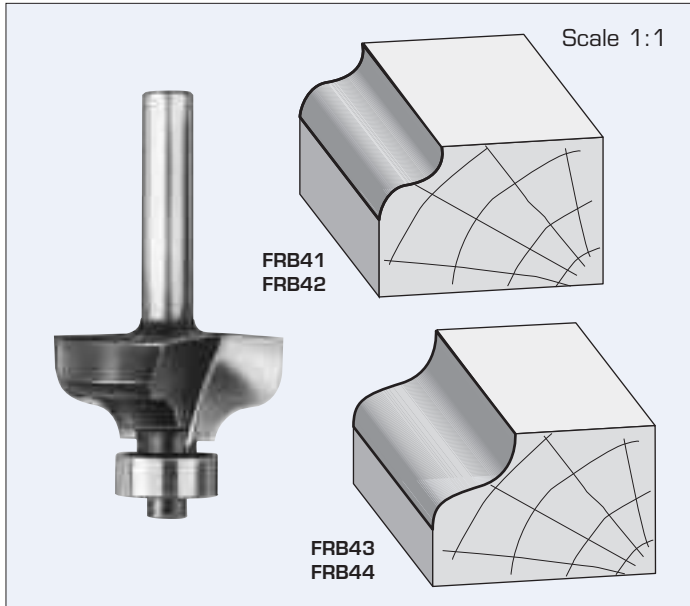


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB40-1	1-1/4"	5/32"	11/16"	1/4"
FRB40-2	1-1/4"	5/32"	11/16"	1/2"

Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

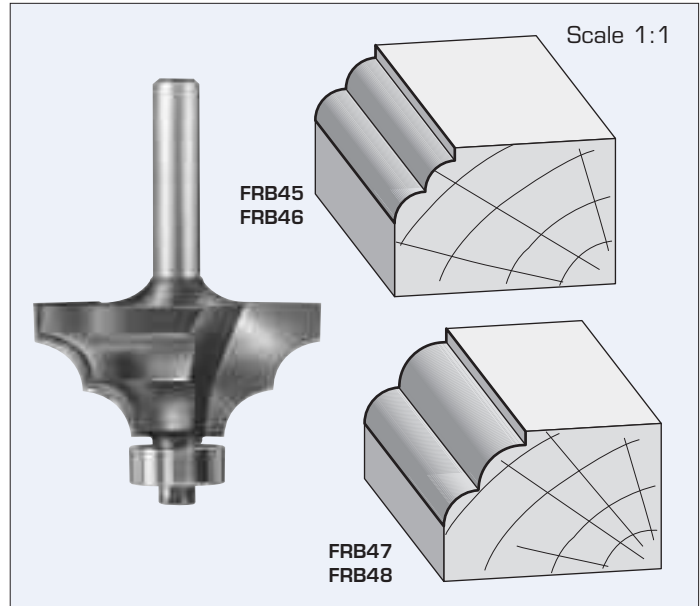
FRB41
**PANELLING BIT
WITH 1/2" BEARING**


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB41	1-1/8"	5/32"	1/2"	1/4"
FRB42	1-1/8"	5/32"	1/2"	1/2"
FRB43	1-3/8"	1/4"	11/16"	1/4"
FRB44	1-3/8"	1/4"	11/16"	1/2"

Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538

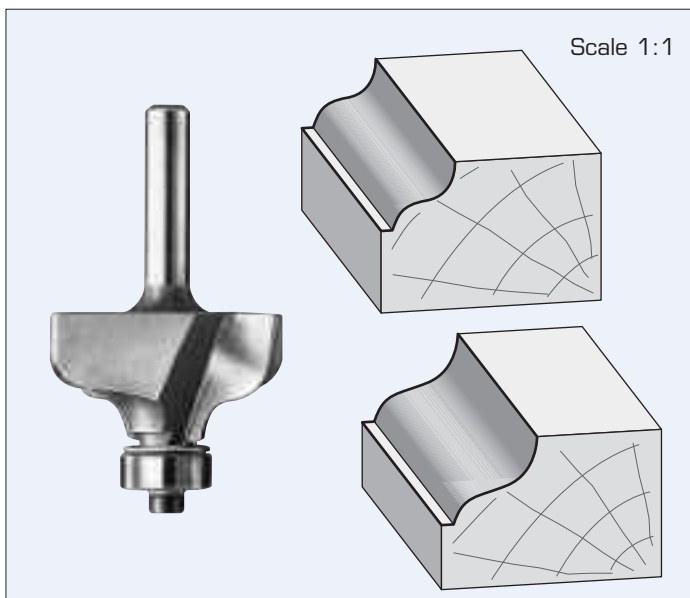
FRB45
**CLASSICAL BIT
WITH 1/2" BEARING**


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB45	1-1/8"	5/32"	1/2"	1/4"
FRB46	1-1/8"	5/32"	1/2"	1/2"
FRB47	1-3/8"	7/32"	11/16"	1/4"
FRB48	1-3/8"	7/32"	11/16"	1/2"

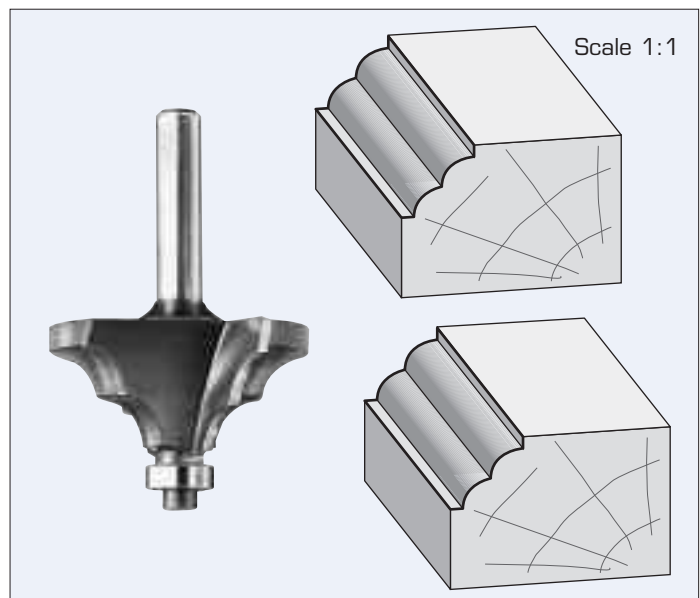
Replacement Parts

 Ball Bearing B3
 Washer WR58

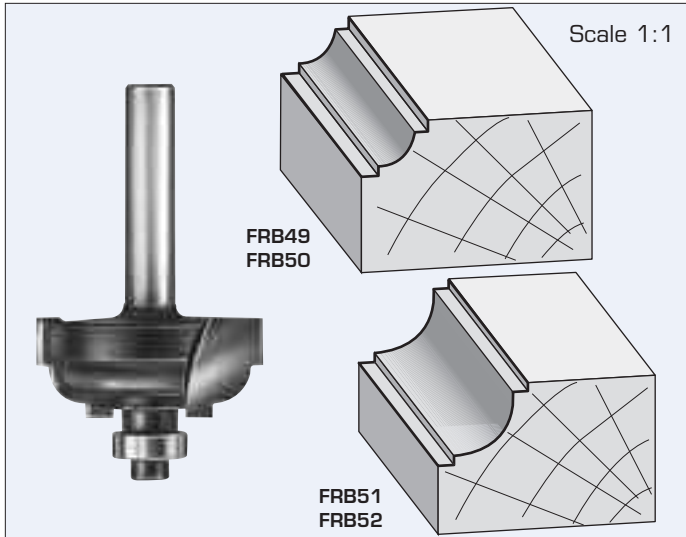
 Spring Washer WFS506
 Screw WNC538

FRB41
**PANELLING BIT
USING 3/8" BEARING**


Profiles produced by using FRB41 to FRB44 with additional 3/8" Ball Bearing (Part No. B2) and Washer (WFS500)

FRB45
**CLASSICAL BIT
USING 3/8" BEARING**


Profiles produced by using FRB45 to FRB48 with additional 3/8" Ball Bearing (Part No. B2) and Washer (WFS500)

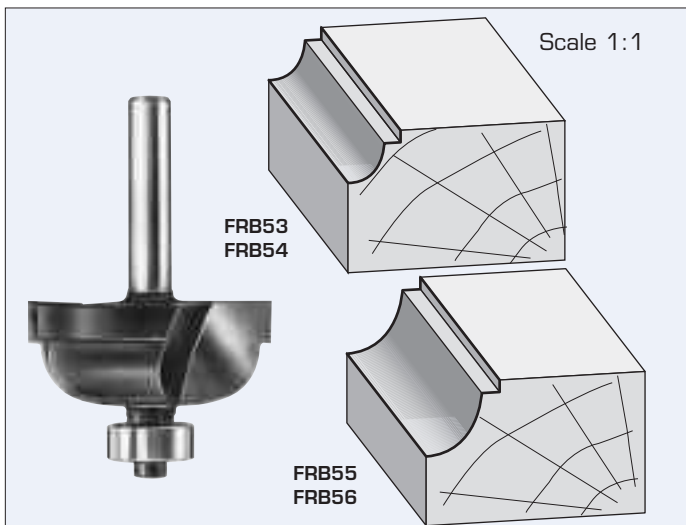
FRB49
CLASSIC PANEL BITS


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB49	1-1/8"	3/16"	1/2"	1/4"
FRB50	1-1/8"	3/16"	1/2"	1/2"
FRB51	1-3/8"	5/16"	5/8"	1/4"
FRB52	1-3/8"	5/16"	5/8"	1/2"

Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538

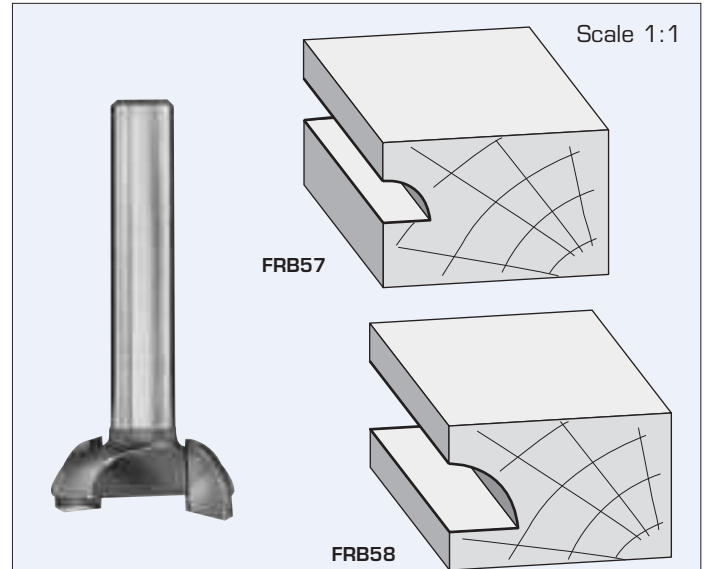
FRB53
FLAT OGEE BITS


PART NO.	LARGE DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.
FRB53	1-1/8"	3/16"	1/2"	1/4"
FRB54	1-1/8"	3/16"	1/2"	1/2"
FRB55	1-3/8"	5/16"	5/8"	1/4"
FRB56	1-3/8"	5/16"	5/8"	1/2"

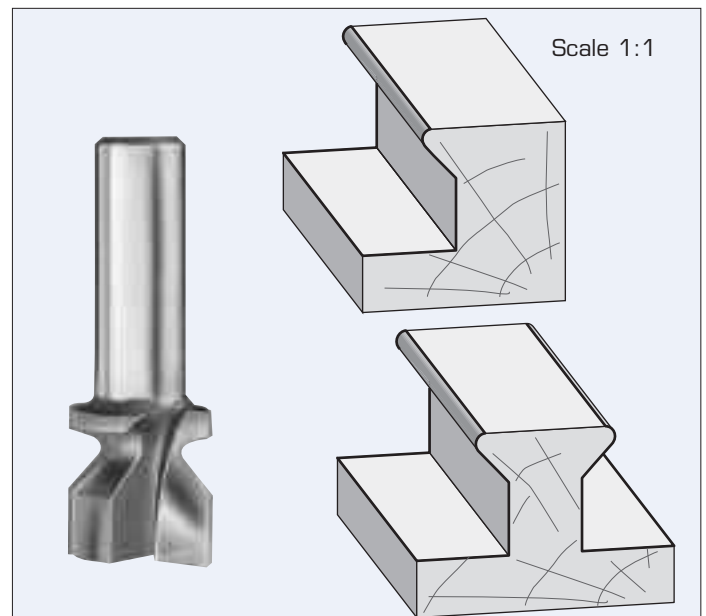
Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538

FRB57
FINGER GRIP BITS


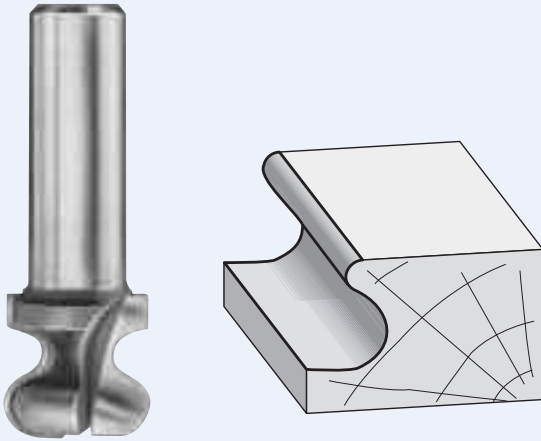
PART NO.	CUTTING DIAM.	RADIUS	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB57	3/4"	1/4"	1/4"	1/4"	1-3/4"
FRB58	1"	3/8"	3/8"	1/4"	1-3/4"

FRB59
FINGER GRIP BIT


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB59	7/8"	1/16"	13/16"	1/2"	2-5/16"

FRB60
FINGER GRIP BIT

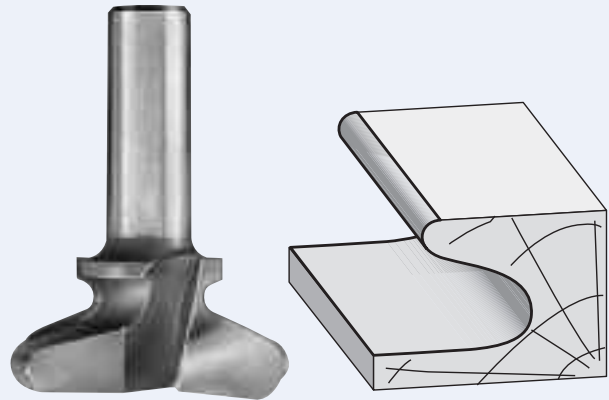
Scale 1:1



PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB60	3/4"	3/32"	3/16"	3/4"	1/2"	2-1/4"

FRB62
FINGER GRIP BIT

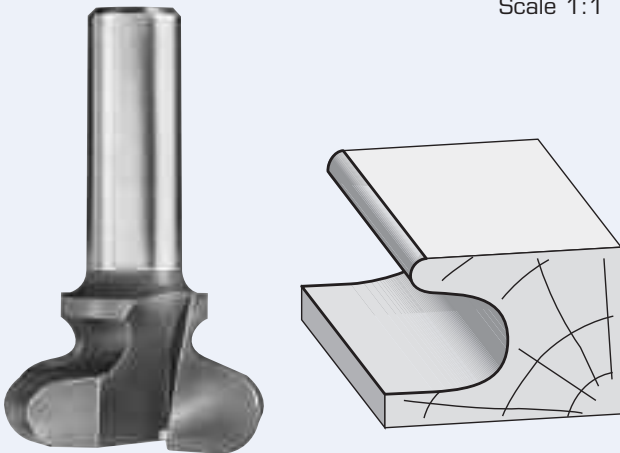
Scale 1:1



PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB62	1-3/4"	3/32"	3/16"	13/16"	1/2"	2-5/16"

FRB61
FINGER GRIP BIT

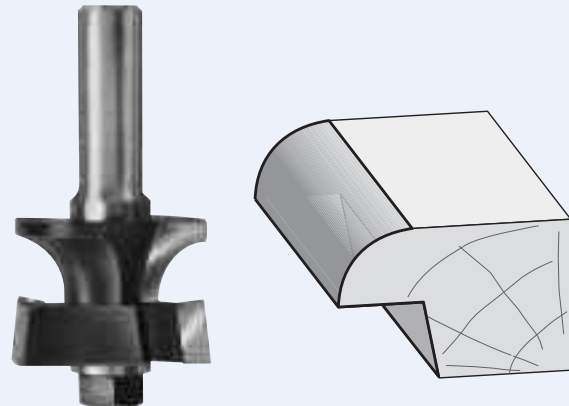
Scale 1:1



PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB61	1-1/2"	5/64"	15/64"	13/16"	1/2"	2-5/16"

FRB62-5
DOOR LIP ROUTER SET

Scale 1:1



PART NO.	LARGE DIAM.	WOOD THICKNESS	RADIUS	DEG. BEVEL	SHANK DIAM.	OVERALL LENGTH
FRB62-5	1-5/8"	1" Max.	3/8"	10°	1/2"	3"

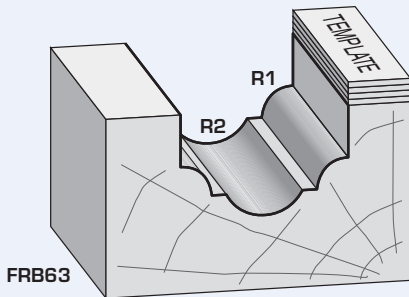
Replacement Parts

- Radius cutter FRB62-5RC
- Bevel cutter FRB62-5BC
- Arbor and nut AR11
- Nut only WNF516

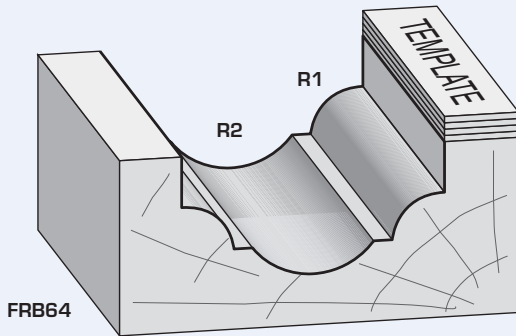
FRB63

PANELLING BIT WITH UPPER BALL BEARING, ROUND BOTTOM

Scale 1:1



FRB63



FRB64

PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB63 (A)	7/8"	5/32"	7/32"	1/2"	1/4"	2"
FRB64 (B)	1-3/8"	1/4"	13/32"	9/16"	1/2"	2-5/8"

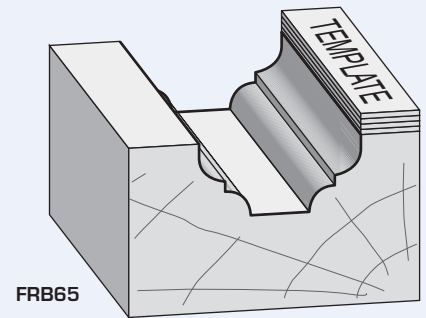
Replacement Parts

- (A) Ball Bearing B5 External Circlip WC01
- (B) Ball Bearing B7 External Circlip WC02

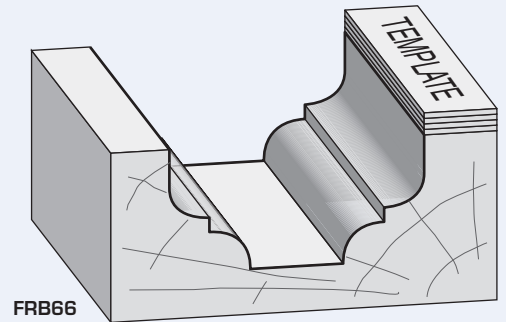
FRB65

PANELLING BIT WITH UPPER BALL BEARING, FLAT BOTTOM

Scale 1:1



FRB65

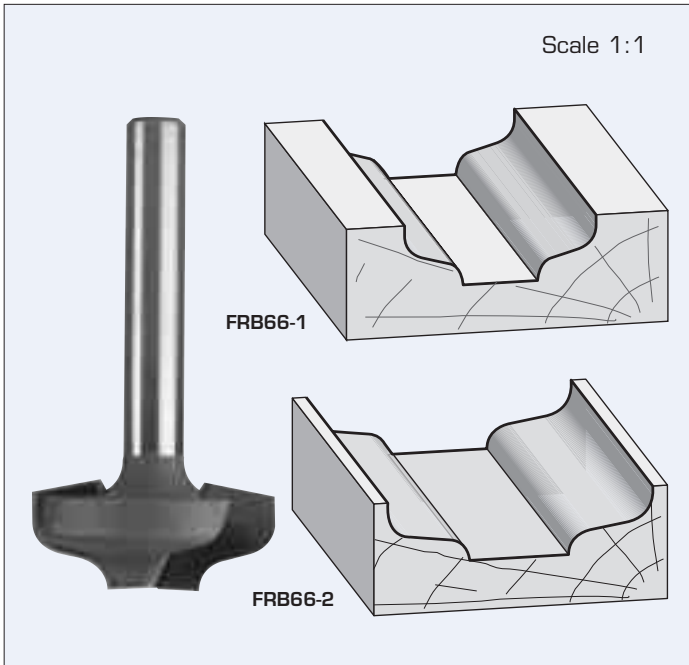


FRB66

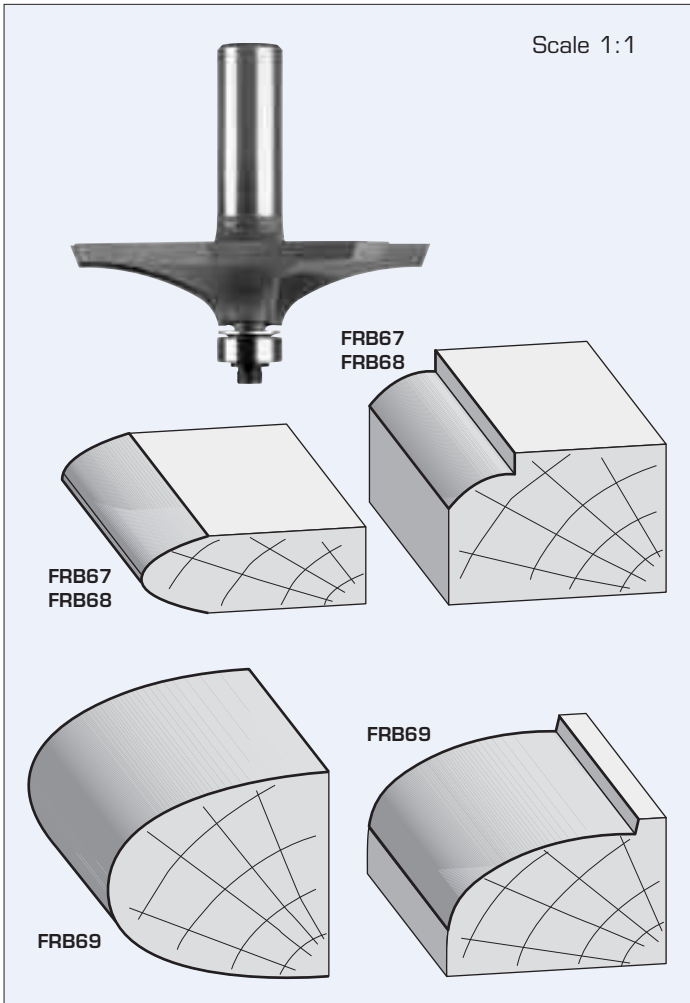
PART NO.	LARGE DIAM.	SMALL DIAM.	RADIUS R	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB65 (A)	7/8"	0.319"	9/64"	3/8"	1/4"	2"
FRB66 (B)	1-3/8"	0.522"	13/64"	9/16"	1/2"	2-5/8"

Replacement Parts

- (A) Ball Bearing B5 External Circlip WC01
- (B) Ball Bearing B7 External Circlip WC02

FRB66-1
**FLAT BOTTOM OGEE BITS
PLUNGE TYPE**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	RADIUS	SHANK DIAM.	OVERALL LENGTH
FRB66-1	1"	3/8"	1/8"	1/4"	2"
FRB66-2	1-3/8"	3/8"	1/8"	1/2"	2-1/4"

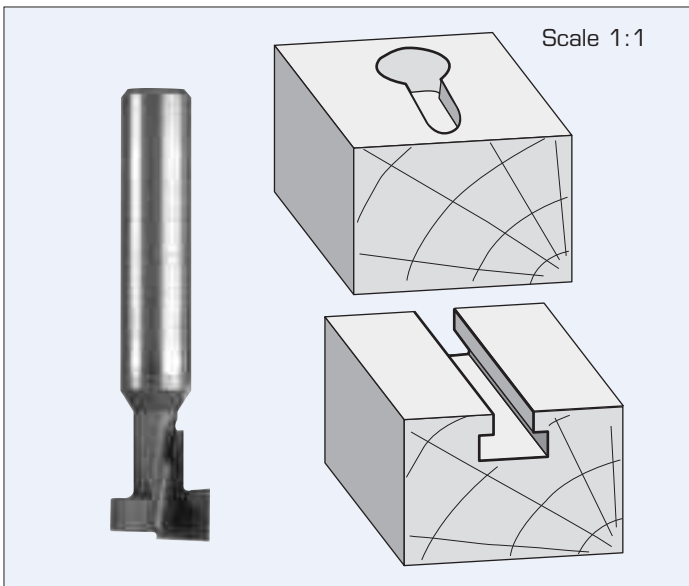
FRB67
**THUMB NAIL BITS
WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB67	1-3/16"	15/32"	3/8"	1/4"	2-1/16"
FRB68	1-3/16"	15/32"	3/8"	1/2"	2-1/16"
FRB69*	2-3/4"	1-7/8"	11/16"	1/2"	2-1/2"

*Max. RPM 18,000

Replacement Parts

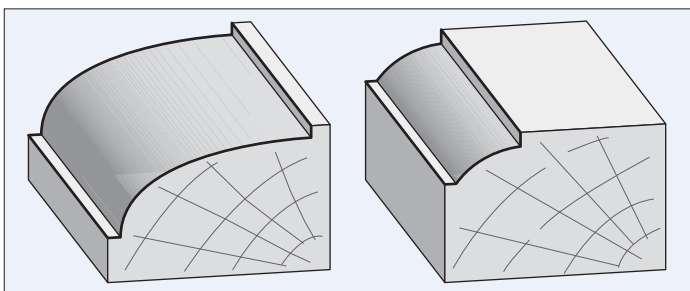
- Ball Bearing B3 Spring Washer WFS506
- Washer WR58 Screw WNC538

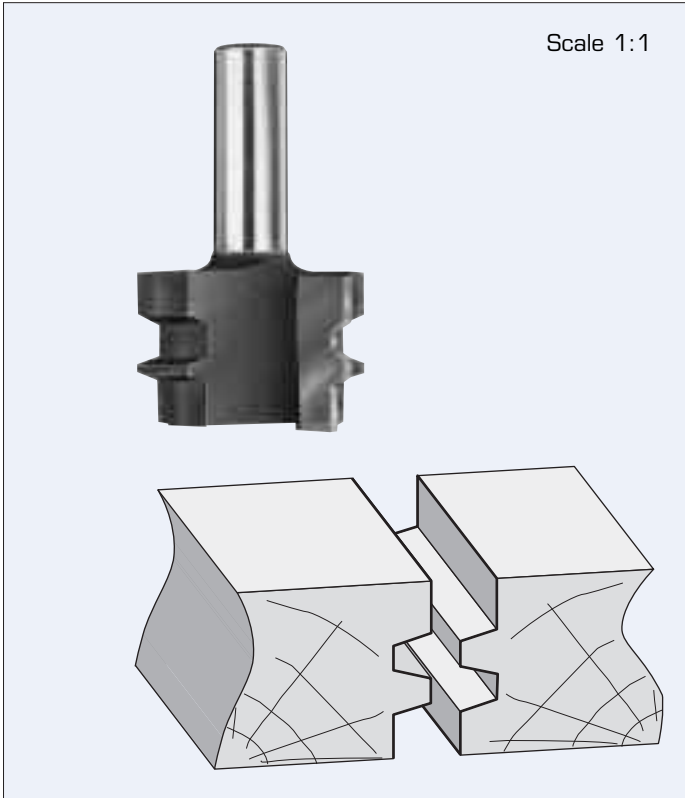
FRB66-5
**KEYHOLE BIT
ONE FLUTE**


PART NO.	LARGE DIAM.	SMALL DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB66-5	3/8"	3/16"	3/8"	1/4"	1-1/2"

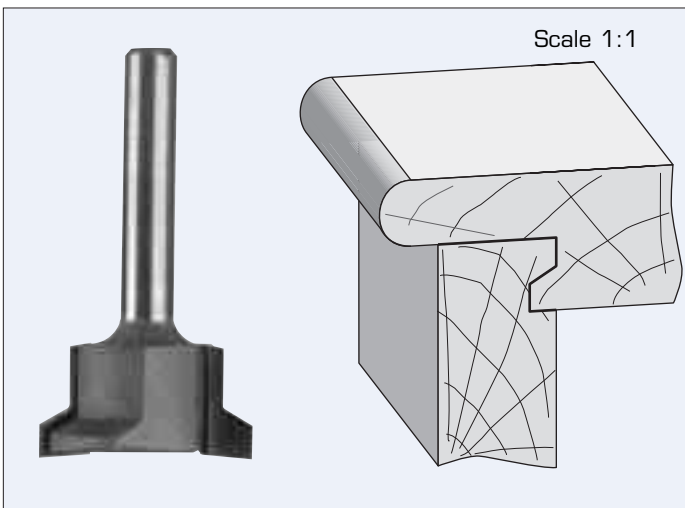
THUMB NAIL BITS BEADING TYPE

Shapes produced by using above bits with 3/8" bearing
PART No. B2, replace washer with PART No. WFS500

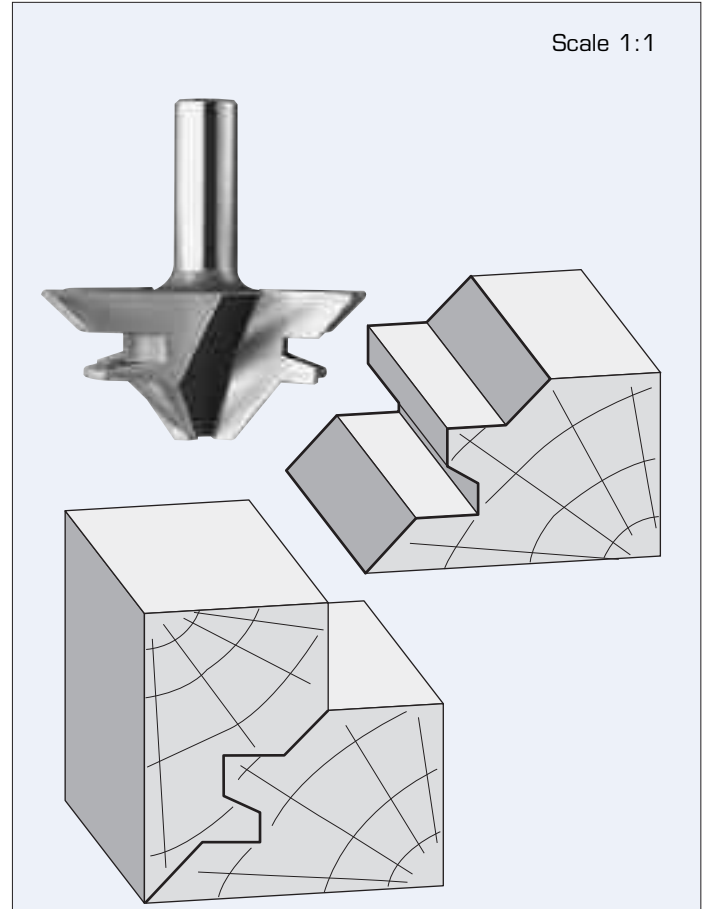


FRB72
**GLUE JOINT BIT
TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB72	1-29/64"	1-1/8"	1/2"	2-5/8"

FRB72-1
**DRAWER LOCK BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB72-1	3/4"	1/2"	1/4"	1-7/8"
FRB72-3	1"	1/2"	1/2"	1-7/8"

FRB73
**LOCK MITER BITS
90° CORNER TWO FLUTES**


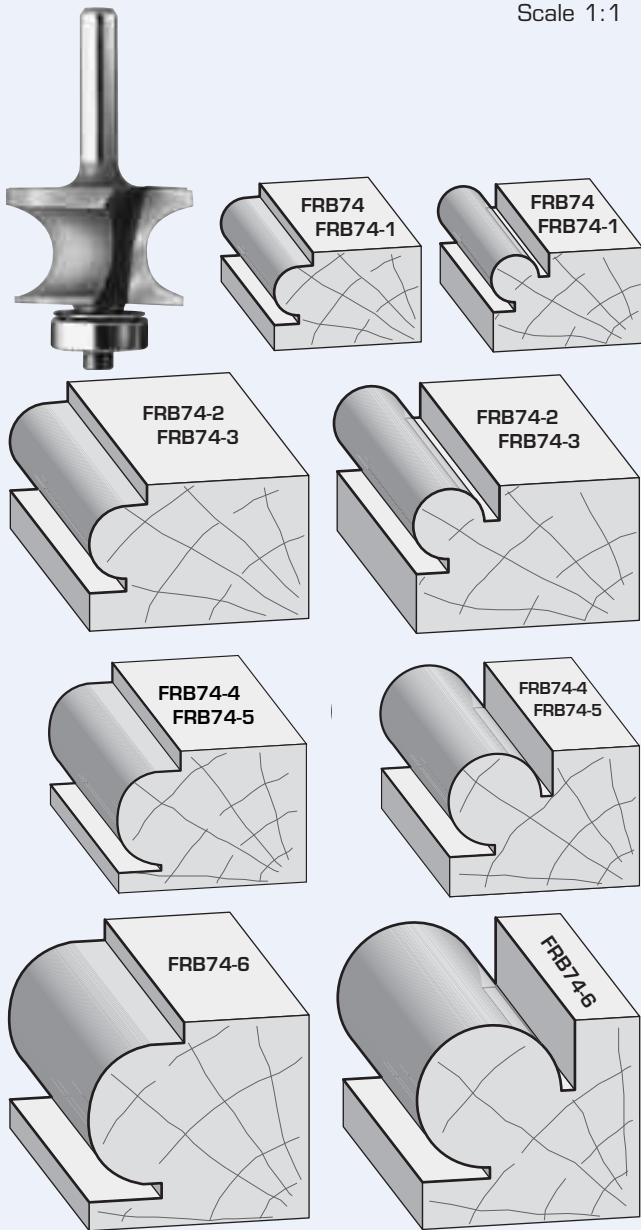
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB73-1	1-1/2"	1/2"	1/4"	1-5/8"
FRB73-2	1-3/4"	3/4"	1/2"	2-1/4"
FRB73*	2-23/32"	1-3/16"	1/2"	2-11/16"

*Max. RPM 18,000

FRB74

CORNER BEADING BITS WITH BALL BEARING GUIDE

Scale 1:1



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB74 (A)	7/8"	1/8"	9/16"	1/4"	2-1/8"
FRB74-1 (A)	7/8"	1/8"	9/16"	1/2"	2-1/2"
FRB74-2 (B)	1-1/16"	3/16"	5/8"	1/4"	2-1/4"
FRB74-3 (B)	1-1/16"	3/16"	5/8"	1/2"	2-5/8"
FRB74-4 (B)	1-1/4"	1/4"	3/4"	1/4"	2-3/8"
FRB74-5 (B)	1-1/4"	1/4"	3/4"	1/2"	2-5/8"
FRB74-6 (B)	1-1/2"	3/8"	1"	1/2"	3"

Replacement Parts For (A)

Ball Bearing B3
Washer WR58
Spring Washer WFS506
Screw WNC538

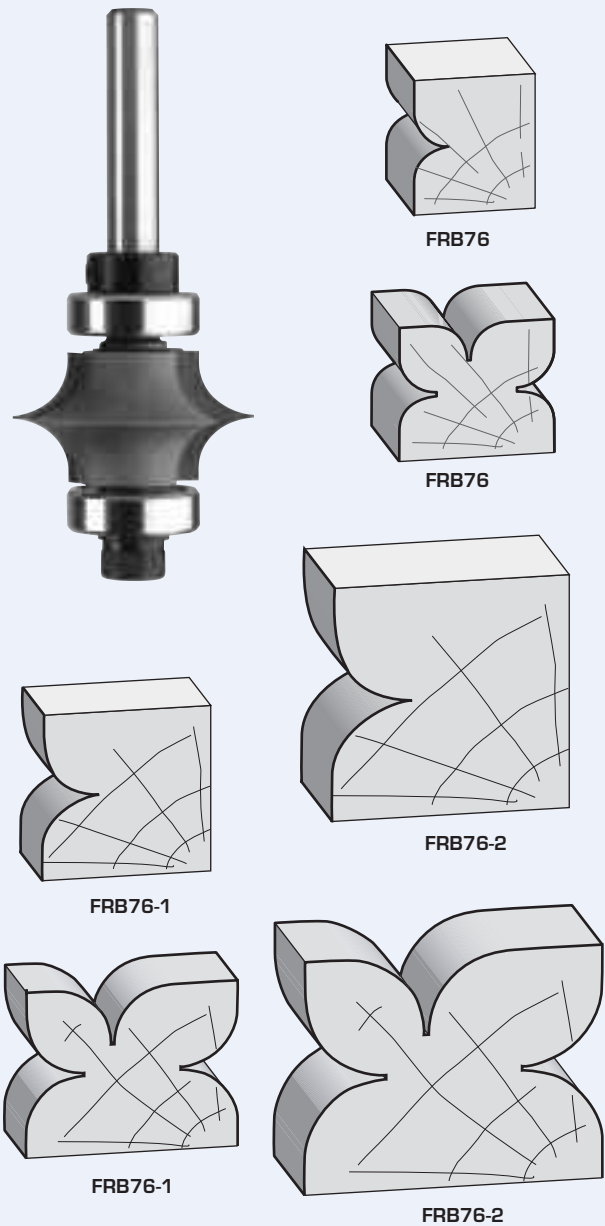
Replacement Parts For (B)

Ball Bearing B3-4
Washer WR59
Spring Washer WFS506
Screw WNC538

FRB76

BEADING BITS LEAF-EDGE STYLE

Scale 1:1

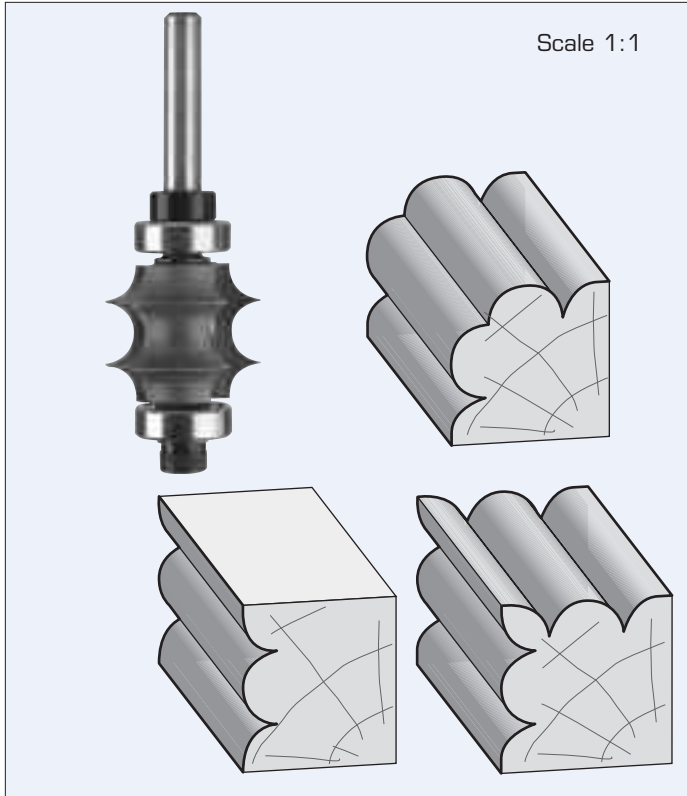


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76	1"	3/16"	1/2"	1/4"	2-1/2"
FRB76-1	1-1/8"	1/4"	5/8"	1/4"	2-5/8"
FRB76-2	1-3/8"	3/8"	7/8"	1/4"	2-7/8"

Replacement Parts

Ball Bearing B3-3
Lock Ring WO1
Lock Ring Screw WNC525
Screw WNF1012

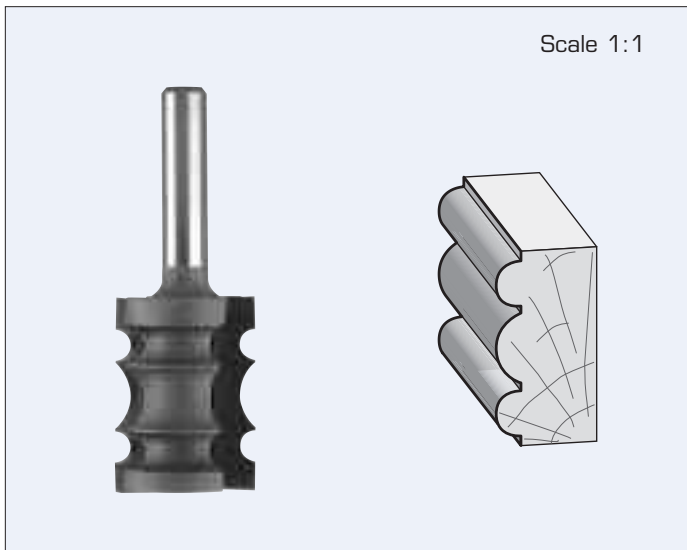
**FRB76-3 BEADING BIT
DOUBLE LEAF EDGE STYLE**



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76-3	1"	3/16"	7/8"	1/4"	3"

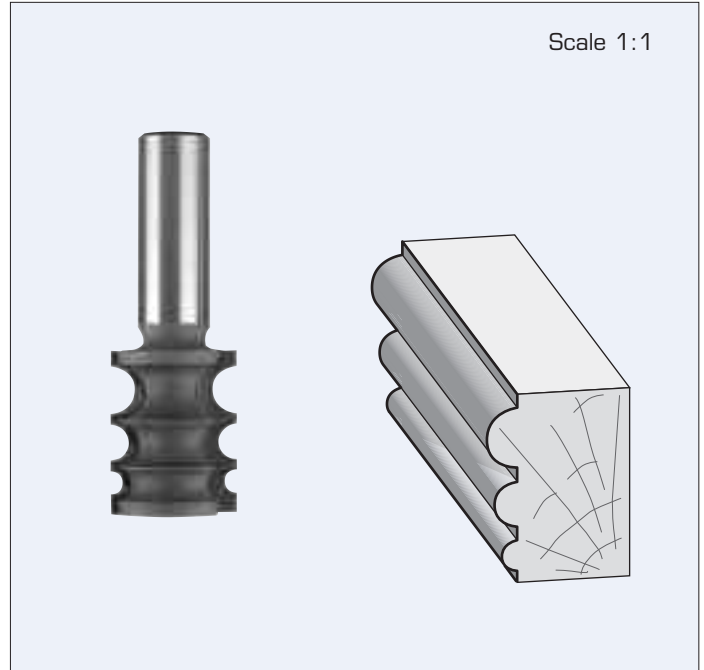
Replacement Parts
Ball Bearing B3-3 Lock Ring W01 Screw WNF1012

**FRB76-4 TRIPLE BEADING BIT
TWO FLUTES**



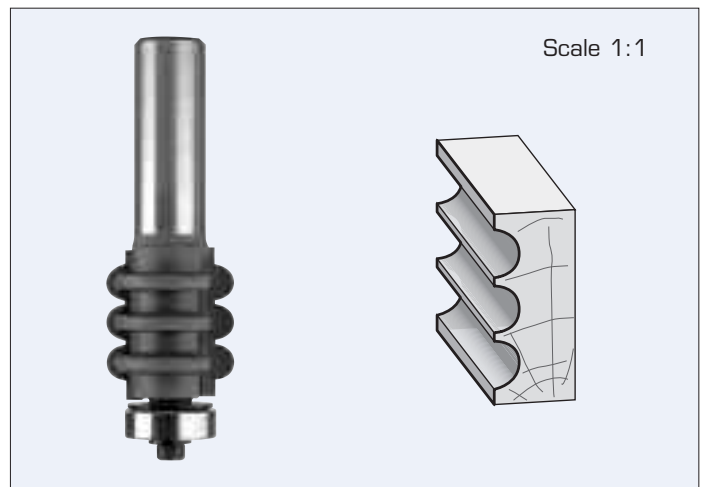
PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76-4	3/4"	5/64"	1/4"	1"	1/4"	2-1/8"

**FRB76-5 VARIABLE
BEADING BITS**



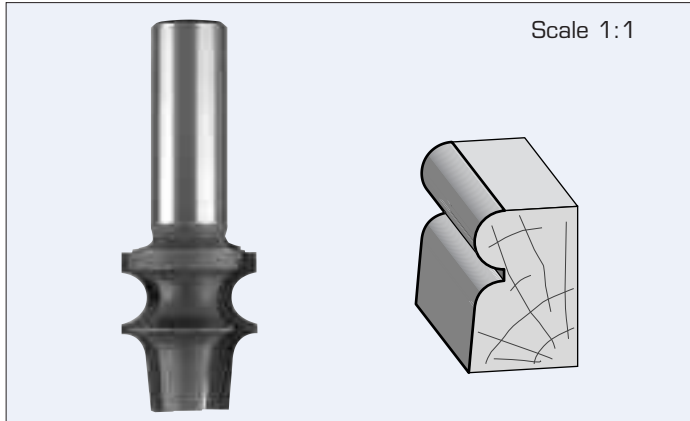
PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	RADIUS R3	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76-5	7/8"	5/32"	1/8"	5/64"	1-1/8"	1/4"	2-1/4"
FRB76-6	7/8"	5/32"	1/8"	5/64"	1-1/8"	1/2"	2-5/8"

**FRB76-7 CONVEX BEADING BITS
WITH BALL BEARING GUIDE**

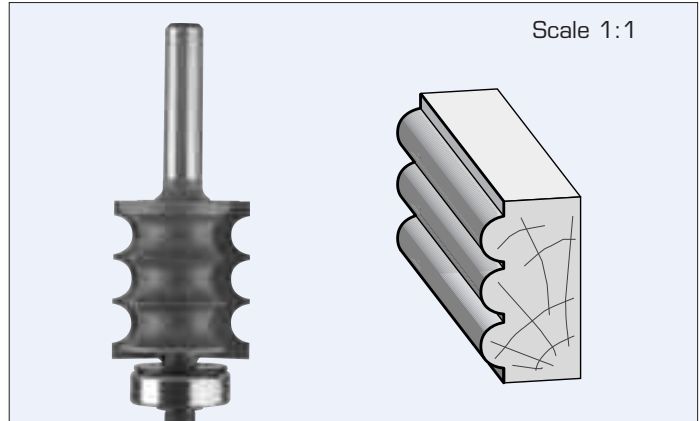


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76-7	7/8"	1/8"	1"	1/4"	2-1/2"
FRB76-8	7/8"	1/8"	1"	1/2"	2-7/8"

Replacement Parts
Ball Bearing B3-4 Spring Washer WFS506
Washer WR59 Screw WNC538

FRB76-9
**EDGE BEADING BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB76-9	7/8"	5/32"	1-1/32"	1/4"	2-5/16"
FRB77	7/8"	5/32"	1-1/32"	1/2"	2-1/2"

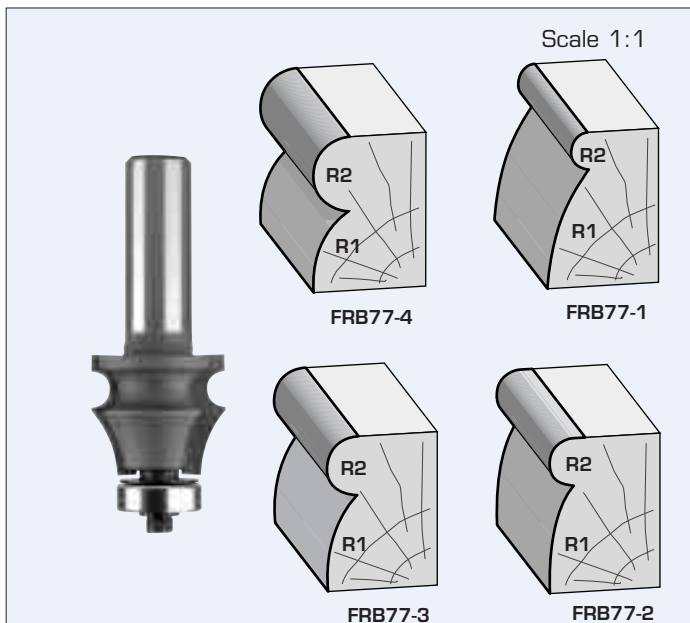
FRB77-5
**TRIPLE BEADING
BITS WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB77-5	7/8"	1/8"	1"	1/4"	2-1/2"
FRB77-6	7/8"	1/8"	1"	1/2"	2-7/8"

Replacement Parts

 Ball Bearing B3-4
 Washer WR59

 Spring Washer WFS506
 Screw WNC538

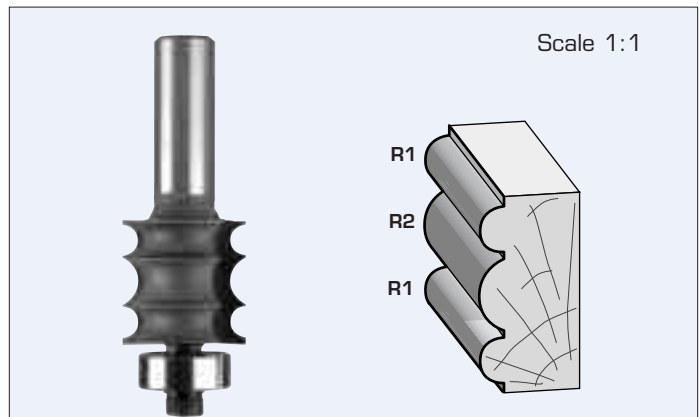
FRB77-1
**EDGE BEADING BITS
WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB77-1	1"	1"	3/32"	7/8"	1/2"	2-3/4"
FRB77-2	1"	3/4"	1/8"	7/8"	1/2"	2-3/4"
FRB77-3	1"	9/16"	5/32"	7/8"	1/2"	2-3/4"
FRB77-4	1"	3/8"	3/16"	7/8"	1/2"	2-3/4"

Replacement Parts

 Ball Bearing B3-4
 Washer WR59

 Spring Washer WFS506
 Screw WNC538

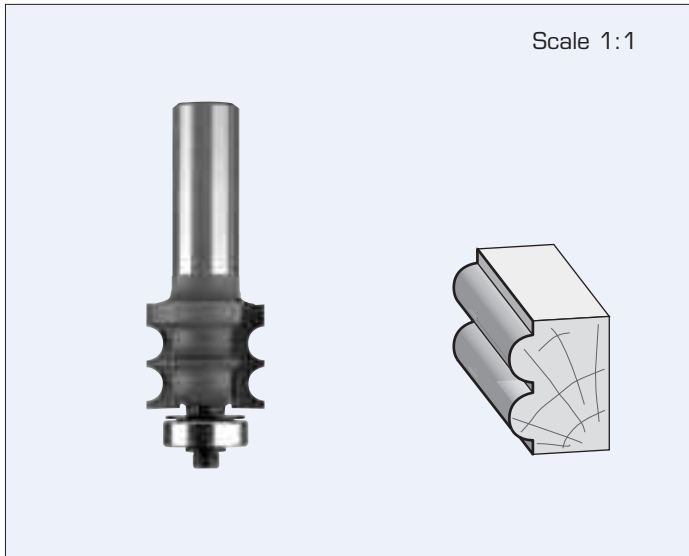
FRB77-7
**TRIPLE BEADING BITS
WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB77-7	1"	1/8"	3/16"	1"	1/4"	2-1/4"
FRB77-8	1"	1/8"	3/16"	1"	1/2"	2-1/4"

Replacement Parts

 Ball Bearing B4
 Washer WFS500

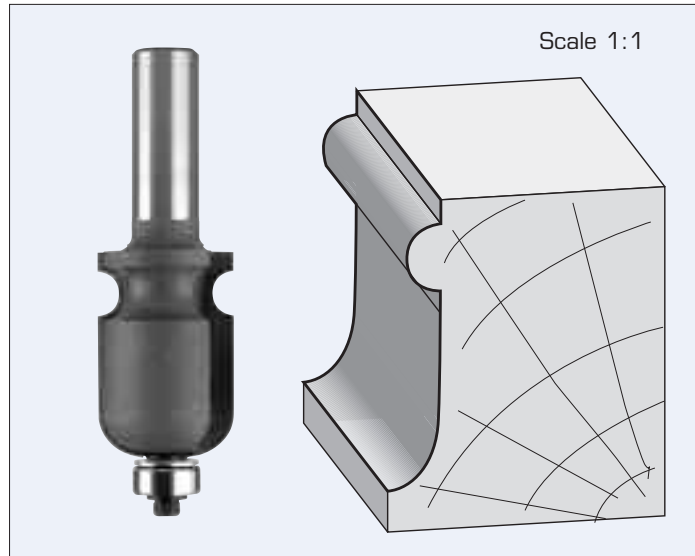
 Spring Washer WFS506
 Screw WNC538

FRB77-9
**DOUBLE BEADING BIT
WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB77-9	7/8"	1/8"	3/4"	1/2"	2-5/8"

Replacement Parts

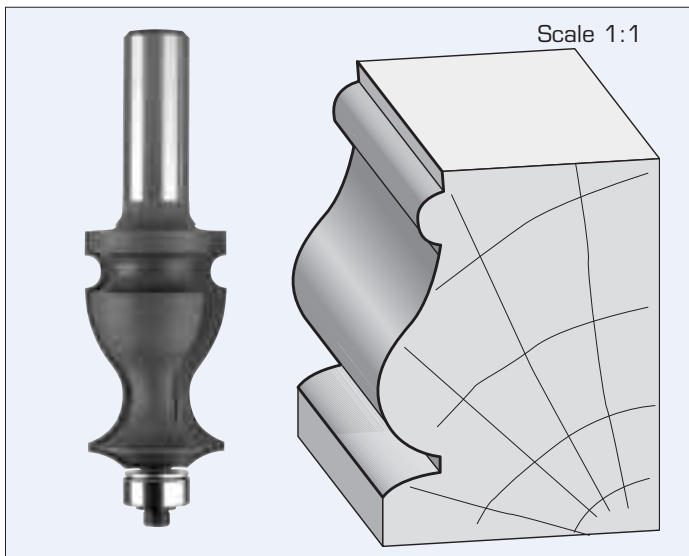
Ball Bearing B3-4 Spring Washer WFS506
Washer WR59 Screw WNC538

FRB78-2
**ARCHITECTURAL
MOULDING BIT**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-2	1"	1-1/2"	1/2"	3-3/8"

Replacement Parts

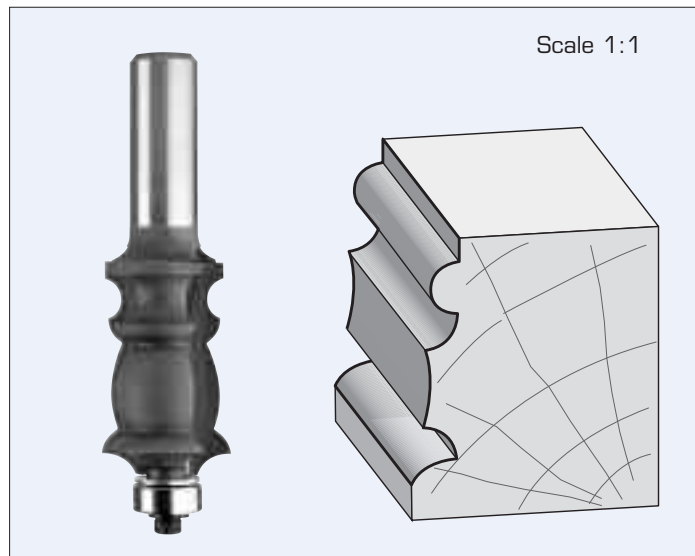
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB78-1
**ARCHITECTURAL
MOULDING BIT**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-1	1-1/16"	1-3/4"	1/2"	3-3/4"

Replacement Parts

Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

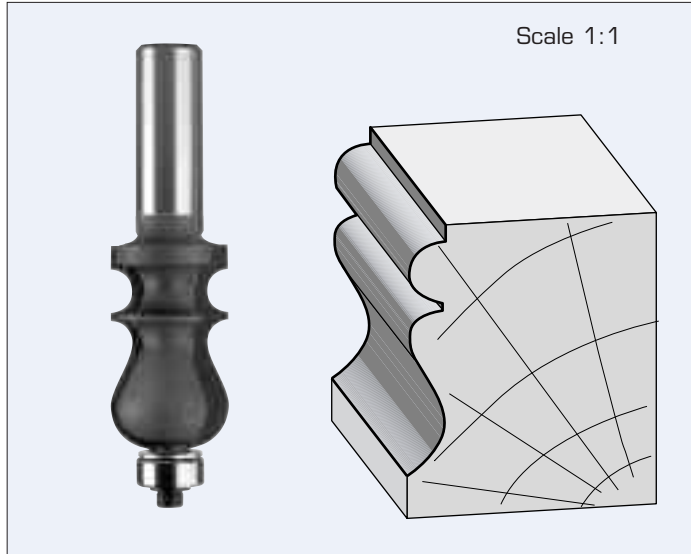
FRB78-3
**ARCHITECTURAL
MOULDING BIT**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-3	1"	1-1/2"	1/2"	3-1/2"

Replacement Parts

Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB78-4 ARCHITECTURAL MOULDING BIT WITH BALL BEARING GUIDE

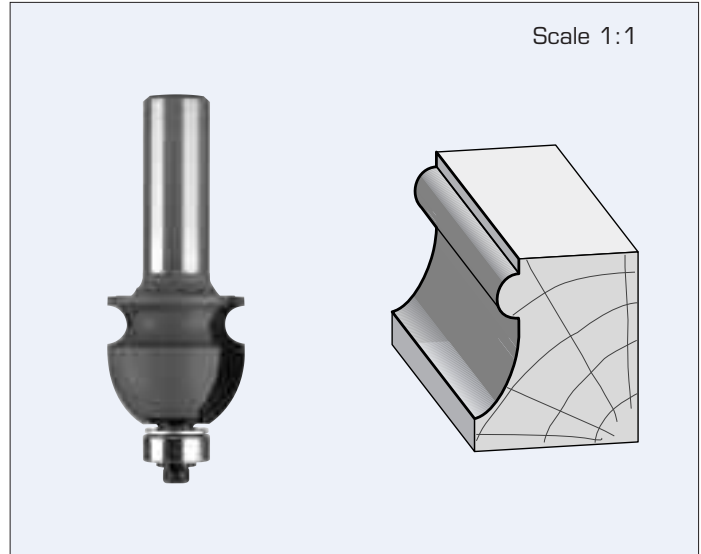


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-4	7/8"	1-1/2"	1/2"	3-3/8"

Replacement Parts

Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB78-6 ARCHITECTURAL MOULDING BIT WITH BEARING

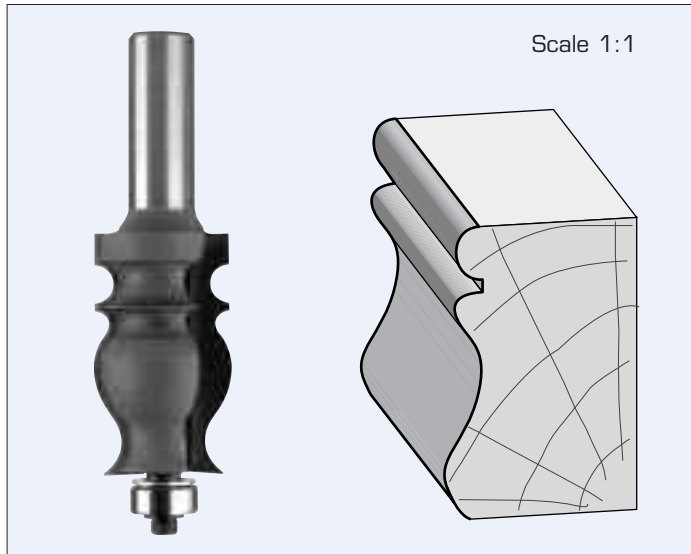


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-6	1"	1"	1/2"	2-7/8"

Replacement Parts

Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB78-5 ARCHITECTURAL MOULDING BIT WITH BALL BEARING GUIDE

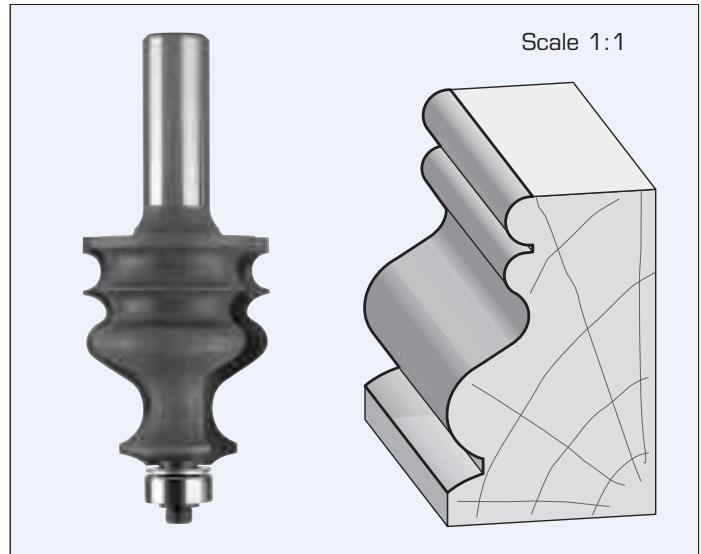


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB78-5	1"	1-3/4"	1/2"	3-3/4"

Replacement Parts

Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

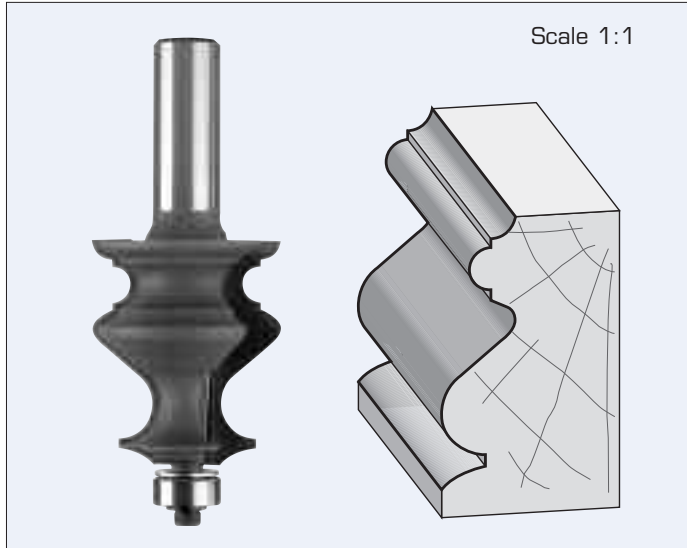
FRB100 EDGE MOULDING BIT WITH BALL BEARING GUIDE



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB100	1-3/8"	1-5/8"	1/2"	3-1/2"

Replacement Parts

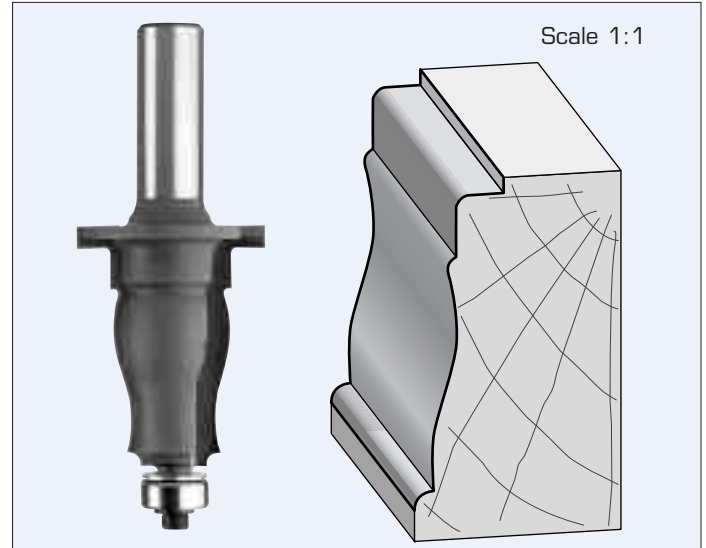
Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

FRB101
**EDGE MouldING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB101	1-3/8"	1-5/8"	1/2"	3-1/2"

Replacement Parts

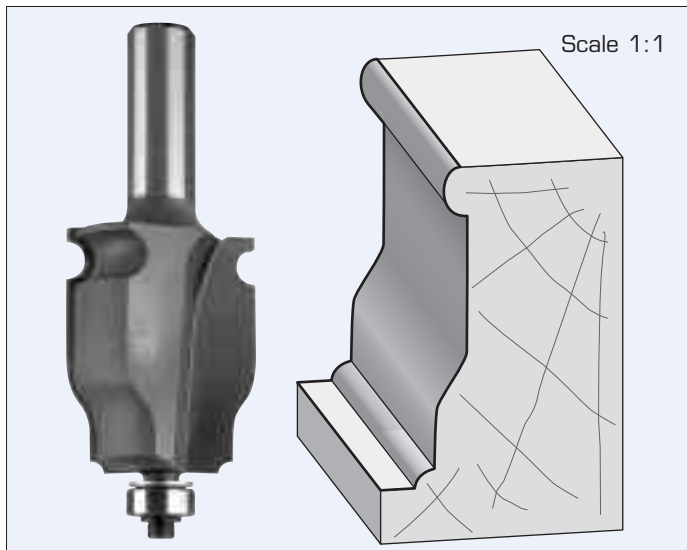
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB103
**EDGE MouldING BIT
WITH BALL BEARING**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB103	1-3/8"	1-3/4"	1/2"	3-5/8"

Replacement Parts

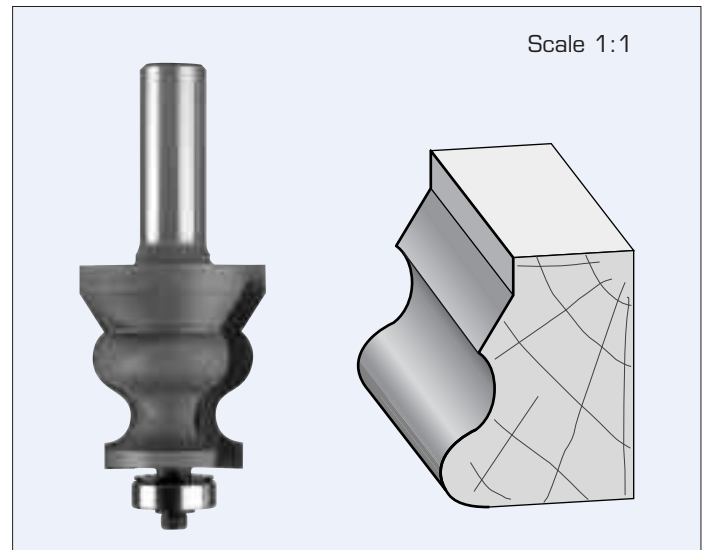
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB102
**EDGE MouldING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB102	1-3/8"	1-3/4"	1/2"	3-5/8"

Replacement Parts

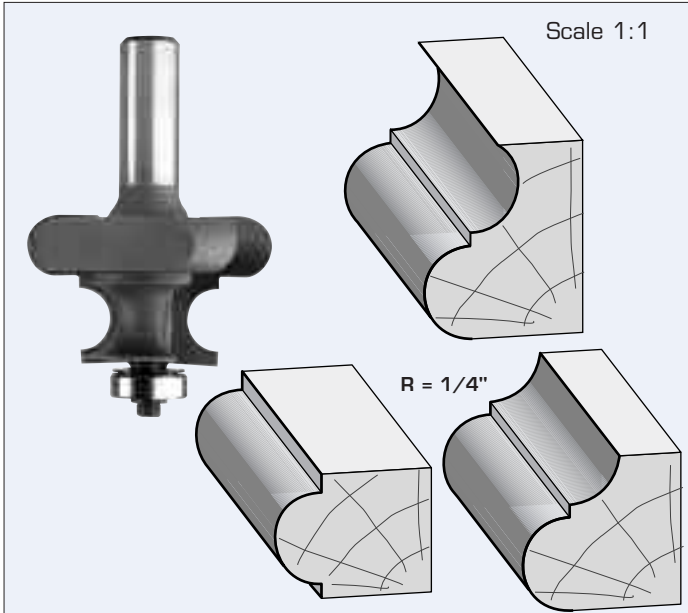
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB104
**EDGE MouldING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB104	1-3/8"	1-1/2"	1/2"	3-3/8"

Replacement Parts

Ball Bearing B3-4 Spring Washer WFS506
Washer WR59 Screw WNC538

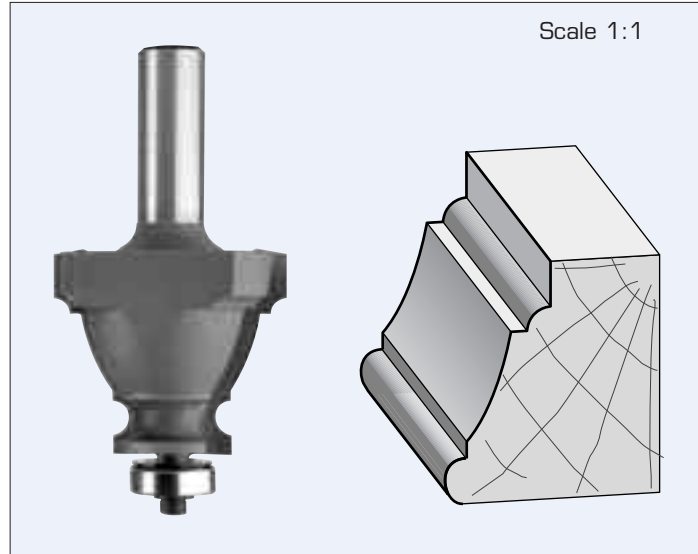
FRB105
EDGE MOULDING BIT WITH BALL BEARING GUIDE


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB105	2"	1-1/4"	1/2"	3-1/8"

Replacement Parts

 Ball Bearing B3-4
 Washer WR59

 Spring Washer WFS506
 Screw WNC538

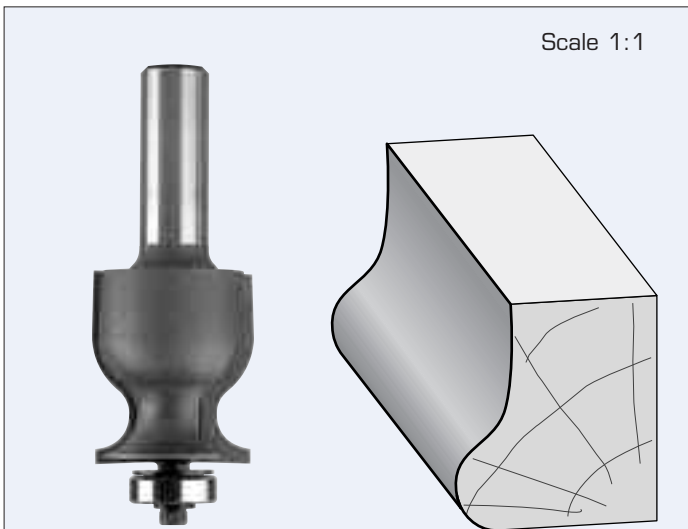
FRB107
EDGE MOULDING BIT WITH BALL BEARING GUIDE


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB107	1-3/4"	1-1/2"	1/2"	3-7/16"

Replacement Parts

 Ball Bearing B3-4
 Washer WR59

 Spring Washer WFS506
 Screw WNC538

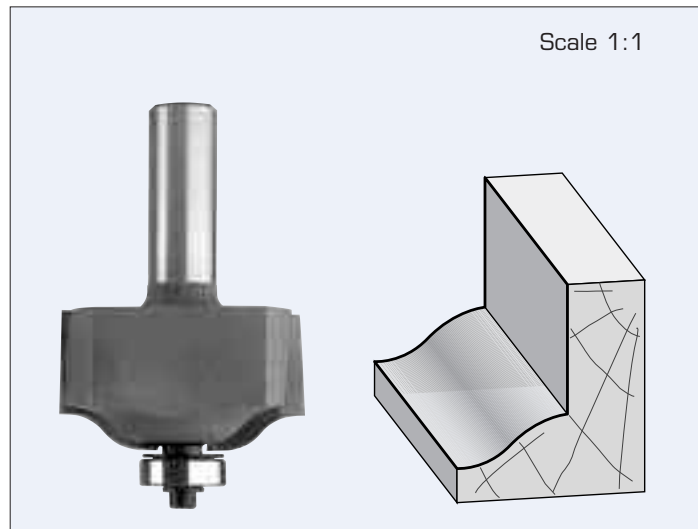
FRB106
EDGE MOULDING BIT WITH BALL BEARING GUIDE


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB106	1-3/16"	1-3/8"	1/2"	3-1/4"

Replacement Parts

 Ball Bearing B3-4
 Washer WR59

 Spring Washer WFS506
 Screw WNC538

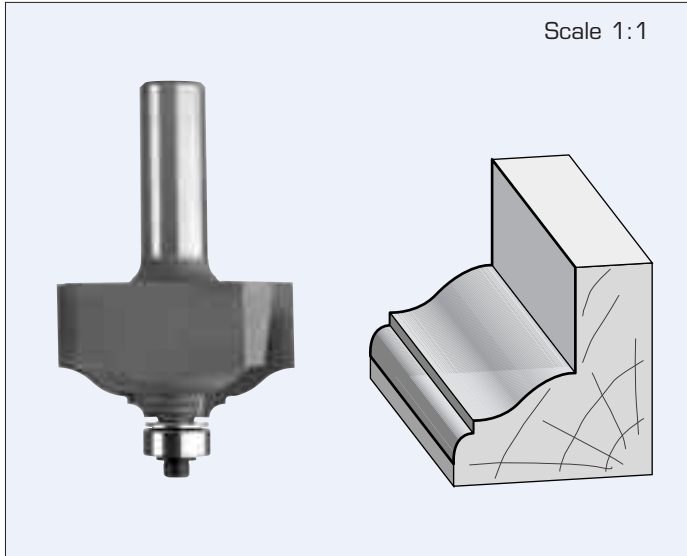
FRB108
EDGE MOULDING BIT WITH BALL BEARING GUIDE


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB108	1-3/4"	1"	1/2"	3"

Replacement Parts

 Ball Bearing B3-2
 Washer WR59

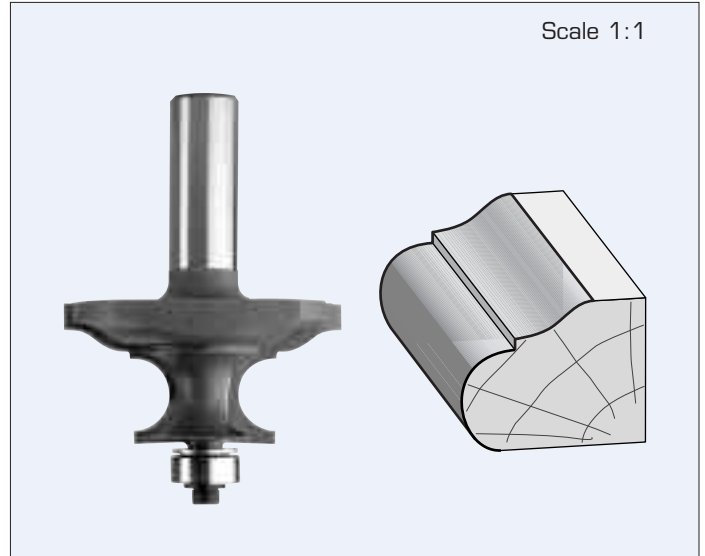
 Spring Washer WFS506
 Screw WNC512

FRB109
**EDGE MouldING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB109	1-3/4"	1"	1/2"	3"

Replacement Parts

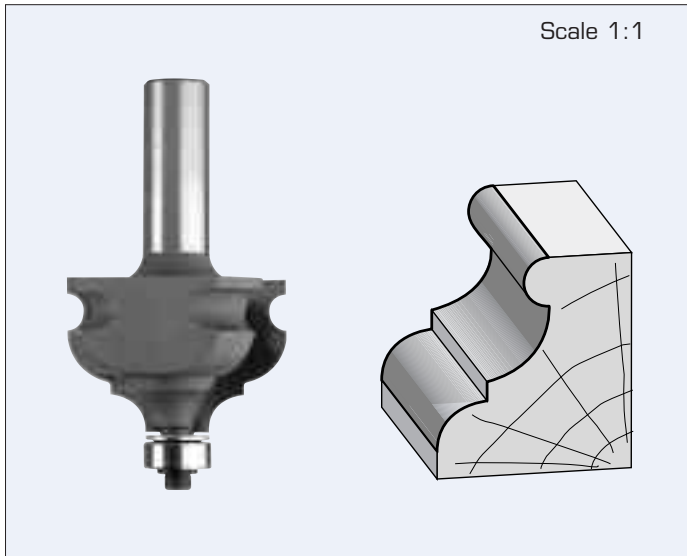
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB111
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB111	2"	1"	1/2"	2-7/8"

Replacement Parts

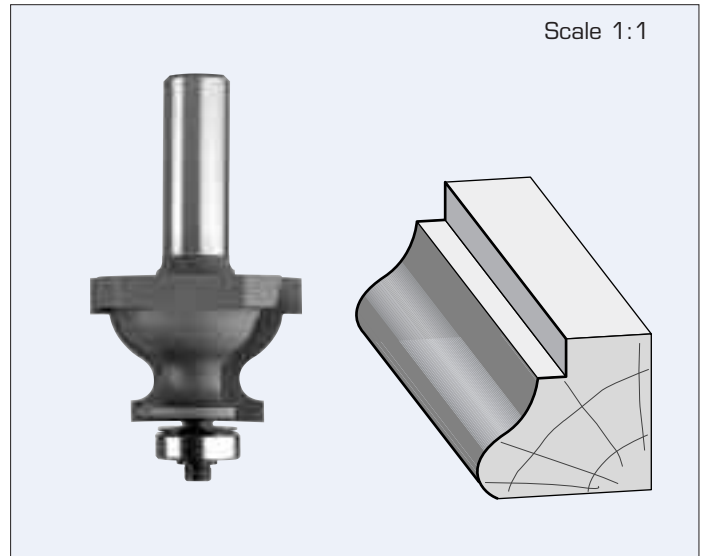
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB110
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB110	1-5/8"	1-1/8"	1/2"	3"

Replacement Parts

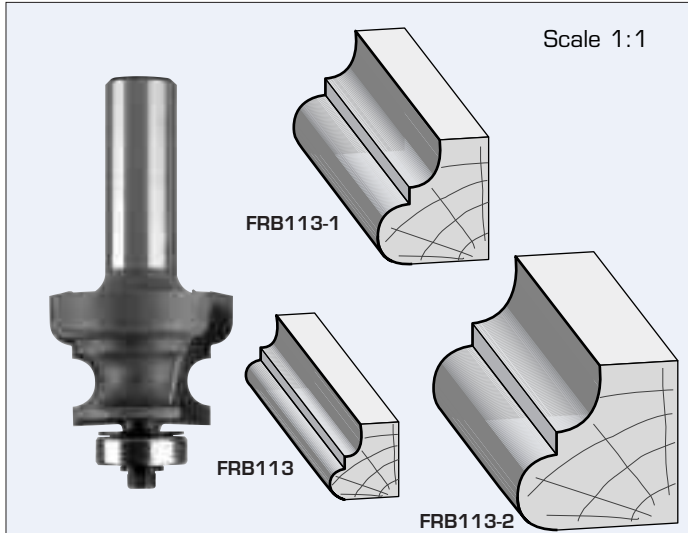
Ball Bearing B3 Spring Washer WFS506
Washer WR58 Screw WNC538

FRB112
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB112	1-9/16"	1-1/8"	1/2"	3"

Replacement Parts

Ball Bearing B3-4 Spring Washer WFS506
Washer WR59 Screw WNC538

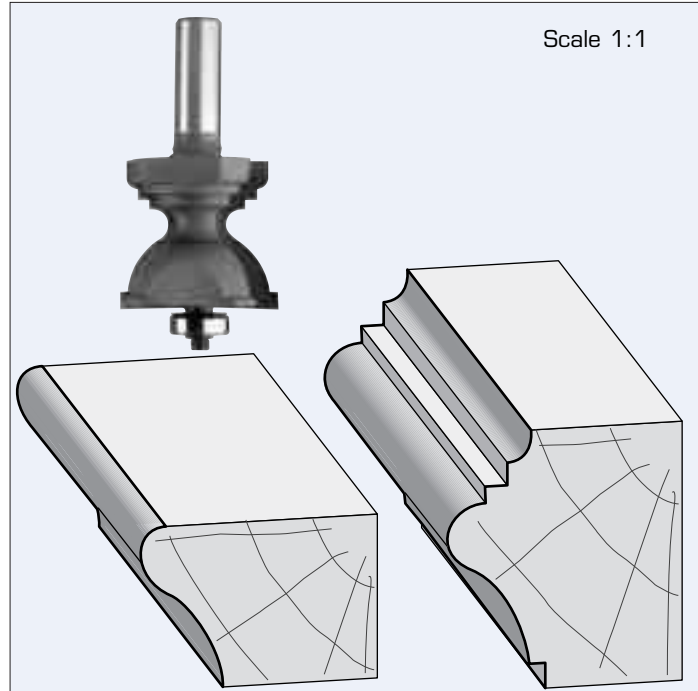
FRB113
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB113	13/16"	5/64"	5/64"	19/32"	1/2"	2-1/2"
FRB113-1	1-1/4"	5/32"	5/32"	7/8"	1/2"	2-3/4"
FRB113-2	1-9/16"	7/32"	3/16"	1-3/16"	1/2"	3-1/16"

Replacement Parts

 Ball Bearing B3-4
Washer WR59

 Spring Washer WFS506
Screw WNC538

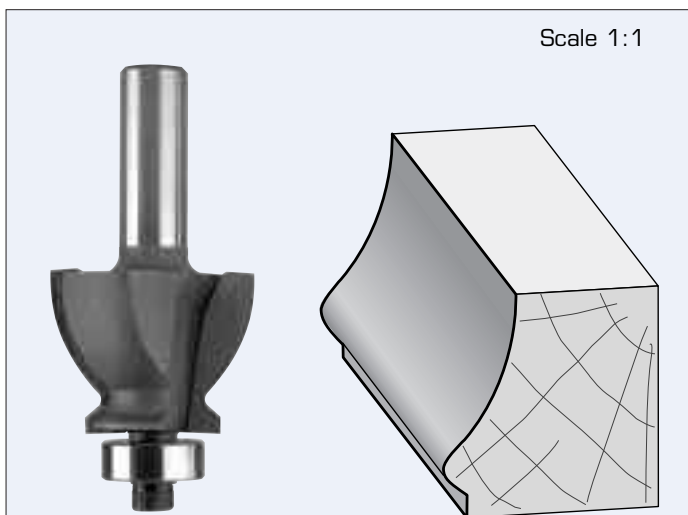
FRB115
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB115	1-21/32"	1-9/16"	1/2"	3-1/2"

Replacement Parts

 Ball Bearing B3-4
Washer WR59

 Spring Washer WFS506
Screw WNC538

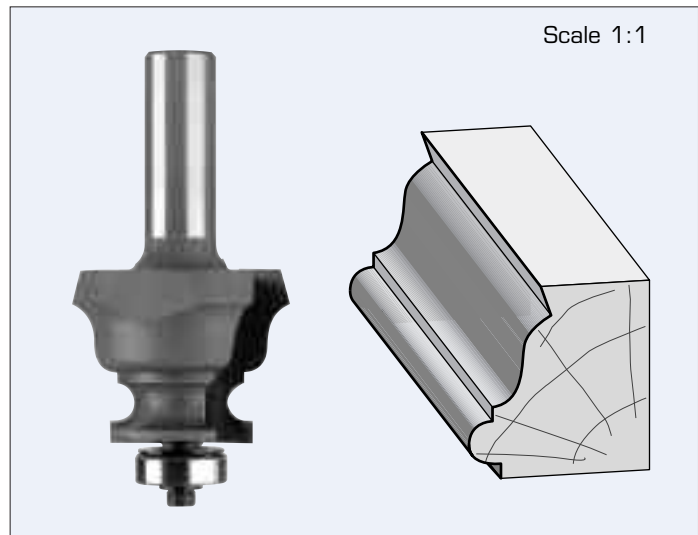
FRB114
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB114	1-1/2"	1-3/16"	1/2"	3-1/4"

Replacement Parts

 Ball Bearing B4
Screw WNF1012

Spring Washer WFS500

FRB116
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB116	1-1/2"	1-3/16"	1/2"	3-1/8"

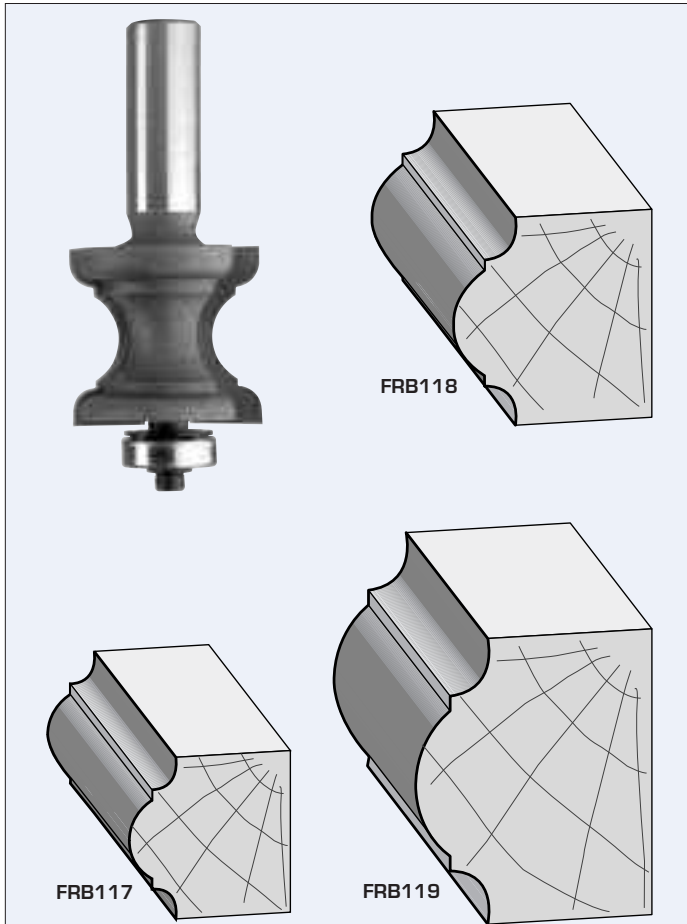
Replacement Parts

 Ball Bearing B3-4
Washer WR59

 Spring Washer WFS506
Screw WNC538

FRB117
**MOULDING BITS
WITH BALL BEARING GUIDE**

Scale 1:1



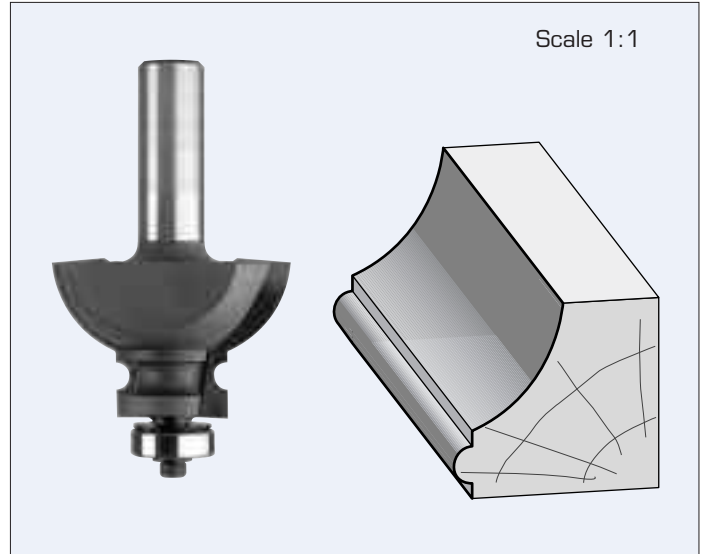
PART NO.	LARGE DIAM.	RADIUS R	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB117	1-1/8"	15/64"	1"	1/2"	2-7/8"
FRB118	1-1/4"	5/16"	1-3/16"	1/2"	3-1/8"
FRB119	1-3/8"	33/64"	1-9/16"	1/2"	3-1/2"

Replacement Parts

 Ball Bearing B3-4 Spring Washer WFS506
 Washer WR59 Screw WNC538

FRB120
**MOULDING BIT
WITH BALL BEARING GUIDE**

Scale 1:1



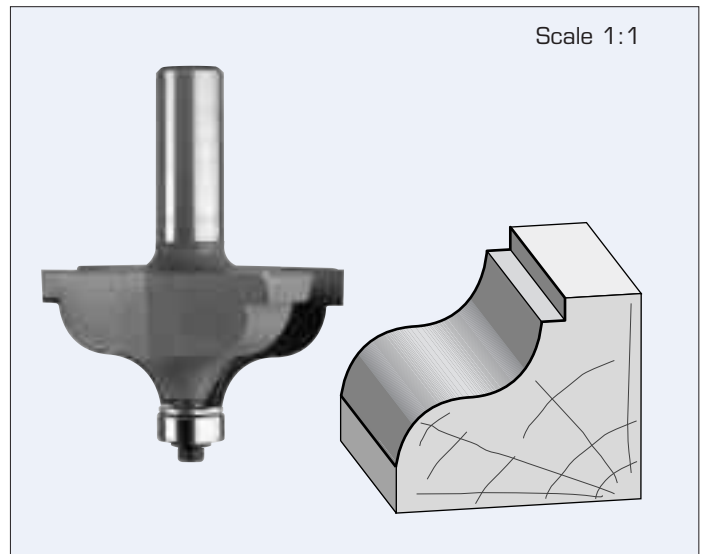
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB120	1-3/4"	1-3/16"	1/2"	3-1/8"

Replacement Parts

 Ball Bearing B3-4 Spring Washer WFS506
 Washer WR59 Screw WNC538

FRB121
**MOULDING BIT
WITH BALL BEARING GUIDE**

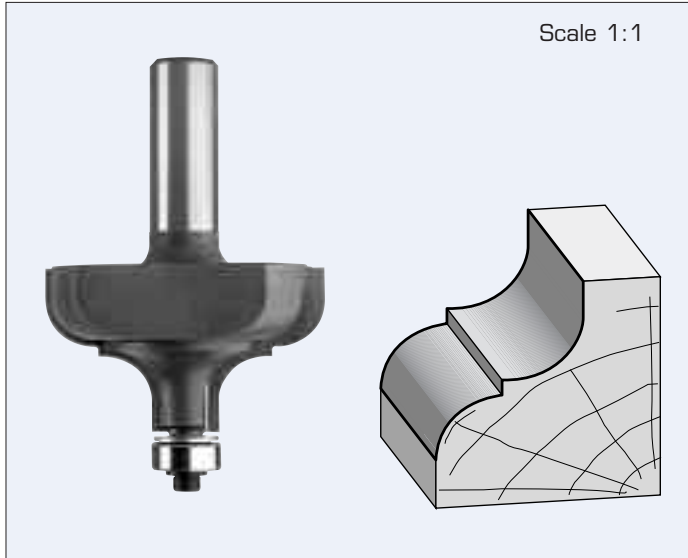
Scale 1:1



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB121	2-1/4"	1"	1/2"	2-7/8"

Replacement Parts

 Ball Bearing B3 Spring Washer WFS506
 Washer WR58 Screw WNC538

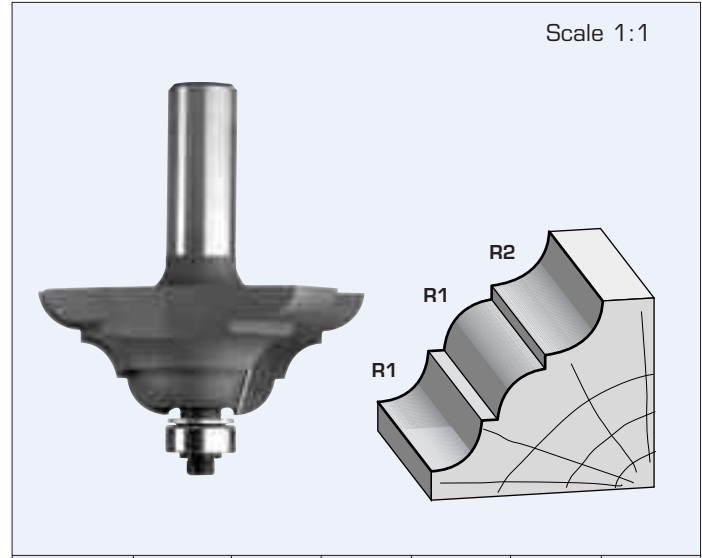
FRB122
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB122	2"	21/64"	1-7/32"	1/2"	3-1/8"

Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538

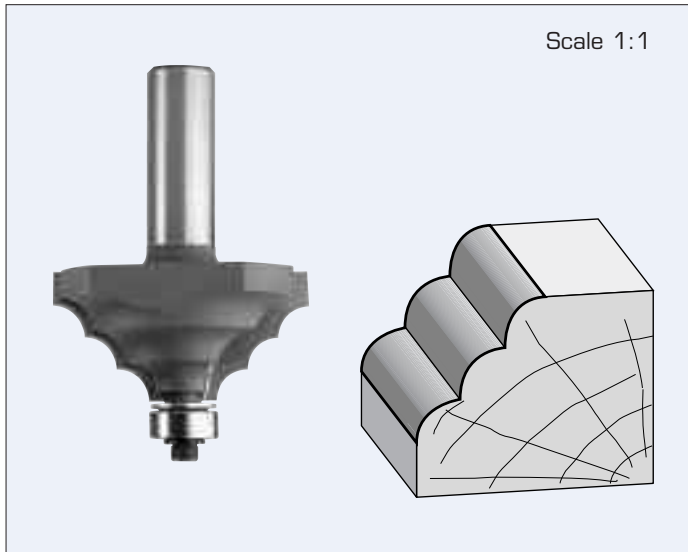
FRB124
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB124	2-5/16"	1/4"	19/64"	7/8"	1/2"	2-3/4"

Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538

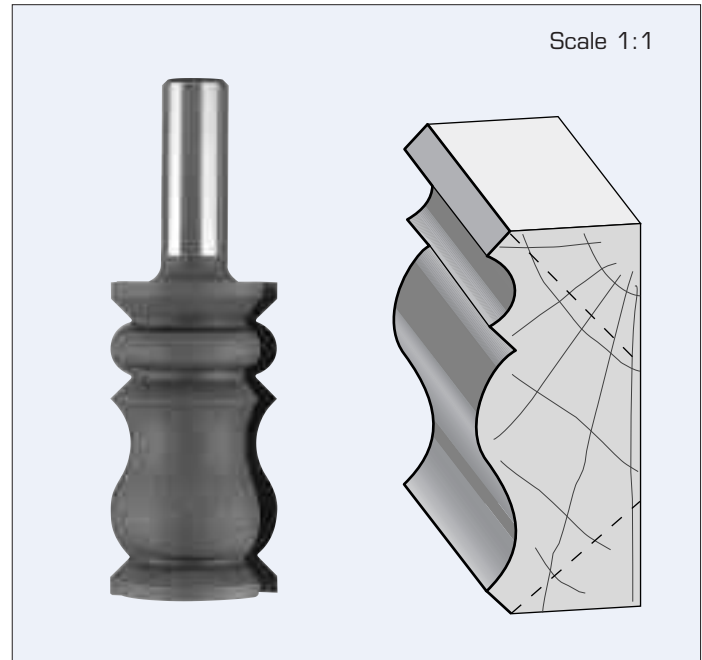
FRB123
**MOULDING BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB123	1-7/8"	15/64"	15/16"	1/2"	2-7/8"

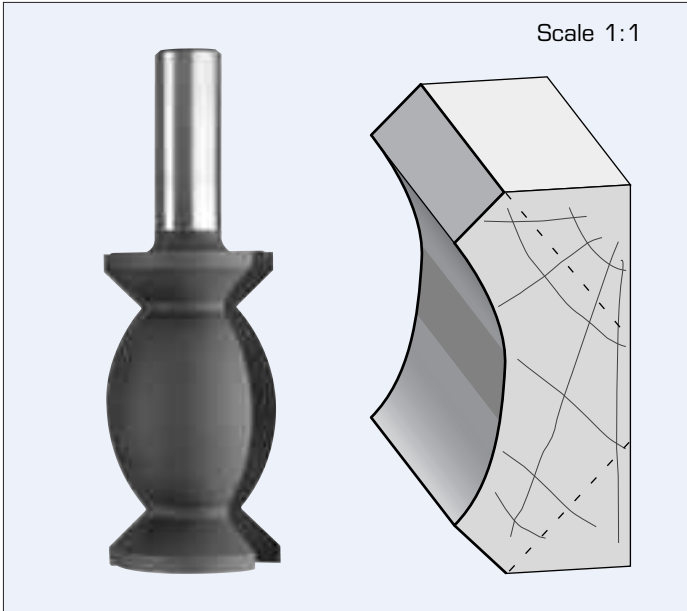
Replacement Parts

 Ball Bearing B3
 Washer WR58

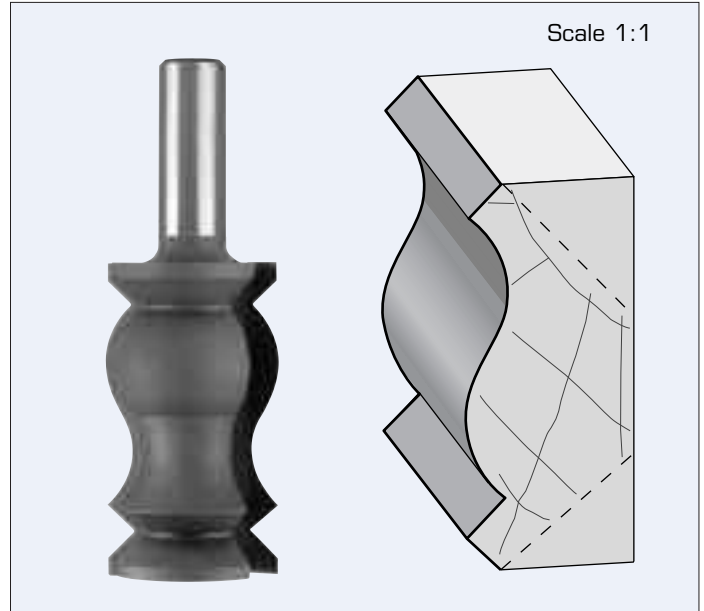
 Spring Washer WFS506
 Screw WNC538

FRB150
**CROWN MOULDING BIT
TWO FLUTES**


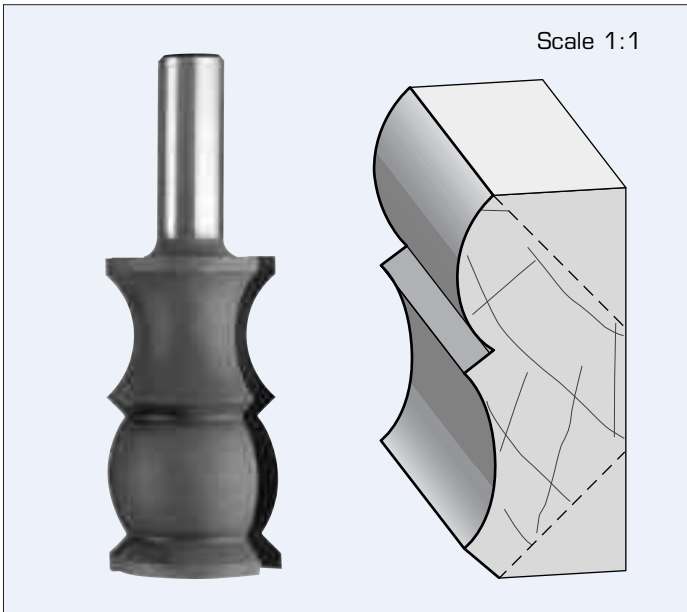
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB150	1-1/4"	2-1/4"	1/2"	3-3/4"

FRB151
**CROWN MOULDING BIT
TWO FLUTES**


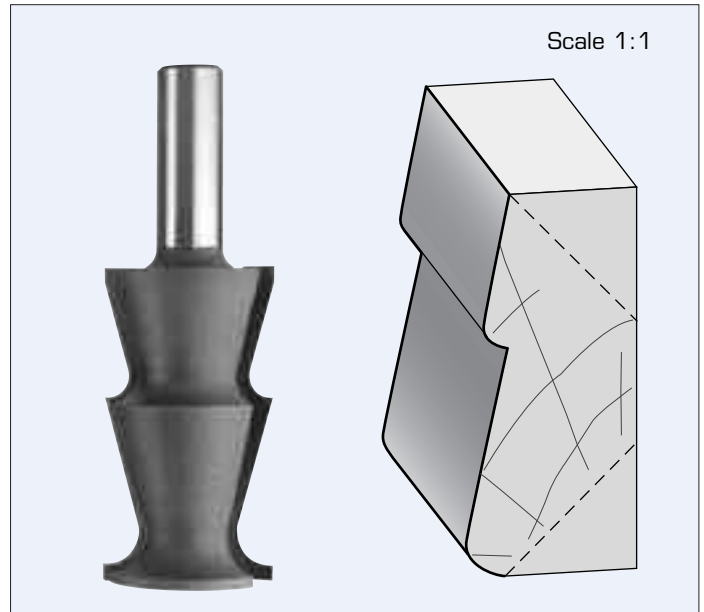
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB151	1-1/4"	2-1/4"	1/2"	3-3/4"

FRB153
CROWN MOULDING BIT TWO FLUTES


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB153	1-1/4"	2-1/4"	1/2"	3-3/4"

FRB152
**CROWN MOULDING BIT
TWO FLUTES**


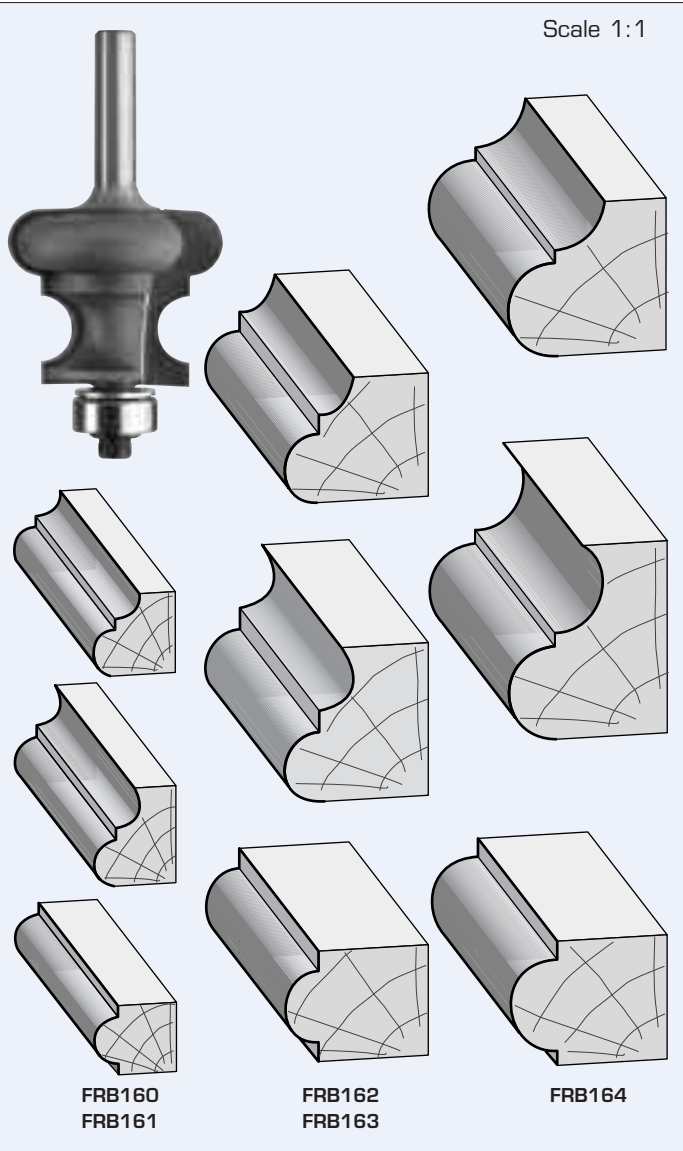
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB152	1-1/4"	2-1/4"	1/2"	3-3/4"

FRB154
**CROWN MOULDING BIT
TWO FLUTES**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB154	1-1/4"	2-1/4"	1/2"	3-3/4"

FRB160
MATCHED BEAD BITS WITH BALL BEARING GUIDE

Scale 1:1


FRB160
FRB161

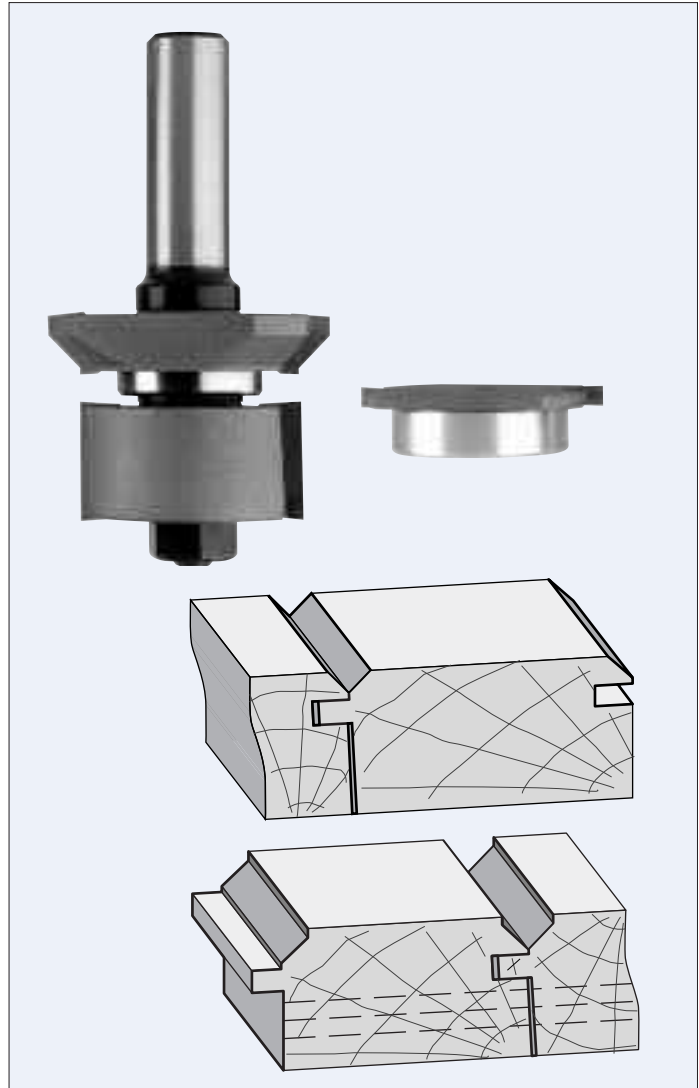
FRB162
FRB163

FRB164

PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB160 (A)	1"	1/8"	5/8"	1/4"	2-1/4"
FRB161 (A)	1"	1/8"	5/8"	1/2"	2-5/8"
FRB162 (A)	1-1/4"	3/16"	1"	1/4"	2-5/8"
FRB163 (A)	1-1/4"	3/16"	1"	1/2"	2-7/8"
FRB164 (B)	2"	1/4"	1-1/4"	1/2"	3-1/8"

Replacement Parts

- | | |
|--|--------------------------------------|
| A) Ball Bearing B3
Washer WR58 | Spring Washer WFS506
Screw WNC538 |
| B) Ball Bearing B3-4
Washer WR59 | Spring Washer WFS506
Screw WNC538 |

FRB170
TONGUE AND GROOVE "V" PANEL BIT SET


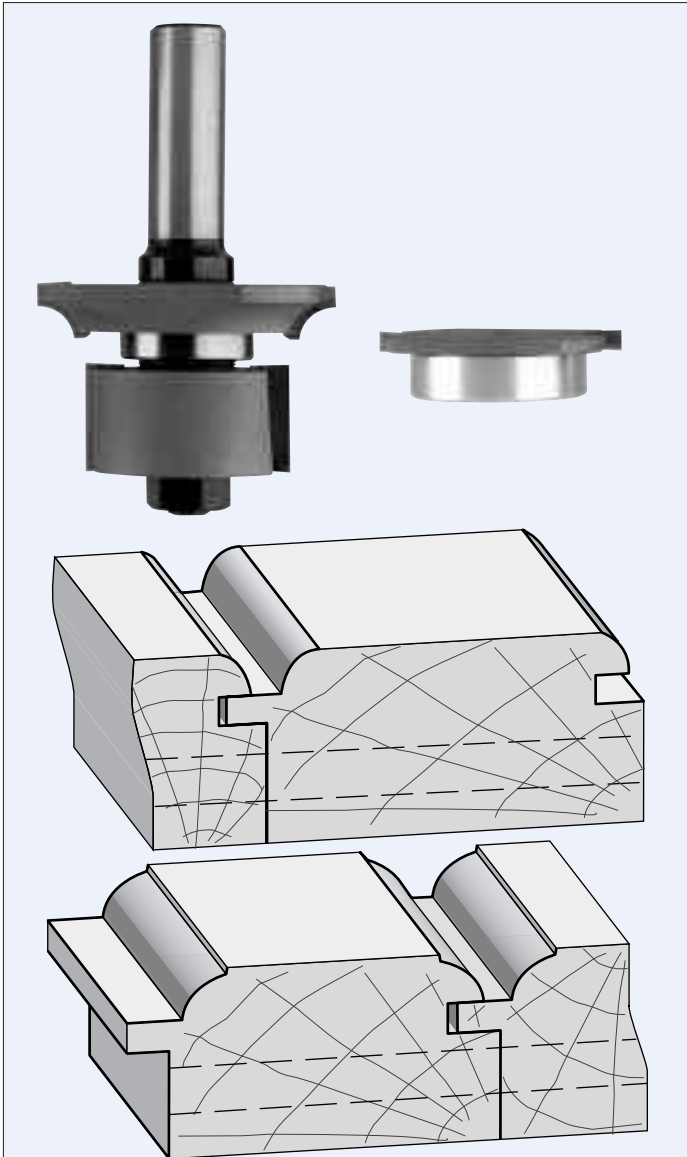
PART NO.	LARGE DIAM.	DEG. BEVEL	GROOVE WIDTH	GROOVE DEPTH	SHANK DIAM.	OVERALL LENGTH
FRB170	1-13/16"	45°	5/32"	1/4"	1/2"	3"

MINIMUM WOOD THICKNESS 1/2"
MAXIMUM WOOD THICKNESS 1"
Replacement Cutters

- Profile Cutter FRB170PC
- Rabbeting Cutter FRB170RC
- Grooving Cutter FRB170GC

Replacement Parts

- | | | |
|--------------------|------------------------|-------|
| Arbor and Nut AR21 | Spacers 3.0mm [3 pcs.] | WF610 |
| Nut only WNF516 | Spacers 1.0mm [3 pcs.] | WF608 |
| Ball Bearing B5 | Shim 0.5mm [1 pc.] | WF606 |
| Ball Bearing B6-6 | Shim 0.4mm [1 pc.] | WF605 |
| | Shims 0.1mm [3 pcs.] | WF604 |
| | Shim 0.05mm [1 pc.] | WF600 |

FRB171
**TONGUE AND GROOVE
RADIUS PANEL BIT SET**


PART NO.	LARGE DIAM.	RADIUS	GROOVE WIDTH	GROOVE DEPTH	SHANK DIAM.	OVERALL LENGTH
FRB171	1-13/16"	15/64"	5/32"	1/4"	1/2"	3"

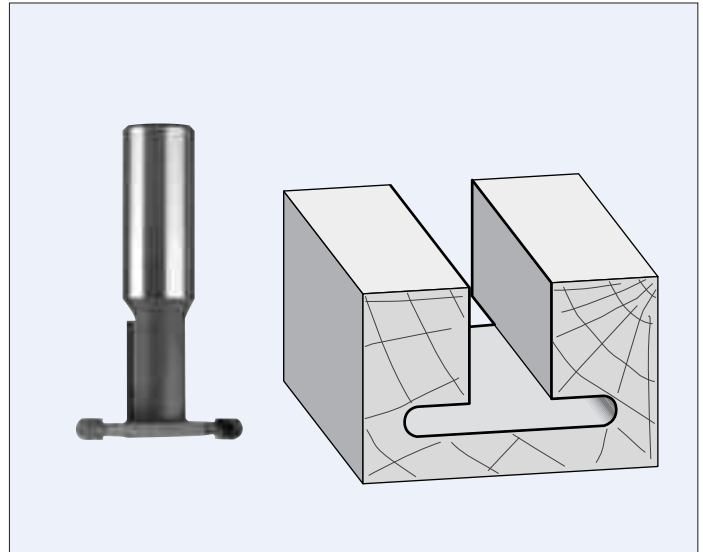
MINIMUM WOOD THICKNESS 1/2"
MAXIMUM WOOD THICKNESS 1"

Replacement Cutters

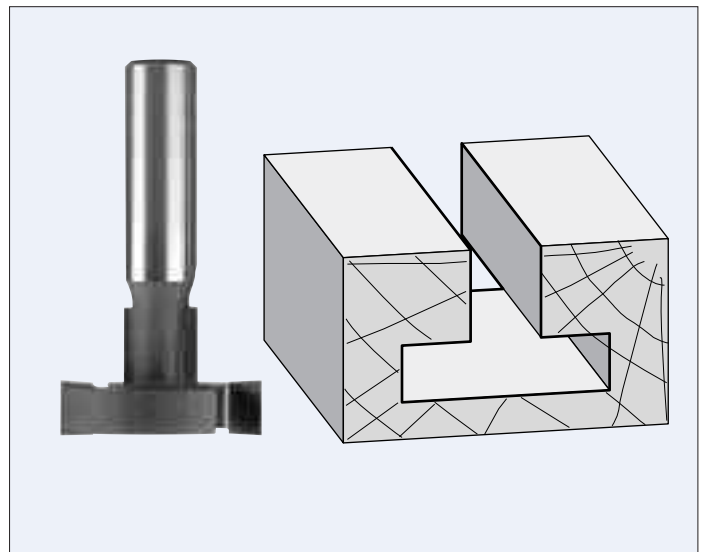
Profile Cutter FRB171PC
Rabbeting Cutter FRB170RC
Grooving Cutter FRB171GC

Replacement Parts

Arbor and Nut AR21	Spacers 3.0mm (3 pcs.)	WF610
Nut only WNF516	Spacers 1.0mm (3 pcs.)	WF608
Ball Bearing B5	Shim 0.5mm (1 pc.)	WF606
Ball Bearing B6-6	Shim 0.4mm (1 pc.)	WF605
	Shims 0.1mm (3 pcs.)	WF604
	Shim 0.05mm (1 pc.)	WF600

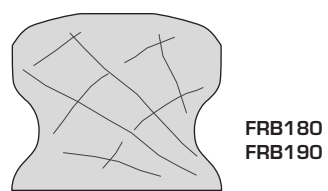
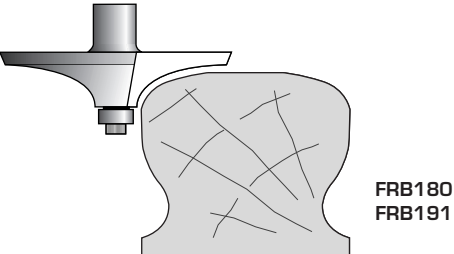
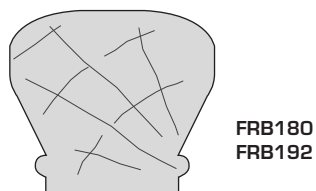
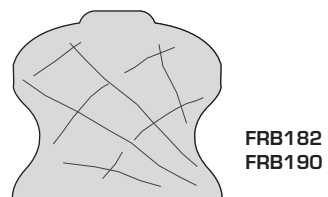
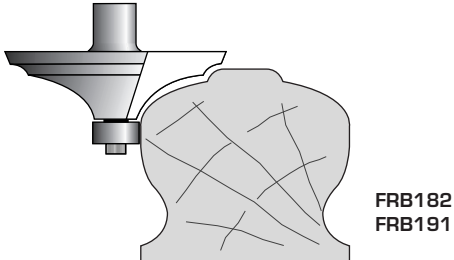
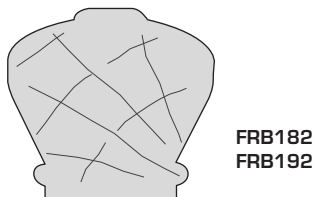
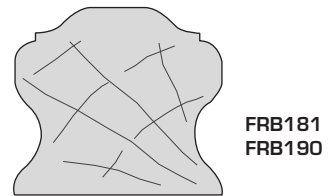
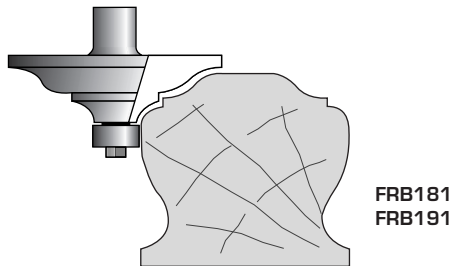
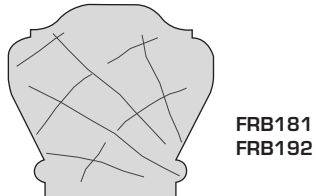
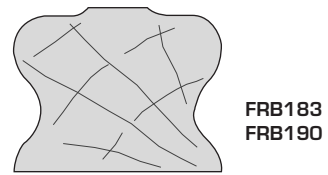
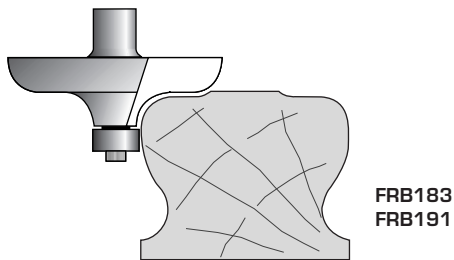
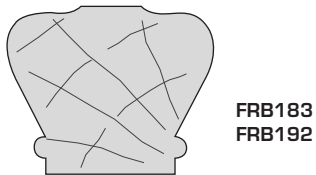
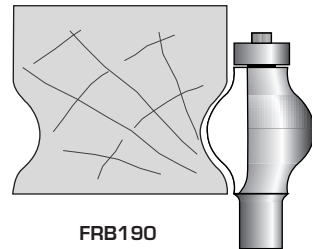
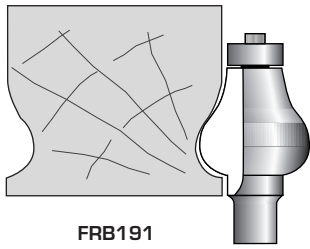
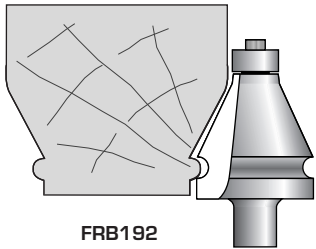
FRB174
**RADIUS T-SLOT
BITS ONE PLUS TWO WINGS**


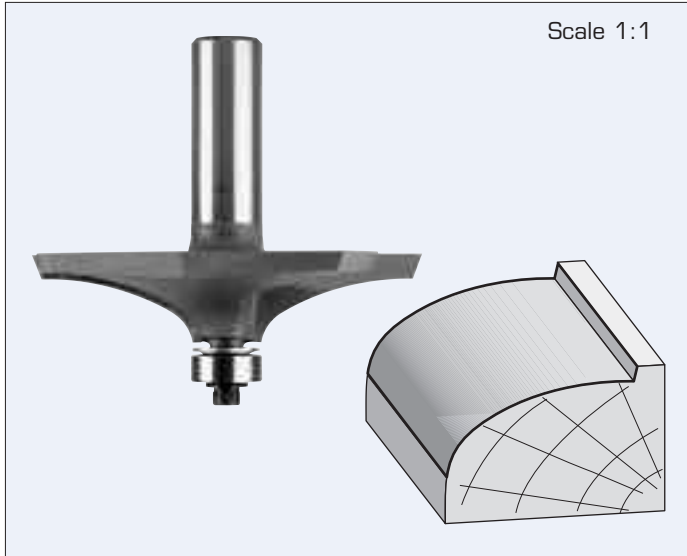
PART NO.	LARGE DIAM.	SMALL DIAM.	GROOVE WIDTH	RADIUS	CUTTING LENGTH	SHANK DIAM.
FRB174	1-1/8"	7/16"	5/32"	5/64"	13/16"	3/8"
FRB175	1-1/8"	7/16"	5/32"	5/64"	13/16"	1/2"
FRB176	1-39/64"	3/8"	5/32"	5/64"	13/16"	3/8"

FRB177
**T-SLOT BITS
TWO PLUS TWO WINGS**


PART NO.	LARGE DIAM.	SMALL DIAM.	GROOVE WIDTH	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB177	1-3/32"	3/8"	5/16"	13/16"	1/2"	2-5/8"
FRB178	1-3/32"	3/8"	5/16"	13/16"	3/8"	2-3/8"
FRB179	1-3/8"	1/2"	3/8"	7/8"	1/2"	2-9/16"

HANDRAIL BIT SELECTION



FRB180
**HANDRAIL BIT
WITH BALL BEARING GUIDE**


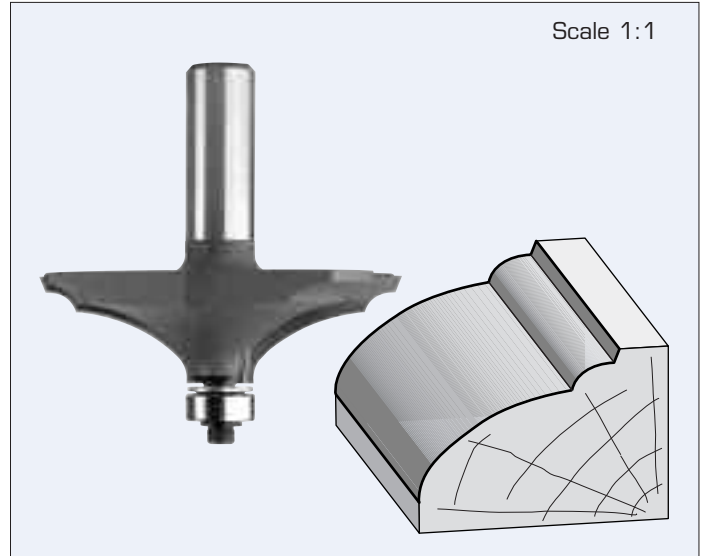
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB180	2-3/4"	11/16"	1/2"	2-1/2"

Max. RPM 18,000

Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

FRB182
**HANDRAIL BIT
WITH BALL BEARING GUIDE**


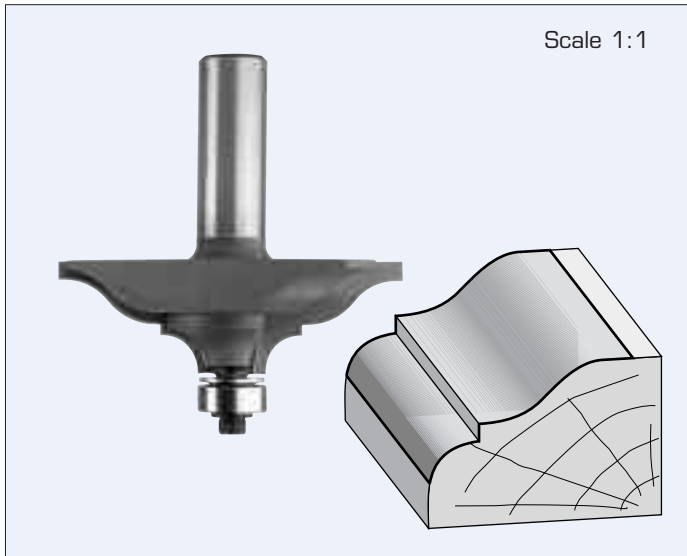
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB182	2-5/8"	3/4"	1/2"	2-5/8"

Max. RPM 18,000

Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

FRB181
**HANDRAIL BIT
WITH BALL BEARING GUIDE**


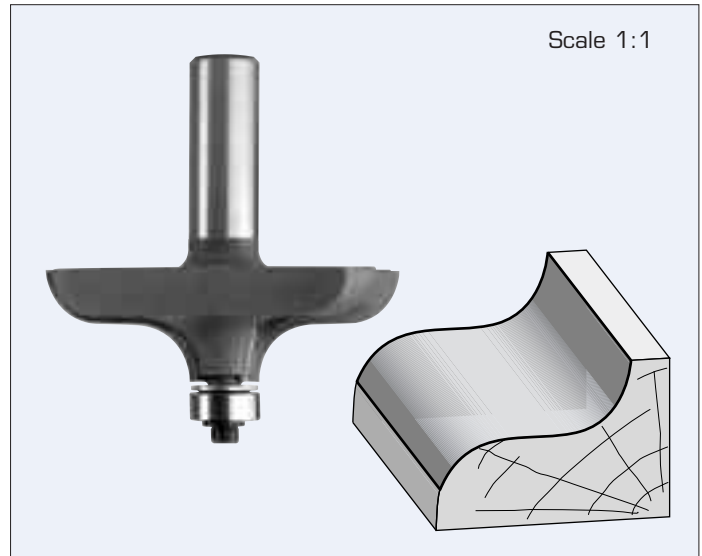
PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB181	2-1/2"	25/32"	1/2"	2-3/4"

Max. RPM 18,000

Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

FRB183
**HANDRAIL BIT
WITH BALL BEARING GUIDE**


PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB183	2-1/2"	25/32"	1/2"	2-3/4"

Max. RPM 18,000

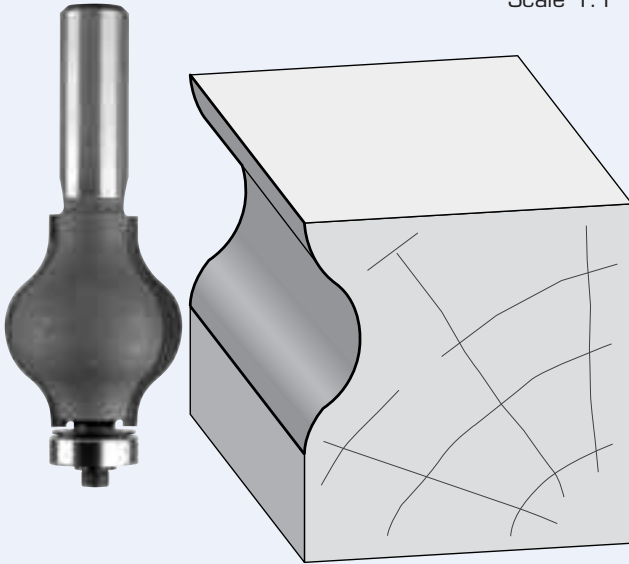
Replacement Parts

Ball Bearing B3
Washer WR58

Spring Washer WFS506
Screw WNC538

FRB190
**HANDRAIL BIT
WITH BALL BEARING GUIDE**

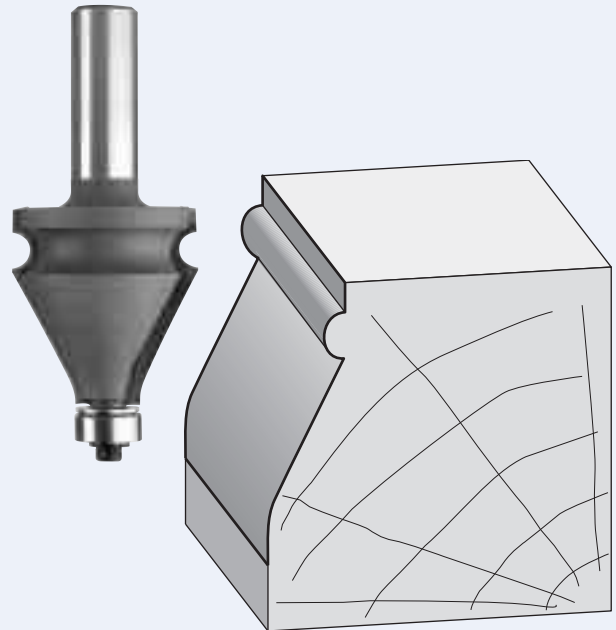
Scale 1:1



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB190	1-1/4"	1-1/2"	1/2"	3-3/8"

Replacement Parts (see below)
FRB192
**HANDRAIL BIT
WITH BALL BEARING GUIDE**

Scale 1:1



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB192	1-3/8"	1-1/2"	1/2"	3-3/8"

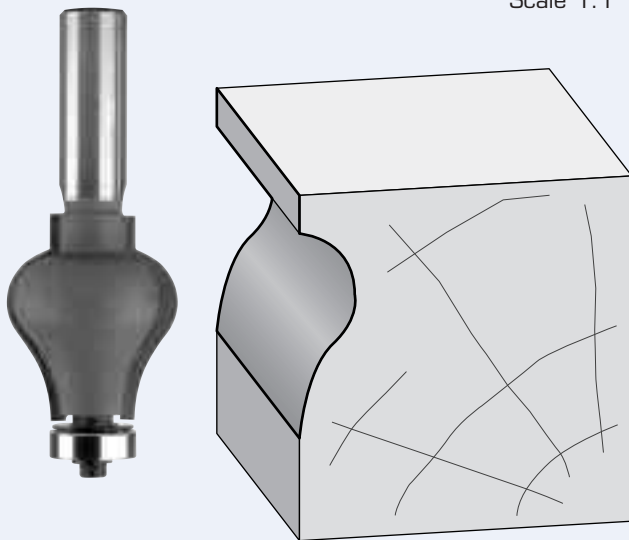
Replacement Parts

 Ball Bearing B3
Washer WR58

 Spring Washer WFS506
Screw WNC538

FRB191
**HANDRAIL BIT
WITH BALL BEARING GUIDE**

Scale 1:1



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB191	1-1/4"	1-1/2"	1/2"	3-3/8"

Replacement Parts for FRB190 & FRB191

 Ball Bearing B3-4 Spring Washer WFS506
Washer WR59 Screw WNC538

FRB195
**MULTI PROFILE BIT WITH BALL BEARING GUIDE
TWO FLUTES**

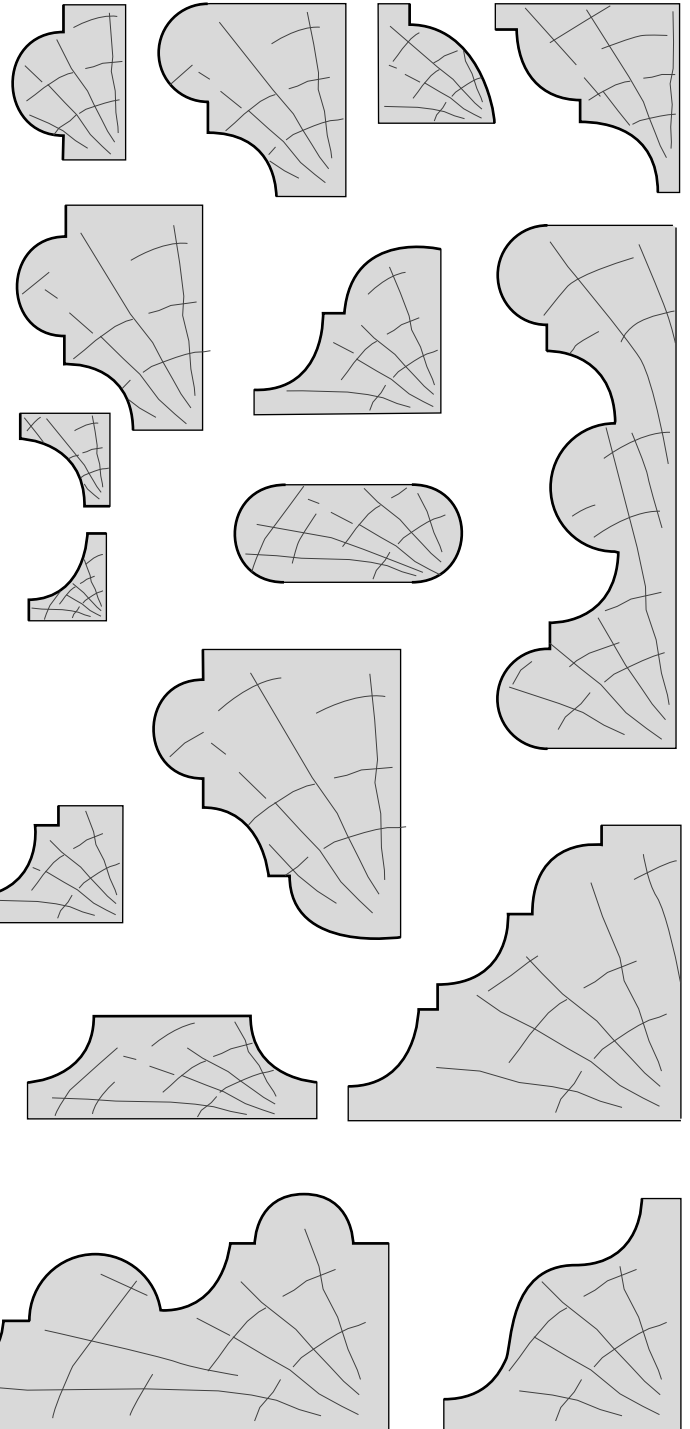
Scale 1:1



PART NO.	LARGE DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB195	2-1/8"	1-7/8"	1/2"	3-3/4"

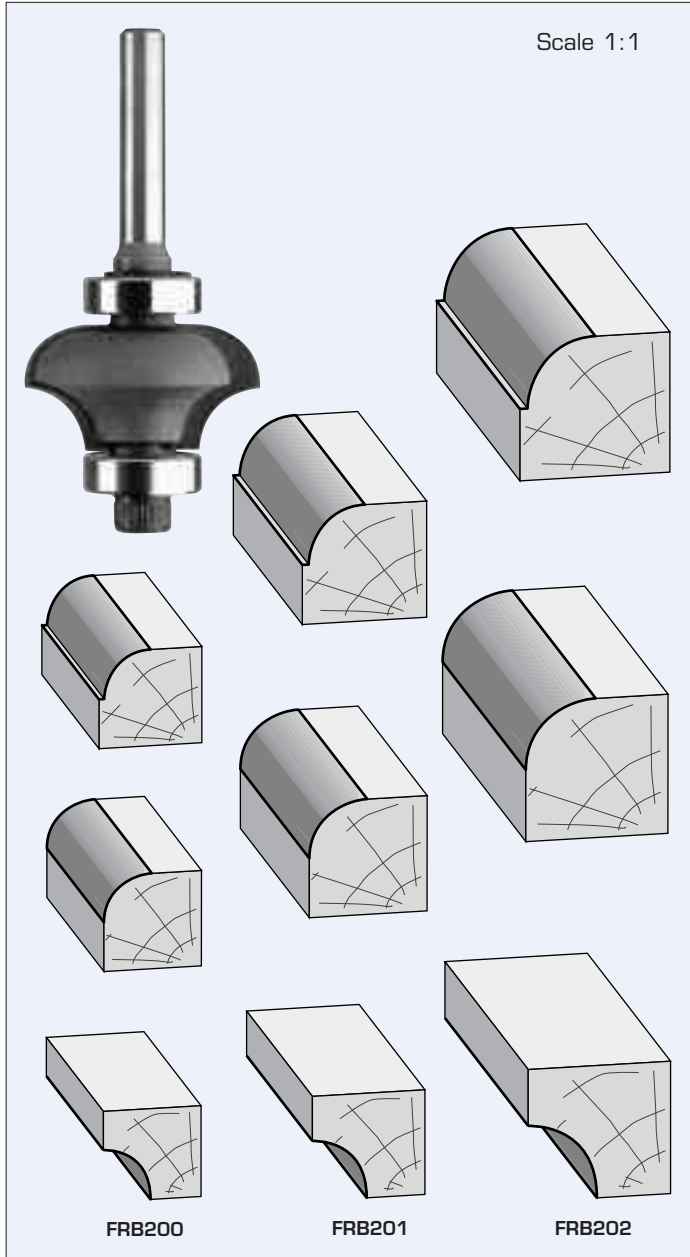
Max. RPM 18,000
Replacement Parts

 Ball Bearing B3
 Washer WR58

 Spring Washer WFS506
 Screw WNC538


FRB200

**MATCHING CORNER
ROUND/COVE BITS**



PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB200	1-1/8"	1/4"	35/64"	1/4"	2-19/32"
FRB201	1-1/4"	5/16"	43/64"	1/4"	2-23/32"
FRB202	1-3/8"	3/8"	51/64"	1/4"	2-27/32"

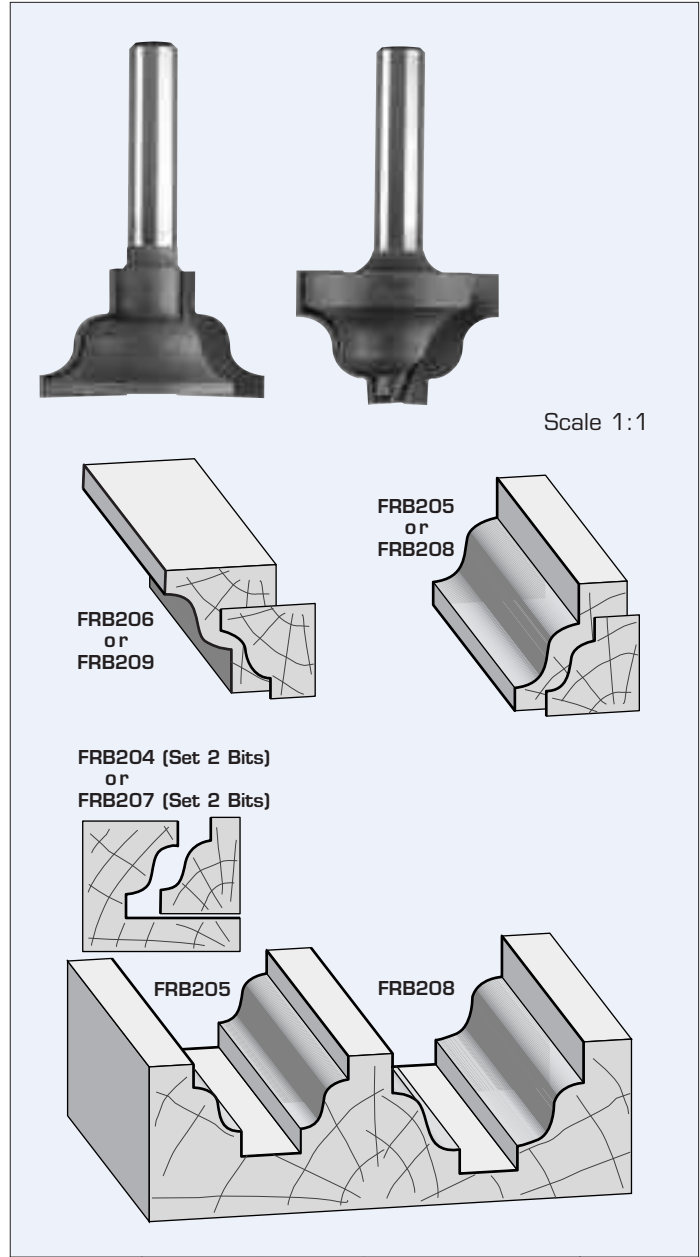
This unique router bit with two flutes and double ball bearing guides performs two machining cuts, rounding over and cove. To achieve beading cuts, use additional Ball Bearing part No. B3-1B

Replacement Parts

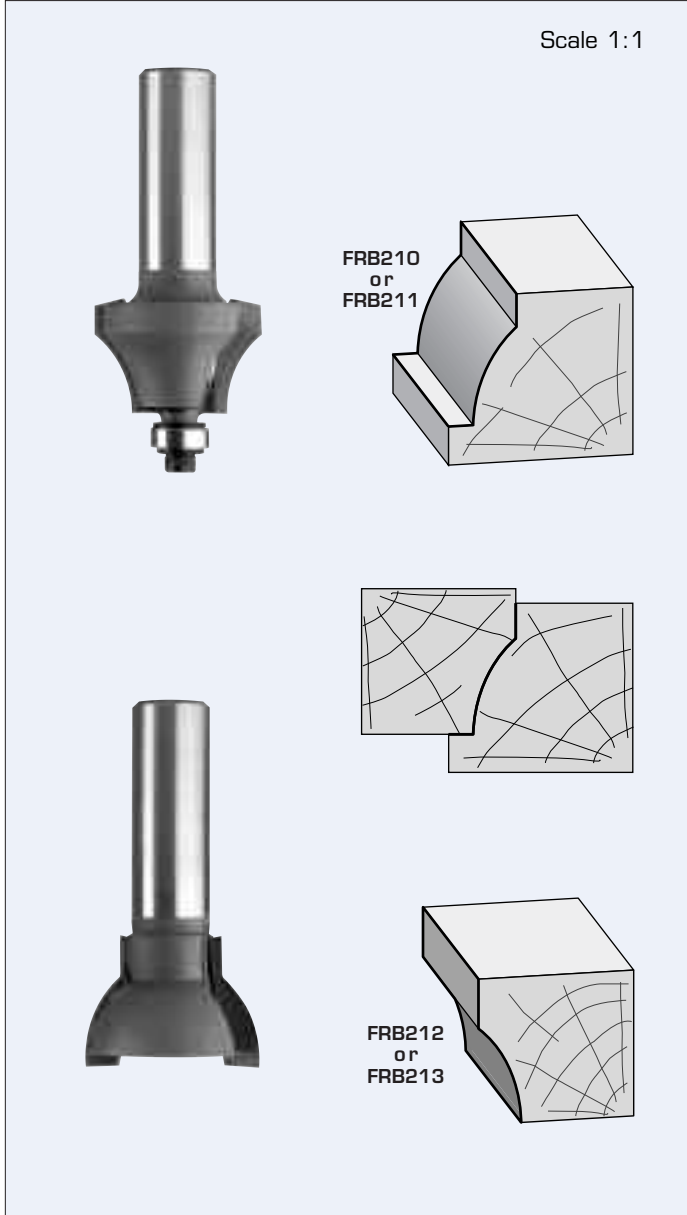
- Ball Bearing B3-4A
- External Circlip WCO1
- Screw WNF1012
- Washer WFS500

FRB204

**STILE AND RAIL
BITS, TWO PIECE SETS**



PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB204	Complete Set (2 bits)				
FRB205	13/16"	1/8"	1/2"	1/4"	1-5/8"
FRB206	1"	1/8"	1/2"	1/4"	1-5/8"
FRB207	Complete Set (2 bits)				
FRB208	1"	5/32"	21/32"	1/4"	1-25/32"
FRB209	1-1/8"	5/32"	21/32"	1/4"	1-25/32"

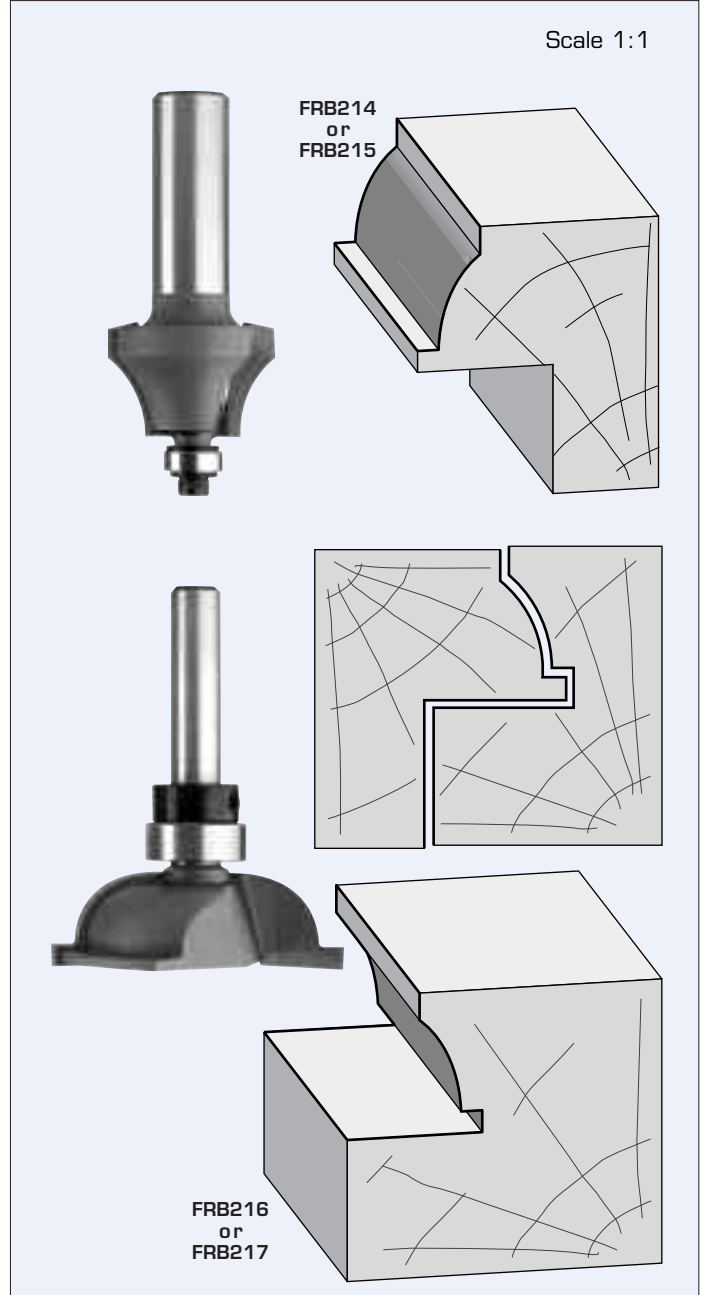
FRB210
**SASH BAR JOINT BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB210	1-1/16"	43/64"	11/16"	1/4"	2-1/4"
FRB211	1-1/16"	43/64"	11/16"	1/2"	2-5/8"
FRB212	1-7/64"	43/64"	27/32"	1/4"	2-1/16"
FRB213	1-7/64"	43/64"	27/32"	1/2"	2-5/16"

Replacement Parts

 Ball Bearing B2
 Washer WFS500

 Spring Washer WFS506
 Screw WNC538

FRB214
**STILE AND RAIL
SETS TWO FLUTES**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB214 (A)	1-1/16"	43/64"	43/64"	1/4"	2-1/4"
FRB215 (A)	1-5/16"	11/32"	19/32"	1/4"	2-1/4"
FRB216 (B)	1-3/16"	43/64"	5/8"	1/4"	2-1/16"
FRB217 (B)	1-7/16"	11/32"	15/32"	1/4"	2-1/16"

Replacement Parts
A) Ball Bearing B2
 Washer WFS500

 Spring Washer WFS506
 Screw WNC538

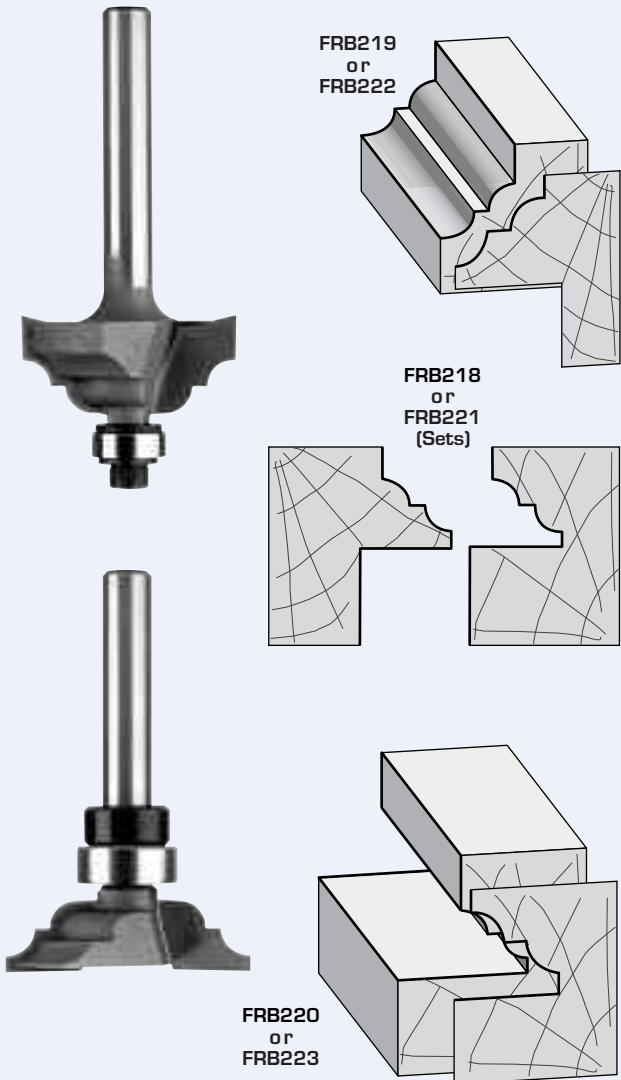
B) Ball Bearing B3-1
 Lock Ring WO1

Screw WNC525

FRB218

**STILE AND RAIL BITS
TWO PIECE SETS**

Scale 1:1



PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB218	Complete Set (2 bits)				
FRB219 (A)	1-5/64"	9/64"	1/2"	1/4"	2"
FRB220 (B)	1-13/64"	9/64"	23/64"	1/4"	2"
FRB221	Complete Set (2 bits)				
FRB222 (A)	1-5/16"	11/64"	5/8"	1/4"	2"
FRB223 (B)	1-7/16"	11/64"	15/32"	1/4"	2"

Replacement Parts

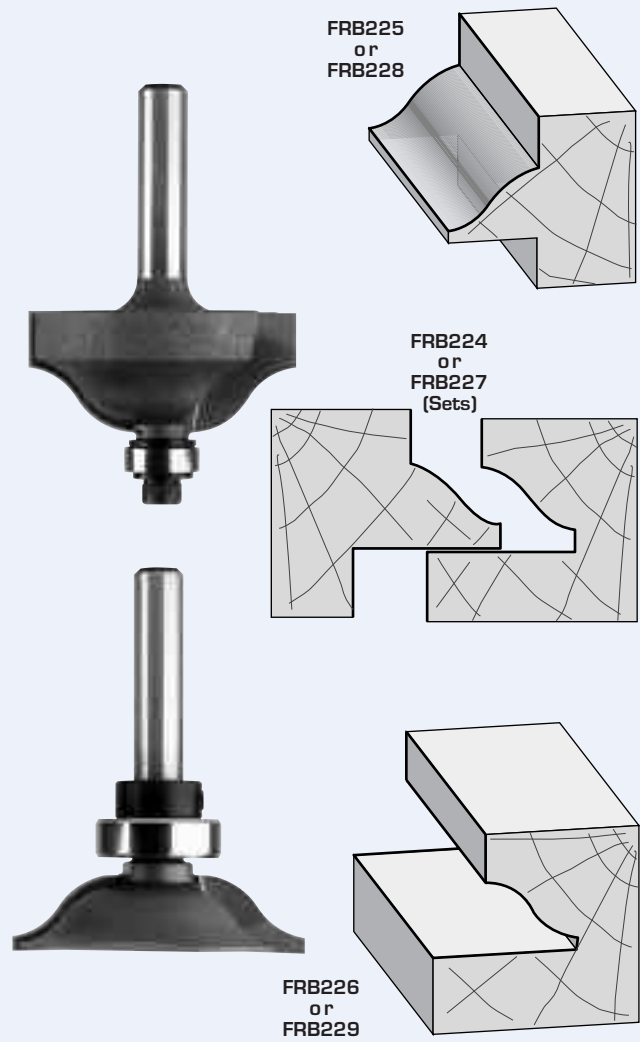
- A)** Ball Bearing B2 Spring Washer WFS506
 Washer WFS500 Screw WNC538
- B)** Ball Bearing B3-1
 Lock Ring WO1 Screw WNC525

FRB224

**STILE AND RAIL
BITS TWO PIECE SETS**



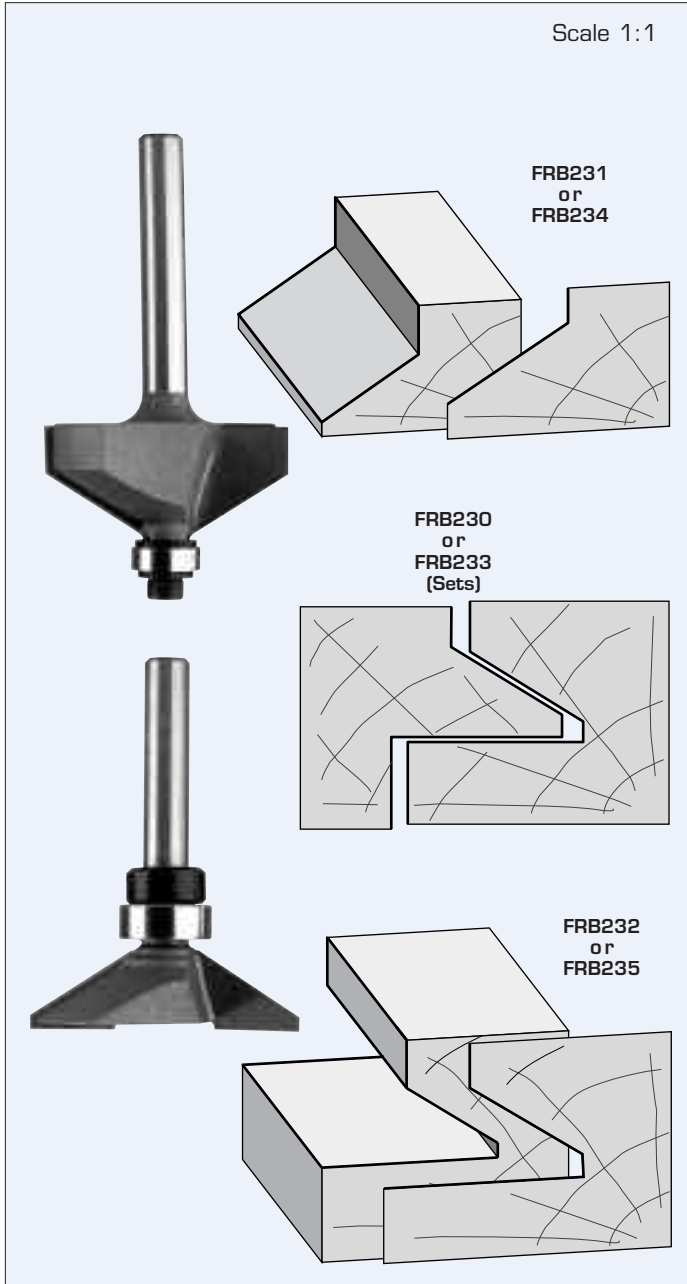
Scale 1:1



PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB224	Complete Set (2 bits)				
FRB225 (A)	1-5/16"	21/64"	35/64"	1/4"	2-3/64"
FRB226 (B)	1-7/16"	21/64"	25/64"	1/4"	2"
FRB227	Complete Set (2 bits)				
FRB228 (A)	1-15/32"	21/64"	35/64"	1/4"	2-3/64"
FRB229 (B)	1-39/64"	21/64"	7/16"	1/4"	2"

Replacement Parts

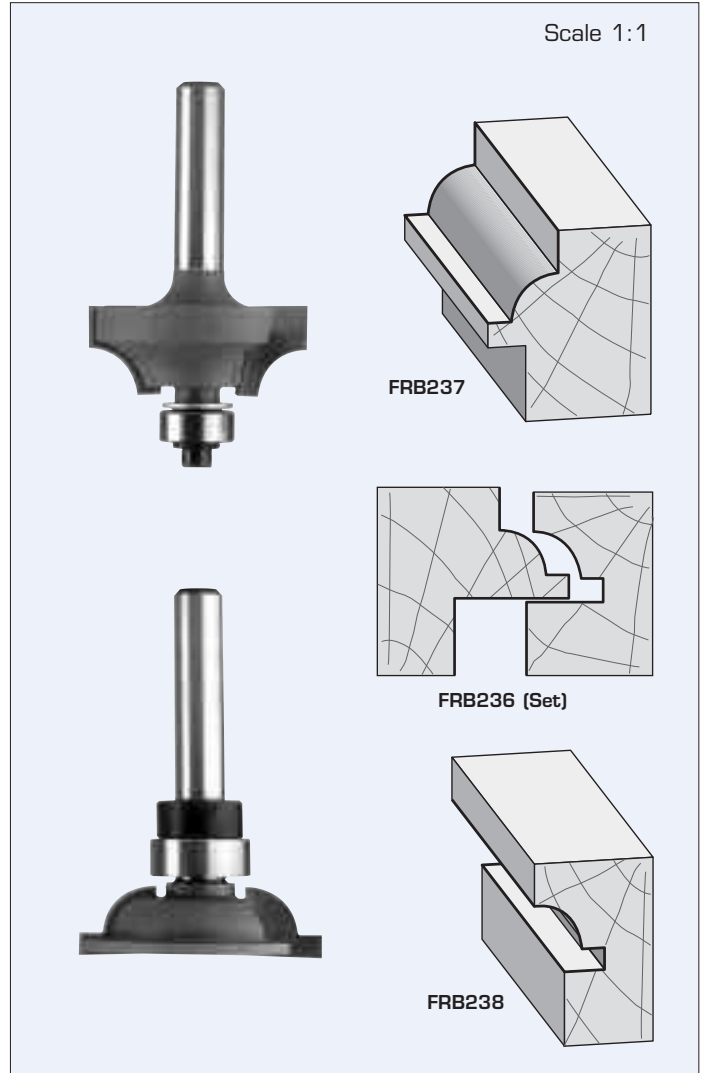
- A)** Ball Bearing B2 Spring Washer WFS506
 Washer WFS500 Screw WNC538
- B)** Ball Bearing B3-1
 Lock Ring WO1 Screw WNC525

FRB230
**STILE AND RAIL BITS
TWO PIECE SETS**


PART NO.	LARGE DIAM.	DEG. BEVEL	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB230	Complete Set (2 bits)				
FRB231 (A)	1-5/16"	33°	35/64"	1/4"	2-1/16"
FRB232 (B)	1-7/16"	33°	25/64"	1/4"	2"
FRB233	Complete Set (2 bits)				
FRB234 (A)	1-9/16"	32°	43/64"	1/4"	2-1/8"
FRB235 (B)	1-11/16"	32°	31/64"	1/4"	2"

Replacement Parts

- A)** Ball Bearing B2 Spring Washer WFS506
 Washer WFS500 Screw WNC538
- B)** Ball Bearing B3-1
 Lock Ring WO1 Screw WNC525

FRB236
**STILE AND RAIL
BITS TWO PIECE SETS**


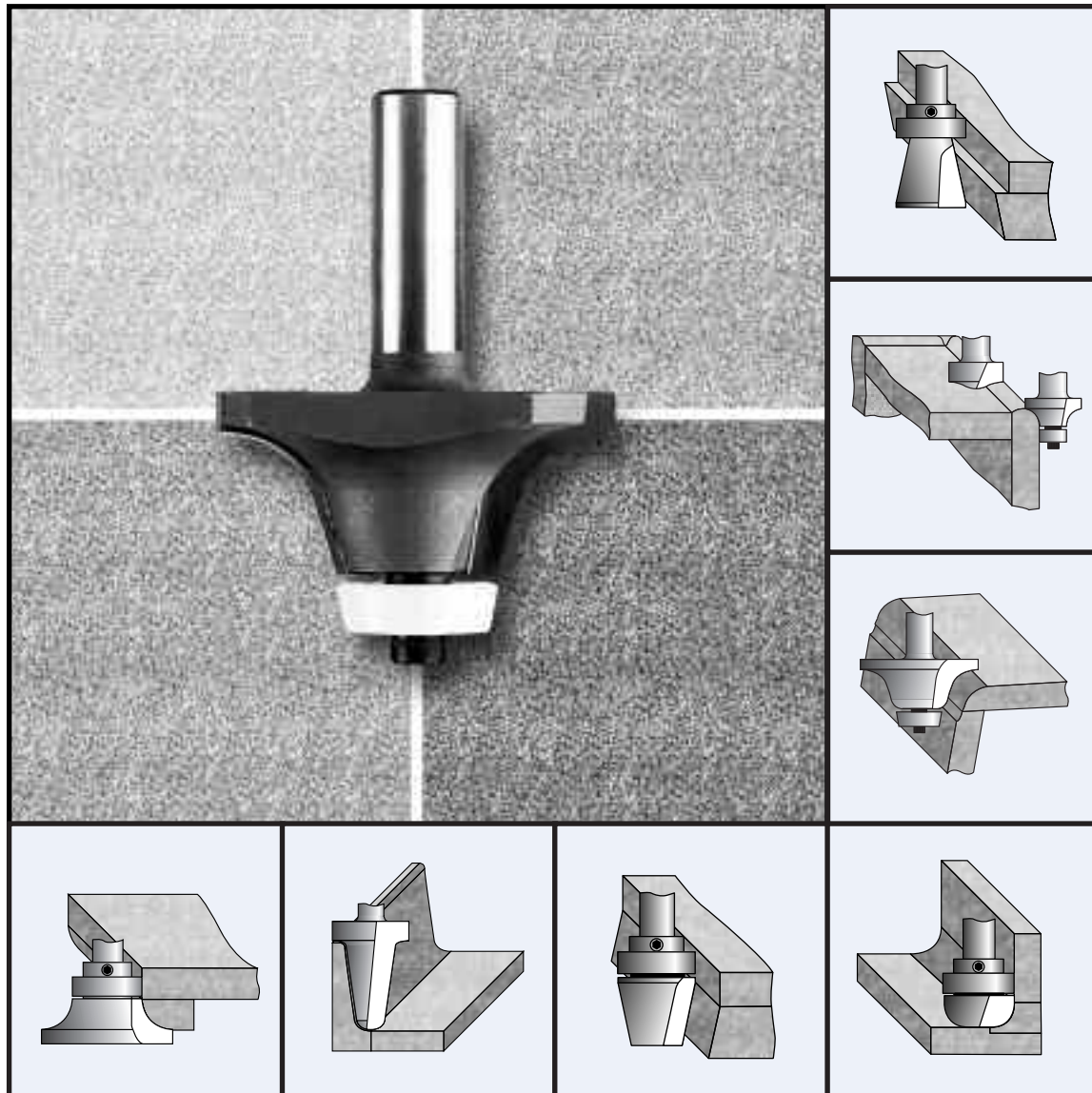
PART NO.	LARGE DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB236	Complete Set (2 bits)				
FRB237 (A)	1-5/64"	15/64"	29/64"	1/4"	2"
FRB238 (B)	1-13/64"	15/64"	23/64"	1/4"	1-7/8"

Replacement Parts

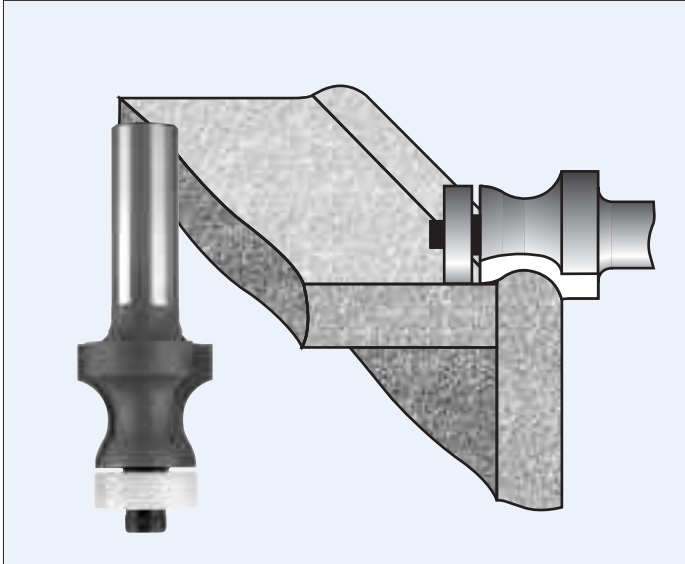
- A)** Ball Bearing B2 Spring Washer WFS506
 Washer WFS500 Screw WNC538
- B)** Ball Bearing B3-1
 Lock Ring WO1 Screw WNC525

SOLID SURFACE ROUTER BITS

SPECIAL ROUTER BITS FOR FABRICATING SOLID SURFACE MATERIALS
 (WILSONART® GIBRALTAR®, SSV®, CORIAN®, SURELL®, AVONITE®, FOUNTAINHEAD®, etc.)



FS Tool Router Bits have been specifically engineered for the fabrication of **solid surface materials**. Tough carbide grades and specific tool geometry ensures extended tool life. Ball bearing guides, where possible, have a nylon shield to prevent marking of the workpiece. See page E7 for solid surface circular saw blades.

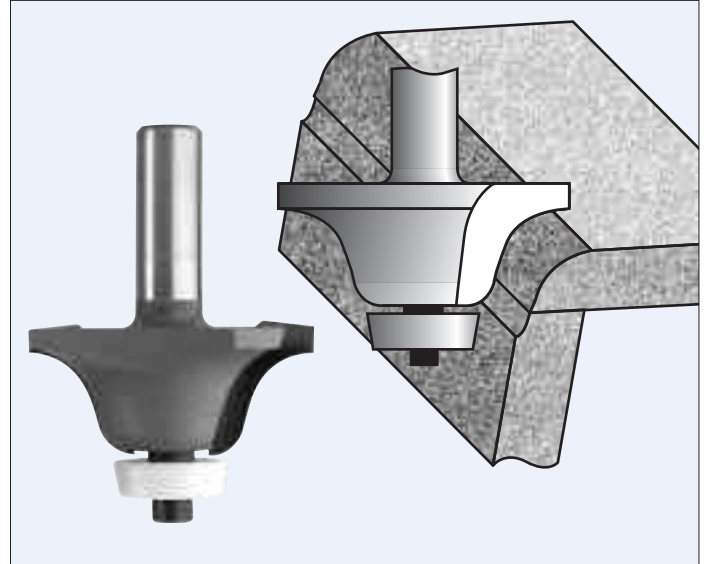
FRB400
**COUNTER TOP BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB400	1"	5/16"	7/8"	1/2"	2-7/8"
FRB401	1"	5/16"	1-1/8"	1/2"	3-1/16"

Replacement Parts

 Ball Bearing B22
Screw WNF1012

Spring Washer WFS508

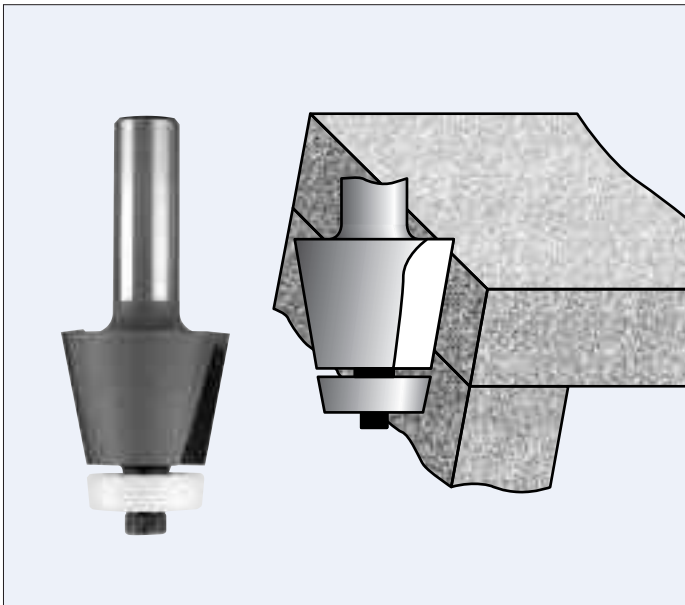
FRB403
**ROMAN OGEE
UNDERMOUNT BOWL BITS**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB403	2-1/8"	1/2"	1"	1/2"	3"
FRB404	2-3/8"	9/16"	1-1/4"	1/2"	3-3/8"

Replacement Parts

 Ball Bearing B24
Screw WNF1012

Spring Washer WFS508

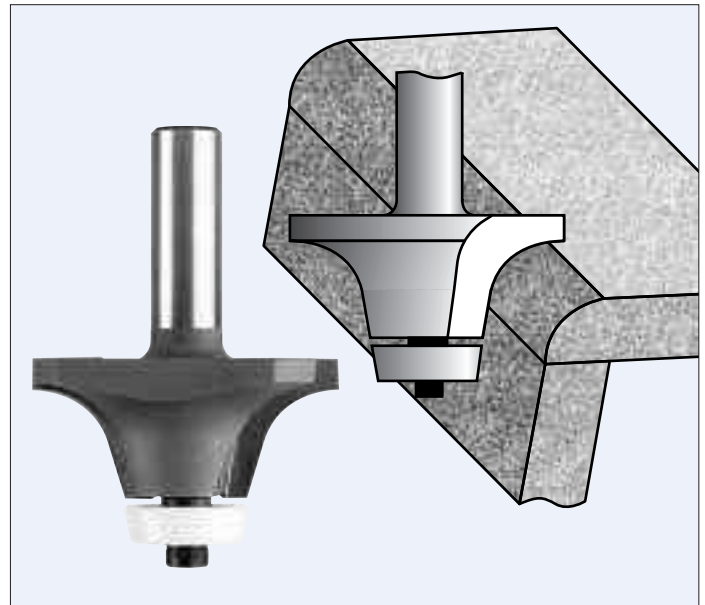
FRB402
**BEVEL UNDERMOUNT
BOWL BITS**


PART NO.	CUTTING DIAM.	DEG. OF BEVEL	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB402	1-1/4"	12°	1"	1/2"	3-3/16"

Replacement Parts

 Ball Bearing B24
Screw WNF1012

Spring Washer WFS508

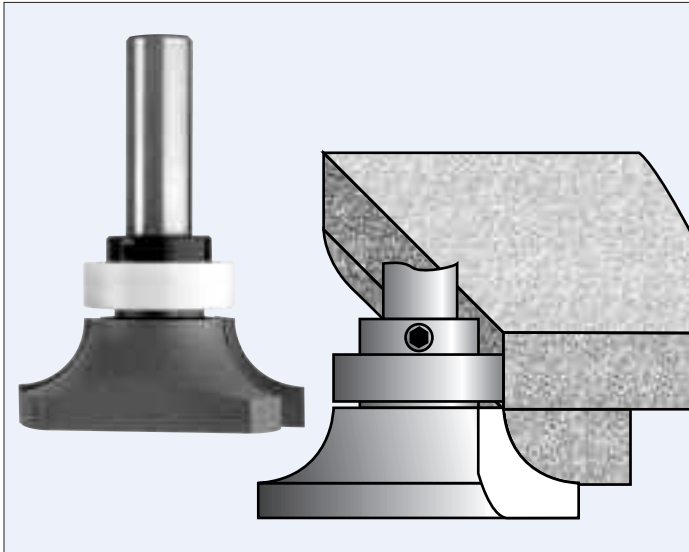
FRB405
**ROUNDING OVER
UNDERMOUNT BOWL BITS**


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB405	2-1/8"	1/2"	1"	1/2"	3-1/8"
FRB406	2-1/4"	9/16"	1-1/4"	1/2"	3-1/4"

Replacement Parts

 Ball Bearing B24
Screw WNF1012

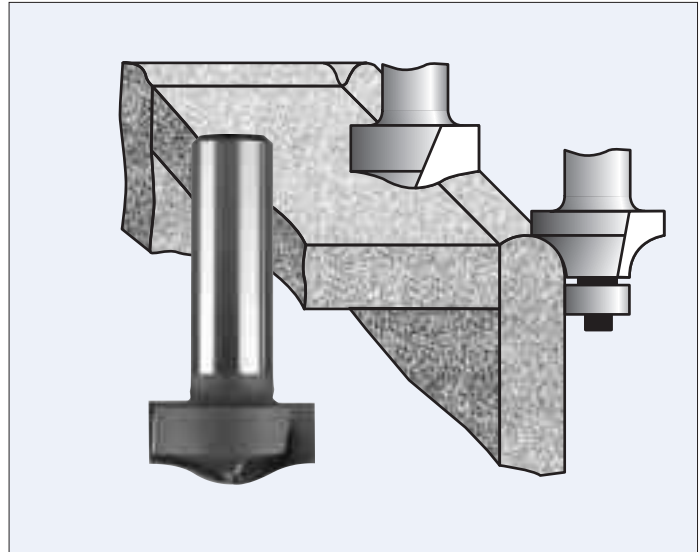
Spring Washer WFS508

FRB407
INVERTED ROUNDING OVER BITS


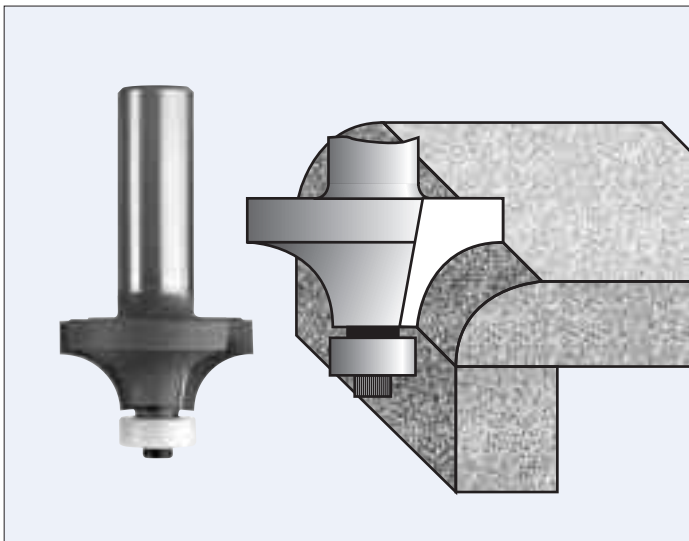
PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB407	2-1/8"	1/2"	3/4"	1/2"	2-7/8"
FRB408	2-5/8"	3/4"	1"	1/2"	3"

Replacement Parts

Ball Bearing B30 Lock Ring W03 Screw WNC518

FRB416
COUNTER-TOP BITS "NO-DRIP" DESIGN


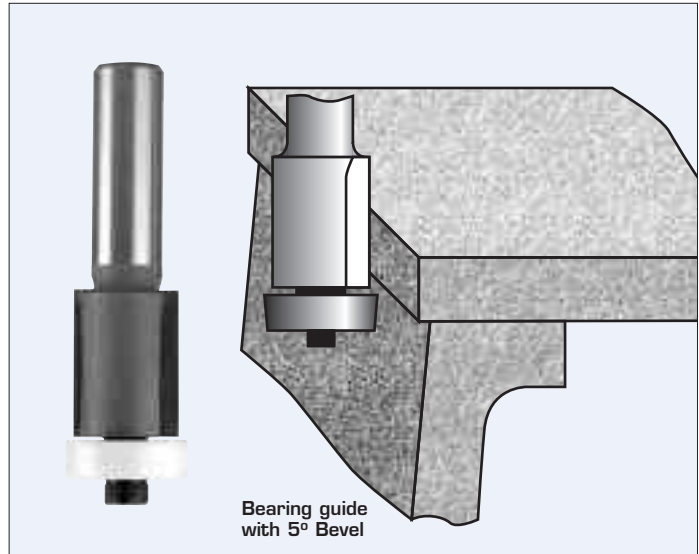
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB416	1"	1/2"	1/2"	2-1/8"

FRB410
ROUNDING OVER BITS


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB410	1-1/8"	5/16"	1/2"	1/2"	2-5/16"
FRB411	1-1/4"	3/8"	5/8"	1/2"	2-7/16"
FRB412	1-1/2"	1/2"	3/4"	1/2"	2-9/16"
FRB413	2"	3/4"	1"	1/2"	2-3/4"

Replacement Parts

Ball Bearing B20 Spring Washer WFS506 Screw WNC538

FRB418
OVER-HANG 1/16" 5 DEGREE ROUGH-OUT BIT


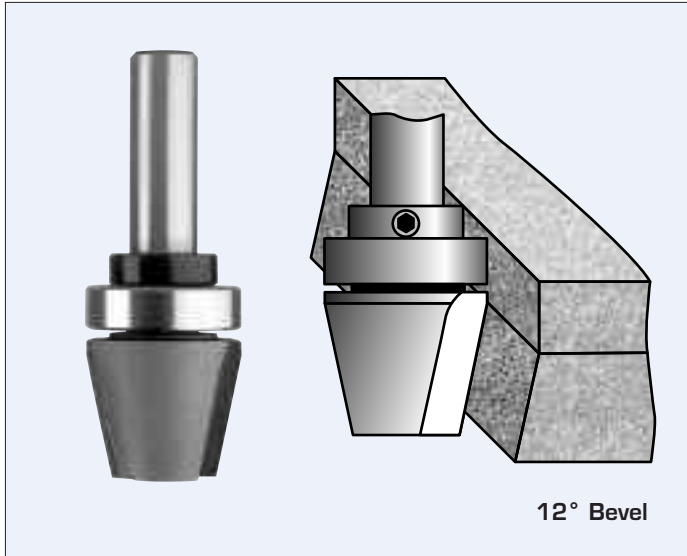
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB418	3/4"	1"	1/2"	3-1/4"

Application:

Using a template, this tool will "rough-out" the sink cut-out. A second tool (flush trim FRB424) will finish the cut flush.

Replacement Parts

Ball Bearing B26 Screw WNF1012

FRB420
**TOPMOUNTED
COUNTERTOP BIT**


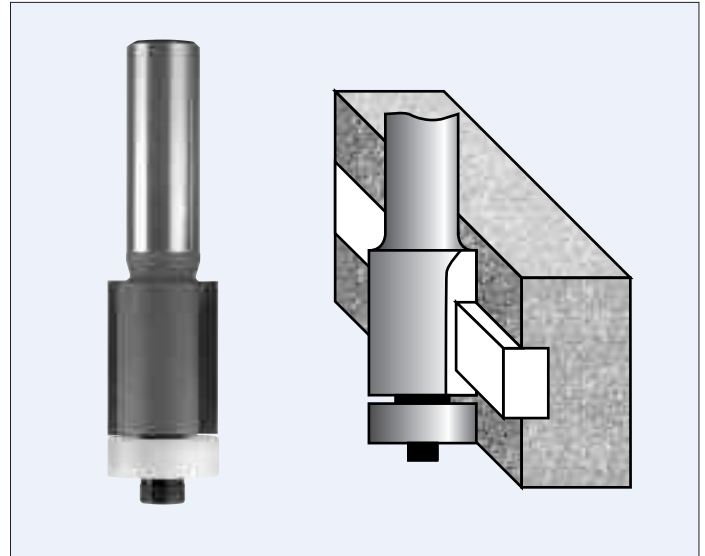
12° Bevel

PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB420	1-1/8"	1"	1/2"	3-1/8"

Replacement Parts

 Ball Bearing B6-4
 Screw WNC518

Lock Ring W03

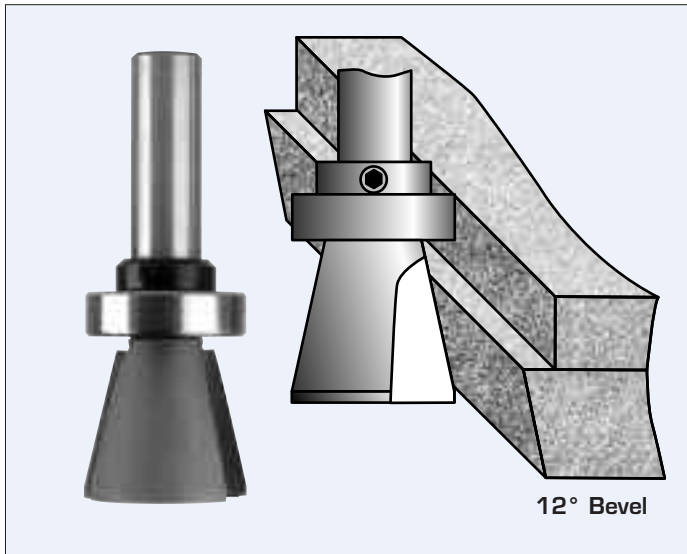
FRB424
**INLAY FLUSH
TRIMMING BITS 0-DEGREES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB424	3/4"	1"	1/2"	3-1/4"

Replacement Parts

Ball Bearing B22

Screw WNF1012

FRB422
**TOPMOUNTED
BOWL BIT**


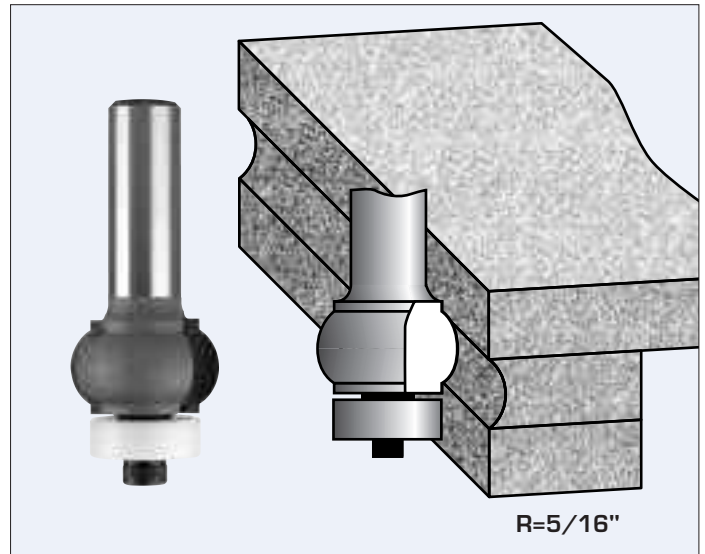
12° Bevel

PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB422	1-1/8"	1"	1/2"	3-1/8"

Replacement Parts

 Ball Bearing B6-4
 Screw WNC518

Lock Ring W03

FRB426
**EDGE COVE
TRIMMING BIT**


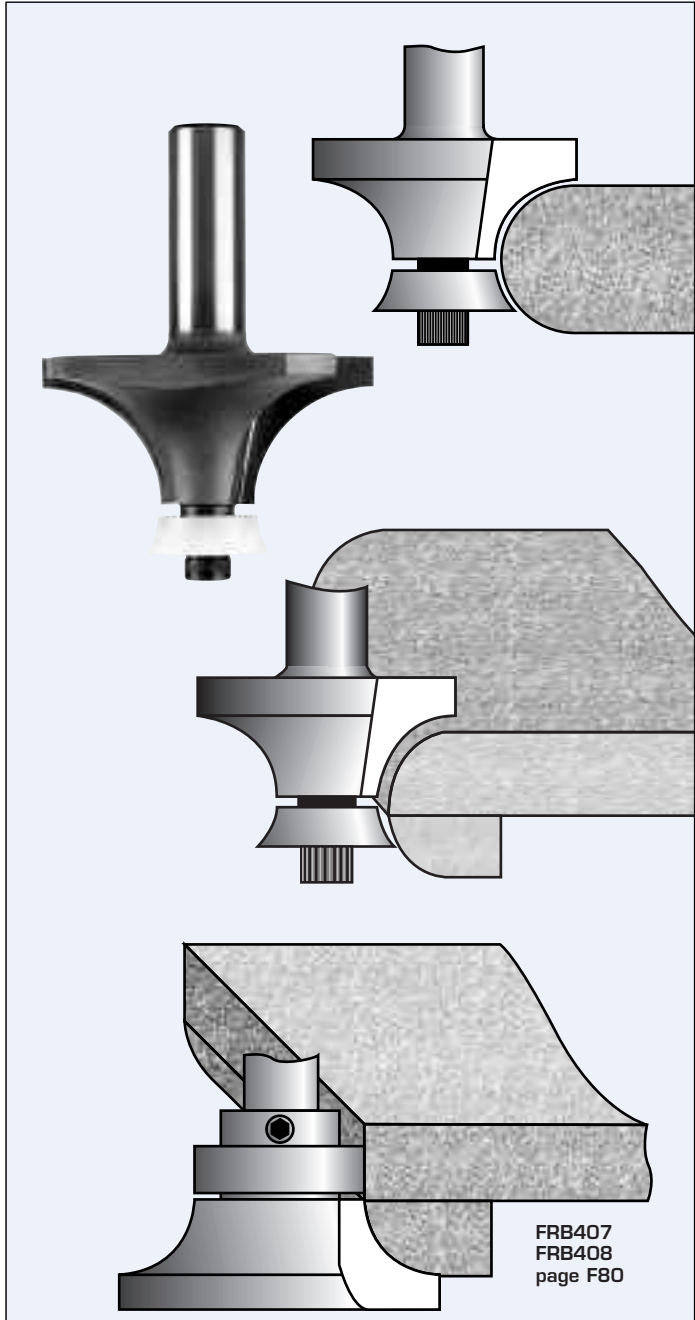
R=5/16"

PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB426	1"	5/8"	1/2"	2-5/8"

Replacement Parts

Ball Bearing B22

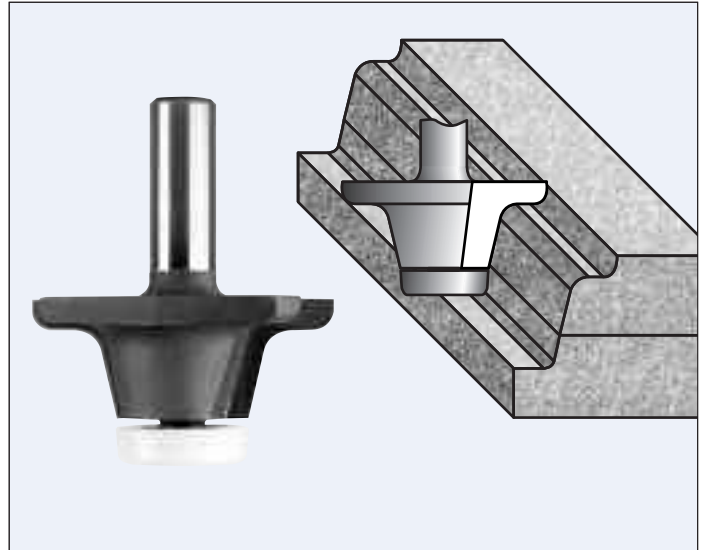
Screw WNF1012

FRB430
CORNER ROUNDING BITS WITH RADIUS BALL BEARING


PART NO.	LARGE DIAM.	SMALL DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB430 (A)	1-5/8"	5/8"	1/2"	47/64"	1/2"	2-1/16"
FRB431 (B)	2-1/8"	5/8"	3/4"	63/64"	1/2"	2-15/16"
FRB432 (C)	2-5/8"	5/8"	1"	1-15/64"	1/2"	3-3/16"

Replacement Parts

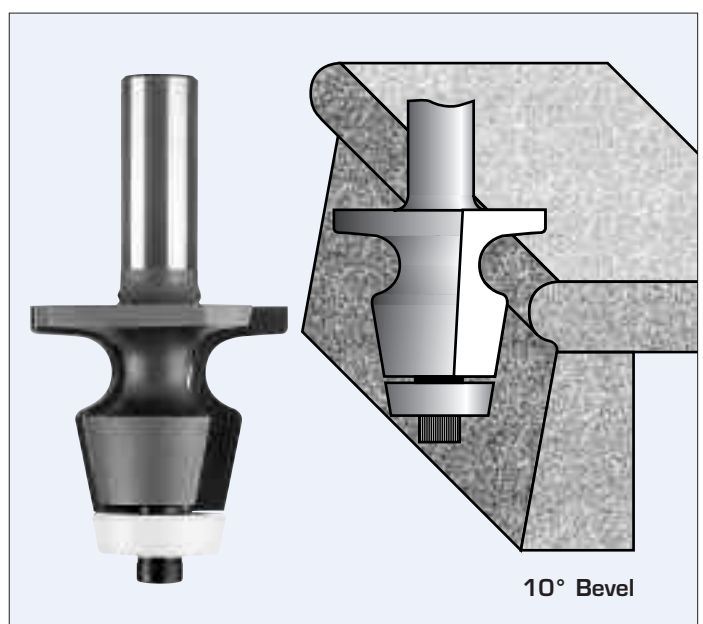
- (A) Ball Bearing B80 Screw WNF1012
Washer WFS500
- (B) Ball Bearing B82 Screw WNF1012
Washer WFS500
- (C) Ball Bearing B84 Screw WNF1012
Washer WFS500

FRB436
UNDERMOUNT BOWL BITS TWO FLUTES


PART NO.	LARGE DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB436	2-1/4"	13/64"	5/32"	15/16"	1/2"	23/4"

Replacement Parts

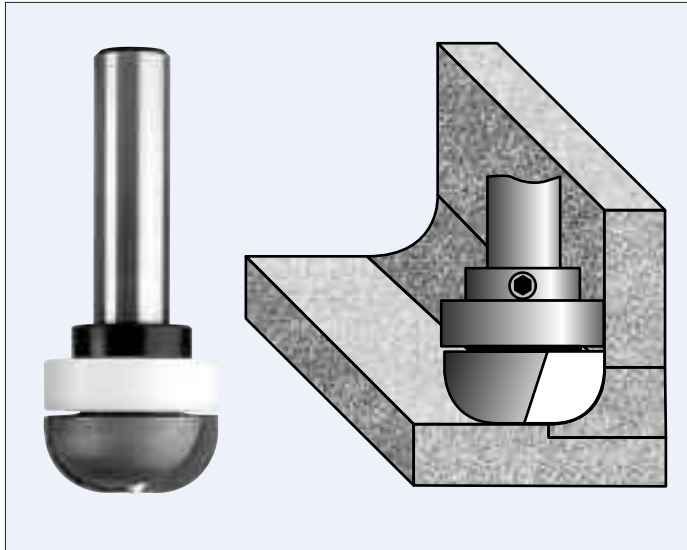
- Ball Bearing B21 Screw W103214
- Washer WFS500

FRB438
UNDERMOUNT PROFILE BOWL BITS


PART NO.	LARGE DIAM.	SMALL DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB438	1-21/32"	7/8"	15/64"	1-5/16"	1/2"	3-5/16"

Replacement Parts

- Ball Bearing B24 Screw WNF1012
- Washer WFS500

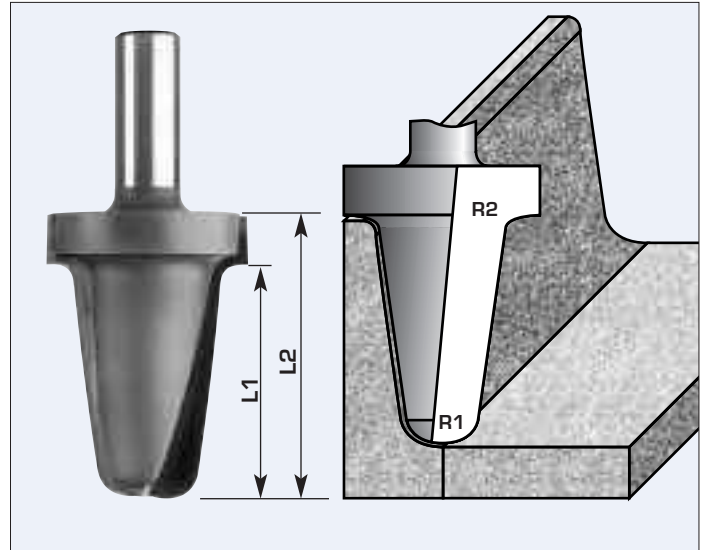
FRB440
COVE BIT WITH CENTRE BALL BEARING GUIDE


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB440	1-1/8"	25/64"	1/2"	1/2"	2-7/8"

Replacement Parts

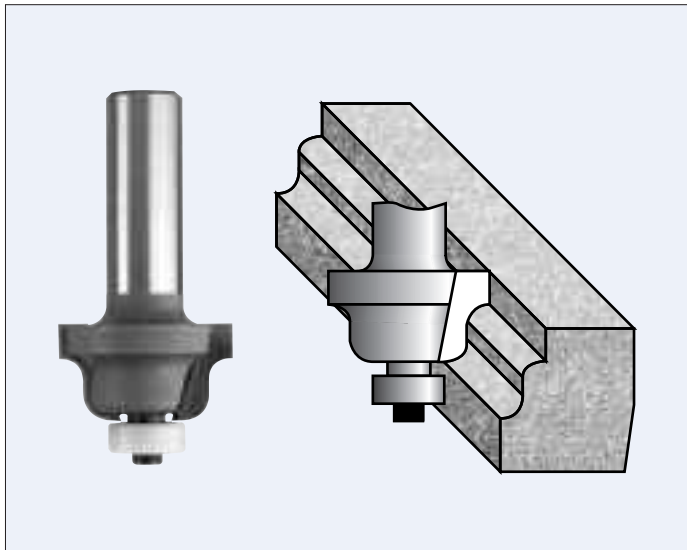
 Ball Bearing B30
 Lock Ring WO3

Screw WNC518

FRB444
CORNER COVE BITS TWO FLUTES


PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING L1	CUTTING L2	OVERALL LENGTH
FRB444	1-17/32"	15/64"	1/8"	1-3/16"	1-9/16"	3-1/16"
FRB446	1-17/32"	15/64"	1/8"	1-3/4"	2-5/32"	3-11/16"

Above bits supplied with 1/2" shank diam.

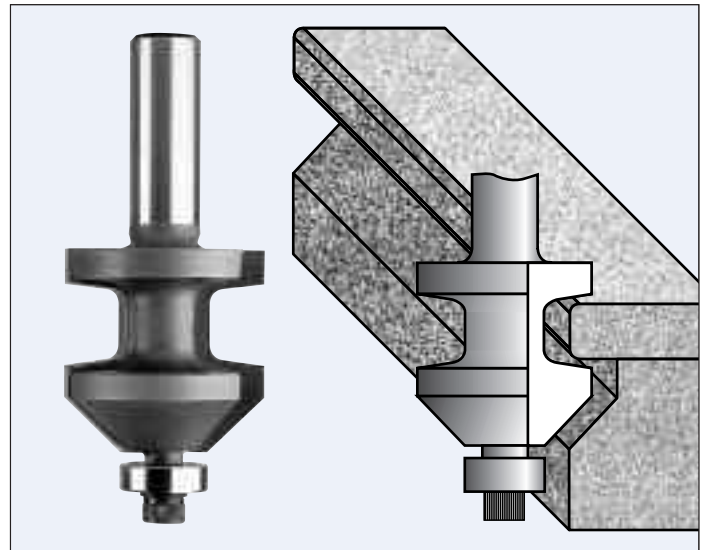
FRB442
ROMAN OGEE BIT TWO FLUTES


PART NO.	CUTTING DIAM.	RADIUS R1	RADIUS R2	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB442	1-1/8"	1/8"	5/32"	5/8"	1/2"	2-9/16"

Replacement Parts

 Ball Bearing B20
 Washer WFS500

Screw WNC538

FRB448
BEVEL HOB BIT TWO FLUTES


PART NO.	CUTTING DIAM.	RADIUS	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
FRB448	1-3/8"	1/8"	1-7/16"	1/2"	2-7/8"

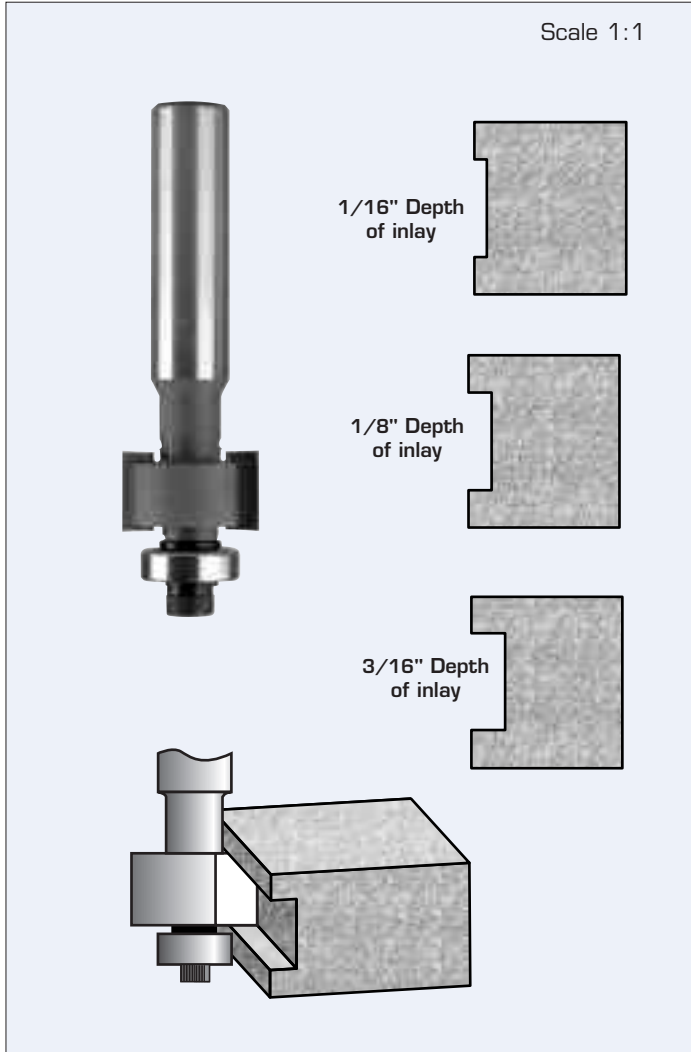
Replacement Parts

 Ball Bearing B3-3
 Washer WFS502

Screw WNF1012

FRB460

**FACE INLAY BITS
TWO FLUTES**



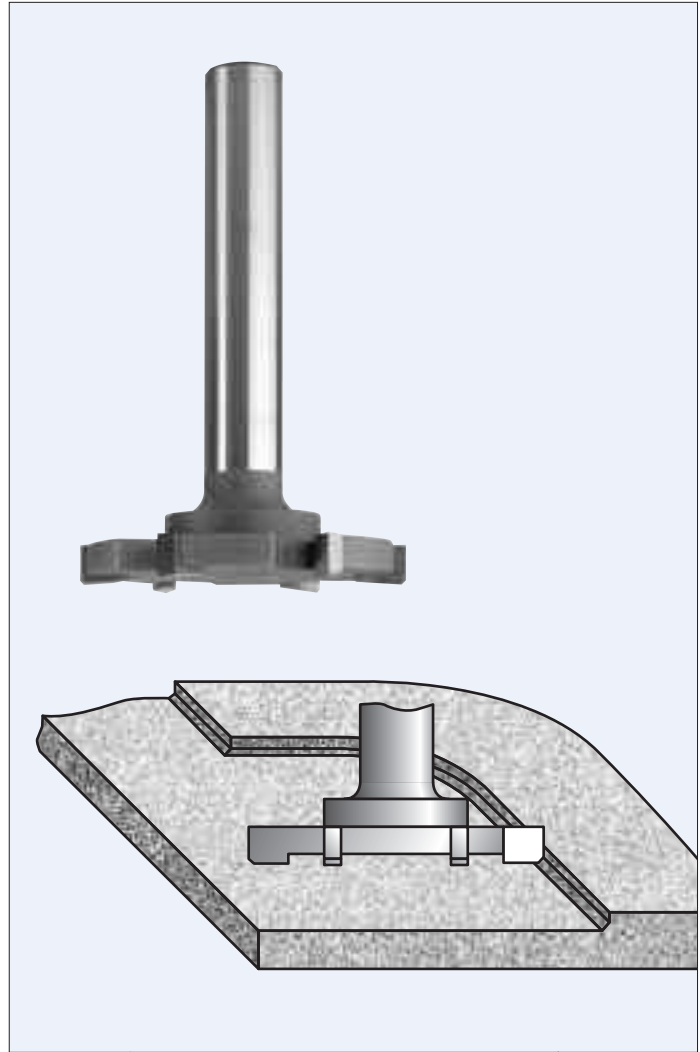
PART NO.	CUTTING DIAM.	CUTTING WIDTH	DEPTH OF INLAY	SHANK DIAM.	OVERALL LENGTH
FRB460 (A)	7/8"	1/4"	1/16"	1/2"	3"
FRB461 (B)	7/8"	1/4"	1/8"	1/2"	3"
FRB462 (C)	7/8"	1/4"	3/16"	1/2"	3"
FRB463 (A)	7/8"	1/2"	1/16"	1/2"	3-1/2"
FRB464 (B)	7/8"	1/2"	1/8"	1/2"	3-1/2"
FRB465 (C)	7/8"	1/2"	3/16"	1/2"	3-1/2"
FRB466 (A)	7/8"	3/4"	1/16"	1/2"	3-1/2"
FRB467 (B)	7/8"	3/4"	1/8"	1/2"	3-1/2"
FRB468 (C)	7/8"	3/4"	3/16"	1/2"	3-1/2"

Replacement Parts

- (A) Ball Bearing B4 Washer WFS500
Screw WNF1012
- (B) Ball Bearing B3-3 Washer WFS500
Screw WNF1012
- (C) Ball Bearing B3-1 Washer WFS500
Screw WNF1012

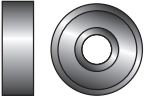







FRB470

**BOWL AND
COUNTERTOP TRIM BIT 6 WING**

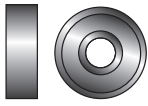






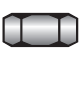


PART NO.	CUTTING DIAM.	CARBIDE HEIGHT	SHANK DIAM.	OVERALL LENGTH
FRB470	2-1/16"	1/4"	1/2"	3-5/16"

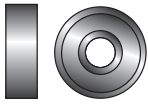
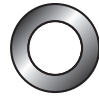





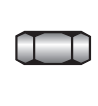
ROUTER BIT REPLACEMENT PARTS INDEX

ROUTER BIT PART NO.	CAT. PAGE	 BALL BEARING(S)	 FLAT/SPRING WASHER	 RAISED WASHER	 SCREW	 EXTERNAL CIRCLIP	 LOCK RING	 LOCK RING SCREW	 HEX NUT
FRB14 to FRB17	F36	B3	WFS506	WR58	WNC538	-	-	-	-
FRB18 to FRB20	F37	B3	WFS506	WR58	WNC538	-	-	-	-
FRB21 to FRB23	F37	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB23-5 to FRB23-6	F38	see page F38	-	-	-	-	-	-	-
FRB23-7	F39	see page F39	-	-	-	-	-	-	-
FRB24 to FRB24-1	F39	B3	WFS506	WR58	WNC538	-	-	-	-
FRB25 to FRB25-3	F40	B3	WFS506	WR58	WNC538	-	-	-	-
FRB27	F42	see page F42	-	-	-	-	-	-	-
FRB28 to FRB30	F43	see page F43	-	-	-	-	-	-	-
FRB31 to FRB31-1	F44	see page F44	-	-	-	-	-	-	-
FRB31-2 to FRB31-3	F45	see page F45	-	-	-	-	-	-	-
FRB31-4	F46	see page F46	-	-	-	-	-	-	-
FRB31-5	F46	B5	-	-	-	-	-	-	WNF516
FRB31-6	F47	see page F47	-	-	-	-	-	-	WNF516
FRB31-7	F48	see page F48	-	-	-	-	-	-	WNF516
FRB33 to FRB36	F49	see page F49	-	-	-	-	-	-	-
FRB37 to FRB40	F49	B1	WFS504	WR12	WNC338	-	-	-	-
FRB40-1 to FRB40-2	F49	B3	WFS506	WR58	WNC538	-	-	-	-
FRB41 to FRB48	F50	see page F50	-	-	-	-	-	-	-
FRB49 to FRB56	F51	B3	WFS506	WR58	WNC538	-	-	-	-
FRB62-5	F52	see page F52	-	-	-	-	-	-	-
FRB63	F53	B5	-	-	-	WCO1	-	-	-
FRB64	F53	B7	-	-	-	WCO2	-	-	-
FRB65	F53	B5	-	-	-	WCO1	-	-	-
FRB66	F53	B7	-	-	-	WCO2	-	-	-
FRB67 to FRB69	F54	B3	WFS506	WR58	WNC538	-	-	-	-
FRB74 to FRB74-1	F56	B3	WFS506	WR58	WNC538	-	-	-	-
FRB74-2 to FRB74-6	F56	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB76 to FRB76-2	F56	B3-3	-	-	WNF1012	-	WO1	WNC525	-
FRB76-3	F57	B3-3	-	-	WNF1012	-	WO1	WNC525	-
FRB76-7 to FRB76-8	F57	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB77-1 to FRB77-4	F58	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB77-5 to FRB77-6	F58	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB77-7 to FRB77-8	F58	B4	WFS506	WFS500	WNC538	-	-	-	-
FRB77-9	F59	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB78-1 to FRB78-3	F59	B3	WFS506	WR58	WNC538	-	-	-	-
FRB78-4 to FRB78-6	F60	B3	WFS506	WR58	WNC538	-	-	-	-
FRB100	F60	B3	WFS506	WR58	WNC538	-	-	-	-
FRB101 to FRB103	F61	B3	WFS506	WR58	WNC538	-	-	-	-
FRB104	F61	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB105 to FRB107	F62	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB108	F62	B3-2	WFS506	WR59	WNC512	-	-	-	-
FRB109 to FRB111	F63	B3	WFS506	WR58	WNC538	-	-	-	-
FRB112	F63	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB113 to FRB113-2	F64	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB114	F64	B4	-	WFS500	WNF1012	-	-	-	-
FRB115 to FRB116	F64	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB117 to FRB120	F65	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB121	F65	B3	WFS506	WR58	WNC538	-	-	-	-
FRB122 to FRB124	F66	B3	WFS506	WR58	WNC538	-	-	-	-
FRB160 to FRB163	F68	B3	WFS506	WR58	WNC538	-	-	-	-
FRB164	F58	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB170	F68	see page F68	-	-	-	-	-	-	-
FRB171	F69	see page F69	-	-	-	-	-	-	-
FRB180 to FRB183	F71	B3	WFS506	WR58	WNC538	-	-	-	-
FRB190 to FRB191	F72	B3-4	WFS506	WR59	WNC538	-	-	-	-
FRB192	F72	B3	WFS506	WR58	WNC538	-	-	-	-
FRB195	F73	B3	WFS506	WR58	WNC538	-	-	-	-
FRB200 to FRB202	F74	see page F74	-	-	-	-	-	-	-
FRB210 to FRB215	F75	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB216 to FRB217	F75	B3-1	-	-	-	-	WO1	WNC525	-

ROUTER BIT REPLACEMENT PARTS INDEX

ROUTER BIT PART NO.	CAT. PAGE	 BALL BEARING(S)	 FLAT/SPRING WASHER	 RAISED WASHER	 SCREW	 EXTERNAL CIRCLIP	 LOCK RING	 LOCK RING SCREW	 HEX NUT
FRB219	F76	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB220	F76	B3-1	-	-	-	-	WO1	WNC525	-
FRB222	F76	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB223	F76	B3-1	-	-	-	-	WO1	WNC525	-
FRB225	F76	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB226	F76	B3-1	-	-	-	-	WO1	WNC525	-
FRB228	F76	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB229	F76	B3-1	-	-	-	-	WO1	WNC525	-
FRB231	F77	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB232	F77	B3-1	-	-	-	-	WO1	WNC525	-
FRB234	F77	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB235	F77	B3-1	-	-	-	-	WO1	WNC525	-
FRB237	F77	B2	WFS506	WFS500	WNC538	-	-	-	-
FRB238	F77	B3-1	-	-	-	-	WO1	WNC525	-
FRB400 to FRB401	F79	B22	WFS508	-	WNF1012	-	-	-	-
FRB402 to FRB406	F79	B24	WFS508	-	WNF1012	-	-	-	-
FRB407 to FRB408	F80	B30	-	-	-	-	WO3	WNC518	-
FRB410 to FRB413	F80	B20	WFS506	-	WNC538	-	-	-	-
FRB418	F80	B26	-	-	WNF1012	-	-	-	-
FRB420 to FRB422	F81	B6-4	-	-	-	-	WO3	WNC518	-
FRB424 to FRB426	F81	B22	-	-	WNF1012	-	-	-	-
FRB430	F82	B80	-	WFS500	WNF1012	-	-	-	-
FRB431	F82	B82	-	WFS500	WNF1012	-	-	-	-
FRB432	F82	B84	-	WFS500	WNF1012	-	-	-	-
FRB436	F82	B21	-	WFS500	W103214	-	-	-	-
FRB438	F82	B24	-	WFS500	WNF1012	-	-	-	-
FRB440	F83	B30	-	-	-	-	WO3	WNC518	-
FRB442	F83	B20	-	WFS500	WNC538	-	-	-	-
FRB448	F83	B3-3	-	WFS502	WNF1012	-	-	-	-
FRB460	F84	B4	-	WFS500	WNF1012	-	-	-	-
FRB461	F84	B3-3	-	WFS500	WNF1012	-	-	-	-
FRB462	F84	B3-1	-	WFS500	WNF1012	-	-	-	-
FRB463	F84	B4	-	WFS500	WNF1012	-	-	-	-
FRB464	F84	B3-3	-	WFS500	WNF1012	-	-	-	-
FRB465	F84	B3-1	-	WFS500	WNF1012	-	-	-	-
FRB466	F84	B4	-	WFS500	WNF1012	-	-	-	-
FRB467	F84	B3-3	-	WFS500	WNF1012	-	-	-	-
FRB468	F84	B3-1	-	WFS500	WNF1012	-	-	-	-
R2320 to R2320 -1	F8	B3-1	-	-	-	-	WO1	WNC525	-
R2321	F8	B3-3	-	-	-	-	WO1	WNC525	-
R2322	F8	B4	-	-	-	-	WO1	WNC525	-
R2322-1 to R2322-2	F8	B4-1A	-	-	-	-	WO4	WNC518	-
R2323	F8	B6-1	-	-	-	-	WO2	WNC525	-
R2324	F8	B6-1A	-	-	-	-	WO4	WNC518	-
R2325	F8	B6-4	-	-	-	-	WO3	WNC518	-
R2326	F8	B6-5	-	-	-	-	WO3	WNC518	-
R2327	F8	B10	-	-	-	-	WO3	WNC518	-
R2406-9	F9	B3-1	-	-	-	-	WO1	WNC525	-
R2420	F9	B3-1	-	-	-	-	WO1	WNC525	-
R2421	F9	B4	-	-	-	-	WO1	WNC525	-
R2422	F9	B4-1A	-	-	-	-	WO4	WNC518	-
R2423	F9	B6-4	-	-	-	-	WO3	WNC518	-
R2430 to R2434	F9	B3	WFS506	WR58	WNC538	-	-	-	-
R2436 to R2437	F10	B3-1 / B3	WFS506	WR58	WNC538	-	WO1	WNC525	-
R2440 to R2444	F10	B3	WFS506	WR58	WNC538	-	-	-	-
R2450	F10	B4	-	-	-	-	WO1	WNC525	-
R2451	F10	B6-1A	-	-	-	-	WO4	WNC518	-
R2452	F10	B10	-	-	-	-	WO3	WNC518	-
R2512 to R2514	F11	B3	WFS506	WR58	WNC538	-	-	-	-
R2515	F11	B3-4	WFS506	WR59	WNC512	-	-	-	-
R2516	F11	B4	WFS508	WR59	WNF1012	-	-	-	-

ROUTER BIT REPLACEMENT PARTS INDEX

ROUTER BIT PART NO.	CAT. PAGE	 BALL BEARING(S)	 FLAT/SPRING WASHER	 RAISED WASHER	 SCREW	 EXTERNAL CIRCLIP	 LOCK RING	 LOCK RING SCREW	 HEX NUT
R2517	F11	B4	WFS508	WR59	WNF1012	-	-	-	-
R2519	F11	B6-4	-	-	-	-	W03	WNC518	-
R2525 to R2527	F12	B6-3	-	-	-	-	-	-	WNF516
R2530	F13	B5	-	-	-	-	-	-	WNF516
R2535	F13	B5	-	-	-	-	-	-	WNF516
R2560	F14	B3-1	-	-	-	-	W01	WNC525	-
R2620	F15	B3-1	-	-	-	-	W01	WNC525	-
R2800-1 to R2806	F17	B1	WFS504	WR12	WNC338	-	-	-	-
R2807 to R2810	F17	B3	WFS506	WR58	WNC538	-	-	-	-
R2900 to R2903	F17	B3	WFS506	WR58	WNC538	-	-	-	-
R2905 to R2908	F18	B2	WFS506	WFS500	WNC538	-	-	-	-
R2950 to R2951	F18	see page F18	-	-	-	-	-	-	-
R2960 to R2961	F19	see page F19	-	-	-	-	-	-	-
R2970 to R2972	F20	see page F20	-	-	-	-	-	-	-
R3000 to R3013	F21	B3	WFS506	WR58	WNC538	-	-	-	-
R3030	F22	B3-1	-	-	-	-	W01	WNC525	-
R3032	F22	B4	-	-	-	-	W01	WNC525	-
R3034	F22	B5	-	-	-	-	W01	WNC525	-
R3036	F22	B6-4	-	-	-	-	W03	WNC518	-
R3100 to R3114	F22	B2	WFS506	WFS500	WNC538	-	-	-	-
R3200 to R3203	F23	B1	WFS504	WR12	WNC338	-	-	-	-
R3300 to R3301	F23	B2	WFS506	WFS500	WNC538	-	-	-	-
R3302	F23	B3	WFS506	WR58	WNC538	-	-	-	-
R3302-1	F23	B1	WFS506	WR58	WNC538	-	-	-	-
R3303 to R3304	F23	B3	WFS506	WR58	WNC538	-	-	-	-
R3304-1	F23	B1	WFS506	WR58	WNC538	-	-	-	-
R3305 to R3307	F23	B3	WFS506	WR58	WNC538	-	-	-	-
R3310 to R3313	F23	B3-4	WFS506	WR59	WNC538	-	-	-	-
R3320 to R3323	F23	B3	WFS506	WR58	WNC538	-	-	-	-
R3324	F23	B4	WFS508	-	WNF1012	-	-	-	-
R3325	F23	B1	WFS504	WR12	WNC338	-	-	-	-
R3400-1 to R3400-2	F24	B01	-	-	WNC2732	-	-	-	-
R3400 to R3401	F24	B2	WFS506	WFS500	WNC538	-	-	-	-
R3402 to R3403	F24	B3	WFS506	WR58	WNC538	-	-	-	-
R3403-1	F24	B3-4	WFS506	WR59	WNC538	-	-	-	-
R3404 to R3408	F24	B3	WFS506	WR58	WNC538	-	-	-	-
R3409	F24	B4	WFS508	-	WNF1012	-	-	-	-
R3500 to R3501	F24	B3	WFS506	WR58	WNC538	-	-	-	-
R3501-1	F24	B4-1	WFS508	-	WNF1012	-	-	-	-
R3502 to R3504	F24	B3	WFS506	WR58	WNC538	-	-	-	-
R3510 to R3512	F24	B3 (2 pieces)	WFS508	WR58	-	-	-	-	WN1024
R3520 to R3521	F25	B3	WFS506	WR58	WNC538	-	-	-	-
R3600 to R3608	F25	B5	WF608	-	-	-	-	-	WNF516
R3700 -1	F26	B3-3	-	-	W103214	-	-	-	-
R3700 to R3703	F26	B4	-	WFS500	WNF1012	-	-	-	-
R4120 to R4152	F27	see page F27	-	-	-	-	-	-	-
R4160 to R4162	F29	see page F29	-	-	-	-	-	-	WNF516
R4164	F30	see page F30	-	-	-	-	-	-	WNF516

B01**BALL BEARING GUIDES**

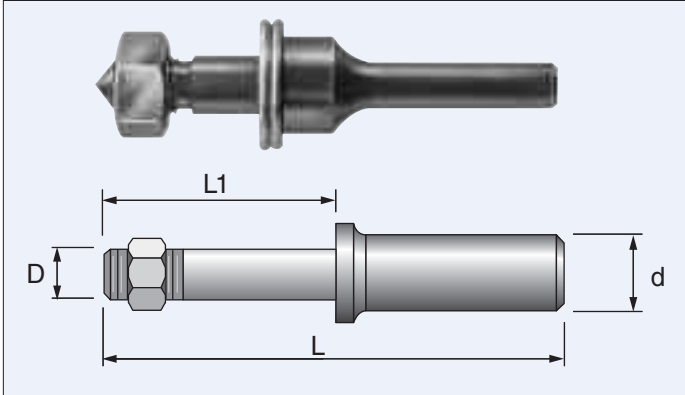
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS
B01	1/4"	1/8"	7/64"
B1	3/8"	1/8"	5/32"
B2	3/8"	3/16"	1/8"
B2-1	1/2"	1/8"	11/64"
B3	1/2"	3/16"	5.0mm
B3-1	1/2"	1/4"	3/16"
B3-1A	14mm	7.0mm	5.0mm
B3-1B	14mm	8.0mm	4.0mm
B3-2	5/8"	3/16"	5.0mm
B3-3	5/8"	1/4"	5.0mm
B3-4	16mm	5.0mm	5.0mm
B3-4A	16mm	8.0mm	5.0mm
B3-5	3/4"	3/16"	3/16"
B3-6	19mm	6.0mm	6.0mm
B4	3/4"	1/4"	9/32"
B4-1A	3/4"	1/2"	5/32"
B4-1	22mm	7.0mm	7.0mm
B5	7/8" (22.20mm)	5/16" (7.94mm)	7.0mm
B6	7/8"	3/16"	6.6mm
B6-1	26mm	10mm	8.0mm
B6-1A	1"	15mm	5.5mm
B6-2	1-1/8"	3/16"	6.6mm
B6-3	28mm	8.0mm	9.0mm
B6-4	1-1/8"	1/2"	5/16"
B6-4A	1-7/32"	5/16"	8.6mm
B6-5	1-1/4"	15mm	8.5mm
B6-5A	1-1/4"	8.0mm	5.0mm
B6-6	1-5/16"	5/16"	8.6mm
B7	35mm	15mm	11.0mm
B8	1-3/8"	3/16"	6.6mm
B10	1-1/2"	15mm	8.5mm
B12	2"	15mm	12.5mm

B20**SUPER-GLIDE BALL BEARING ASSEMBLIES**

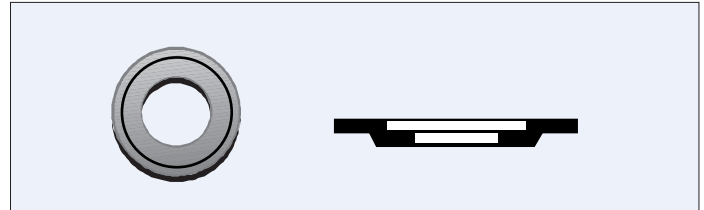
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	DEGREE OF TAPER
B20	1/2"	3/16"	0°
B21	25mm	1/4"	5°
B22	3/4"	1/4"	0°
B24	7/8"	1/4"	10°
B26	7/8"	1/4"	5°
B27	27mm	1/4"	0°
B28	28mm	5/16"(8mm)	0°
B30	1-1/8"	15mm	0°
B32	29mm	5/16"(8mm)	0°
B34	34mm	5/16"(8mm)	0°
B36	40.8mm	5/16"(8mm)	0°
B38	43mm	5/16"(8mm)	0°

B80**SUPER-GLIDE RADIUS BALL BEARING ASSEMBLIES**

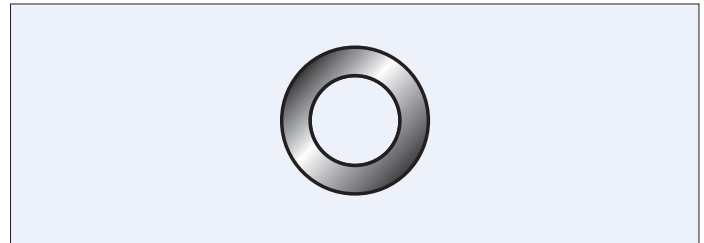
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS	RADIUS
B80	27/32"	1/4"	1/4"	1/2"
B82	3/4"	1/4"	1/4"	3/4"
B84	3/4"	1/4"	1/4"	1"

AR14
**ARBORS - ROUTER CUTTER
ARBORS WITH NUT & WASHER**


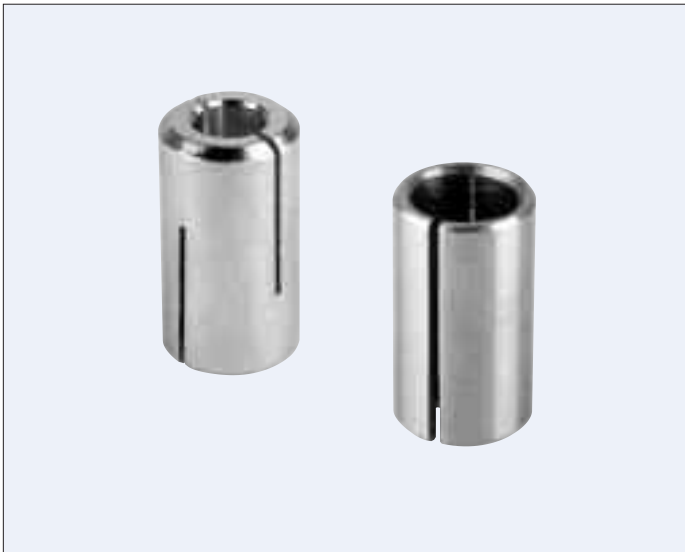
PART NO.	SPINDLE DIAM. (D)	SHANK DIAM. (d)	LENGTH (L1)	OVERALL LENGTH (L)
AR14	5/16"	1/4"	7/8"	2-3/8"
AR13	5/16"	3/8"	1-7/16"	3"
AR12	5/16"	1/2"	1"	2-3/8"
AR11	5/16"	1/2"	1-3/8"	3"
AR20	5/16"	1/2"	2-1/8"	3-3/4"
AR21	5/16"	1/2"	1-1/2"	3-1/8"
AR22	5/16"	1/2"	2-5/8"	4-1/4"
AR23	5/16"	1/2"	1-3/4"	3-5/16"

WR12
**RAISED WASHERS
(DUST SHIELDS)**


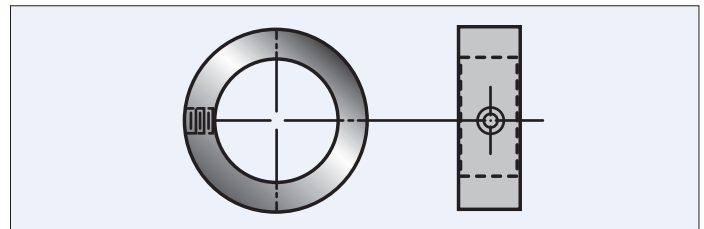
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS
WR12	3/8"	1/8"	0.7mm
WR58	1/2"	3/16"	0.7mm
WR59	16mm	5mm	0.8mm

WFS500
**FLAT/SPRING
WASHERS**


PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS
WFS500	5/16"	3/16"	1.2mm
WFS502	3/8"	1/4"	1.4mm
WFS504	3/16"	7/64"	1/64"
WFS506	1/4"	1/8"	1/64"
WFS508	3/8"	3/16"	1.0mm
WFS510	12mm	5/16"	1.0mm

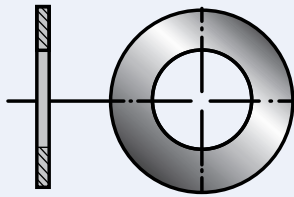
WA3814
ROUTER BIT ADAPTORS


PART NO.	OUTSIDE DIAM. MACHINE COLLET	INSIDE DIAM. ROUTER SHANK	LENGTH
WA3814	3/8"	1/4"	1"
WA1238	1/2"	3/8"	1"
WA1214	1/2"	1/4"	1"

W01
LOCK RINGS


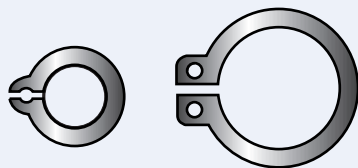
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	SCREW PART NO.
W01	11mm	1/4"	WNC525
W02	16mm	3/8"	WNC518
W03	21mm	1/2"	WNC518
W04	18mm	1/2"	WNC518

WF501 **SPACERS - SHIMS**
FLAT



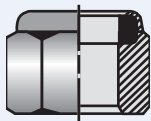
PART NO.	OUTSIDE DIAM.	INSIDE DIAM.	THICKNESS
WF501	12mm	8mm	0.1mm
WF502	12mm	8mm	0.2mm
WF505	12mm	8mm	0.5mm
WF510	12mm	8mm	1.0mm
WF600	5/8"	5/16"	0.05mm
WF604	5/8"	5/16"	0.1mm
WF605	5/8"	5/16"	0.4mm
WF606	5/8"	5/16"	0.5mm
WF608	5/8"	5/16"	1.0mm
WF610	5/8"	5/16"	3.0mm
WF611	5/8"	5/16"	3.15mm
WF612	16mm	5/16"	3.4mm
WF614	1/2"	1/4"	5.0mm
WF616	5/8"	5/16"	5.5mm
WF618	5/8"	5/16"	6.0mm

WC01 **EXTERNAL CIRCLIP**



PART NO.	INSIDE DIAM.	THICKNESS
WC01	3/8"	0.8mm
WC02	1/2"	1.0mm

WN1024 **NYLON INSERT LOCKNUT**



PART NO.	TYPE
WN1024	10-24

WNC **SCREWS**



PART NO.	SCREW TYPE	SCREW DIAM.	THREADS PER IN.	OVERALL LENGTH
WNC2732	NC2	11/128"	56	7/32"
WNC518	NC5	1/8"	40	1/8" HEADLESS
WNC525	NC5	1/8"	40	2.5mm HEADLESS
WNC338	NC3	0.099"	48	3/8"
WNC538	NC5	1/8"	40	3/8"
WNC512	NC5	1/8"	40	1/2"
WNF1012	NF10	3/16"	32	1/2"
W103214	10/32	3/16"	32	1/4"

WNF516 **HEX NUTS FOR ROUTER ARBORS**



PART NO.	DESCRIPTION	APPLICATION
WNF516	5/16-24 NF	All arbors with 5/16-24 NF Thread



PRECISION TOOLING for CNC MACHINES
Tool Holders / Solid Carbide Spiral Router Bits



Pam's
divider page prints
here

sec. FC

PRECISION TOOLS FOR CNC ROUTERS

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Aerotech Universal, Solid Carbide Spiral R/Bits	FC28 - FC31
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Cabinet Door Decorative Insert R/Bits	FC82 & FC83
Chamfering Insert R/Bit	FC79
Collet Nuts	FC12
Compression Insert R/Bits	FC72 & FC73
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Solid Carbide Spiral R/Bits, Dovetail	FC64 & FC65
Solid Carbide Spiral R/Bits, Finishing	FC32 - FC35
Solid Carbide Spiral R/Bits, Finishing Low Helix	FC36 & FC37
Solid Carbide Spiral R/Bits, Finishing Compression	FC38 - FC43
Solid Carbide Spiral R/Bits, Finishing Compression SpeedMaster	FC40
Solid Carbide Spiral R/Bits, Phenolic/Composite Low Helix	FC66 & FC67

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Solid Carbide Spiral R/Bits, Roughing Low Helix	FC56 & FC57
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Aerotech



AF-UD2 p. FC24
Aerotech System
Mortise Upcut
Two Flute Compression



AF-HUD2 p. FC25
Aerotech System
High Upcut
Two Flute Compression



AF-UD3 p. FC26
Low Helix
Mortise Upcut
Three Flute Upcut



AF-HUD3 p. FC27
Aerotech System
High Upcut
Three Flute Compression

AEROTECH UNIVERSAL OPTIMIZED



RSF-UD2 p. FC28
Mortise Upcut
Two Flute Compression



RSF-HUD2 p. FC29
High Upcut
Two Flute Compression



RSF-UD3 p. FC30
Mortise Upcut
Three Flute Upcut



RSF-HUD3 p. FC31
High Upcut
Three Flute Compression



RSF-U2 p. FC32
Two Flute Upcut



RSF-D2 p. FC33
Two Flute Downcut



RSF-U3 p. FC34
Three Flute Upcut



RSF-D3 p. FC35
Three Flute Downcut



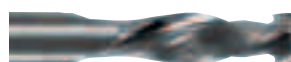
RSFL-U3 p. FC36
Low Helix
Three Flute Upcut



RSFL-D3 p. FC37
Low Helix
Three Flute Downcut



RSF-UD1 p. FC38
Single Flute Compression



RSF-UD2 p. FC39
Two Flute Compression



RSFW-D2 p. FC40
SpeedMaster
Two Flute Compression



RSF-UD2L p. FC42
Left Hand
Two Flute Compression



RSF-UD3 p. FC43
Three Flute Compression



























RPCD p. FC44
PCD Diamond
1+1 Compression

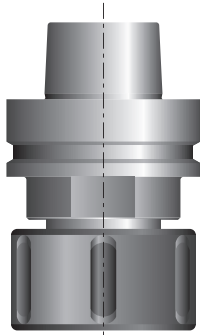


RPCD138 p. FC45
PCD Diamond
2+1 Cutting Edge T-Slot

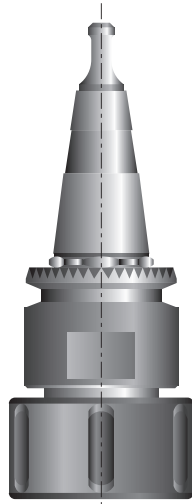
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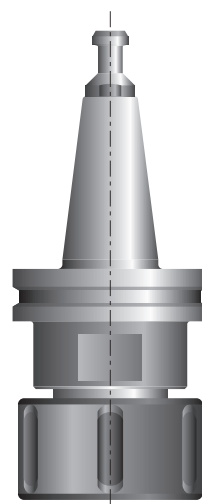
	RSC-U2 Chipbreaker Two Flute Upcut	p. FC46		RSFV-U2 V-Point Two Flute Upcut	p. FC60
	RSC-D2 Chipbreaker Two Flute Downcut	p. FC47		RSCBN-U3 Ballnose Rougher Three Flute Upcut	p. FC61
	RSC-U3 Chipbreaker Three Flute Upcut	p. FC48		RSFBN Ballnose Two & Three Flute Upcut	p. FC62
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	RS-DPM Pass-by / Deep Pocket Mortise	p. FC59			



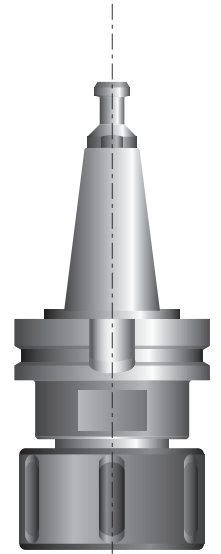
HSK 63F



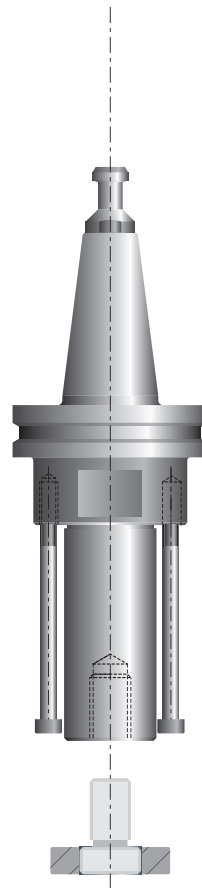
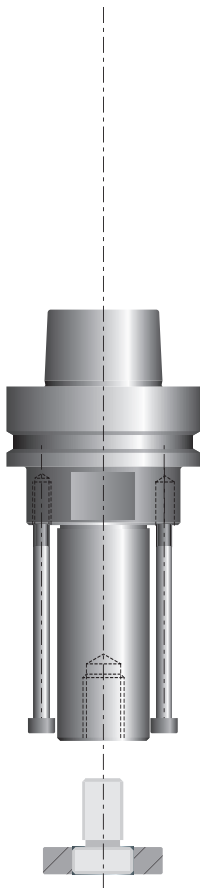
ISO 30
SCM/Morbidelli



ISO 30

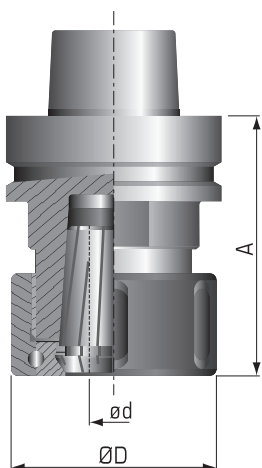


BT 30



HSK63F

COLLET CHUCKS HSK63F WITH BALL BEARING COLLET NUT



DESIGN:

- Collet chucks with hollow taper shank V DIN 69893-6 FORM F
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Ball bearing collet nut for increased clamping pressure and increased concentricity
- Balanced tool body and collet nut
- Suitable for both left and right hand rotation

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change

PLEASE SPECIFY WHEN ORDERING:

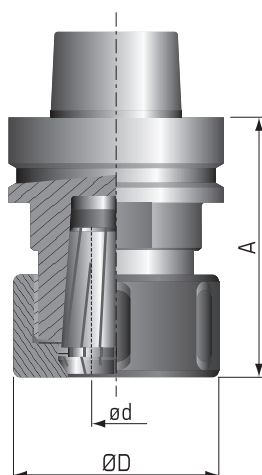
- If your CNC Router requires holes in the HSK Taper

PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2080	ER32	3-20	50	70	RH/LH
RC2082	ER40	3-26	63	75	RH/LH
RC2084	OZ25	2-25	60	75	RH/LH

Spring collets not included (see page FC8 & FC9).

HSK63F

COLLET CHUCKS HSK63F WITHOUT BALL BEARING COLLET NUT



DESIGN:

- Collet chucks with hollow taper shank V DIN 69893-6 FORM F
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut
- Right hand rotation (left hand available upon request)

APPLICATION:

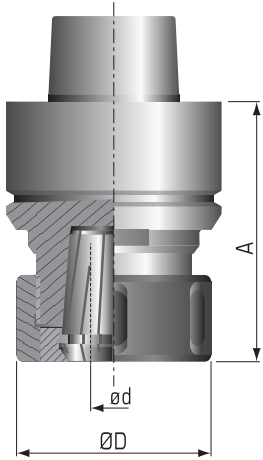
- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change

PLEASE SPECIFY WHEN ORDERING:

- If your CNC Router requires holes in the HSK Taper

PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2090	ER32	3-20	50	70	RH
RC2092	ER40	3-26	63	75	RH

Spring collets not included (see page FC8 & FC9).



DESIGN:

- Collet chucks with hollow taper shank V DIN 69893-6 FORM F
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change for Thermwood machines

IMPORTANT:

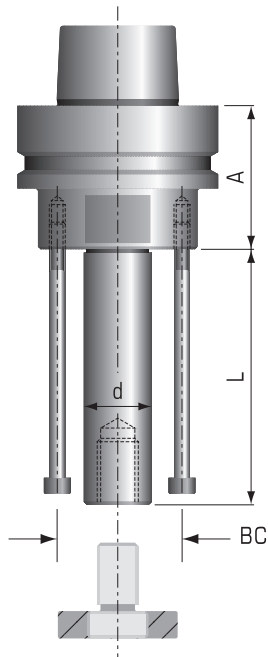
- Part number RC2092TH and RC2094TH are not compatible with Thermwood's "Typewriter" style toolchanger

PART NO.	COLLET TYPE	CLAMPING RANGE $\varnothing d$ mm	$\varnothing D$ mm	A mm	ROTATION
RC2090TH	ER32	3-20	50	72.5	RH
RC2092TH	ER40	3-26	63	76.5	RH
RC2094TH	OZ25	2-25	60	76.5	RH

Spring collets not included (see page FC8 & FC9).

HSK63F

CUTTER ARBORS WITH HSK63F TAPER



DESIGN:

- Cutter arbor with hollow taper shank V DIN 69893-6 FORM F
- Cutter arbor balanced

APPLICATION:

- For mounting bore type tools
- On CNC routers with automatic tool change

PLEASE SPECIFY WHEN ORDERING:

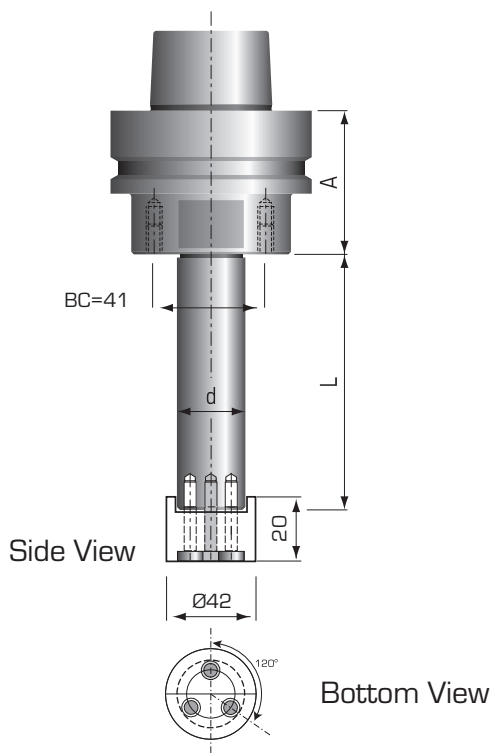
- If your CNC Router requires holes in the HSK Taper

PART NO.	SHAFT DIAM. $\varnothing d$ mm	SHAFT LENGTH L mm	A mm	BOLT CIRCLE BC mm
RC3100	20	40	80	32
RC3102	20	70	45	32
RC3104	20	70	80	32
RC3106	30	40	80	48
RC3108	30	80	45	48
RC3109	30	80	80	48

Other shaft sizes available upon request.

HSK63F

CUTTER ARBORS WITH HSK63F TAPER



DESIGN:

- Cutter arbor with hollow taper shank V DIN 69893-6 FORM F
- Cutter arbor balanced

APPLICATION:

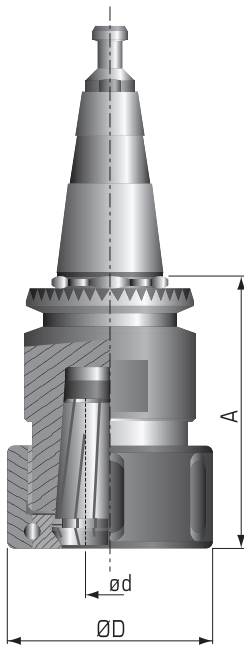
- For mounting bore type tools
- On CNC routers with automatic tool change

PLEASE SPECIFY WHEN ORDERING:

- If your CNC Router requires holes in the HSK Taper

PART NO.	SHAFT DIAM. $\varnothing d$ inches	SHAFT LENGTH L mm	A mm	BOLT CIRCLE BC mm
RC3200	1-1/4"	55	45	41
RC3202	1-1/4"	80	45	41

Other shaft sizes available upon request.

ISO30
**COLLET CHUCKS ISO30 FOR SCM/MORBIDELLI
WITH BALL BEARING NUT**

DESIGN:

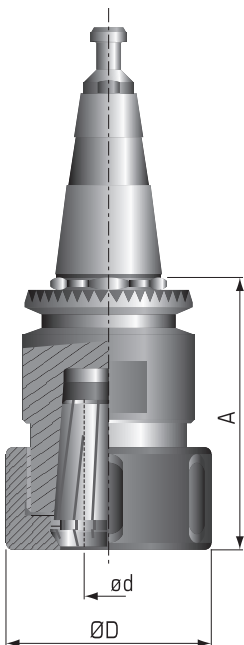
- Collet chucks with steep taper and serrated flange
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Ball bearing collet nut for increased clamping pressure and increased concentricity
- Balanced tool body and collet nut
- Suitable for both left and right hand rotation

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change for SCM and Morbidelli

PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2020	ER32	3-20	50	55	RH/LH
RC2022	ER40	3-26	63	72	RH/LH
RC2024	OZ25	2-25	60	72	RH/LH

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

ISO30
**COLLET CHUCKS ISO30 FOR SCM/MORBIDELLI
WITHOUT BALL BEARING NUT**

DESIGN:

- Collet chucks with steep taper and toolhead flange
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut
- Right hand rotation (left hand available upon request)

APPLICATION:

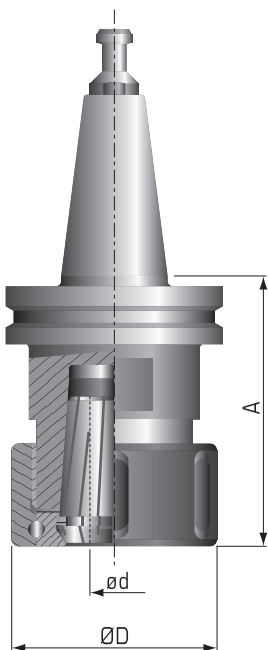
- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change for SCM and Morbidelli

PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2030	ER32	3-20	50	55	RH
RC2032	ER32	3-20	50	55	LH
RC2034	ER40	3-25	63	72	RH
RC2036	ER40	3-25	63	72	LH
RC2038	OZ25	2-25	60	72	RH
RC2039	OZ25	2-25	60	72	LH

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

ISO30

COLLET CHUCKS ISO30 WITH BALL BEARING COLLET NUT



DESIGN:

- Collet chucks with steep taper DIN 69871, without grooves or notches
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Ball bearing collet nut for increased clamping pressure and increased concentricity
- Balanced tool body and collet nut
- Suitable for both left and right hand rotation

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change

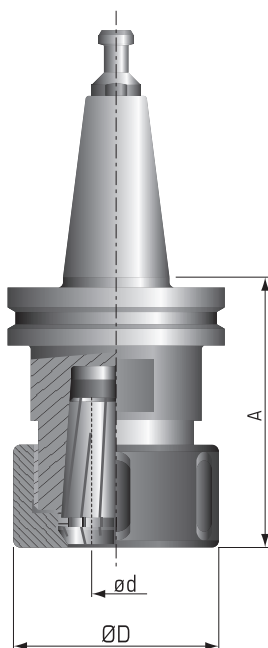
PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2000 •	ER32	3-20	50	45	RH/LH
RC2002 •	ER32	3-20	50	55	RH/LH
RC2004	ER40	3-26	63	58.5	RH/LH
RC2006	OZ25	2-25	60	58.5	RH/LH

- No collar with flats

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

ISO30

COLLET CHUCKS ISO30 WITHOUT BALL BEARING COLLET NUT



DESIGN:

- Collet chucks with steep taper DIN 69871, without grooves or notches
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut
- Right hand rotation (left hand available upon request)

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change

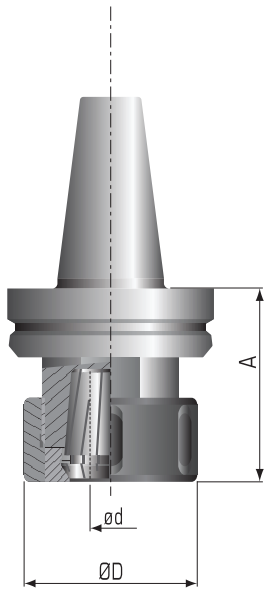
PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2010 •	ER32	3-20	50	45	RH
RC2012 •	ER32	3-20	50	55	RH
RC2014	ER40	3-26	63	58.5	RH
RC2016	OZ25	2-25	60	58.5	RH

- No collar with flats

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

ISO30

COLLET CHUCKS ISO30 FOR THERMWOOD WITHOUT BALL BEARING NUT



DESIGN:

- Collet chucks with steep taper and serrated flange
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change for Thermwood machines

IMPORTANT:

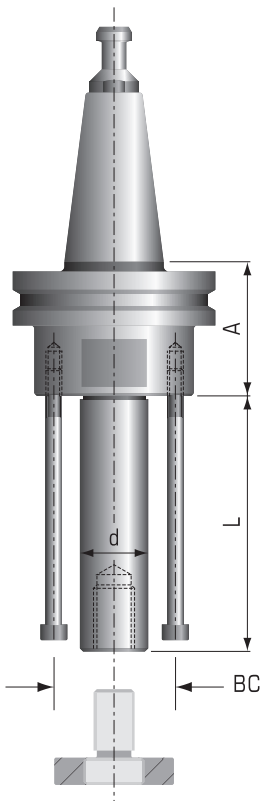
- Part number RC2014TH is not compatible with Thermwood's "Typewriter" style toolchanger

PART NO.	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2012TH	ER32	3-20	50	57.5	RH
RC2012THL	ER32	3-20	50	57.5	LH
RC2014TH	ER40	2-25	63	67.5	RH

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

ISO30

CUTTER ARBORS WITH ISO30 TAPER



DESIGN:

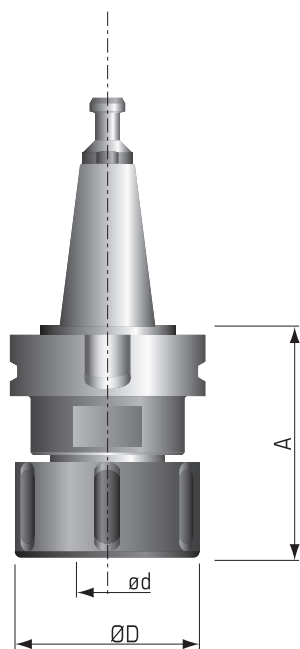
- Cutter arbor with steep taper DIN 69871, without grooves or notches
- Available in 2 designs:
 - Dimension A = 42mm for short clamping
 - Dimension A = 63mm for extended clamping, upon request
- Cutter arbor balanced

APPLICATION:

- For mounting bore type tools
- On CNC routers with automatic tool change

PART NO.	SHAFT DIAM. ød mm	SHAFT LENGTH L mm	A mm	BOLT CIRCLE BC mm
RC3050	20	55	42	32
RC3052	20	70	42	32
RC3054	30	55	42	48
RC3056	30	80	42	48
RC3058	30	100	42	48

When ordering, specify pull stud type (see page FC15 – FC16).
Other shaft sizes available upon request.


DESIGN:

- Collet chucks with BT - steep taper and with groove and notches
- Suitable for spring collets manufactured to DIN 6388 or DIN 6499
- Balanced tool body and collet nut
- Right hand rotation (left hand available upon request)

APPLICATION:

- Precision collet chuck for clamping shank type tools
- On CNC routers with automatic tool change

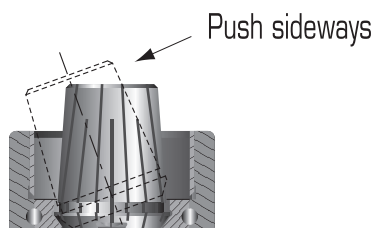
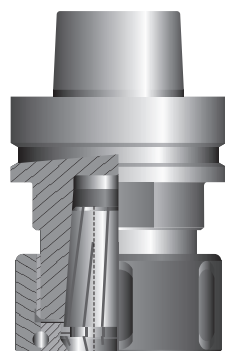
PART NO.	TAPER SIZE	COLLET TYPE	CLAMPING RANGE ød mm	ØD mm	A mm	ROTATION
RC2040 ▲	BT20	ER20	2-13	35	45	RH
RC2042	BT20	ER25	3-16	42	45	RH
RC2044	BT30	ER25	3-16	42	60	RH
RC2046	BT30	ER32	3-20	50	56	RH
RC2047 ▲	BT30	ER32	3-20	50	60	RH
RC2048 ●	BT30	ER40	3-26	63	58.5	RH
RC2050	BT35	ER25	3-16	42	65	RH
RC2052 ●	BT35	ER32	3-20	50	70	RH
RC2054	BT35	ER40	3-26	63	58.5	RH
RC2055	BT35	ER40	3-26	63	70	RH
RC2056	BT40	ER25	3-16	42	65	RH
RC2058	BT40	ER32	3-20	50	65	RH
RC2059	BT40	ER40	3-26	63	70	RH

- ▲ Special “No Knotch” Collet Chuck for Komo CNC Routers, use pull stud type PS1090
- No collar with flats

When ordering, specify pull stud type (see page FC10 & FC11).
Spring collets not included (see page FC8 & FC9).

COLLETS
PROPER USE AND MAINTENANCE
APPLICATION:

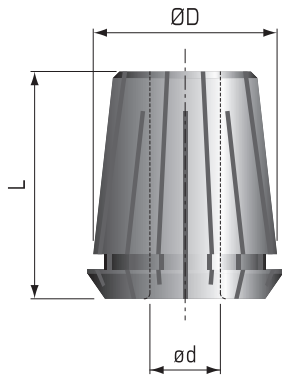
- Collet chuck and Collet should be cleaned of debris and rust during each tool change
- Collets should be replaced after approximately 600 operating hours
- Inspect, clean and/or replace the collet if the router bit shank exhibits equally spaced marks. These marks are often a result of inadequate clamping of the router bit's shank.



Spring collect connecting system

ER25 DIN 6499

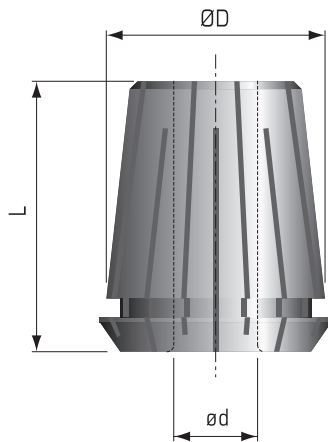
PRECISION SPRING COLLETS TYPE:430E/ER25



PART NO.	ød mm	CLAMPING RANGE mm	DIAM. ØD mm	LENGTH L mm
RCER2506	6	6-5	26	34
RCER2508	8	8-7	26	34
RCER2510	10 (3/8")	10-9	26	34
RCER2512	12	12-11	26	34
RCER2514	14	14-13	26	34
RCER2516	16 (5/8")	16-15	26	34

ER32 DIN 6499

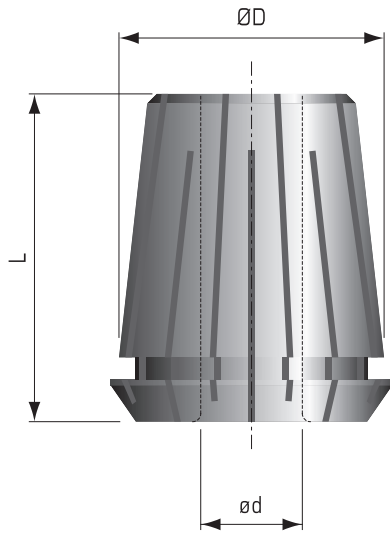
PRECISION SPRING COLLETS TYPE:740E/ER32



PART NO.	ød mm	CLAMPING RANGE mm	DIAM. ØD mm	LENGTH L mm
RCER3203	3	3-2	32.8	40
RCER3204	4	4-3	32.8	40
RCER3205	5	5-4	32.8	40
RCER3206	6	6-5	32.8	40
RCER32-14	1/4"	1/4"	32.8	40
RCER3207	7	7-6	32.8	40
RCER3208	8	8-7	32.8	40
RCER3209	9	9-8	32.8	40
RCER3210	10 (3/8")	10-9	32.8	40
RCER3211	11	11-10	32.8	40
RCER3212	12	12-11	32.8	40
RCER3213	13 (1/2")	13-12	32.8	40
RCER3214	14	14-13	32.8	40
RCER3215	15	15-14	32.8	40
RCER3216	16 (5/8")	16-15	32.8	40
RCER3217	17	17-16	32.8	40
RCER3218	18	18-17	32.8	40
RCER3219	19	19-18	32.8	40
RCER32-34	3/4"	3/4"	32.8	40
RCER3220	20	20-19	32.8	40

ER40
DIN 6499

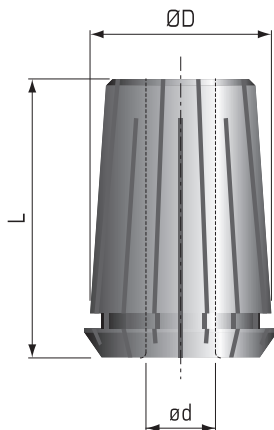
PRECISION SPRING COLLETS TYPE:472E/ER40



PART NO.	ød mm	CLAMPING RANGE mm	DIAM. ØD mm	LENGTH L mm
RCER4004	4	4-3	40.8	46
RCER4005	5	5-4	40.8	46
RCER4006	6	6-5	40.8	46
RCER40-14	1/4"	1/4"	40.8	46
RCER4007	7	7-6	40.8	46
RCER4008	8	8-7	40.8	46
RCER4009	9	9-8	40.8	46
RCER4010	10 (3/8")	10-9	40.8	46
RCER4011	11	11-10	40.8	46
RCER4012	12	12-11	40.8	46
RCER4013	13 (1/2")	13-12	40.8	46
RCER4014	14	14-13	40.8	46
RCER4015	15	15-14	40.8	46
RCER4016	16 (5/8")	16-15	40.8	46
RCER4017	17	17-16	40.8	46
RCER4018	18	18-17	40.8	46
RCER4019	19	19-18	40.8	46
RCER40-34	3/4"	3/4"	40.8	46
RCER4020	20	20-19	40.8	46
RCER4025	25	25-24	40.8	46
RCER40-1	1"	1"	40.8	46
RCER4026	26	26-25	40.8	46

OZ
DIN 6388

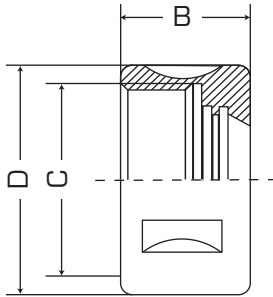
PRECISION SPRING COLLETS TYPE:444E/OZ25



PART NO.	ød	DIAM. ØD mm	LENGTH L mm
RCOZ2504	4mm	33.1	52
RCOZ2506	6mm	33.1	52
RCOZ25-14	1/4"	33.1	52
RCOZ2507	7mm	33.1	52
RCOZ2510	10mm	33.1	52
RCOZ25-12	1/2"	33.1	52
RCOZ2513	13mm	33.1	52
RCOZ2516	16mm	33.1	52
RCOZ2519	19mm	33.1	52
RCOZ25-34	3/4"	33.1	52
RCOZ2520	20mm	33.1	52
RCOZ2525	25mm	33.1	52

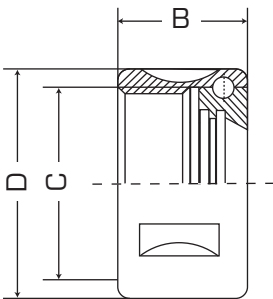
	PART NO.	TOOL HOLDER TYPE	MACHINE
	PS1010	ISO30	BIESSE (Prior to 1992)
	PS1020	ISO30	BIESSE (After 1992) MASTERWOOD
	PS1030	ISO30	ALBERTI, VITAP MASTERWOOD (COLOMBO MOTOR)
	PS1040	ISO30/BT30	IMA, MAKA, WEEKE, BUSELLATO, BULLERI, COSMEC RICHENBACHER
	PS1050	ISO40	IMA, MAKA, WEEKE, BUSELLATO, BULLERI, COSMEC RICHENBACHER
	PS1060	ISO30	SCM - MORBIDELLI
	PS1070	ISO30	CMS

	PART NO.	TOOL HOLDER TYPE	MACHINE
	PS1080	ISO30	THERMWOOD, ESSETEAM
	PS1090	BT30	KOMO
	PS1100	BT30	SHODA
	PS1110	BT35	HEIAN
	PS1120	BT40	SHODA
	PS1130	CYLINDRICAL SHANK	—



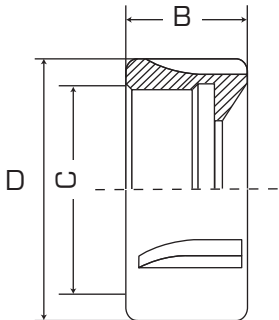
COLLET NUTS WITHOUT BALL BEARING

PART NO.	DIAM. ØD mm	THICKNESS B mm	DIAM. ØC	DIN#	SPRING COLLET TYPE	ROTATION
CN1010	50	23	M40 x 1.5	6499	ER32	RH
CN1020	63	25	M50 x 1.5	6499	ER40	RH
CN1030	60	30	M48 x 2.0	6388	OZ25	RH
CN1040	50	23	M40 x 1.5	6499	ER32	LH
CN1050	63	25	M50 x 1.5	6499	ER40	LH
CN1060	60	30	M48 x 2.0	6388	OZ25	LH



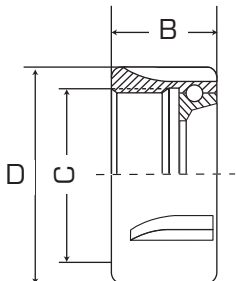
COLLET NUTS WITH BALL BEARING

PART NO.	DIAM. ØD mm	THICKNESS B mm	DIAM. ØC	DIN#	SPRING COLLET TYPE	ROTATION
CN1110	50	23	M40 x 1.5	6499	ER32	RH
CN1120	63	29	M50 x 1.5	6499	ER40	RH
CN1130	60	30	M48 x 2.0	6388	OZ25	RH
CN1140	50	23	M40 x 1.5	6499	ER32	LH
CN1150	63	29	M50 x 1.5	6499	ER40	LH
CN1160	60	30	M48 x 2.0	6388	OZ25	LH



COLLET NUTS WITHOUT BALL BEARING

PART NO.	DIAM. ØDmm	THICKNESS Bmm	DIAM. ØC	TYPE
CN1210	50	22	M40 x 1.5	ETS32
CN1220	63	25	M50 x 1.5	ETS40



COLLET NUTS WITH BALL BEARING

PART NO.	DIAM. ØDmm	THICKNESS Bmm	DIAM. ØC	TYPE
CN1310	50	24	M40 x 1.5	ETS32
CN1320	63	27	M50 x 1.5	ETS40


DIN 6388

PART NO.	COLLET NUT ØD mm	SPRING COLLET TYPE
WR1010	50	ER32
WR1020	63/60	ER40/OZ25

For collet nut specs, see page FC12.


DIN 6499

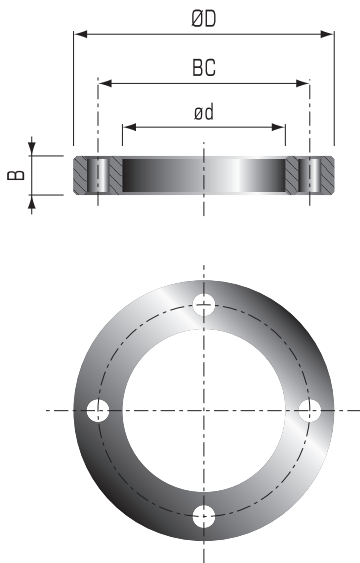
PART NO.	COLLET NUT ØD mm	SPRING COLLET TYPE
WR1030	50	ER32
WR1040	63	ER40

For collet nut specs, see page FC12.


HSK-E40

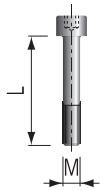
PART NO.	A mm	SPRING COLLET TYPE
WR1050	37	ER32
WR1070	47	ER40
WR1090	40	OZ

For collet nut specs, see page FC12.



PART NO.	DIAM. ØD mm	THICKNESS B mm	BORE ød mm	BOLT CIRCLE BC mm
W052100	45	0.1	20	32
W052102	45	0.2	20	32
W052104	45	0.5	20	32
W052106	45	1	20	32
W052108	45	2	20	32
W052110	45	5	20	32
W052112	45	6	20	32
W052114	45	7	20	32
W052116	45	10	20	32
W052118	45	15	20	32
W052120	45	20	20	32

PART NO.	DIAM. ØD mm	THICKNESS B mm	BORE ød mm	BOLT CIRCLE BC mm
W052200	60	0.1	30	48
W052202	60	0.2	30	48
W052204	60	0.5	30	48
W052206	60	1	30	48
W052208	60	2	30	48
W052210	60	5	30	48
W052212	60	6	30	48
W052214	60	8	30	48
W052216	60	10	30	48
W052218	60	15	30	48
W052220	60	20	30	48
W052222	60	25	30	48
W052224	60	30	30	48

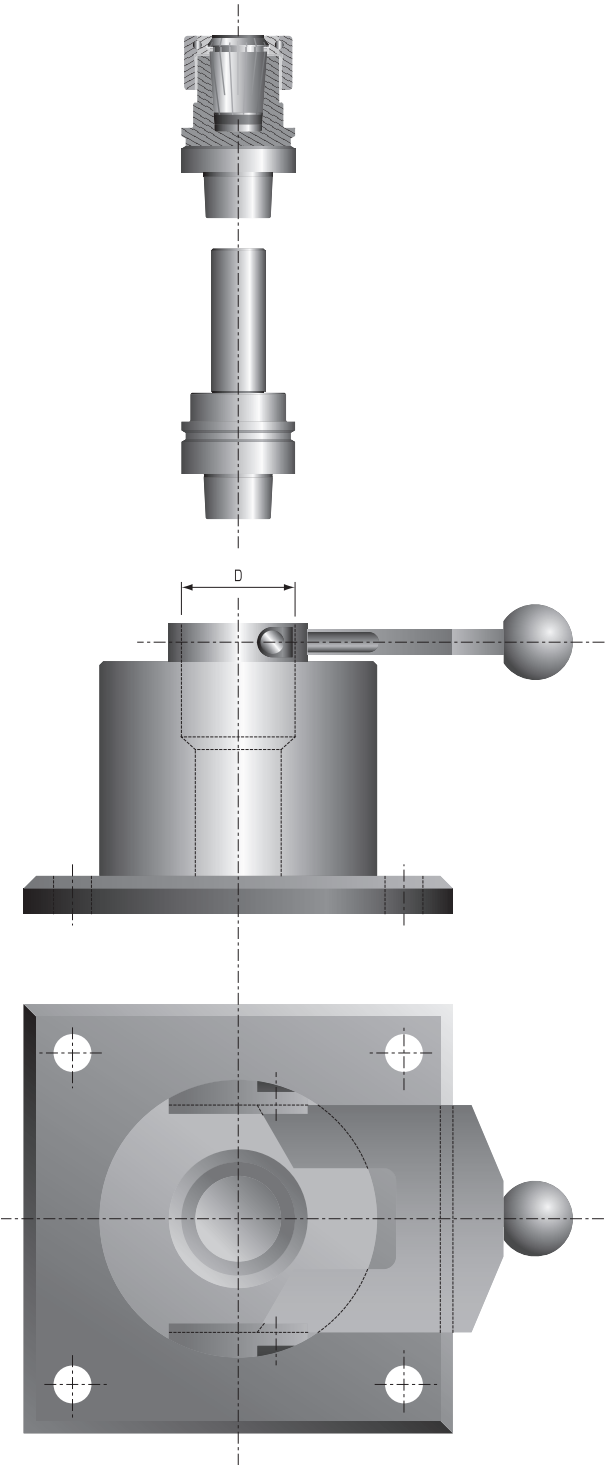


Hex Screws For Cutter Arbors

PART NO.	DIMENSIONS M x L
W501730	M6 x 60
W501731	M6 x 75
W501732	M6 x 85

MD1010

MOUNTING DEVICE FOR ASSEMBLY AND DISASSEMBLY OF COLLET CHUCKS AND CUTTER ARBORS



DESIGN/APPLICATION:

- Device for safe assembling and disassembling of shank type tools into chucks or bore type tools onto cutter arbors

PART NO.	D mm	TOOL HOLDER TYPE
MD1010	50	ISO30 HSK50E
MD1020	63.5	ISO40 BT40
MD1030	63	HSK63F
MD1040	46	ISO30 (CMS) BT30
MD1050	53	BT35
MD1060	49	SCM MORBIDELLI

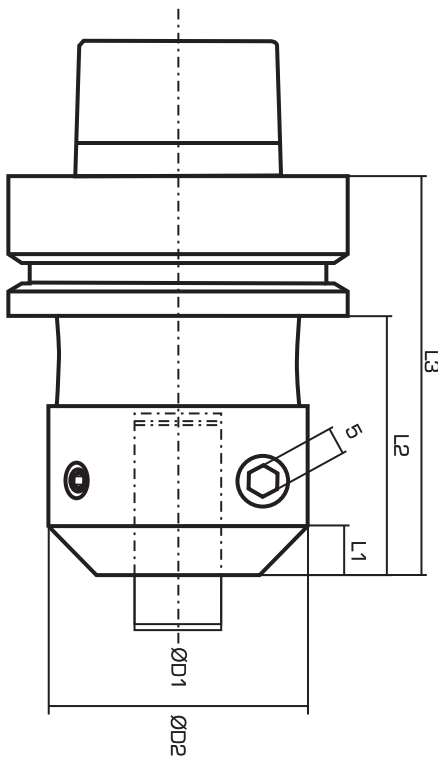
**DESIGN:**

- Precision hydraulic chucks are available in HSK63F connections only
- Hydraulic clamping ensures radial running accuracy for optimum quality of cut and extended tool life
- Safety guard design prevents the tool from falling out even when the chuck is not pressurized
- Suitable for both left and right rotation
- Balanced to G2.5 at 25,000 RPM

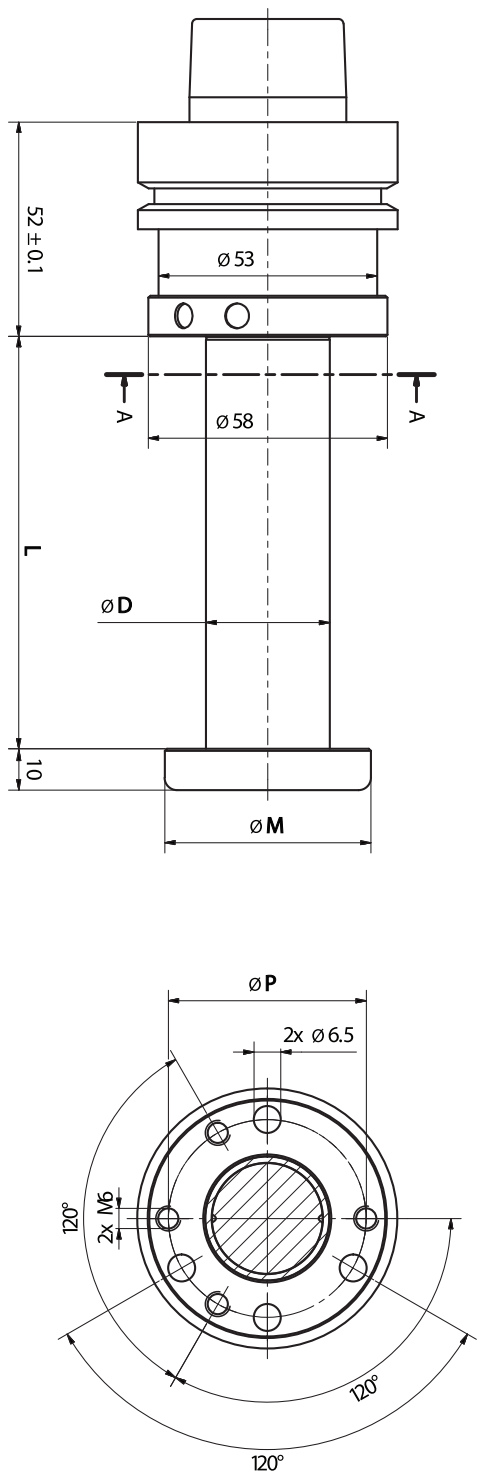
APPLICATION:

- For precise clamping of shank type tools
- On CNC routers with manual or automatic tool change

TYPE	ØD1	ØD2	L1	L2	L3
G3-10/HSK63F	10	45	3	42	68
G3-12/HSK63F	12	45	3	42	68
G3-16/HSK63F	16	48	9	48	74
G3-20/HSK63F	20	52	15	54	80
G3-25/HSK63F	25	59	22.5	61.5	87.5



TYPE	ØD1	ØD2	L1	L2	L3
G3-3/8"/HSK63F	3/8"	45	3	42	68
G3-1/2"/HSK63F	1/2"	45	4.5	43.5	69.5
G3-5/8"/HSK63F	5/8"	48	9	48	74
G3-3/4"/HSK63F	3/4"	52	13.5	52.5	78.5
G3-1"/HSK63F	1"	59	22.5	61.5	87.5


DESIGN:

- Precision hydraulic chucks are available in HSK63F connections only
- Hydraulic clamping ensures exact radial running accuracy for optimum quality of cut and extended tool life
- Quick and simple tool changing reduces downtime
- Suitable for both left and right hand rotation

APPLICATION:

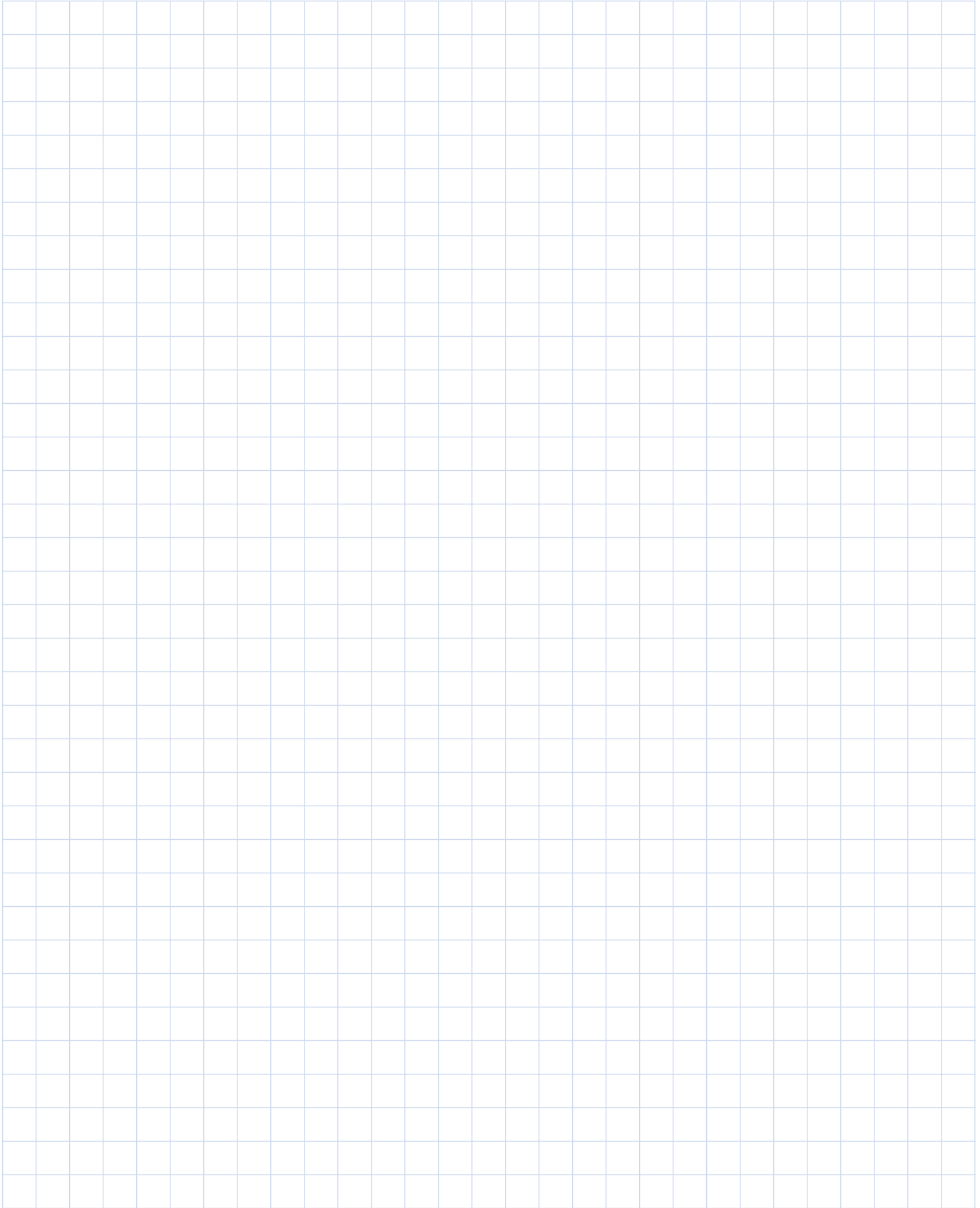
- For precision mounting of bore type tools
- On CNC routers with manual or automatic tool change

METRIC SIZES

TYPE	$\varnothing D$	L	$\varnothing M$	$\varnothing P$
GE2-20x40/HSK63F	20	40	45	32
GE2-25x55/HSK63F	25	55	50	40
GE2-30x40/HSK63F	30	40	58	48
GE2-30x55/HSK63F	30	55	58	48
GE2-30x80/HSK63F	30	80	58	48
GE2-30x100/HSK63F	30	100	58	48

IMPERIAL SIZES

TYPE	$\varnothing D$	L	$\varnothing M$	$\varnothing P$
GE2-1"x40/HSK63F	1"	40	50	40
GE2-1"x55/HSK63F	1"	55	50	40
GE2-1"x80/HSK63F	1"	80	53	40
GE2-1-1/4"x40/HSK63F	1-1/4"	40	58	48
GE2-1-1/4"x55/HSK63F	1-1/4"	55	58	48

A large, empty grid of light blue lines on a white background, intended for taking notes. The grid consists of approximately 25 columns and 35 rows.



Dust Free Nesting

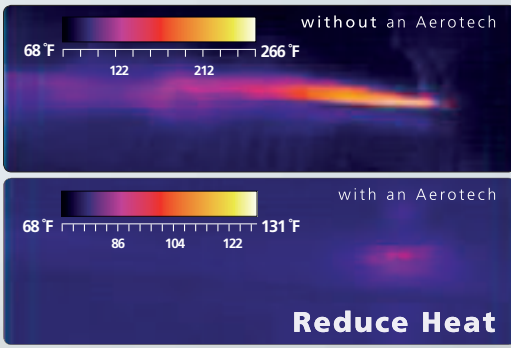


97.4% dust extraction with an Aerotech by FS Cruing will increase your production throughput, extend tool life, reduce operating costs, reduce downtime and significantly improve your nesting cell's air quality. We would like to show you how safe, effective and beneficial an Aerotech will be to you with an on-site demonstration. What you need to do is call us at (800) 461-5319 or request a demonstration online at www.dustfreenesting.com

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Replace your toolholder and eliminate dust, 100% Guaranteed.

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Aerotech

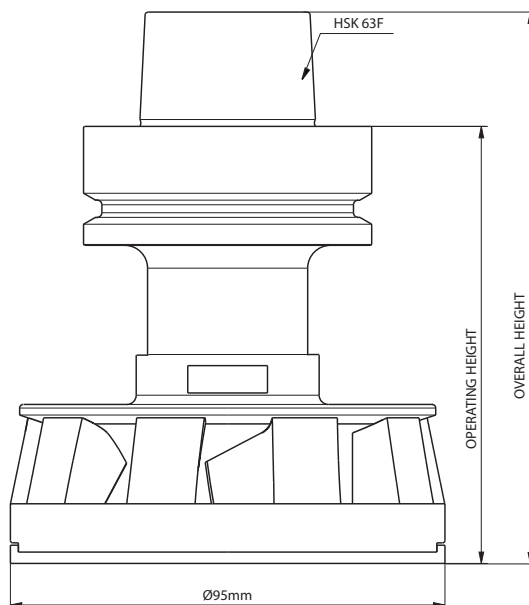
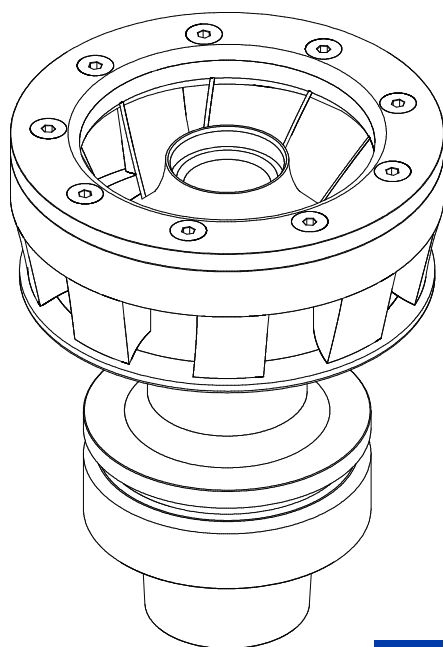


Endorsed by



AER-11

AEROTECH SYSTEM BODY - HSK63F CONNECTION



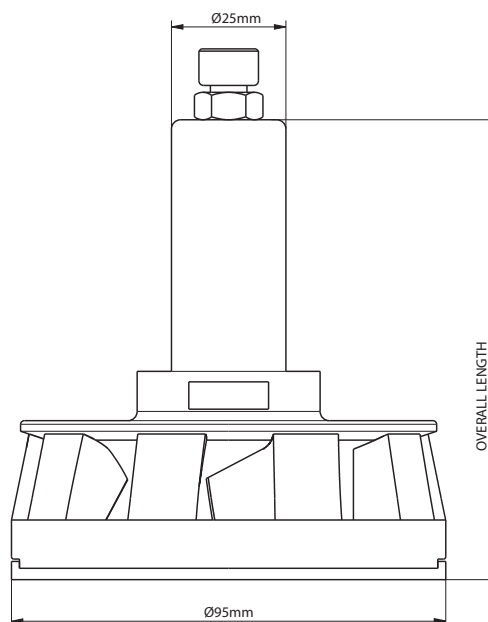
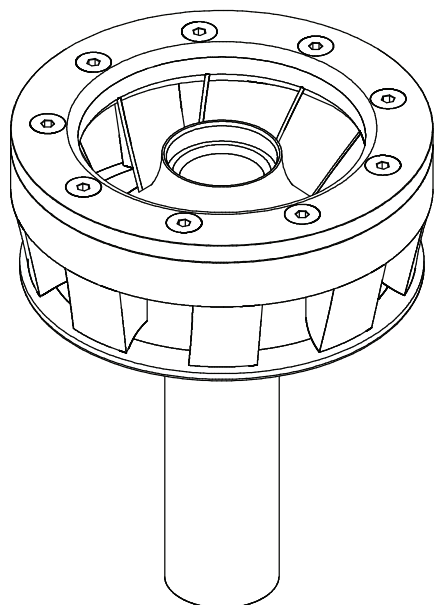
AEROTECH BODY

HSK63F TOOLHOLDER TYPE

PART NO.	SPINDLE CONN.	SERIES NO.	LARGE DIAM.	R. BIT CONN.	OVERALL HEIGHT	OPERATING HEIGHT
AER-11A-HOLDER	HSK63F	1	95mm	HSK20C	121mm	96mm
AER-11W-HOLDER	HSK63F	1	95mm	HSK20C	125mm	100mm
AER-11WU-HOLDER	HSK63F	1	95mm	COLLET	130mm	105mm

AER-12

AEROTECH SYSTEM BODY - 25MM SHANK



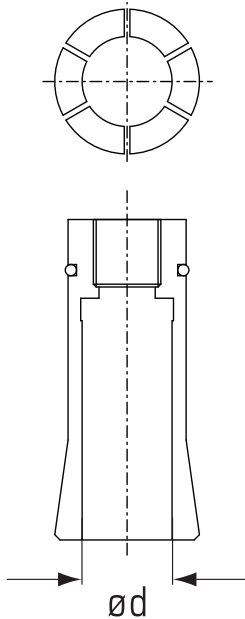
AEROTECH BODY

25MM SHANK TYPE

PART NO.	SPINDLE CONN.	SERIES NO.	LARGE DIAM.	R. BIT CONN.	OVERALL HEIGHT	OPERATING HEIGHT
AER-12A-HOLDER	25mm	1	95mm	HSK20C	121mm	96mm
AER-12W-HOLDER	25mm	1	95mm	HSK20C	125mm	100mm

AER COLLET

AEROTECH UNIVERSAL COLLETS



AEROTECH UNIVERSAL COLLETS

IMPERIAL SIZES

PART NO.	CLAMPING RANGE ød mm	MAX. SHANK LENGTH	AEROTECH MODEL COMPATIBILITY
AERC-COLLET-1/4	1/4"	42mm	AER-11WU
AERC-COLLET-3/8	3/8"	42mm	AER-11WU
AERC-COLLET-1/2	1/2"	42mm	AER-11WU
AERC-COLLET-5/8	5/8"	42mm	AER-11WU

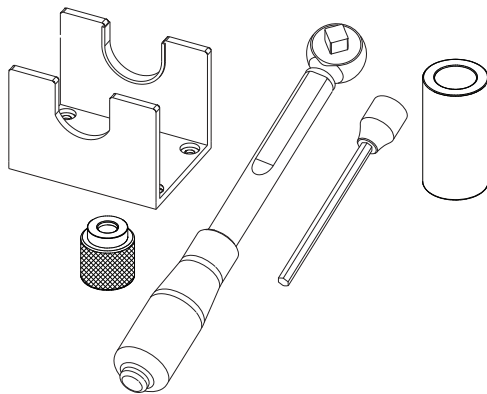
AEROTECH UNIVERSAL COLLETS

METRIC SIZES

PART NO.	CLAMPING RANGE ød mm	MAX. SHANK LENGTH	AEROTECH MODEL COMPATIBILITY
AERC-COLLET-6MM	6mm	42mm	AER-11WU
AERC-COLLET-10MM	10mm	42mm	AER-11WU
AERC-COLLET-12MM	12mm	42mm	AER-11WU
AERC-COLLET-16MM	16mm	42mm	AER-11WU

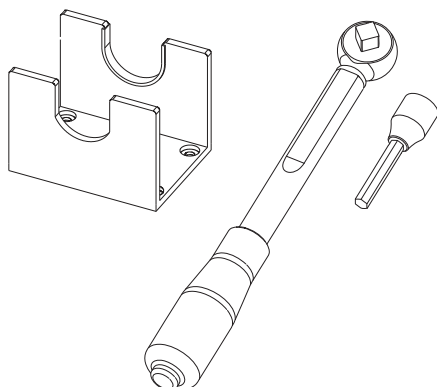
AER-KIT

AEROTECH MOUNTING KITS



AEROTECH HSK20C MOUNTING KIT

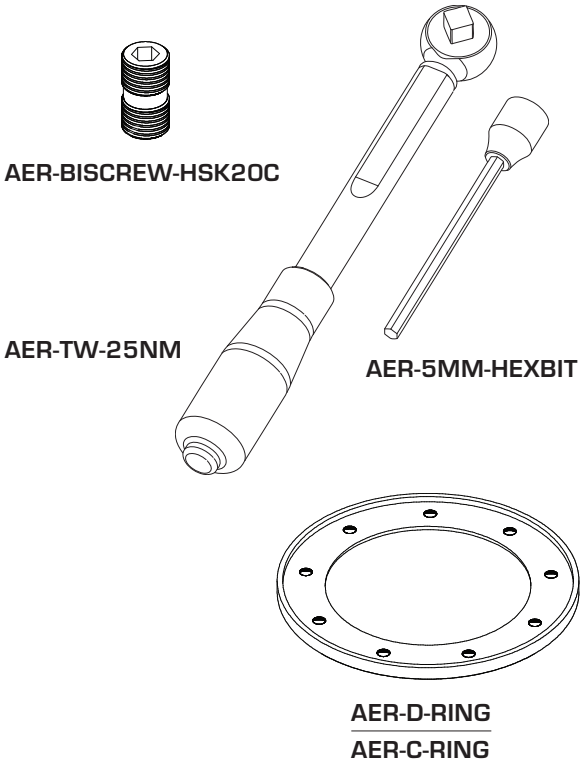
PART NO.	PART DESCRIPTION
AER-KIT	AEROTECH HSK20C MOUNTING KIT INCLUDES: MOUNTING PLATE, BI-SCREW POSITIONER (DEPTH GAUGE), 3/8" DRIVE ADJUSTABLE TORQUE WRENCH (25Nm/18ft-lb), 5MM HEX BIT AND 25MM SHANK ADAPTOR SLEEVE



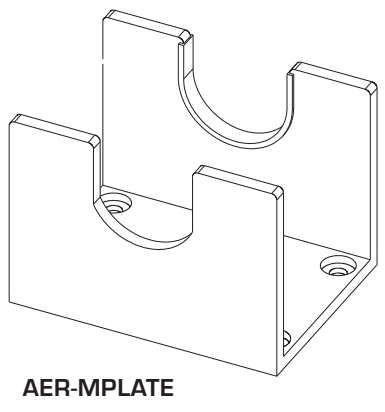
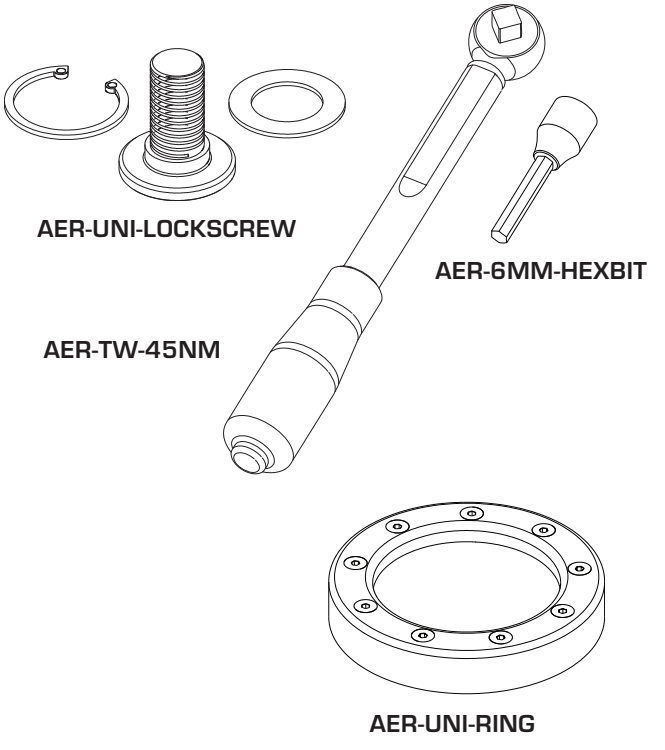
AEROTECH UNIVERSAL MOUNTING KIT

PART NO.	PART DESCRIPTION
AER-UNI-KIT	AEROTECH UNIVERSAL MOUNTING KIT INCLUDES: MOUNTING PLATE, 3/8" DRIVE FIXED TORQUE WRENCH (45Nm/33ft-lb) AND 6MM HEX BIT

AEROTECH SYSTEM



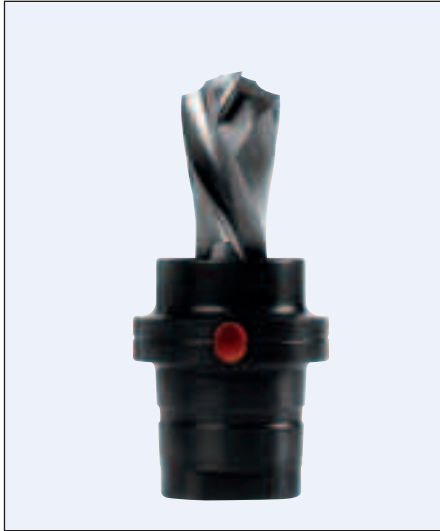
AEROTECH UNIVERSAL



REPLACEMENT PARTS

PART NO.	PART DESCRIPTION
AER-5MM-HEXBIT	5MM HEX BIT FOR 3/8" DRIVE FOR THE AEROTECH SYSTEM
AER-6MM-HEXBIT	6MM HEX BIT FOR 3/8" DRIVE FOR THE AEROTECH UNIVERSAL
AER-BISCREW	AEROTECH HSK20C BI-SCREW
AER-C-RING	7MM REMOVBLE FLANGE
AER-D-RING	3MM REMOVABLE FLANGE
AER-MPLATE	AEROTECH MOUNTING PLATE
AER-TW-25NM	AEROTECH SYSTEM 3/8" DRIVE ADJUSTABLE TORQUE WRENCH (25Nm/18ft-lb)
AER-TW-45NM	AEROTECH UNIVERSAL 3/8" DRIVE FIXED TORQUE WRENCH (45Nm/33ft-lb)
AER-UNI-LOCKSCREW	AEROTECH UNIVERSAL LOCK SCREW
AER-UNI-RING	AEROTECH UNIVERSAL FLANGE

MORTISE COMPRESSION WITH REUSABLE HSK20C



DESIGN:

- Router bit is loaded into a reusable HSK20C holder
- Tool design is optimized for highspeed cutting with the Aerotech System
- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- This upcut length will prevent tear-out when cutting rebates, dados or pockets with a depth of 0.250" or greater
- If part movement is a concern, using this design may assist material hold down

IMPORTANT:

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech System to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a High Upcut design (see next page for tooling options), reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS TWO FLUTE

MORTISE UPCUT COMPRESSION SPIRAL

PART NO.		CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
AF2058-UD2-12.9BH	▲	1/4"	1/2"	0.188"	2+2	HSK20C
AF2058-UD2-19.25BH	▲	1/4"	3/4"	0.188"	2+2	HSK20C
AF2059W-UD2-12.9BH	▲	3/8"	1/2"	0.188"	2+2	HSK20C
AF2059W-UD2-16BH	▲	3/8"	5/8"	0.188"	2+2	HSK20C
AF2059W-UD2-19.25BH	▲	3/8"	3/4"	0.188"	2+2	HSK20C
AF2059W-UD2-22.2BH	▲	3/8"	7/8"	0.188"	2+2	HSK20C
AF2059W-UD2-25.6BH	▲	3/8"	1"	0.188"	2+2	HSK20C
AF2061-UD2-12.9BH	▲	1/2"	1/2"	0.188"	2+2	HSK20C
AF2061-UD2-16BH	▲	1/2"	5/8"	0.188"	2+2	HSK20C
AF2061-UD2-19.25BH	▲	1/2"	3/4"	0.188"	2+2	HSK20C
AF2061-UD2-22.2BH	▲	1/2"	7/8"	0.188"	2+2	HSK20C
AF2061-UD2-25.6BH	▲	1/2"	1"	0.188"	2+2	HSK20C
AF2061-UD2-31.95BH	▲	1/2"	1-1/4"	0.188"	2+2	HSK20C
AF2061-UD2-38.3BH	▲	1/2"	1-1/2"	0.188"	2+2	HSK20C
AF2061-UD2-51BH	▲	1/2"	2"	0.188"	2+2	HSK20C
AF2064-UD2-19.25BH	▲	5/8"	3/4"	0.188"	2+2	HSK20C
AF2066-UD2-19.25BH	▲	3/4"	3/4"	0.188"	2+2	HSK20C

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend its capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59

HIGH UPCUT COMPRESSION WITH REUSABLE HSK20C



DESIGN:

- Router bit is loaded into a reusable HSK20C holder
- Tool design is optimized for highspeed cutting with the Aerotech System
- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board

IMPORTANT:

This High Upcut design is recommended for maximum dust extraction.

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech System to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a tool with more Upcut Length, reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS TWO FLUTE

HIGH UPCUT COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
AF2058-HUD2-12.9BH	1/4"	1/2"	9.5mm	2+2	HSK20C
AF2058-HUD2-19.25BH	1/4"	3/4"	14.5mm	2+2	HSK20C
AF2059W-HUD2-12.9BH	3/8"	1/2"	9.5mm	2+2	HSK20C
AF2059W-HUD2-16BH	3/8"	5/8"	12.0mm	2+2	HSK20C
AF2059W-HUD2-19.25BH	3/8"	3/4"	14.5mm	2+2	HSK20C
AF2059W-HUD2-22.2BH	3/8"	7/8"	16.5mm	2+2	HSK20C
AF2059W-HUD2-25.6BH	3/8"	1"	19.0mm	2+2	HSK20C
AF2061-HUD2-12.9BH	1/2"	1/2"	8.0mm	2+2	HSK20C
AF2061-HUD2-16BH	1/2"	5/8"	10.0mm	2+2	HSK20C
AF2061-HUD2-19.25BH	1/2"	3/4"	12.0mm	2+2	HSK20C
AF2061-HUD2-22.2BH	1/2"	7/8"	14.0mm	2+2	HSK20C
AF2061-HUD2-25.6BH	1/2"	1"	16.0mm	2+2	HSK20C
AF2061-HUD2-31.95BH	1/2"	1-1/4"	20.0mm	2+2	HSK20C
AF2061-HUD2-38.3BH	1/2"	1-1/2"	24.0mm	2+2	HSK20C
AF2061-HUD2-51BH	1/2"	2"	32.0mm	2+2	HSK20C
AF2064-HUD2-19.25BH	5/8"	3/4"	12.0mm	2+2	HSK20C
AF2066-HUD2-19.25BH	3/4"	3/4"	12.0mm	2+2	HSK20C

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59

MORTISE COMPRESSION WITH REUSABLE HSK20C



DESIGN:

- Router bit is loaded into a reusable HSK20C holder
- Tool design is optimized for highspeed cutting with the Aerotech System
- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Faster feed rates at low spindle speeds are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For exceptionally smooth finishing cuts
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-milling operations
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- This upcut length will prevent tear-out when cutting rebates, dados or pockets with a depth of 0.250" or greater
- If part movement is a concern, using this design may assist material hold down

IMPORTANT:

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech System to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a High Upcut design (see next page for tooling options), reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS THREE FLUTE

MORTISE UPCUT COMPRESSION SPIRAL

PART NO.		CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
AF2059A-UD3-12.9BH	▲	3/8"	1/2"	0.188"	3+3	HSK20C
AF2059A-UD3-16BH	▲	3/8"	5/8"	0.188"	3+3	HSK20C
AF2059A-UD3-19.25BH	▲	3/8"	3/4"	0.188"	3+3	HSK20C
AF2059A-UD3-25.6BH	▲	3/8"	1"	0.188"	3+3	HSK20C
AF2061-UD3-12.9BH	▲	1/2"	1/2"	0.188"	3+3	HSK20C
AF2061-UD3-16BH	▲	1/2"	5/8"	0.188"	3+3	HSK20C
AF2061-UD3-19.25BH	▲	1/2"	3/4"	0.188"	3+3	HSK20C
AF2061-UD3-25.6BH	▲	1/2"	1"	0.188"	3+3	HSK20C

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend its capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59

HIGH UPCUT COMPRESSION WITH REUSABLE HSK20C

DESIGN:

- Router bit is loaded into a reusable HSK20C holder
- Tool design is optimized for highspeed cutting with the Aerotech System
- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Faster feed rates at low spindle speeds are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For exceptionally smooth finishing cuts
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-milling operations
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board

IMPORTANT:

This High Upcut design is recommended for maximum dust extraction.

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech System to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a tool with more Upcut Length, reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS THREE FLUTE
HIGH UPCUT COMPRESSION SPIRAL

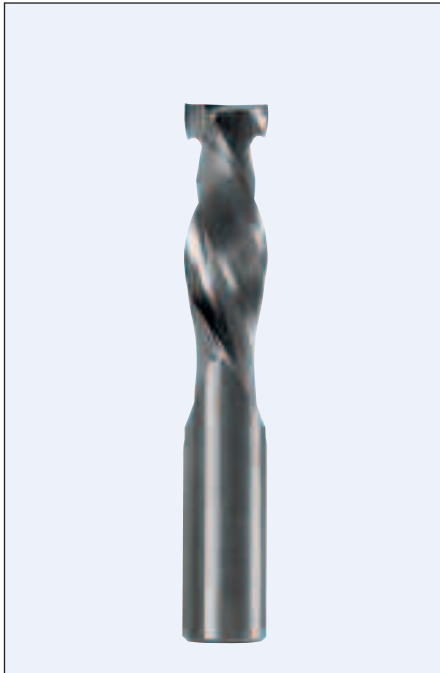
PART NO.	CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
AF2059A-HUD3-12.9BH	3/8"	1/2"	9.5mm	3+3	HSK20C
AF2059A-HUD3-16BH	3/8"	5/8"	12.0mm	3+3	HSK20C
AF2059A-HUD3-19.25BH	3/8"	3/4"	14.5mm	3+3	HSK20C
AF2059A-HUD3-25.6BH	3/8"	1"	19.0mm	3+3	HSK20C
AF2061-HUD3-12.9BH	1/2"	1/2"	8.0mm	3+3	HSK20C
AF2061-HUD3-16BH	1/2"	5/8"	10.0mm	3+3	HSK20C
AF2061-HUD3-19.25BH	1/2"	3/4"	12.0mm	3+3	HSK20C
AF2061-HUD3-25.6BH	1/2"	1"	16.0mm	3+3	HSK20C

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

- Tool design is optimized for highspeed cutting with the Aerotech System
- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- This upcut length will prevent tear-out when cutting rebates, dados or pockets with a depth of 0.250" or greater
- If part movement is a concern, using this design may assist material hold down

IMPORTANT:

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech Universal to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a High Upcut design (see next page for tooling options), reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS TWO FLUTE

MORTISE UPCUT COMPRESSION SPIRAL

PART NO.		CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
RSF2058-UD2-12.9	▲	1/4"	1/2"	0.188"	2+2	CYL.
RSF2058-UD2-19.25	▲	1/4"	3/4"	0.188"	2+2	CYL.
RSF2059W-UD2-12.9	▲	3/8"	1/2"	0.188"	2+2	CYL.
RSF2059W-UD2-16	▲	3/8"	5/8"	0.188"	2+2	CYL.
RSF2059W-UD2-19.25	▲	3/8"	3/4"	0.188"	2+2	CYL.
RSF2059W-UD2-25.6	▲	3/8"	1"	0.188"	2+2	CYL.
RSF2061-UD2-12.9	▲	1/2"	1/2"	0.188"	2+2	CYL.
RSF2061-UD2-16	▲	1/2"	5/8"	0.188"	2+2	CYL.
RSF2061-UD2-19.25	▲	1/2"	3/4"	0.188"	2+2	CYL.
RSF2061-UD2-25.6	▲	1/2"	1"	0.188"	2+2	CYL.
RSF2061-UD2-31.95	▲	1/2"	1-1/4"	0.188"	2+2	CYL.
RSF2061-UD2-38.3	▲	1/2"	1-1/2"	0.188"	2+2	CYL.
RSF2061-UD2-51	▲	1/2"	2"	0.188"	2+2	CYL.
RSF2064-UD2-19.25	▲	5/8"	3/4"	0.188"	2+2	CYL.
RSF2066-UD2-19.25	▲	3/4"	3/4"	0.188"	2+2	CYL.

CYL. refers to a Cylindrical Shank

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

- Tool design is optimized for highspeed cutting with the Aerotech System
- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board

IMPORTANT:

This High Upcut design is recommended for maximum dust extraction.

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech Universal to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a tool with more Upcut Length, reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS TWO FLUTE

HIGH UPCUT COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
RSF2058-HUD2-12.9	1/4"	1/2"	9.5mm	2+2	CYL.
RSF2058-HUD2-19.25	1/4"	3/4"	14.5mm	2+2	CYL.
RSF2059W-HUD2-12.9	3/8"	1/2"	9.5mm	2+2	CYL.
RSF2059W-HUD2-16	3/8"	5/8"	12.0mm	2+2	CYL.
RSF2059W-HUD2-19.25	3/8"	3/4"	14.5mm	2+2	CYL.
RSF2059W-HUD2-22.2	3/8"	7/8"	16.5mm	2+2	CYL.
RSF2059W-HUD2-25.6	3/8"	1"	19.0mm	2+2	CYL.
RSF2061-HUD2-12.9	1/2"	1/2"	8.0mm	2+2	CYL.
RSF2061-HUD2-16	1/2"	5/8"	10.0mm	2+2	CYL.
RSF2061-HUD2-19.25	1/2"	3/4"	12.0mm	2+2	CYL.
RSF2061-HUD2-22.2	1/2"	7/8"	14.0mm	2+2	CYL.
RSF2061-HUD2-25.6	1/2"	1"	16.0mm	2+2	CYL.
RSF2061-HUD2-31.95	1/2"	1-1/4"	20.0mm	2+2	CYL.
RSF2061-HUD2-38.3	1/2"	1-1/2"	24.0mm	2+2	CYL.
RSF2061-HUD2-51	1/2"	2"	32.0mm	2+2	CYL.
RSF2064-HUD2-19.25	5/8"	3/4"	12.0mm	2+2	CYL.
RSF2066-HUD2-19.25	3/4"	3/4"	12.0mm	2+2	CYL.

CYL. refers to a Cylindrical Shank
Mortise Upcut Length is less than 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

- Tool design is optimized for highspeed cutting with the Aerotech System
- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Faster feed rates at low spindle speeds are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For exceptionally smooth finishing cuts
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-miling operations
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- This upcut length will prevent tear-out when cutting rebates, dados or pockets with a depth of 0.250" or greater
- If part movement is a concern, using this design may assist material hold down

IMPORTANT:

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech Universal to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a High Upcut design (see next page for tooling options), reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS THREE FLUTE

MORTISE UPCUT COMPRESSION SPIRAL

PART NO.		CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
RSF2059A-UD3-12.9	▲	3/8"	1/2"	0.188"	3+3	CYL.
RSF2059A-UD3-16	▲	3/8"	5/8"	0.188"	3+3	CYL.
RSF2059A-UD3-19.25	▲	3/8"	3/4"	0.188"	3+3	CYL.
RSF2059A-UD3-25.6	▲	3/8"	1"	0.188"	3+3	CYL.
RSF2061-UD3-12.9	▲	1/2"	1/2"	0.188"	3+3	CYL.
RSF2061-UD3-16	▲	1/2"	5/8"	0.188"	3+3	CYL.
RSF2061-UD3-19.25	▲	1/2"	3/4"	0.188"	3+3	CYL.
RSF2061-UD3-25.6	▲	1/2"	1"	0.188"	3+3	CYL.

CYL. refers to a Cylindrical Shank

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

- Tool design is optimized to improve the dust extraction and highspeed cutting with the Aerotech System
- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Faster feed rates at low spindle speeds are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For exceptionally smooth finishing cuts
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-miling operations
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board

IMPORTANT:

This High Upcut design is recommended for maximum dust extraction.

Dust (Chips) must remain moderately loose and unpacked in the cut for the Aerotech Universal to provide maximum dust extraction. Typically packed dust is caused by the downshear cutting action. Material type and condition, operating environment and cutting path pattern have an impact as to how densely dust will become packed within the cut.

To overcome packed dust, decrease the amount of downshear within the cut. This can be accomplished by selecting a tool with more Upcut Length, reducing the depth of cut per pass and/or performing multiple passes.

FINISHING BITS THREE FLUTE

HIGH UPCUT COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	MAX. MTL THICKNESS	UPCUT LENGTH	NO. FLUTES	SHANK TYPE
RSF2059A-HUD3-12.9	3/8"	1/2"	9.5mm	3+3	CYL.
RSF2059A-HUD3-16	3/8"	5/8"	12.0mm	3+3	CYL.
RSF2059A-HUD3-19.25	3/8"	3/4"	14.5mm	3+3	CYL.
RSF2059A-HUD3-25.6	3/8"	1"	19.0mm	3+3	CYL.
RSF2061-HUD3-12.9	1/2"	1/2"	8.0mm	3+3	CYL.
RSF2061-HUD3-16	1/2"	5/8"	10.0mm	3+3	CYL.
RSF2061-HUD3-19.25	1/2"	3/4"	12.0mm	3+3	CYL.
RSF2061-HUD3-25.6	1/2"	1"	16.0mm	3+3	CYL.

CYL. refers to a Cylindrical Shank
Mortise Upcut Length is less than 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

- Excellent surface finish is produced by the 2 precision ground cutting edges
- Better chipflow and lower heat retention are provided by the 2 flute design
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, one side laminated with face down or solid wood
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out along the bottom face of the board
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend its capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

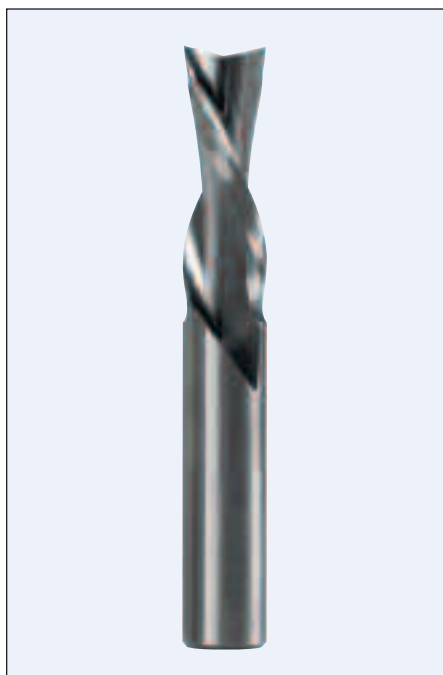
FINISHING BITS TWO FLUTE

UPCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFM03012-U2	3mm	12mm	3mm	2	50mm
RSF2000A-U2	1/8"	1/2"	1/8"	2	2"
RSF2000-U2	1/8"	1/2"	1/4"	2	2"
RSF2002-U2	5/32"	1/2"	1/4"	2	2"
RSFM04012-U2	4mm	12mm	4mm	2	50mm
RSF2004-U2	3/16"	3/4"	1/4"	2	2"
RSF2005-U2	3/16"	3/4"	1/4"	2	2-1/2"
RSFM05017-U2	5mm	17mm	5mm	2	50mm
RSFM06027-U2	6mm	27mm	6mm	2	60mm
RSF2006-U2	1/4"	3/4"	1/4"	2	2-1/2"
RSF2008-U2	1/4"	1"	1/4"	2	2-1/2"
RSF2009-U2	1/4"	1"	1/4"	2	3"
RSF2010-U2	5/16"	1"	5/16"	2	2-1/2"
RSFM08035-U2	8mm	35mm	8mm	2	80mm
RSF2012-U2	3/8"	3/4"	3/8"	2	2-1/2"
RSF2014-U2	3/8"	1"	3/8"	2	2-1/2"
RSF2015-U2	3/8"	1-1/4"	3/8"	2	3"
RSF2016-U2	3/8"	1-1/4"	1/2"	2	3"
RSFM10035-U2	10mm	35mm	10mm	2	80mm
RSFM12035-U2	12mm	35mm	12mm	2	80mm
RSF2019S-U2	1/2"	5/8"	1/2"	2	3"
RSF2020S-U2	1/2"	7/8"	1/2"	2	3"
RSF2020-U2	1/2"	1-1/4"	1/2"	2	3"
RSF2024-U2	1/2"	1-1/2"	1/2"	2	3-1/2"
RSF2028-U2	1/2"	2"	1/2"	2	4"
RSF2032-U2	1/2"	2-1/4"	1/2"	2	4-1/2"
RSF2034-U2	1/2"	2-1/2"	1/2"	2	5-1/2"
RSFM14055-U2	14mm	55mm	14mm	2	100mm
RSF2036-U2	5/8"	1-1/2"	5/8"	2	4"
RSF2038-U2	5/8"	2"	5/8"	2	4"
RSFM16055-U2	16mm	55mm	16mm	2	100mm
RSFM18055-U2	18mm	55mm	18mm	2	100mm
RSF2042-U2	3/4"	1-1/2"	3/4"	2	4"
RSF2044-U2	3/4"	2"	3/4"	2	4"
RSF2048-U2	3/4"	2-1/2"	3/4"	2	5"
RSFM20055-U2	20mm	55mm	20mm	2	100mm

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Excellent surface finish is produced by the 2 precision ground cutting edges
- Better chipflow and lower heat retention are provided by the 2 flute design
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, one side laminated with face up or solid wood
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out along the top face of the board
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

FINISHING BITS TWO FLUTE
DOWNCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFM03012-D2	3mm	12mm	3mm	2	50mm
RSF2000A-D2	1/8"	1/2"	1/8"	2	2"
RSF2000-D2	1/8"	1/2"	1/4"	2	2"
RSF2002-D2	5/32"	1/2"	1/4"	2	2"
RSFM04012-D2	4mm	12mm	4mm	2	50mm
RSF2004-D2	3/16"	3/4"	1/4"	2	2"
RSF2005-D2	3/16"	3/4"	1/4"	2	2-1/2"
RSFM05017-D2	5mm	17mm	5mm	2	50mm
RSFM06027-D2	6mm	27mm	6mm	2	60mm
RSF2006-D2	1/4"	3/4"	1/4"	2	2-1/2"
RSF2008-D2	1/4"	1"	1/4"	2	2-1/2"
RSF2009-D2	1/4"	1"	1/4"	2	3"
RSF2010-D2	5/16"	1"	5/16"	2	2-1/2"
RSFM08035-D2	8mm	35mm	8mm	2	80mm
RSF2012-D2	3/8"	3/4"	3/8"	2	2-1/2"
RSF2014-D2	3/8"	1"	3/8"	2	2-1/2"
RSF2015-D2	3/8"	1-1/4"	3/8"	2	3"
RSF2016-D2	3/8"	1-1/4"	1/2"	2	3"
RSFM10035-D2	10mm	35mm	10mm	2	80mm
RSFM12035-D2	12mm	35mm	12mm	2	80mm
RSF2019S-D2	1/2"	5/8"	1/2"	2	3"
RSF2020S-D2	1/2"	7/8"	1/2"	2	3"
RSF2020-D2	1/2"	1-1/4"	1/2"	2	3"
RSF2024-D2	1/2"	1-1/2"	1/2"	2	3-1/2"
RSF2028-D2	1/2"	2"	1/2"	2	4"
RSF2032-D2	1/2"	2-1/4"	1/2"	2	4-1/2"
RSF2034-D2	1/2"	2-1/2"	1/2"	2	5-1/2"
RSFM14055-D2	14mm	55mm	14mm	2	100mm
RSF2036-D2	5/8"	1-1/2"	5/8"	2	4"
RSF2038-D2	5/8"	2"	5/8"	2	4"
RSFM16055-D2	16mm	55mm	16mm	2	100mm
RSFM18055-D2	18mm	55mm	18mm	2	100mm
RSF2042-D2	3/4"	1-1/2"	3/4"	2	4"
RSF2044-D2	3/4"	2"	3/4"	2	4"
RSF2048-D2	3/4"	2-1/2"	3/4"	2	5"
RSFM20055-D2	20mm	55mm	20mm	2	100mm

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY/DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, one side laminated with face down or solid wood
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-miling operations
- Eliminates chipping, fuzzing and tear-out along the bottom face of the board
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

FINISHING BITS THREE FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFM08035-U3	8mm	35mm	8mm	3	80mm
RSF2011S-U3	3/8"	5/8"	3/8"	3	2-1/2"
RSF2013S-U3	3/8"	7/8"	3/8"	3	2-1/2"
RSF2018-U3	3/8"	1-1/4"	1/2"	3	3"
RSFM10035-U3	10mm	35mm	10mm	3	80mm
RSFM12035-U3	12mm	35mm	12mm	3	80mm
RSF2019S-U3	1/2"	5/8"	1/2"	3	3"
RSF2020S-U3	1/2"	7/8"	1/2"	3	3"
RSF2022-U3	1/2"	1-1/4"	1/2"	3	3"
RSF2026-U3	1/2"	1-1/2"	1/2"	3	3-1/2"
RSF2030-U3	1/2"	2"	1/2"	3	4"
RSFM14055-U3	14mm	55mm	14mm	3	100mm
RSF2040-U3	5/8"	2"	5/8"	3	4"
RSFM16055-U3	16mm	55mm	16mm	3	100mm
RSFM18055-U3	18mm	55mm	18mm	3	100mm
RSF2046-U3	3/4"	2"	3/4"	3	4"
RSF2050-U3	3/4"	2-1/2"	3/4"	3	5"
RSFM20055-U3	20mm	55mm	20mm	3	100mm

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention are provided by the 3 flute design
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, one side laminated with face up or solid wood
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-miling operations
- Eliminates chipping, fuzzing and tear-out along the top face of the board
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

FINISHING BITS THREE FLUTE
DOWNCUT SPIRAL

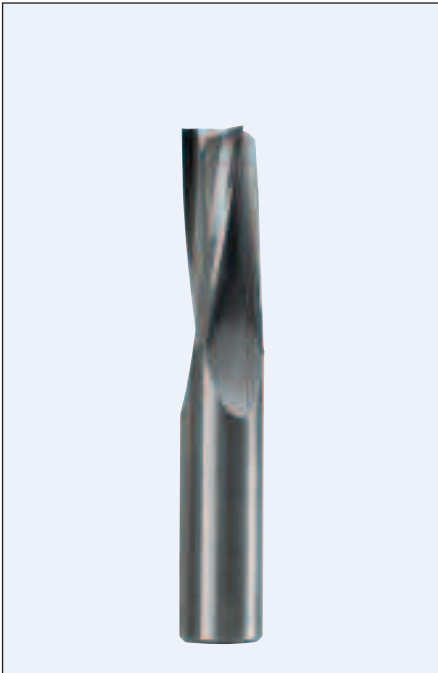
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFM08035-D3	8mm	35mm	8mm	3	80mm
RSF2011S-D3	3/8"	5/8"	3/8"	3	2-1/2"
RSF2013S-D3	3/8"	7/8"	3/8"	3	2-1/2"
RSF2018-D3	3/8"	1-1/4"	1/2"	3	3"
RSFM10035-D3	10mm	35mm	10mm	3	80mm
RSFM12035-D3	12mm	35mm	12mm	3	80mm
RSF2019S-D3	1/2"	5/8"	1/2"	3	3"
RSF2020S-D3	1/2"	7/8"	1/2"	3	3"
RSF2022-D3	1/2"	1-1/4"	1/2"	3	3"
RSF2026-D3	1/2"	1-1/2"	1/2"	3	3-1/2"
RSF2030-D3	1/2"	2"	1/2"	3	4"
RSFM14055-D3	14mm	55mm	14mm	3	100mm
RSF2040-D3	5/8"	2"	5/8"	3	4"
RSFM16055-D3	16mm	55mm	16mm	3	100mm
RSFM18055-D3	18mm	55mm	18mm	3	100mm
RSF2046-D3	3/4"	2"	3/4"	3	4"
RSF2050-D3	3/4"	2-1/2"	3/4"	3	5"
RSFM20055-D3	20mm	55mm	20mm	3	100mm

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute low helix design
- Low helix design reduces lifting force and deflection of work pieces
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 10° Helix design with plunging capability

APPLICATION:

- Superior finish on hardwoods, softwoods, MDF and solid surface materials
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting hard materials and deep cuts
- Noise levels during cutting operations of hard materials will be reduced due to lower cutting pressure required
- Eliminates chipping, fuzzing and tear-out along the bottom face of the board
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

LOW HELIX FINISHING THREE FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFL2006-U3	1/4"	3/4"	1/4"	3	3"
RSFL2010-U3	5/16"	1"	5/16"	3	3"
RSFL2018-U3	3/8"	1-1/4"	1/2"	3	4"
RSFL2022-U3	1/2"	1-1/4"	1/2"	3	4"
RSFL2030-U3	1/2"	2-1/8"	1/2"	3	4-1/2"
RSFL2046-U3	3/4"	2"	3/4"	3	5"
RSFL2052-U3	3/4"	2-1/2"	3/4"	3	5"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute low helix design
- Low helix design reduces lifting force and deflection of work pieces
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 10° Helix design with plunging capability

APPLICATION:

- Superior finish on hardwoods, softwoods, MDF and solid surface materials
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting hard materials and deep cuts
- Noise levels during cutting operations of hard materials will be reduced due to lower cutting pressure required
- Eliminates chipping, fuzzing and tear-out along the top face of the board
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

LOW HELIX FINISHING THREE FLUTE				DOWNCUT SPIRAL	
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFL2006-D3	1/4"	3/4"	1/4"	3	3"
RSFL2010-D3	5/16"	1"	5/16"	3	3"
RSFL2018-D3	3/8"	1-1/4"	1/2"	3	4"
RSFL2022-D3	1/2"	1-1/4"	1/2"	3	4"
RSFL2030-D3	1/2"	2-1/8"	1/2"	3	4-1/2"
RSFL2046-D3	3/4"	2"	3/4"	3	5"
RSFL2052-D3	3/4"	2-1/2"	3/4"	3	5"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Radius Tip	FC61 - FC63
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



FINISHING BITS ONE FLUTE				COMPRESSION SPIRAL		
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSF2058-UD1 ▲	1/4"	7/8"	1/4"	0.188"	1+1	2-1/2"
RSF2060-UD1	3/8"	1-1/8"	3/8"	0.400"	1+1	3"
RSF2061-UD1	1/2"	1-1/4"	1/2"	0.390"	1+1	3"
RSF2062-UD1	1/2"	1-1/2"	1/2"	0.390"	1+1	3-1/2"
RSF2063-UD1	1/2"	2"	1/2"	0.390"	1+1	4"
RSF2064-UD1	5/8"	1-1/2"	5/8"	0.465"	1+1	4"
RSF2066-UD1	3/4"	2"	3/4"	0.625"	1+1	4"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Excellent surface finish is produced by the single precision ground cutting edge
- Excellent chipflow and lower heat retention are provided by the single flute design
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Ideal multi-purpose tool for single tool CNC routers
- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Superior cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

FINISHING BITS TWO FLUTE
COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSF2058M-UD2 ▲	1/4"	7/8"	1/4"	0.188"	2+2	2-1/2"
RSF2059MS-UD2 ▲	3/8"	7/8"	3/8"	0.188"	2+2	3"
RSF2060-UD2	3/8"	1-1/8"	3/8"	0.290"	2+2	3"
RSF2059M-UD2 ▲	3/8"	1-1/4"	3/8"	0.188"	2+2	3"
RSF2059-UD2	3/8"	1-1/4"	3/8"	0.275"	2+2	3"
RSF2061MS-UD2 ▲	1/2"	7/8"	1/2"	0.188"	2+2	3"
RSF2061M-UD2 ▲	1/2"	1-1/4"	1/2"	0.188"	2+2	3"
RSF2061-UD2	1/2"	1-1/4"	1/2"	0.390"	2+2	3"
RSF2061A-UD2	1/2"	1-3/8"	1/2"	0.390"	2+2	3-1/2"
RSF2062M-UD2 ▲	1/2"	1-5/8"	1/2"	0.188"	2+2	3-1/2"
RSF2062-UD2	1/2"	1-5/8"	1/2"	0.570"	2+2	3-1/2"
RSF2063-UD2	1/2"	2"	1/2"	0.625"	2+2	4"
RSF2064-UD2	5/8"	1-1/2"	5/8"	0.625"	2+2	4"
RSF2065-UD2	5/8"	2"	5/8"	0.625"	2+2	4"
RSF2066M-UD2 ▲	3/4"	2"	3/4"	0.188"	2+2	4"
RSF2066-UD2	3/4"	2"	3/4"	0.625"	2+2	4"
RSF2068-UD2	3/4"	2-1/2"	3/4"	0.625"	2+2	4"

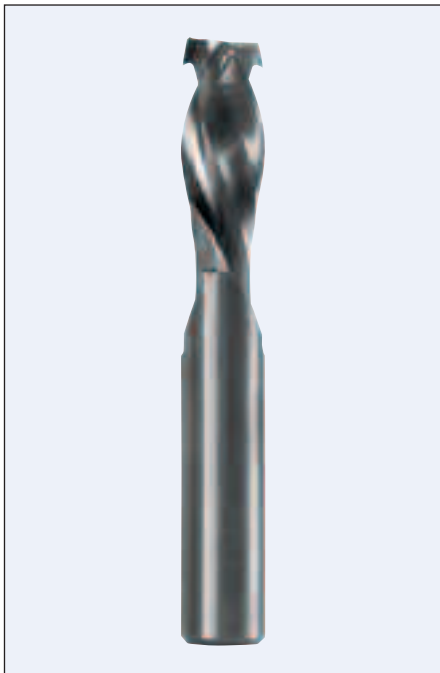
▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



FINISHING BITS - SPEEDMASTER				COMPRESSION SPIRAL		
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSF2059W-UD2 ▲	3/8"	1"	3/8"	0.188"	2+2	2-1/2"
RSF2060W-UD2 ▲	3/8"	1-1/4"	3/8"	0.188"	2+2	2-1/2"
RSFM2061W-UD2▲	12mm	35mm	12mm	4.7mm	2+2	75mm
RSF2061WS-UD2 ▲	1/2"	7/8"	1/2"	0.188"	2+2	3"
RSF2061W-UD2 ▲	1/2"	1-3/8"	1/2"	0.188"	2+2	3-1/2"
RSF2061WP-UD2	1/2"	1-3/8"	1/2"	0.500"	2+2	3-1/2"
RSF2064W-UD2 ▲	5/8"	1-3/8"	5/8"	0.188"	2+2	4"
RSF2066W-UD2 ▲	3/4"	2"	3/4"	0.188"	2+2	4"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Excellent surface finish is produced by the aggressive cutting edge design and 2 precision ground cutting edges
- Superior chipflow and lower heat retention are provided by the special 2 flute design
- Exceptionally high feed rates are possible due to the unique HIGHSPEED tool geometry and surface finish
- Special submicron, corrosion resistant, extended life carbide provides increased sharpness of the cutting edge, durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts at exceptionally high feed rates
- Longer tool life when cutting chipboard, plywood and veneered or laminated materials
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

SPEEDMASTER

Extreme Highspeed Compression Router Bit

Try it... and see your CNC production improve dramatically. Ask for a trial tool to immediately capture the production you're losing every hour of every day.

50 metres
/min

**NESTING
& ROUTING**



Why bother?

Your CNC router is designed for feed-rates and production volumes that cannot be achieved with conventional tooling. Only with the unique geometries, cutting edge materials and core tensile strength of our SpeedMaster Series can you begin to realize your lost potential and maximize production throughput!

TRUE HIGH SPEED

What to expect?

Serviced once or six times, the performance of our SpeedMaster Series continues to provide production feed-rates more than double what you currently experience

when cutting engineered wood products such as MDF, Plywood,

Particleboard and HPL, all the while never sacrificing cut quality or tool life.

More than G-Code, RPM and feed-rate parameters represent the most determining factors in your tooling's performance and product quality. We maximize your parameters based on several key factors such as material, # of expected service cycles and your required quality of cut.

A little research goes a long way.

We take the time to do it right because our passion is high performance tooling.



Engineered to outperform



LEFT HAND

FINISHING BITS TWO FLUTE

COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSF2058M-UD2L ▲	1/4"	7/8"	1/4"	0.188"	2+2	2-1/2"
RSF2059-UD2L	3/8"	1-1/4"	3/8"	0.275"	2+2	3"
RSF2061-UD2L	1/2"	1-1/4"	1/2"	0.390"	2+2	3"
RSF2061A-UD2L	1/2"	1-3/8"	1/2"	0.390"	2+2	3-1/2"
RSF2062-UD2L	1/2"	1-5/8"	1/2"	0.570"	2+2	3-1/2"
RSF2065-UD2L	5/8"	2"	5/8"	0.625"	2+2	4"
RSF2066-UD2L	3/4"	2"	3/4"	0.625"	2+2	4"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Excellent surface finish is produced by the 2 precision ground cutting edges
- Excellent chipflow and lower heat retention are provided by the 2 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For smooth finishing cuts
- Excellent finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



FINISHING BITS THREE FLUTE

COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSF2059AS-UD3 ▲	3/8"	7/8"	3/8"	0.188"	3+3	2-1/2"
RSF2059S-UD3	3/8"	1"	3/8"	0.275"	3+3	2-1/2"
RSF2059A-UD3 ▲	3/8"	1"	3/8"	0.188"	3+3	2-1/2"
RSF2059M-UD3 ▲	3/8"	1-1/4"	3/8"	0.188"	3+3	3"
RSF2059-UD3	3/8"	1-1/4"	3/8"	0.275"	3+3	3"
RSF2061MS-UD3▲	1/2"	7/8"	1/2"	0.188"	3+3	3"
RSF2061-UD3 ▲	1/2"	1-1/4"	1/2"	0.188"	3+3	3"
RSF2062-UD3	1/2"	1-5/8"	1/2"	0.525"	3+3	3-1/2"
RSF2062M-UD3 ▲	1/2"	1-5/8"	1/2"	0.188"	3+3	3-1/2"
RSF2065-UD3	5/8"	2"	5/8"	0.625"	3+3	4"
RSF2066-UD3	3/4"	2"	3/4"	0.625"	3+3	4"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Superior surface finish is produced by the 3 precision ground cutting edges
- Good chipflow and lower heat retention is provided by the 3 flute design
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For exceptionally smooth finishing cuts
- Superior finish on hardwoods, softwoods, laminated panels, MDF, chipboard, plywood and solid surface materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Increased number of bite marks per inch reduces chip size and provides a smooth finish on the core of plywood and particleboards, especially important when edge-banding without pre-miling operations
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFCATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



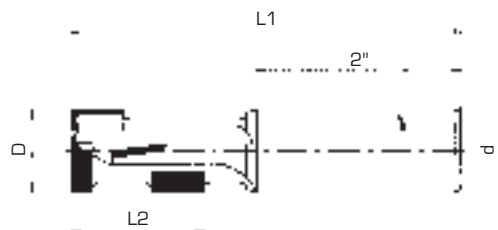
DIAMOND COMPRESSION BITS					CARBIDE PLUNGE POINT	
PART NO.	CUTTING DIAM. [D]	CUTTING LENGTH [L2]	SHANK DIAM. [d]	UPCUT LENGTH	NO. TEETH	OVERALL LENGTH [L1]
RPCD2066	1/2"	1"	1/2"	0.375"	1+1	3-3/8"
RPCD2068	1/2"	1-3/8"	1/2"	0.375"	1+1	3-3/8"
RPCD2070	1/2"	1-5/8"	1/2"	0.375"	1+1	4"
RPCD2076	5/8"	1"	5/8"	0.375"	1+1	3-3/8"
RPCD2078	5/8"	1-5/8"	5/8"	0.375"	1+1	4"
RPCD2148	3/4"	1"	3/4"	0.375"	1+1	3-3/8"
RPCD2076	3/4"	1-3/8"	3/4"	0.375"	1+1	3-3/4"
RPCD2152	3/4"	1-5/8"	3/4"	0.375"	1+1	4"
RPCD2160	3/4"	2-1/16"	3/4"	0.375"	1+1	4-1/2"

DESIGN:

- Excellent surface finish and exceptionally long run-time are provided by the Microfinish erosion process of each PCD diamond cutting edge
- Excellent chipflow and low heat retention is provided by the staggered 1+1 tooth configuration
- Carbide Plunge Point provides clean entry cuts
- Re-sharpenable

APPLICATION:

- PCD Diamond tools are recommended for operations that require maximum tool life
- For smooth finishing cuts
- Excellent finish on laminated panels, MDF, chipboard, solid surface and hardwood materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- For improved dust extraction use with an Aerotech (page FC21)



ADDITIONAL SIZES/DESIGNS

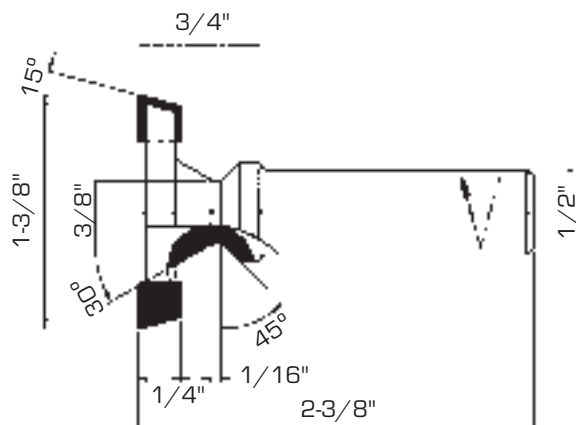
PCD Diamond router bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a PCD Diamond router bit that matches your application, please contact your FS Tool representative.


DIAMOND T-SLOT BIT

PART NO.	CUTTING DIAM.	KERF	SHANK DIAM.	MAX. DEPTH OF CUT	NO. TEETH	OVERALL LENGTH
RPCD138	1-3/8"	1/4"	1/2"	3/4"	2+1	2-3/8"
RPCD138-LH	1-3/8"	1/4"	1/2"	3/4"	2+1	2-3/8"

RPCD138-LH is Left Hand Rotation


DESIGN:

- Excellent surface finish and exceptionally long run-time are provided by the Microfinish erosion process of each PCD diamond cutting edge
- Fast feed rates are possible due to the high performance tool geometry
- More service cycles are possible due to the large PCD Diamond cutting edges
- Re-sharpenable

APPLICATION:

- PCD Diamond tools are recommended for operations that require maximum tool life
- For smooth finishing cuts
- Excellent finish on laminated panels, MDF, and other composite materials
- For improved dust extraction use with an Aerotech (page FC21)

ADDITIONAL SIZES

PCD Diamond T-Slot bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a PCD T-Slot router bit that matches your application, please contact your FS Tool representative.

**DESIGN:**

- Good surface finish is produced by the 2 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Excellent chipflow and lower heat retention is provided by the 2 flute design with Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- Commonly used for rebates, dados/grooving and pocketing operations on raw panels, plywood and solid wood
- Reduces fuzzing and tear-out along the bottom face of the board
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

CHIPBREAKER BITS TWO FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSC2116-U2	3/8"	1-1/4"	3/8"	2	3"
RSC2120-U2	1/2"	1-1/4"	1/2"	2	3"
RSC2124-U2	1/2"	1-5/8"	1/2"	2	3-1/2"
RSC2130-U2	1/2"	2-1/8"	1/2"	2	4"
RSC2138-U2	5/8"	2-1/4"	5/8"	2	4"
RSC2144-U2	3/4"	2-1/4"	3/4"	2	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


CHIPBREAKER BITS TWO FLUTE
DOWNCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSC2116-D2	3/8"	1-1/4"	3/8"	2	3"
RSC2120-D2	1/2"	1-1/4"	1/2"	2	3"
RSC2124-D2	1/2"	1-5/8"	1/2"	2	3-1/2"
RSC2130-D2	1/2"	2-1/8"	1/2"	2	4"
RSC2138-D2	5/8"	2-1/4"	5/8"	2	4"
RSC2144-D2	3/4"	2-1/4"	3/4"	2	4"

DESIGN:

- Good surface finish is produced by the 2 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Excellent chipflow and lower heat retention are provided by the 2 flute design with Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Reduces fuzzing and tear-out along the top face of the board
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Good surface finish is produced by the 3 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Good chipflow and lower heat retention are provided by the 3 flute design with Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Faster feed rates at low spindle speeds
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Reduces fuzzing and tear-out along the bottom face of the board
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

CHIPBREAKER BITS THREE FLUTE

UPCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSC2118-U3	1/2"	1-1/8"	1/2"	3	3"
RSC2146-U3	3/4"	2-1/4"	3/4"	3	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Good surface finish is produced by the 3 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Good chipflow and lower heat retention are provided by the 3 flute design with Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Faster feed rates at low spindle speeds
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Reduces fuzzing and tear-out along the top face of the board
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

CHIPBREAKER BITS THREE FLUTE**DOWNCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSC2118-D3	1/2"	1-1/8"	1/2"	3	3"
RSC2146-D3	3/4"	2-1/4"	3/4"	3	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



CHIPBREAKER BITS TWO FLUTE				COMPRESSION SPIRAL		
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSC2159W-UD2 ▲	3/8"	1"	3/8"	0.188"	2+2	2-1/2"
RSC2159-UD2	3/8"	1-1/4"	3/8"	0.275"	2+2	2-1/2"
RSC2161WS-UD2▲	1/2"	7/8"	1/2"	0.188"	2+2	3"
RSC2161W-UD2 ▲	1/2"	1-3/8"	1/2"	0.188"	2+2	3"
RSC2161M-UD2 ▲	1/2"	1-1/4"	1/2"	0.188"	2+2	3"
RSC2161-UD2	1/2"	1-1/4"	1/2"	0.390"	2+2	3"
RSC2162-UD2	1/2"	1-5/8"	1/2"	0.570"	2+2	3-1/2"
RSC2164-UD2	5/8"	1-5/8"	5/8"	0.625"	2+2	4"
RSC2166-UD2	3/4"	2-1/4"	3/4"	0.625"	2+2	4"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Good surface finish is produced by the 2 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Excellent chipflow and lower heat retention are provided by the 2 flute design with Chipbreakers
- Fast feed rates are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


CHIPBREAKER BITS THREE FLUTE
COMPRESSION SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	UPCUT LENGTH	NO. FLUTES	OVERALL LENGTH
RSC2159A-UD3 ▲	3/8"	1"	3/8"	0.188"	3+3	3"
RSC2161-UD3 ▲	1/2"	1-1/4"	1/2"	0.188"	3+3	3"
RSC2162-UD3	1/2"	1-5/8"	1/2"	0.525"	3+3	3-1/2"

▲ Commonly used for Mortising cuts with a minimum depth of 0.250"

DESIGN:

- Good surface finish is produced by the 3 precision ground cutting edges with Chipbreakers
- Chipbreakers reduce cutting pressure and noise levels
- Good chipflow and lower heat retention are provided by the 3 flute design with Chipbreakers
- Faster feed rates at low spindle speeds are possible due to the high performance tool geometry
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- Chipbreakers reduce the size of chips and improve chipflow, allowing for higher feed rates and tool life in plywood, chipboard and solid wood
- Chipbreakers reduce tear-out in plywood, solid wood and loose core materials
- Good finish on hardwoods, softwoods, chipboard and plywood materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Eliminates chipping, fuzzing and tear-out when the end of the upcut/downcut cutting edges are further than 1/16" from the top and bottom faces of the board
- Use a "Mortise" upcut length of 0.188" when cutting rebates, dados or pockets
- If part movement is a concern, use a "Mortise" Upcut Length of 0.188"
- When possible select a router bit with a longer upcut length to improve chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as "Knuckles"
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Good chipflow and lower heat retention in solid wood are provided by the 2 flute design with Knuckles
- Fast feed rates in solid wood are possible due to the 2 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- Upcut spiral provides excellent chip ejection from the cutting path

ROUGHING BITS TWO FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCM0835-U2	8mm	35mm	8mm	2	80mm
RSC2015-U2	3/8"	1-1/4"	3/8"	2	3"
RSC2016-U2	3/8"	1-1/4"	1/2"	2	3"
RSCM1035-U2	10mm	35mm	10mm	2	80mm
RSCM1235-U2	12mm	35mm	12mm	2	80mm
RSC2020-U2	1/2"	1-1/4"	1/2"	2	3"
RSC2024-U2	1/2"	1-1/2"	1/2"	2	3-1/2"
RSC2028-U2	1/2"	2"	1/2"	2	4"
RSC2036-U2	5/8"	1-1/2"	5/8"	2	4"
RSC2038-U2	5/8"	2"	5/8"	2	4"
RSC2042-U2	3/4"	1-1/2"	3/4"	2	4"
RSC2044-U2	3/4"	2"	3/4"	2	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as “Knuckles”
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Good chipflow and lower heat retention in solid wood are provided by the 2 flute design with Knuckles
- Fast feed rates in solid wood are possible due to the 2 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as “Onion skinning”
- Downward cutting action helps hold down material

ROUGHING BITS TWO FLUTE
DOWNCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCM0835-D2	8mm	35mm	8mm	2	80mm
RSC2015-D2	3/8"	1-1/4"	3/8"	2	3"
RSC2016-D2	3/8"	1-1/4"	1/2"	2	3"
RSCM1035-D2	10mm	35mm	10mm	2	80mm
RSCM1235-D2	12mm	35mm	12mm	2	80mm
RSC2020-D2	1/2"	1-1/4"	1/2"	2	3"
RSC2024-D2	1/2"	1-1/2"	1/2"	2	3-1/2"
RSC2028-D2	1/2"	2"	1/2"	2	4"
RSC2036-D2	5/8"	1-1/2"	5/8"	2	4"
RSC2038-D2	5/8"	2"	5/8"	2	4"
RSC2042-D2	3/4"	1-1/2"	3/4"	2	4"
RSC2044-D2	3/4"	2"	3/4"	2	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as "Knuckles"
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Good chipflow and lower heat retention in solid wood are provided by the 3 flute design with Knuckles
- Faster feed rates at lower spindle speeds in solid wood are possible due to the 3 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- Commonly used for rebates, dados/grooving and pocketing operations on raw panels, plywood and solid wood
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Upcut spiral provides excellent chip ejection from the cutting path

ROUGHING BITS THREE FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCM0835-U3	8mm	35mm	8mm	3	80mm
RSC2017-U3	3/8"	1-1/4"	3/8"	3	3"
RSC2018-U3	3/8"	1-1/4"	1/2"	3	3"
RSCM1035-U3	10mm	35mm	10mm	3	80mm
RSCM1235-U3	12mm	35mm	12mm	3	80mm
RSC2022-U3	1/2"	1-1/4"	1/2"	3	3"
RSC2026-U3	1/2"	1-1/2"	1/2"	3	3-1/2"
RSC2030-U3	1/2"	2"	1/2"	3	4"
RSCM1455-U3	14mm	55mm	14mm	3	100mm
RSC2040-U3	5/8"	2"	5/8"	3	4"
RSCM1655-U3	16mm	55mm	16mm	3	100mm
RSCM1855-U3	18mm	55mm	18mm	3	100mm
RSC2046-U3	3/4"	2"	3/4"	3	4"
RSCM2055-U3	20mm	55mm	20mm	3	100mm

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as “Knuckles”
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Good chipflow and lower heat retention in solid wood are provided by the 3 flute design with Knuckles
- Faster feed rates at lower spindle speeds in solid wood are possible due to the 3 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- Commonly used for rebates, dadoes/grooving and pocketing operations on raw panels, plywood and solid wood
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Downward cutting action helps hold down material

ROUGHING BITS THREE FLUTE
DOWNCUT SPIRAL

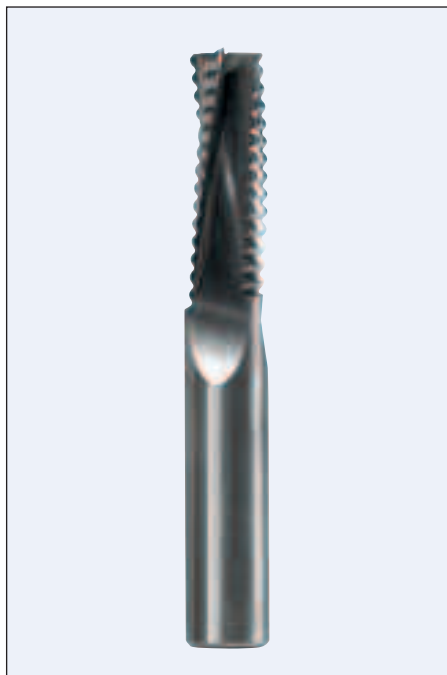
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCM0835-D3	8mm	35mm	8mm	3	80mm
RSC2017-D3	3/8"	1-1/4"	3/8"	3	3"
RSC2018-D3	3/8"	1-1/4"	1/2"	3	3"
RSCM1035-D3	10mm	35mm	10mm	3	80mm
RSCM1235-D3	12mm	35mm	12mm	3	80mm
RSC2022-D3	1/2"	1-1/4"	1/2"	3	3"
RSC2026-D3	1/2"	1-1/2"	1/2"	3	3-1/2"
RSC2030-D3	1/2"	2"	1/2"	3	4"
RSCM1455-D3	14mm	55mm	14mm	3	100mm
RSC2040-D3	5/8"	2"	5/8"	3	4"
RSCM1655-D3	16mm	55mm	16mm	3	100mm
RSCM1855-D3	18mm	55mm	18mm	3	100mm
RSC2046-D3	3/4"	2"	3/4"	3	4"
RSCM2055-D3	20mm	55mm	20mm	3	100mm

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



ROUGHING LOW HELIX BITS				UPCUT SPIRAL	
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCL2018-U3	3/8"	1-1/4"	3/8"	3	4"
RSCL2026-U3	1/2"	1-1/2"	1/2"	3	4"
RSCL2030-U3	1/2"	2"	1/2"	3	4-1/2"
RSCL2040-U3	5/8"	2"	5/8"	3	5"
RSCL2046-U3	3/4"	2"	3/4"	3	5"

DESIGN:

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as "Knuckles"
- Significantly reduced cutting pressure is required due to the less aggressive scalloped cutting edge design
- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute, low helix design with Knuckles
- Faster feed rates at low spindle speeds in hard materials is possible due to the high performance tool geometry and 3 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 10° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting hard materials and deep cuts
- Noise levels during cutting operations of hard materials will be reduced due to lower cutting pressure required
- Upcut spiral provides excellent chip ejection from the cutting path

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Clean but uneven surface finish is produced by the aggressive scalloped cutting edge design, otherwise known as “Knuckles”
- Significantly reduced cutting pressure is required due to the less aggressive scalloped cutting edge design
- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute, low helix design with Knuckles
- Faster feed rates at low spindle speeds in hard materials is possible due to the high performance tool geometry and 3 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 10° Helix design with plunging capability

APPLICATION:

- Knuckles reduce cutting pressure and produce smaller chips that in turn improve chipflow, allowing for higher feed rates and increased tool life in hard materials, solid wood and material hogging applications
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting hard materials and deep cuts
- Noise levels during cutting operations of hard materials will be reduced due to lower cutting pressure required
- Downward cutting action helps hold down material

ROUGHING LOW HELIX BITS
DOWNCUT SPIRAL

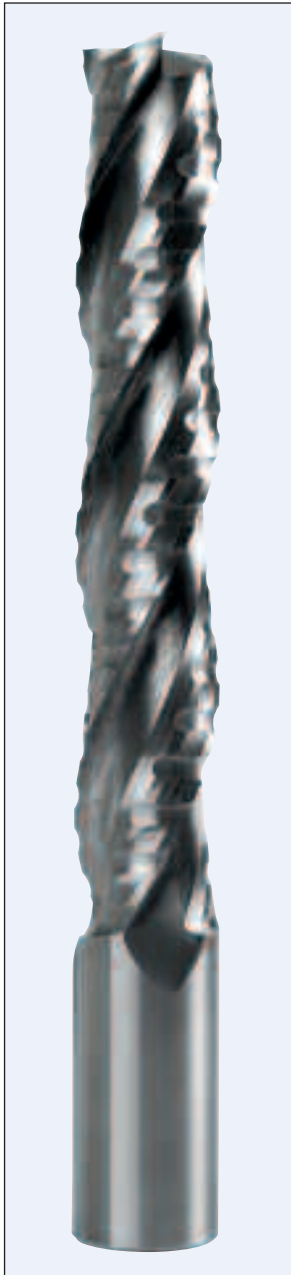
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCL2018-D3	3/8"	1-1/4"	3/8"	3	4"
RSCL2026-D3	1/2"	1-1/2"	1/2"	3	4"
RSCL2030-D3	1/2"	2"	1/2"	3	4-1/2"
RSCL2040-D3	5/8"	2"	5/8"	3	5"
RSCL2046-D3	3/4"	2"	3/4"	3	5"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Special secondary chamfered clearance improves chipflow
- Unique scalloped cutting edges produce a clean cut and extend tool life
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Faster feed rates at lower spindle speeds in hard materials are possible due to the 3 precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability, also available in Low Helix designs
- [RSCH2046-U3] Upcut spiral provides excellent chip ejection from the cutting path
- [RSCH2046-D3] Downward cutting action helps hold down material

APPLICATION:

- Recommended for Entry Doors, Stairways and other deep cuts in hard materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out

ROUGHING HOGGER BITS

PART NO.	SHEAR DIRECTION	CUTTING DIAM.	MAX. DEPTH OF CUT	SHANK DIAM.	SHANK LENGTH	NO. FLUTES	OVERALL LENGTH
RSCH2046-U3	UPCUT	1"	4"	1"	2"	3	7"
RSCH2046-D3	DOWNCUT	1"	4"	1"	2"	3	7"

ADDITIONAL SIZES

Roughing Hogger bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Roughing Hogger router bit that matches your application, please contact your FS Tool representative.



Any of our in-stock solid carbide spiral router bits can be ordered in a Pass By/Deep Pocket Mortise style. To request information about a Pass-By/Deep Pocket Mortise modification or custom router bit, please provide the information below.

DESIGN:

- Typical design utilizes a roughing upcut spiral such as the RSF2030-U3 OR RSCH2046-U3
The design will include a reduced diameter of 1/8" for the area between B and B1, shown on the illustration below
- Reduced diameter on non-cutting flutes reduces lateral pressure allowing for a longer more stable cutting tool and improved chipflow when performing deep cutting operations

APPLICATION:

- Recommended for deep cuts

Part # to Modify: _____

Material Type: _____

Quantity to Order: _____

Cutting Diameter: D = _____

Maximum Depth of Channel: B = _____

Maximum Depth of Cut: B1 = _____

Reduced Diameter: _____

Shank Diameter: d = _____

Shank Length: _____

of Flutes (Cutting Edges): _____

Helix Angle: Standard Helix or Low Helix

Overall Length: _____

[Optional]

[Optional]

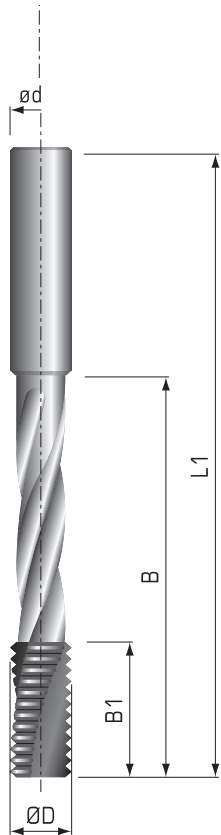
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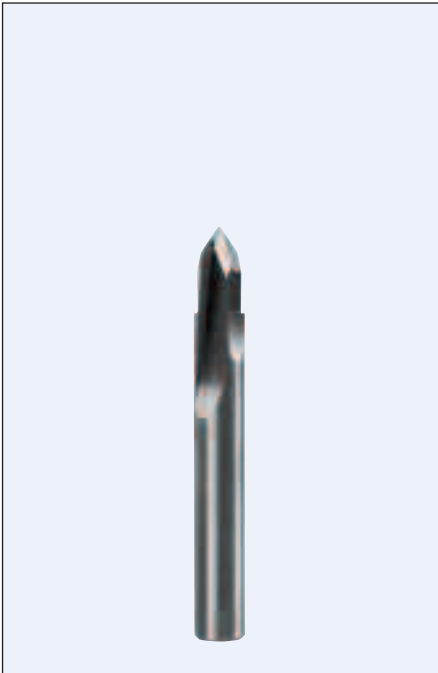
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60°V-POINT BITS

PART NO.	TIP ANGLE	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFV6014/78	60°	1/4"	7/8"	1/4"	2	3"
RSFV6038/1	60°	3/8"	1"	3/8"	2	3"
RSFV6012/114	60°	1/2"	1-1/4"	1/2"	2	3"

90°V-POINT BITS

PART NO.	TIP ANGLE	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFV9014/78	90°	1/4"	7/8"	1/4"	2	3"
RSFV9038/1	90°	3/8"	1"	3/8"	2	3"
RSFV9012/114	90°	1/2"	1-1/4"	1/2"	2	3"

DESIGN:

- Good to Excellent surface finish is produced by the 2 precision ground cutting edges
- Good chipflow is provided by the 2 flute low upshear design with steep back clearances
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up

APPLICATION:

- For smooth finishing V-Groove or Bevel cuts
- Good finish on hardwoods, softwoods, composite materials, solid surface and plastic materials
- For improved dust extraction, use with an Aerotech (page FC21)

ADDITIONAL SIZES

V-Point bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a V-Point router bit that matches your application, please contact your FS Tool representative.


DESIGN:

- Large clearance areas prevent re-welding of debris by allowing chips to quickly flow away from the cutting edges
- Knuckles reduce cutting pressure by creating multiple cuts or chips along a single cutting edge
- Good chipflow and lower heat retention in hard materials are provided by the 3 flute design with Knuckles
- Faster feed rates in solid wood are possible due to the precision ground scalloped cutting edges
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- 30° Helix design with plunging capability

APPLICATION:

- Knuckles produce small chips and improve chipflow, allowing for higher feed rates, lower cutting pressure and tool life in hard materials and hogging applications
- For an exceptionally smooth finish on 3 dimensional machining operations such as mouldings and sculpted parts
- Exceptional finish on hardwoods, softwoods, MDF, chipboard, plywood, solid surface, plastics and composite materials
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Upcut spiral improves chip ejection from the cutting path

ROUGHING BALLNOSE BITS
UPCUT SPIRAL

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCBN2018-U3	3/8"	1-1/4"	3/8"	3	4"
RSCBN2030-U3	1/2"	2-1/4"	1/2"	3	4"
RSCBN2040-U3	5/8"	2-1/4"	5/8"	3	4"
RSCBN2050-U3	3/4"	3-1/2"	3/4"	3	6"

ADDITIONAL SIZES

Spiral Ballnose bits are available in a variety of dimensions and cutting angles beyond those listed here.

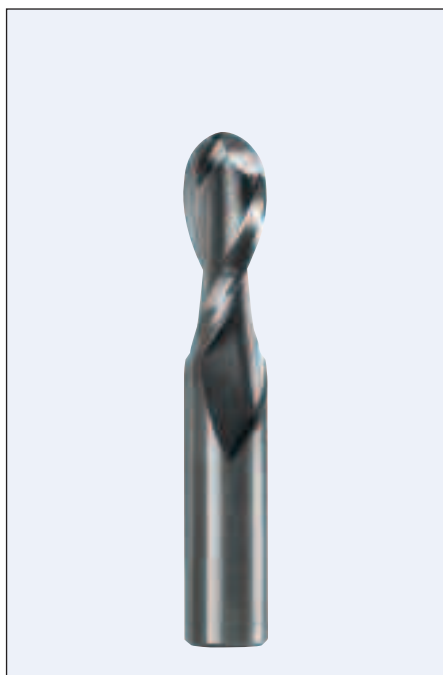
For more information on a Ballnose router bit that matches your application, please contact your FS Tool representative.

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Superior surface finish is produced by the precision ground cutting edges
- Large clearance areas prevent re-welding of debris by allowing chips to quickly flow away from the cutting edges
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For an exceptionally smooth finish on 3 dimensional machining operations such as mouldings and sculpted parts
- Exceptional finish on hardwoods, softwoods, MDF, chipboard, plywood, solid surface, plastics and composite materials
- 3 flute models allow for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Upcut spiral improves chip ejection from the cutting path

ADDITIONAL SIZES

Spiral Ballnose bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Ballnose router bit that matches your application, please contact your FS Tool representative.

FINISHING BALLNOSE BITS**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFBN2000A-U2	1/8"	1/2"	1/8"	2	2"
RSFBN2000-U2	1/8"	1/2"	1/4"	2	2"
RSFBN2006-U2	1/4"	7/8"	1/4"	2	2-1/2"
RSFBN2009-U2	1/4"	1-1/2"	1/4"	2	4"
RSFBN2018-U3	3/8"	1-1/4"	3/8"	3	4"
RSFBN2019-U2	1/2"	1/2"	1/2"	2	3"
RSFBN2020-U2	1/2"	1-1/4"	1/2"	2	3"
RSFBN2030-U3	1/2"	2-1/4"	1/2"	3	4"
RSFBN2040-U3	5/8"	2-1/4"	5/8"	3	4"
RSFBN2046-U3	3/4"	1-1/2"	3/4"	3	4"
RSFBN2050-U3	3/4"	3-1/2"	3/4"	3	4"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


TAPERED BALLNOSE FINISHING BITS

PART NO.	BALLNOSE DIAM.	TAPER INCL. ANGLE	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFBNT1160514/1-U2	1/16"	5°	1"	1/4"	2	2-1/2"
RSFBNT1160314/34-U3	1/16"	3°	3/4"	1/4"	3	3"
RSFBNT180514/34-U3	1/8"	5°	3/4"	1/4"	3	3"
RSFBNT180114/112-U3	1/8"	1°	1-1/2"	1/4"	3	3"
RSFBNT140512/138-U3	1/4"	5°	1-3/8"	1/2"	3	4"
RSFBNT380512/112-U3	3/8"	5°	1-1/2"	1/2"	3	4"

DESIGN:

- Tapered design provides increased strength and rigidity for small ballnose diameters and long flute lengths
- Superior surface finish is produced by the precision ground cutting edges
- Large clearance areas prevent re-welding of debris by allowing chips to quickly flow away from the cutting edges
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 30° Helix design with plunging capability

APPLICATION:

- For an exceptionally smooth finish on 3 dimensional machining operations such as mouldings and sculpted parts
- Exceptional finish on hardwoods, softwoods, MDF, chipboard, plywood, solid surface, plastics and composite materials
- 3 flute models allow for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Upcut spiral improves chip ejection from the cutting path

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

ADDITIONAL SIZES

Spiral Ballnose bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Ballnose router bit that matches your application, please contact your FS Tool representative.

**APPLICATION:**

- For exceptionally smooth finishing cuts
- Significantly increased tool life and cut quality compared to a brazed dovetail router bits
- Upcut spiral improves chip ejection from the cutting path and provides a smooth bottom cut

10° DOVETAIL BITS**UPCUT SPIRAL**

PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFDLM1014/9-U2	10°	14mm	9mm	14mm	2	60mm
RSFDLM1014/10-U2	10°	14mm	10mm	14mm	2	60mm
RSFDL1014/450-U2	10°	14mm	0.450"	14mm	2	60mm
RSFDL1014/622-U2	10°	14mm	0.622"	14mm	2	60mm

LEFT HAND ROTATION**10° DOVETAIL BITS****UPCUT SPIRAL**

PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFDLM1014/9-U2L	10°	14mm	9mm	14mm	2	60mm
RSFDLM1014/10-U2L	10°	14mm	10mm	14mm	2	60mm
RSFDL1014/450-U2L	10°	14mm	0.450"	14mm	2	60mm
RSFDL1014/622-U2L	10°	14mm	0.622"	14mm	2	60mm

DESIGN:

- Unique offset cutting edge design eliminates burring of the workpiece's top edge
- Excellent chipflow and lower heat retention is provided by the 2 spiral flute design
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density
- Designed for OMEC Dovetail Machines

WHEN ORDERING SPECIFY

- If your machines has an Eccentric Spindle, router bits will be custom manufactured

SPIRAL 10° DOVETAIL DOWNCUT, Z=2

APPLICATION:

- For exceptionally smooth finishing cuts
- Significantly increased tool life and cut quality compared to a brazed dovetail router bits
- Downcut spiral provides a smooth finish along the top edge

10° DOVETAIL BITS**DOWNCUT SPIRAL**

PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFDLM1014/9-D2	10°	14mm	9mm	14mm	2	60mm
RSFDLM1014/10-D2	10°	14mm	10mm	14mm	2	60mm
RSFDL1014/450-D2	10°	14mm	0.450"	14mm	2	60mm
RSFDL1014/622-D2	10°	14mm	0.622"	14mm	2	60mm

LEFT HAND ROTATION**10° DOVETAIL BITS****DOWNCUT SPIRAL**

PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFDLM1014/9-D2L	10°	14mm	9mm	14mm	2	60mm
RSFDLM1014/10-D2L	10°	14mm	10mm	14mm	2	60mm
RSFDL1014450-D2L	10°	14mm	0.450"	14mm	2	60mm
RSFDL1014622-D2L	10°	14mm	0.622"	14mm	2	60mm

ADDITIONAL SIZES

Spiral Dovetails are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Dovetail router bit that matches your application, please contact your FS Tool representative.


APPLICATION:

- For exceptionally smooth finishing cuts
- Significantly increased tool life and cut quality compared to a brazed dovetail router bits
- Upcut spiral improves chip ejection from the cutting path and provides a smooth bottom cut

10° DOVETAIL BITS				UPCUT SPIRAL		
PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFD1012/625-U2	10°	1/2"	0.625"	14mm	2	2-1/2"
RSFDM1014/450-U2	10°	14mm	0.450"	14mm	2	60mm

LEFT HAND ROTATION

10° DOVETAIL BITS				UPCUT SPIRAL		
PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFD1012/625-U2L	10°	1/2"	0.625"	14mm	2	2-1/2"
RSFDM1014/450-U2L	10°	14mm	0.450"	14mm	2	60mm

DESIGN:

- Excellent chipflow and lower heat retention is provided by the 2 spiral flute design
- Special submicron, corrosion resistant, extended life carbide provides increased cutting edge durability and resistance to resin build-up when cutting solid wood and materials of inconsistent density

WHEN ORDERING SPECIFY:

- Specify if flat is required on shank, for more information see photo on page FC64
- If your machines has an Eccentric Spindle, router bits will be custom manufactured

SPIRAL 10° DOVETAIL DOWNCUT, Z=2
APPLICATION:

- For exceptionally smooth finishing cuts
- Significantly increased tool life and cut quality compared to a brazed dovetail router bits
- Downcut spiral provides a smooth finish along the top edge

10° DOVETAIL BITS				DOWNCUT SPIRAL		
PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFD1012/625-D2	10°	1/2"	0.625"	14mm	2	2-1/2"
RSFDM1014/450-D2	10°	14mm	0.450"	14mm	2	60mm

LEFT HAND ROTATION

10° DOVETAIL BITS				DOWNCUT SPIRAL		
PART NO.	DOVETAIL ANGLE	CUTTING DIAM.	DOVETAIL LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSFD1012/625-D2L	10°	1/2"	0.625"	14mm	2	2-1/2"
RSFDM1014/450-D2L	10°	14mm	0.450"	14mm	2	60mm

ADDITIONAL SIZES

Spiral Dovetails are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Dovetail router bit that matches your application, please contact your FS Tool representative.

**DESIGN:**

- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute, low helix design
- Special Chipbreakers for Phenolic reduce cutting pressure and noise levels
- Excellent chipflow and lower heat retention are provided by the 3 flute design with Phenolic Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 10° Helix design with plunging capability

APPLICATION:

- Specifically designed to provide an excellent finish and reduced noise levels when cutting Phenolic
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting Phenolic
- Eliminates chipping along the bottom face
- Upcut spiral improves chip ejection from the cutting path
- For improved dust extraction use with an Aerotech (page FC21)

PHENOLIC BITS THREE FLUTE**UPCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCP2108-U3	1/4"	5/8"	1/4"	3	2-1/2"
RSCP2118-U3	3/8"	7/8"	3/8"	3	3"
RSCP2121-U3	1/2"	7/8"	1/2"	3	3"
RSCP2122-U3	1/2"	1-1/4"	1/2"	3	4"
RSCP2131-U3	1/2"	2-1/8"	2/2"	3	4-1/2"

ADDITIONAL SIZES

Phenolic Roughing bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Phenolic Roughing router bit that matches your application, please contact your FS Tool representative.

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Excellent chipflow, lower heat retention and increased tool rigidity are provided by the 3 flute, low helix design
- Special Chipbreakers for Phenolic reduce cutting pressure and noise levels
- Excellent chipflow and lower heat retention are provided by the 3 flute design with Phenolic Chipbreakers
- Submicron, corrosion resistant, extended life carbide provides increased durability and resistance to resin build-up
- 10° Helix design with plunging capability

APPLICATION:

- Specifically designed to provide an excellent finish and reduced noise levels when cutting Phenolic
- Faster feed rates at low spindle speeds
- 3 flute design allows for two cutting edges to be engaged at all times, providing greater stability and reducing run-out
- Improved cutting edge life when cutting Phenolic
- Downward cutting action helps hold down material
- For improved dust extraction use with an Aerotech (page FC21)

PHENOLIC BITS THREE FLUTE**DOWNCUT SPIRAL**

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
RSCP2108-D3	1/4"	5/8"	1/4"	3	2-1/2"
RSCP2118-D3	3/8"	7/8"	3/8"	3	3"
RSCP2121-D3	1/2"	7/8"	1/2"	3	3"
RSCP2122-D3	1/2"	1-1/4"	1/2"	3	4"
RSCP2131-D3	1/2"	2-1/8"	2/2"	3	4-1/2"

ADDITIONAL SIZES

Phenolic Roughing bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Phenolic Roughing router bit that matches your application, please contact your FS Tool representative.

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend its capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
BALLNOSE	+BN	Round Tip	FC61 - FC63
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
PASS BY / DEEP MORTISE	+DM	Stepped	FC59

**DESIGN:**

- Excellent surface finish is produced by the single precision ground cutting edge
- Good chipflow is provided by the single flute design at low speeds
- Straight cutting edge with plunging capability

APPLICATION:

- For smooth finishing cuts
- Superior finish on hardwoods, softwoods, MDF, solid surface materials that are not veneered or laminated
- Superior cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- For improved dust extraction use with an Aerotech (page FC21)

ADDITIONAL SIZES

Straight Finishing bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Straight Finishing router bit that matches your application, please contact your FS Tool representative.

STRAIGHT FINISHING BITS SINGLE FLUTE

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
R1000	1/8"	3/8"	1/4"	1	1-1/2"
R1008	7/32"	3/4"	1/4"	1	2"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59


DESIGN:

- Excellent surface finish is produced by the 2 precision ground cutting edges
- Good chipflow is provided by the 2 straight flute design at moderate feed rates
- Faster feed-rates due to 2 cutting edges
- Straight cutting edge with plunging capability

APPLICATION:

- For smooth finishing cuts
- Superior finish on hardwoods, softwoods, MDF, solid surface materials that are not veneered or laminated
- Increased cutting edge life when frequently accelerating/decelerating or performing multiple passes such as "Onion skinning"
- For improved dust extraction use with an Aerotech (page FC21)

ADDITIONAL SIZES

Straight Finishing bits are available in a variety of dimensions and cutting angles beyond those listed here.

For more information on a Straight Finishing router bit that matches your application, please contact your FS Tool representative.

STRAIGHT FINISHING BITS TWO FLUTE

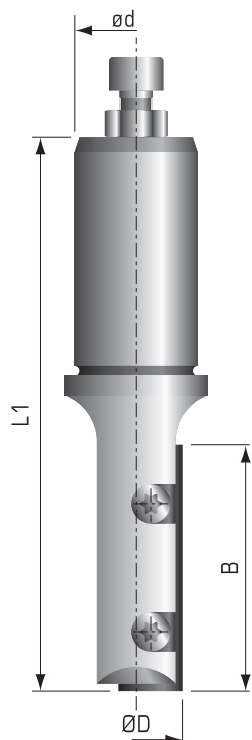
PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. FLUTES	OVERALL LENGTH
R1100	1/8"	3/8"	1/4"	2	1-1/2"
R1104	5/32"	5/8"	1/4"	2	1-1/2"
R1106	3/16"	5/8"	1/4"	2	2"
R1108	7/32"	3/4"	1/4"	2	2"
R1110	1/4"	3/4"	1/4"	2	2"
R1112	1/4"	1"	1/4"	2	2-1/2"
R1304	1/4"	3/4"	1/2"	2	3"
R1306	1/4"	1"	1/2"	2	3"
R1308	5/16"	1"	1/2"	2	3"
R1302	3/8"	1"	3/8"	2	3"
R1310	1/2"	1-1/4"	1/2"	2	3"

EXPANDED CAPABILITIES

Each spiral router bit listed can be ordered with modifications that will extend it's capabilities. Please reference the appropriate product page(s) for more information on each modification's specific applications and benefits.

EXTENDED CAPABILITY OPTIONS

MODIFICATION TYPE	ORDER CODE	MOD. SHAPE	MODIFICATION INFORMATION
CHIPBREAKER	+CB	Notched	FC46 - FC51
REDUCED DIAMETER	+RD	-	-
REDUCED LENGTH	+RL	-	-
ROUGHING	+RS	Scalloped	FC52 - FC57
PASS BY / DEEP MORTISE	+DM	Stepped	FC59



DESIGN:

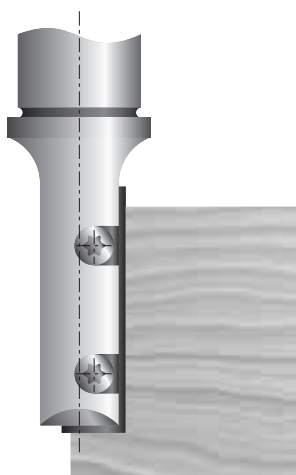
- High tensile steel body with 1 straight insert
- Reversible tungsten carbide insert with 4 cutting edges

APPLICATION:

- For Jointing, rabbeting and grooving in solid wood and panel materials
- Suitable for ramp-in plunge cuts using Z and X or Y axis
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD	FLUTE LENGTH Bmm	SHANK DIAM. ød	NO. FLUTES	OVERALL LENGTH L1	MAX. RPM
RD2167	1/2"	30	1/2"	1	3-1/8"	24000
RD2177	5/8"	30	5/8"	1	3-1/8"	24000
RD2180	5/8"	50	5/8"	1	4-3/4"	20000
RD2185	3/4"	30	3/4"	1	3-1/8"	24000
RD2187	3/4"	50	3/4"	1	4-3/4"	20000

Other sizes available upon request.

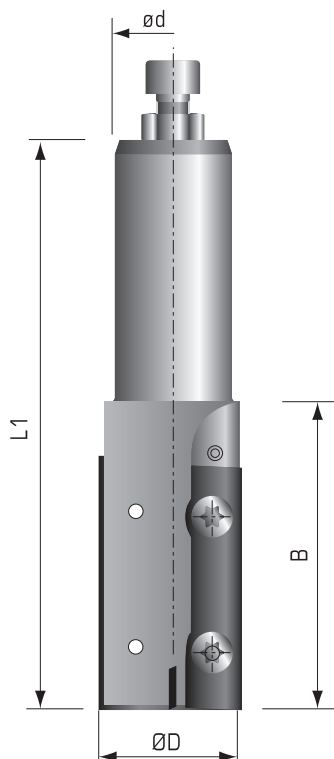


Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	GIB	TORX SCREW
RD2167	PART NO.	303011S	W300803	W501314
	DIMENSIONS	30x5.5x1.1	28x5x2	M3x4
RD2177	PART NO.	303022	W300805	W501314
	DIMENSIONS	30x9x1.5	26x9.5x2.5	M3x7
RD2180	PART NO.	305022	W300806	W502302
	DIMENSIONS	50x9x1.5	46x9.5x2.5	M4x10
RD2185	PART NO.	303022	W300905	W502303
	DIMENSIONS	30x12x1.5	26x9.5x3.5	M4x12
RD2187	PART NO.	305022	W300906	W502303
	DIMENSIONS	50x12x1.5	46x9.5x3.5	M4x12



TORX WRENCH
 PART NO. W400405 T15
 PART NO. W400406 T8


DESIGN:

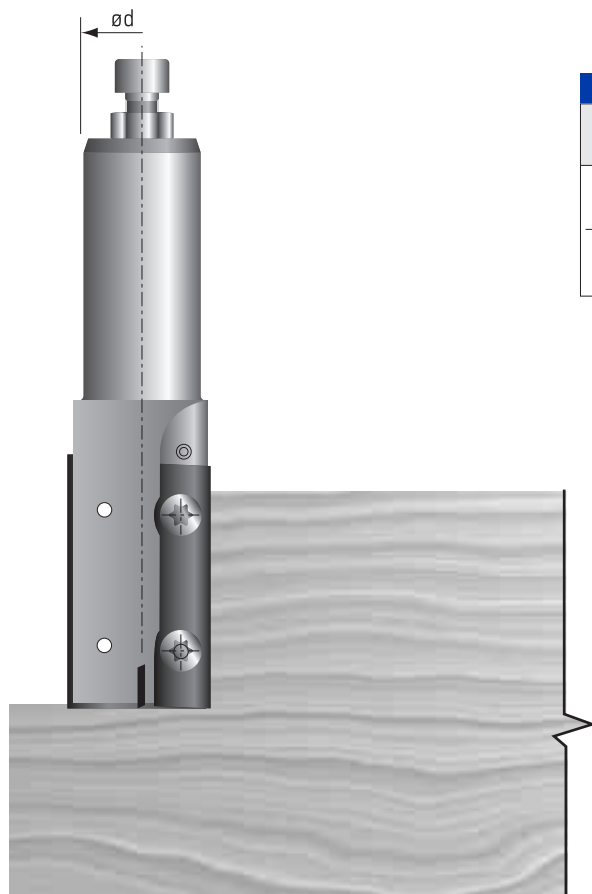
- High tensile steel body with 2 straight inserts and 1 plunge insert
- Reversible tungsten carbide insert with 2 cutting edges

APPLICATION:

- For Jointing, rabbeting and grooving in solid wood and panel materials
- Suitable for straight down plunge cuts and ramp-in plunge cuts using Z and X or Y axis
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD	CUTTING LENGTH Bmm	SHANK DIAM. ød	NO. FLUTES	OVERALL LENGTH L1	MAX. RPM
RD2520	1"	30	3/4"	2+1	3-1/2"	20000
RD2522	1-3/8"	30	3/4"	2+1	3-1/2"	20000

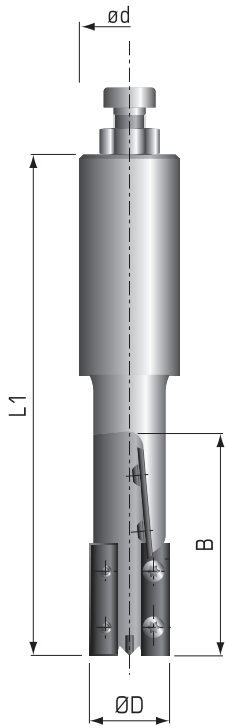
Other sizes available upon request.


Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	SCREW FOR KNIFE	PLUNGE KNIFE	SCREW FOR PLUNGE
RD2520	PART NO.	303009	WM356	RD2510P	WM420
	DIMENSIONS	30 x 9 x 1.5	W 3.5X6	24x10x1.5	M4X2
RD2522	PART NO.	303022	WM356	RD2512P	WM420
	DIMENSIONS	30 x 12 x 1.5	W 3.5X6	33.6x10x1.5	M4X2



TORX WRENCH
PART NO. W400401 T9
PART NO. W400405 T15



DESIGN:

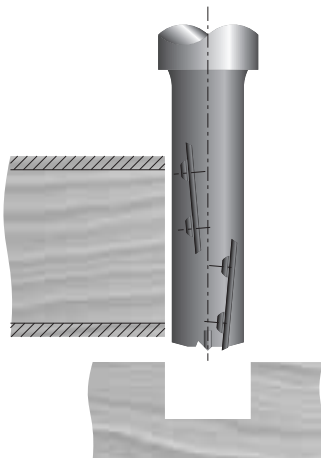
- High tensile steel body with 2+2 inserts in opposing shear angle and 1 brazed on carbide plunge point
- Reversible tungsten carbide insert with 2 cutting edges

APPLICATION:

- For machining double sided laminated panels, solid wood and wood composites
- Suitable for straight down plunge cuts and ramp-in plunge cuts using Z and X or Y axis
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING LENGTH Bmm	SHANK DIAM. ød mm	NO. FLUTES	OVERALL LENGTH L1 mm	ROTATION	MAX. RPM
RD2530	20	53	20	2+2+1	125	RIGHT HAND	20000
RD2532	20	53	20	2+2+1	125	LEFT HAND	20000

Other sizes available upon request.
Supplied with brazed plunge point.



Replacement Parts

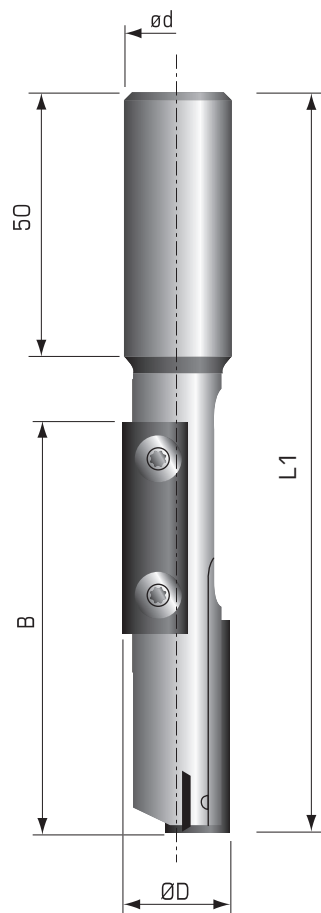
DESCRIPTION	KNIFE	SCREW FOR KNIFE
PART NO.	302810	W502331
DIMENSIONS	28x7x1.5	M3x4



TORX WRENCH
PART NO. W400401 T9

RD2535

PLUNGING AND SIZING INSERT ROUTER BITS WITH COMPRESSION SHEAR 1+1+1



DESIGN:

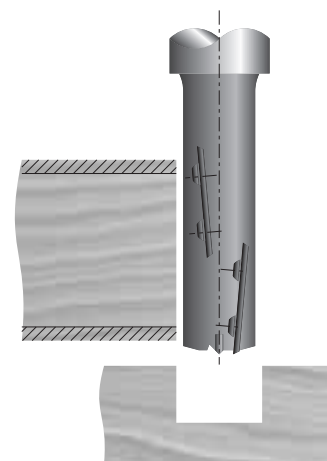
- High tensile steel body with 1+1 inserts in opposing shear angle and 1 insert plunge point
- Reversible tungsten carbide inserts with 2 cutting edges

APPLICATION:

- For machining double sided laminated panels, solid wood and wood composites
- Suitable for straight down plunge cuts and ramp-in plunge cuts using Z and X or Y axis
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD	CUTTING LENGTH Bmm	SHANK DIAM. ød	NO. FLUTES	OVERALL LENGTH L1mm	MAX. RPM
RD2535	3/4"	58	3/4"	1+1+1	120	20000
RD2537	3/4"	78	3/4"	1+1+1	140	20000

Other sizes available upon request.

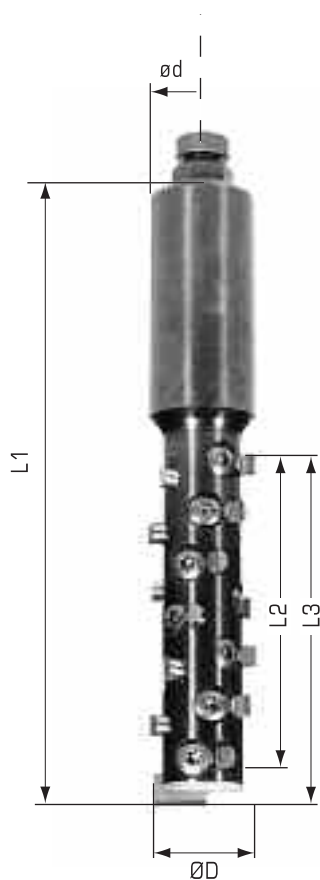


Replacement Parts

TOOL NO.	DESCRIPTION	TOP KNIFE	BOTTOM KNIFE	PLUNGE KNIFE	SCREW FOR KNIFE & PLUNGE
RD2535	PART NO.	303000	303022	300960	WM356
	DIMENSIONS	30x12x1.5	30x12x1.5	9.6x12x1.5	M3.5X6
RD2537	PART NO.	304000	304022	300960	WM356
	DIMENSIONS	40x12x1.5	40x12x1.5	9.6x12x1.5	M3.5X6



TORX WRENCH
PART NO. W400405 T15



DESIGN:

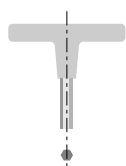
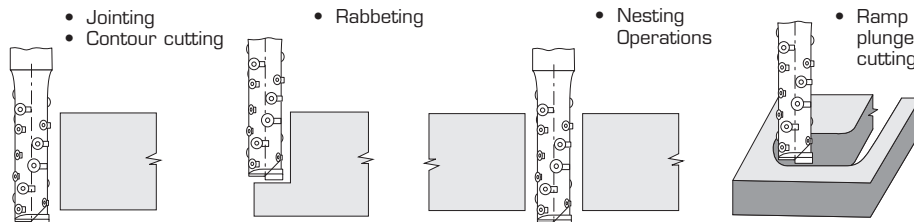
- High tensile steel body with 3 series of cutting pins and 1 tungsten carbide plunge point
- Standard version with straight cutting pins, optional with shear angle cutting pins, up-cut or down-cut can be inserted at any height upon request
- High quality of cut achieved by helically positioned cutting pins
- Fast exchange of cutting pins without adjustment through the patented pin clamping system
- Solid tungsten carbide cutting pins

APPLICATION:

- For shaping, panel sizing, rabbeting and nesting applications
- In solid wood and panel materials
- Suitable for ramp-in plunge cuts using Z and X or Y axis
- On stationary and CNC routers

PART NO.	DIAM ØD	CUTTING LENGTH L2mm	CUTTING LENGTH L3mm	SHANK DIAM. ød	NO. PINS	OVERALL LENGTH L1 mm	MAX. RPM
RD2540	16mm	42	48	14mm	27	110	24000
RD2542	16mm	56	62	14mm	36	125	24000
RD2543	3/4"	42	48	3/4"	27	105	24000
RD2544	3/4"	56	62	3/4"	36	119	24000

Other sizes available upon request.



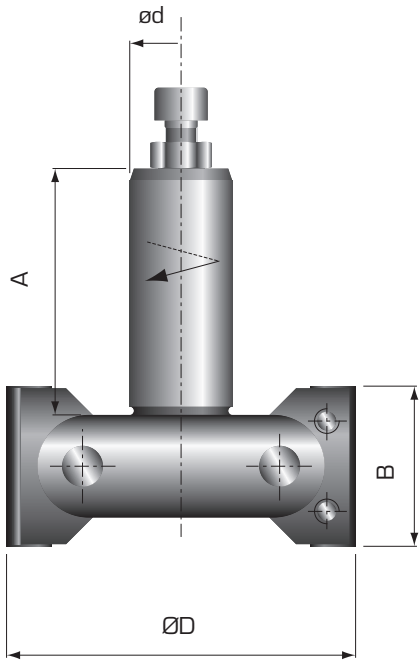
TORX WRENCH
PART NO. W400401 T9

Replacement Parts

TOOL NO.	DESCRIPTION	STRAIGHT PIN	DOWN CUT PIN	UP CUT PIN	PLUNGING INSERT KNIFE	SCREW FOR PIN	SCREW FOR PLUNGING
RD2540	PART NO.	RD2540S	RD2540D	RD2540U	RD2540P	WM355	WM380
RD2542	DIMENSIONS	5.5mm	5.5mm	5.5mm	14mm	M3x5.5	M3x8
RD2543	PART NO.	RD2540S	RD2540D	RD2540U	RD2544P	WM355	WM380
RD2544	DIMENSIONS	5.5mm	5.5mm	5.5mm	17mm	M3x5.5	M3x8

RD2550

MULTI ANGLE INSERT ROUTER CUTTER



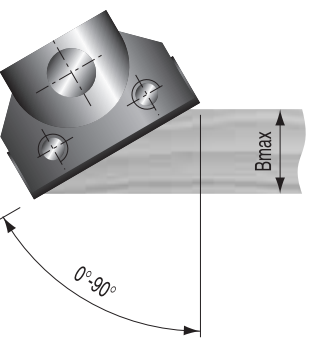
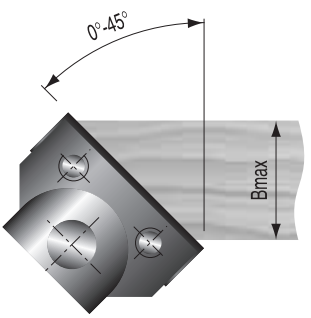
DESIGN:

- High tensile steel body with 2 inserts knives adjustable from 0° to 90° (see chart below) using the high-precision scale
- Reversible tungsten carbide inserts with 4 cutting edges

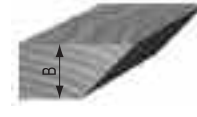
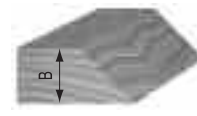
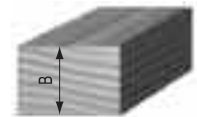
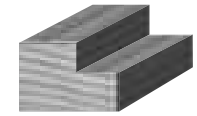
APPLICATION:

- For chamfering, rabbeting and jointing in solid woods
- On stationary and CNC routers

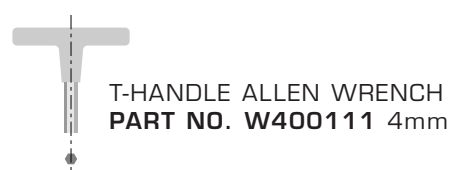
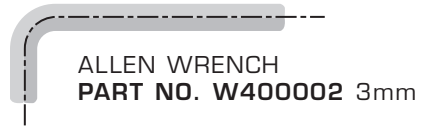
PART NO.	CUTTING DIAM. ØD mm	CUTTING LENGTH Bmm	SHANK DIAM. ød mm	NO. TEETH	SHANK LENGTH A mm	MAX. RPM
RD2550	85	39.5	25	2	60	12000

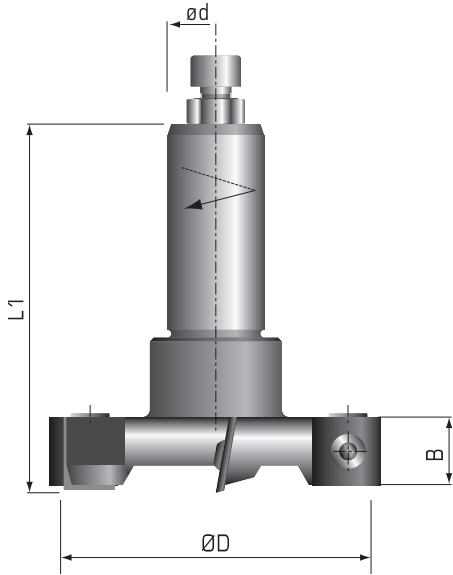


0° - B max= 37
5° - B max= 37
10° - B max= 36
15° - B max= 36
20° - B max= 35
25° - B max= 33
30° - B max= 32
35° - B max= 30
40° - B max= 28
45° - B max= 26
50° - B max= 24
55° - B max= 21
60° - B max= 18
65° - B max= 15
70° - B max= 12
75° - B max= 9
80° - B max= 6
85° - B max= 2
90° - B max= 0



Replacement Parts			
DESCRIPTION	KNIFE	WEDGE	SCREW FOR GIB
PART NO.	304012	W341099	W501414
DIMENSIONS	39.5x12x1.5	38	M6x8





DESIGN:

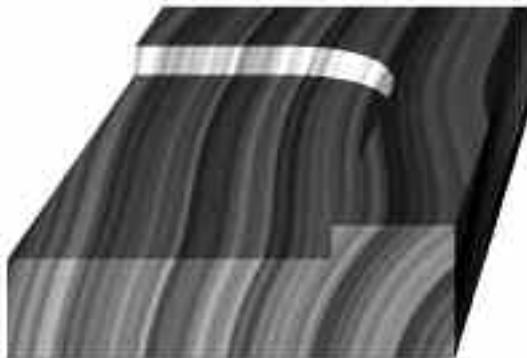
- High tensile steel body with up shear or no shear
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

- For surface cutting in workpieces with large areas and for producing large rabbeting cuts with a single pass
- On CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING LENGTH Bmm	SHANK DIAM. ød	NO. TEETH	OVERALL LENGTH L1 mm	MAX. RPM
RD2560	80	12	3/4"	3	90	16000
RD2562 ▲	80	14	1/2"	3	90	14000
RD2565 ▲	100	14	3/4"	3	90	12000
RD2567	4-1/2"	12	3/4"	4	90	9000

▲ No shear angle
Other sizes available upon request.



Replacement Parts



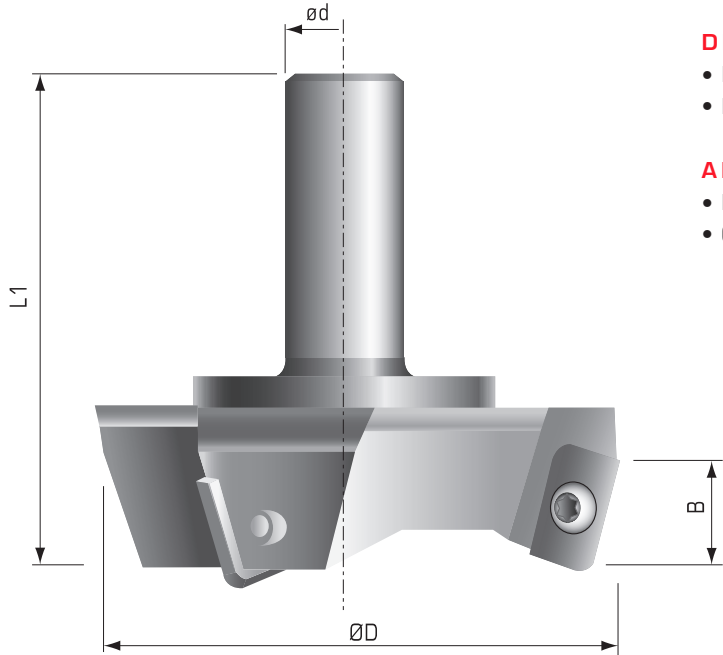
ROUTER BIT	DESCRIPTION	KNIFE	SCREW FOR KNIFE
RD2560	PART NO.	301200	WM350-PL
RD2567	DIMENSIONS	12x12x1.5	M3.5x6
RD2562	PART NO.	301404	W500002
RD2565	DIMENSIONS	14x14x2.0	M5x6.5



TORX WRENCH
PART NO. W400405 T15

RD2570

SURFACING INSERT ROUTER CUTTER



DESIGN:

- High tensile steel body with 3 teeth, up-shear
- Reversible tungsten carbide inserts with 2 cutting edges

APPLICATION:

- For surface cutting in workpieces with large areas
- On CNC routers

PART NO.	CUTTING DIAM. $\varnothing D$ mm	FLUTE LENGTH Bmm	SHANK DIAM. $\varnothing d$ mm	NO.OF TEETH	OVERALL LENGTH L1mm	MAX. RPM
RD2570	90	19	3/4"	3	82	12000



Replacement Parts

DESCRIPTION	KNIFE	SCREW FOR KNIFE
PART NO.	RD2570A	WM350-P
DIMENSIONS	19x12x1.5	M3.5x7.5



TORX WRENCH
PART NO. W400405 T15

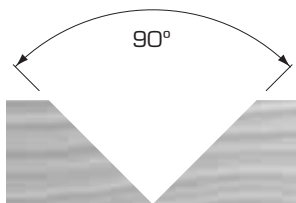
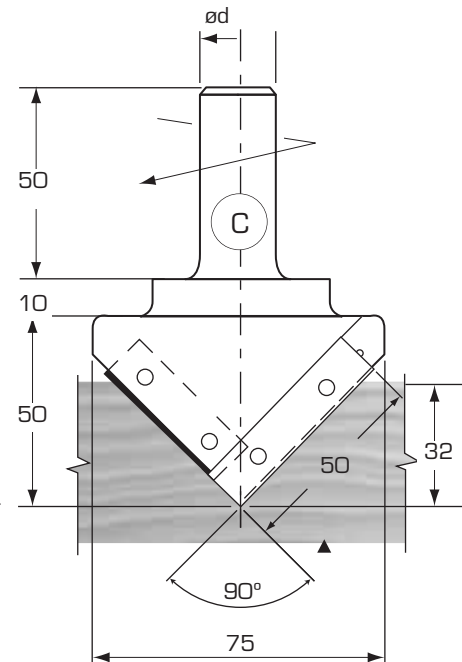
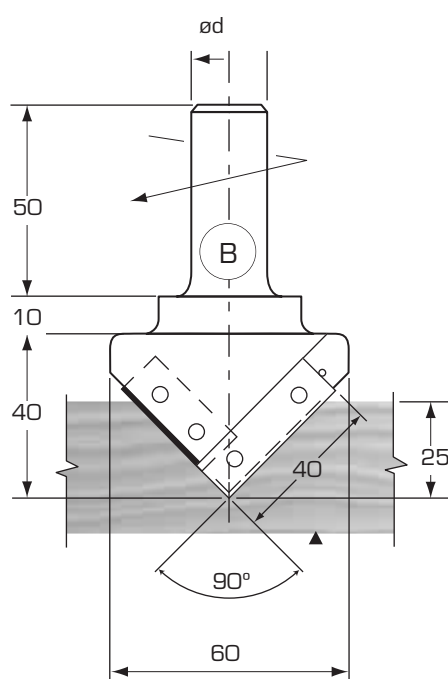
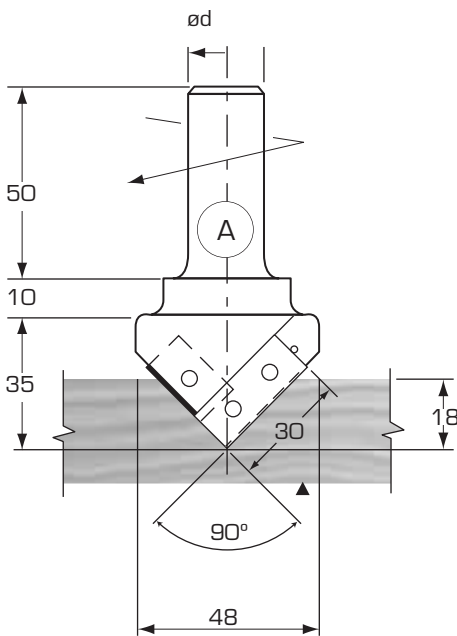
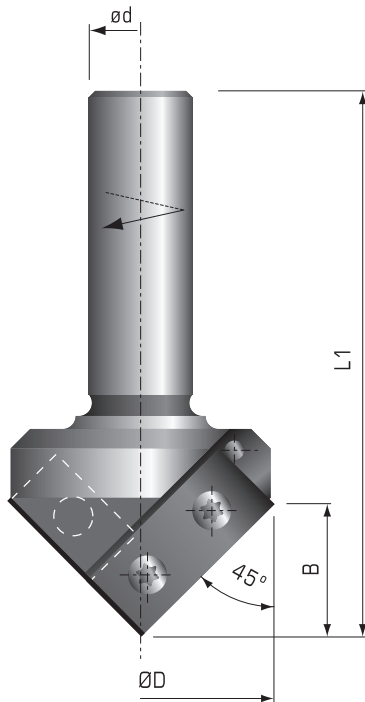
DESIGN:

- High tensile steel body with 1+1 insert knives
- Tool body with positioning pins for easy and accurate replacement of inserts
- Precise center point on bottom
- Reversible tungsten carbide inserts with 2 cutting edges

APPLICATION:

- For chamfering, decorative grooving and for mitre folds in solid wood and panel materials
- On stationary and CNC routers

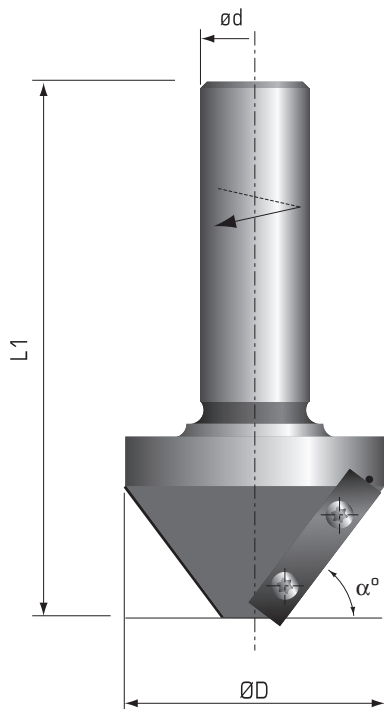
PART NO.	TOOL TYPE	CUTTING DIAM. ØD mm	CUTTING DEPTH Bmm	SHANK DIAM. ød	NO. TEETH	OVERALL LENGTH L1 mm	MAX. RPM
RD2580	A	48	18	3/4"	1+1	95	18000
RD2582	B	60	25	3/4"	1+1	100	18000
RD2584	C	75	32	3/4"	1+1	110	14000



TORX WRENCH
PART NO. W400405 T15

Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	KNIFE	SCREW FOR KNIFE
RD2580	PART NO.	302000	303023	WM350-PL
	DIMENSIONS	20x12x1.5	30X12X1.5	M3.5x6
RD2582	PART NO.	303000	304023	WM350-PL
	DIMENSIONS	30x12x1.5	40X12X1.5	M3.5x6
RD2584	PART NO.	304000	305023	WM350-PL
	DIMENSIONS	40x12x1.5	50X12X1.5	M3.5x6

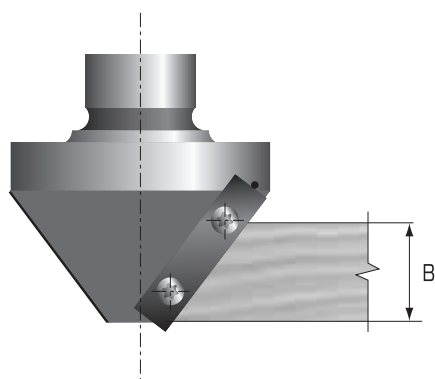

DESIGN:

- High tensile steel body with 2 insert knives
- Tool body with positioning pins for easy and accurate replacement of inserts
- Reversible tungsten carbide insert with 2 cutting edges

APPLICATION:

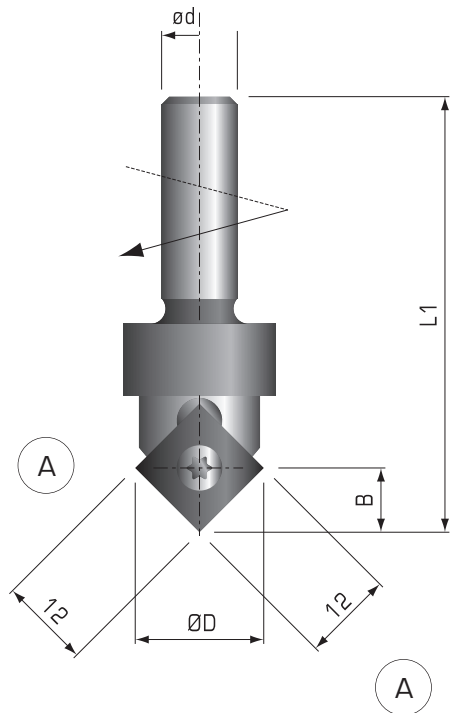
- For chamfering solid wood and panel materials
- On stationary and CNC routers

PART NO.	ANGLE α°	CUTTING DIAM. $\varnothing D$ mm	CUTTING DEPTH B mm	SHANK DIAM. $\varnothing d$	NO. TEETH	OVERALL LENGTH L1 mm	MAX. RPM
RD2590	60°	60	23	3/4"	2	95	18000
RD2592	45°	60	19	3/4"	2	95	18000
RD2594	30°	70	13	3/4"	2	90	18000
RD2595	60°	70	40	3/4"	2	115	14000
RD2596	45°	90	33	3/4"	2	110	14000
RD2598	30°	100	23	3/4"	2	100	12000


Replacement Parts

TOOL NO.	DESCRIPTION	KNIFE	SCREW FOR KNIFE
RD2590	PART NO.	303000	WM350-PL
RD2592	DIMENSIONS	30x12x1.5	M3.5X6
RD2594			
RD2595	PART NO.	305000	WM350-PL
RD2596	DIMENSIONS	50x12x1.5	M3.5X6
RD2598			


TORX WRENCH
PART NO. W400405 T15



DESIGN:

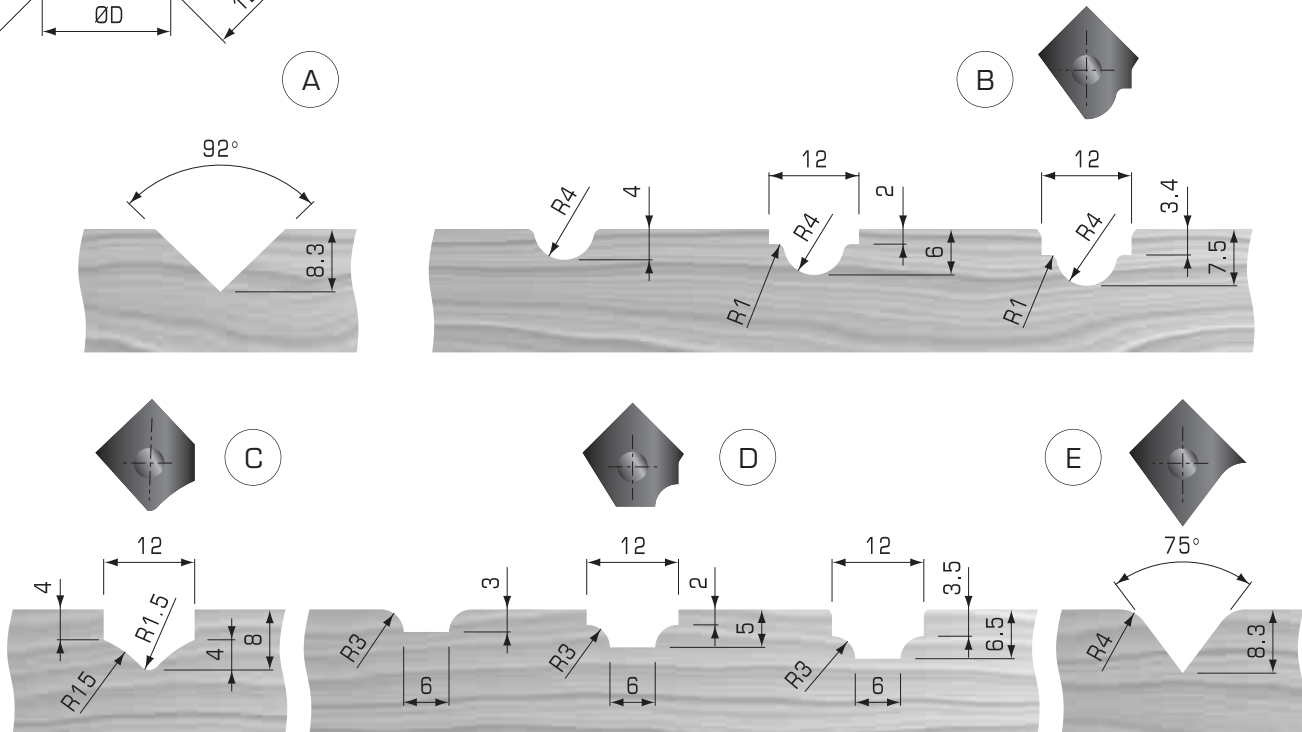
- High tensile steel body with 1 insert knife
- Tungsten carbide insert knife
- Tool body supplied with square insert for profile A. For other profiles, knives ordered separately (refer to chart at the bottom of this page)

APPLICATION:

- For decorative routing in solid wood and panel materials
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØDmm	CUTTING DEPTH Bmm	SHANK DIAM. ød mm	NO. TEETH	OVERALL LENGTH L1mm	MAX. RPM
RD2600	17	8.5	10	1	58	20000

Other profiles available upon request.



KNIFE	DIMENSIONS	PART NO.
A	12x12x1.5	301200
B	12x12x1.5	RD2600B
C	12x12x1.5	RD2600C
D	12x12x1.5	RD2600D
E	12x12x1.5	RD2600E



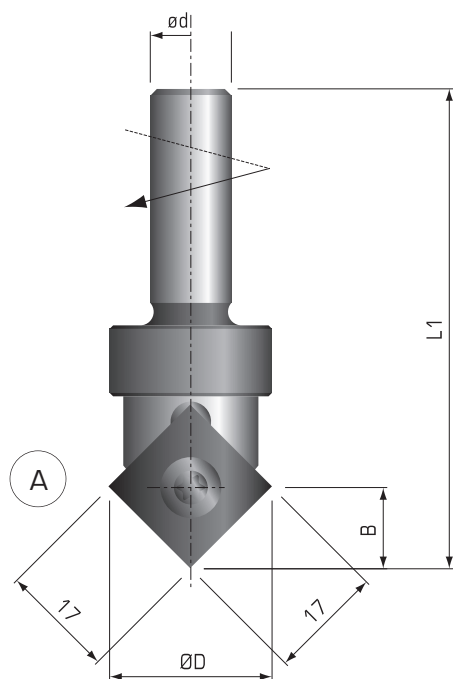
REPLACEMENT TORX SCREW
PART NO. W502310
 M3.5x4.8



TORX WRENCH
PART NO. W400405 T15

RD2610

MULTI PROFILE INSERT ROUTER BIT



DESIGN:

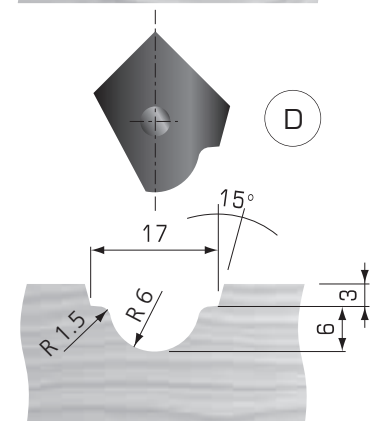
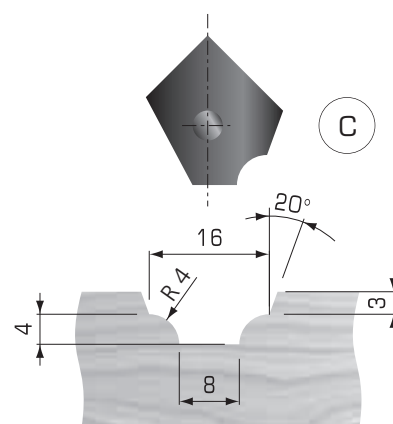
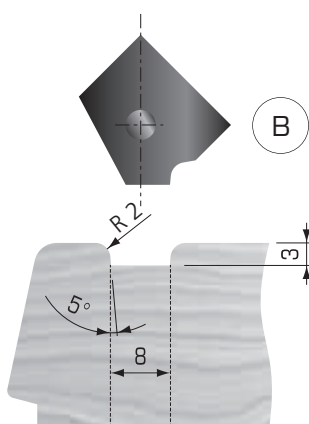
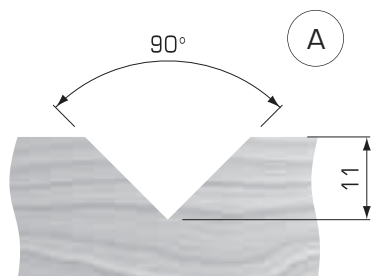
- High tensile steel body with 1 insert knife
- Tungsten carbide insert knife
- Tool body supplied with square insert for profile A. For other profiles, knives ordered separately (refer to chart at the bottom of this page)

APPLICATION:

- For decorative routing in solid wood and panel materials
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ϕD mm	CUTTING DEPTH Bmm	SHANK DIAM. ϕd mm	NO. TEETH	OVERALL LENGTH $L1$ mm	MAX. RPM
RD2610	24	12	12	1	76	20000

Other profiles available upon request.

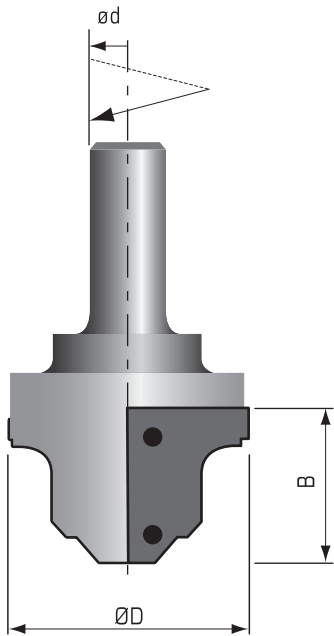


REPLACEMENT TORX SCREW
PART NO. W502306
M4x6



TORX WRENCH
PART NO. W400405 T15

KNIFE	DIMENSIONS	PART NO.
A	17x17x2	301701
B	17x17x2	RD2610B
C	17x17x2	RD2610C
D	17x17x2	RD2610D



DESIGN:

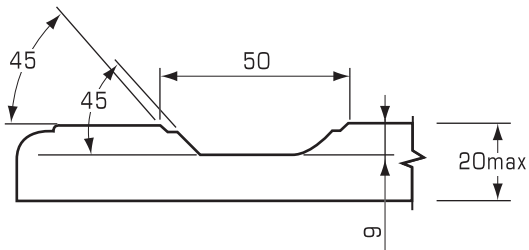
- High tensile steel body with 1 or 2 insert knives
- Tool body with positioning pins for easy and accurate replacement of inserts
- Profiled tungsten carbide inserts with 1 cutting edge

APPLICATION:

- For machining MDF cabinet doors
- On CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING DEPTH B mm	SHANK DIAM, ød	NO. TEETH	REPLACEMENT KNIVES PART NO.	MAX. RPM
RD2620	65	40	3/4"	2	RD2620A	16000
RD2622	50	25	3/4"	2	RD2622B	18000
RD2624	24	25	3/4"	1	RD2624C	20000
RD2626	24	25	3/4"	1	RD2626D	20000

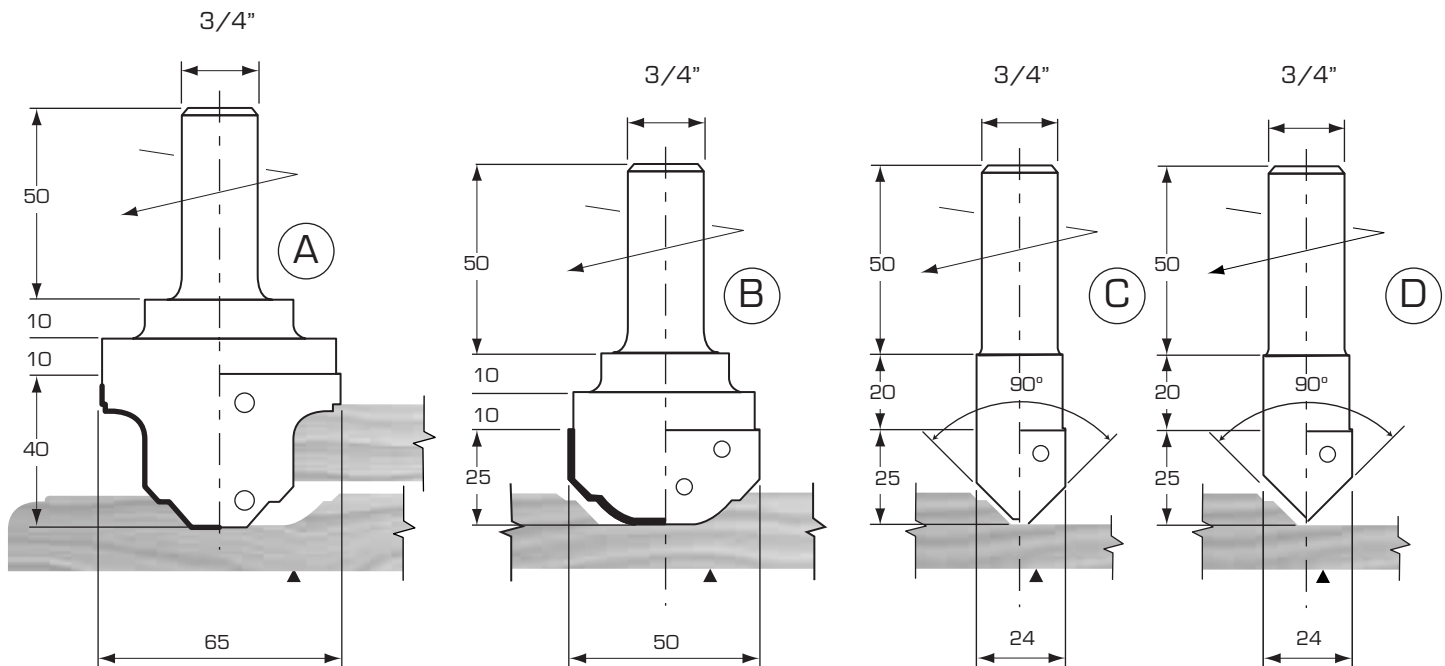
Other profiles available upon request.



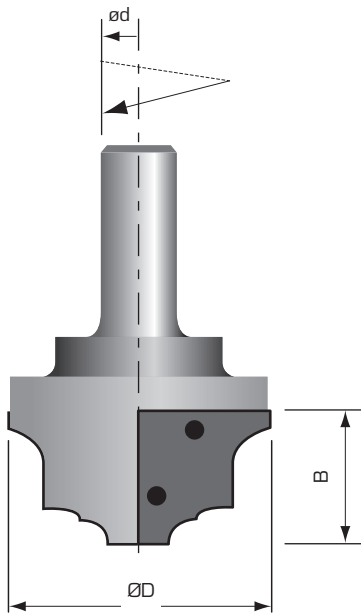
REPLACEMENT TORX SCREW
PART NO. WM350-PL



TORX WRENCH
PART NO. W400405 T15



SCALE 0.5:1


DESIGN:

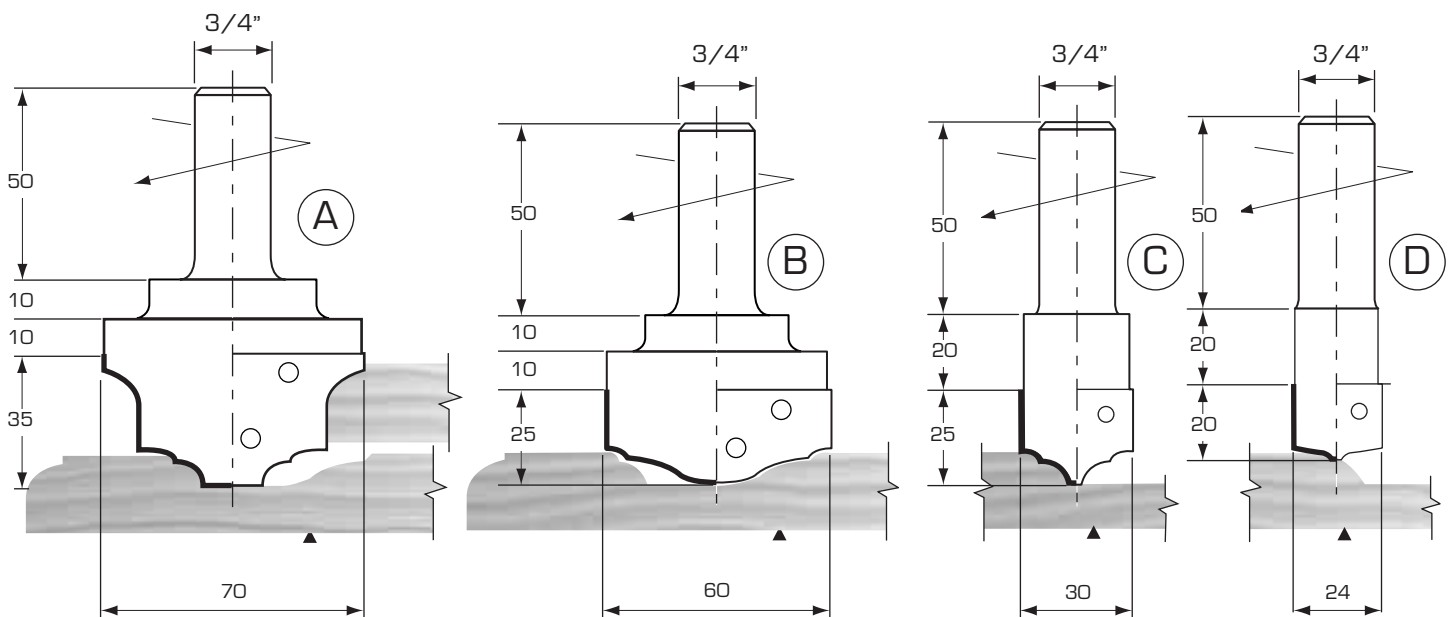
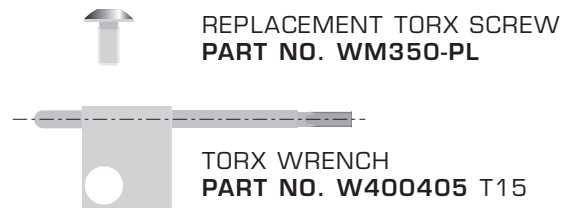
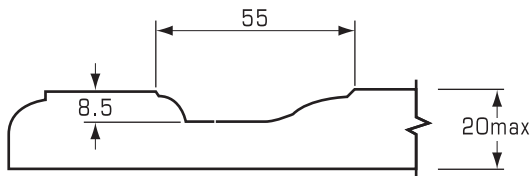
- High tensile steel body with 2 insert knives
- Tool body with positioning pins for easy and accurate replacement of inserts
- Profiled tungsten carbide inserts with 1 cutting edge

APPLICATION:

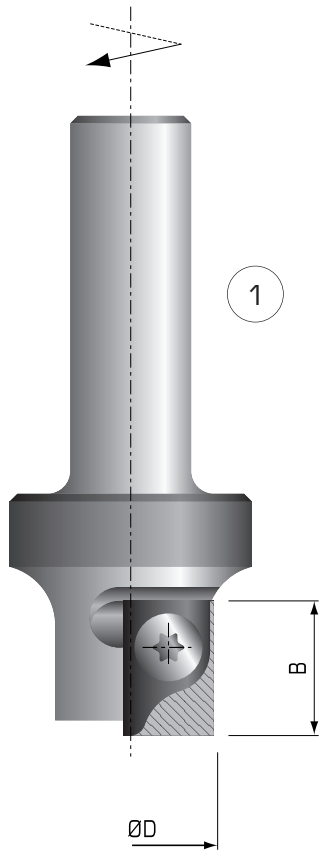
- For machining MDF cabinet doors
- On CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING DEPTH B mm	SHANK DIAM. ød	NO. TEETH	REPLACEMENT KNIVES PART NO.	MAX. RPM
RD2630	70	35	3/4"	2	RD2630A	16000
RD2632	60	25	3/4"	2	RD2632B	18000
RD2634	30	25	3/4"	2	RD2634C	20000
RD2636	24	20	3/4"	2	RD2636D	20000

Other profiles available upon request.



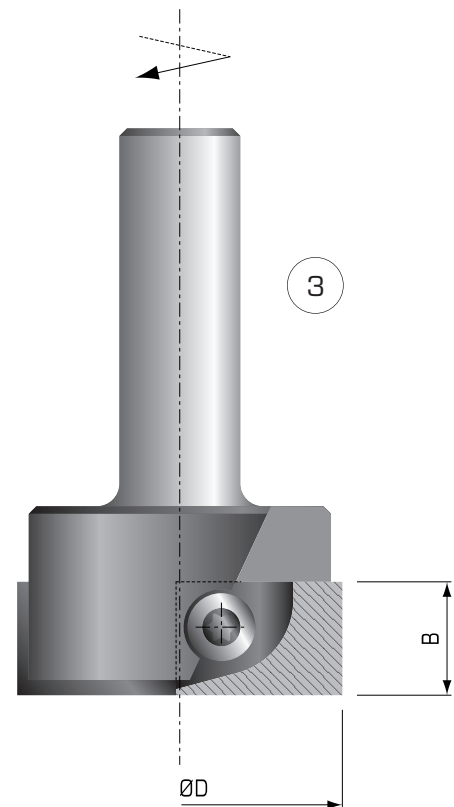
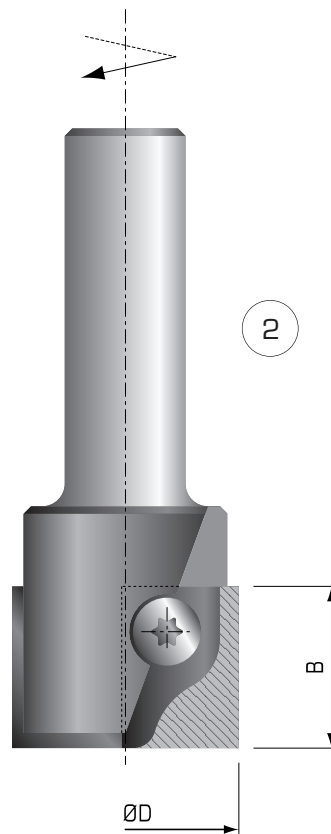
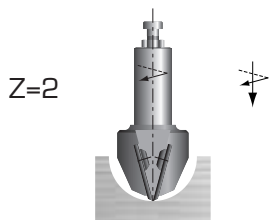
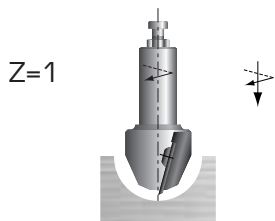
SCALE 0.5:1

**DESIGN:**

- High tensile steel body with 1 or 2 profiled inserts, up-shear angle
- Profiles produced to customer's specifications
- Light shaded section of insert indicates profiling area
- Tungsten carbide insert knives

APPLICATION:

- To produce decorative profiles for furniture and cabinet door production
- On stationary and CNC routers

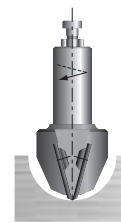
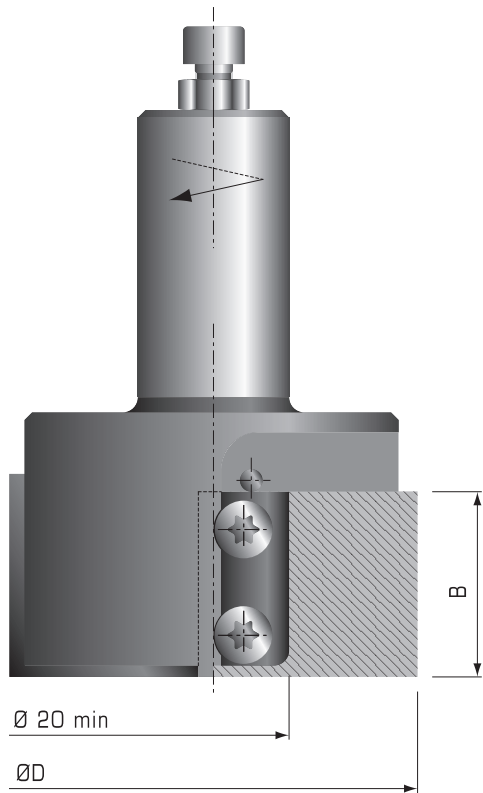


DESIGN:

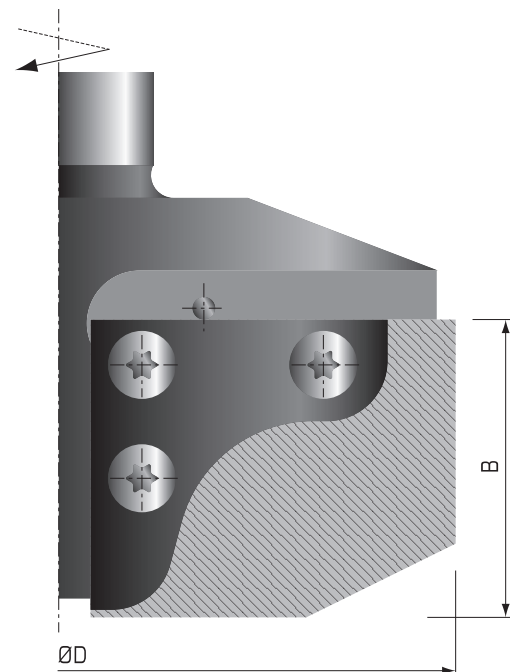
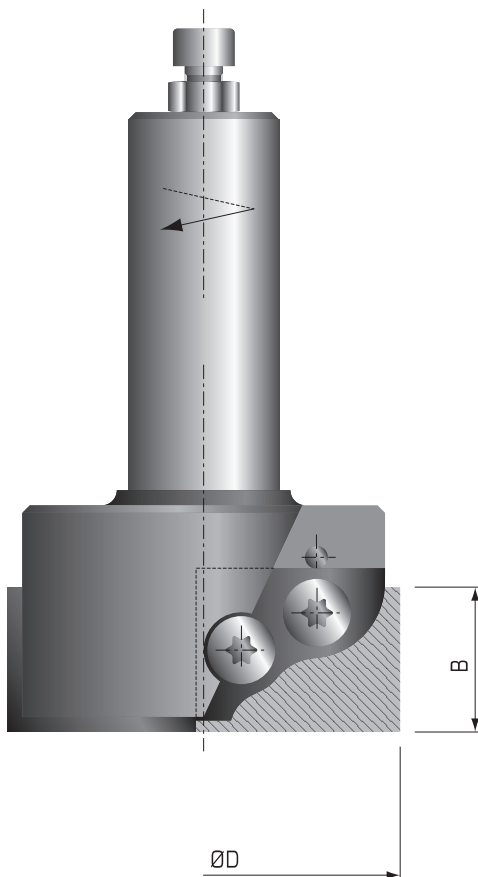
- High tensile steel body with 2 inserts, up-shear angle
- Profiles produced to customer's specifications
- Light shaded section of insert indicates profiling area
- Tungsten carbide insert knives

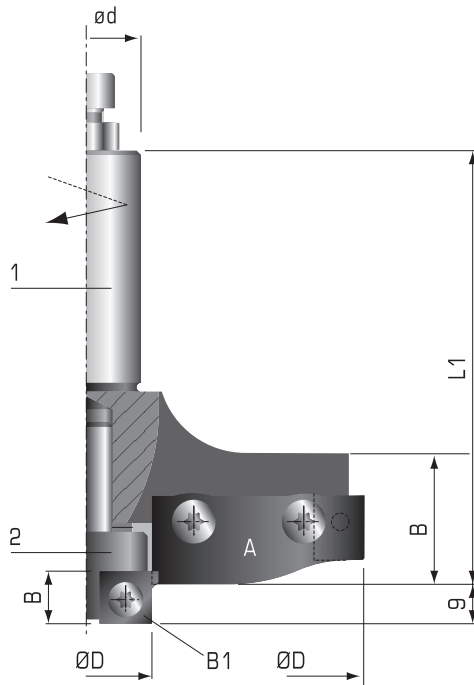
APPLICATION:

- To produce decorative profiles for furniture and cabinet door production
- On stationary and CNC routers



Z=2





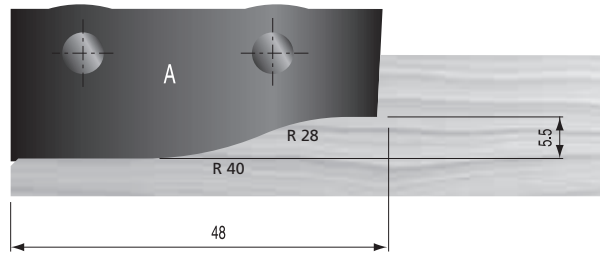
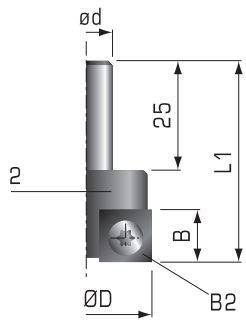
DESIGN:

- High tensile steel body with 2+2 inserts knives, up-shear angle
- Two piece design allows for optional use of jointing cutter
- Tool body with positioning pins for easy and accurate replacement of inserts
- Tungsten carbide inserts

APPLICATION:

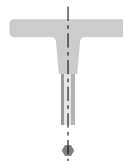
- For panel raising in solid wood and panel materials
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING DEPTH B mm	SHANK DIAM. ød	NO. TEETH	OVERALL LENGTH L1 mm	MAX. RPM
RD2720	140	25	3/4"	2	99	12000
RD2722	30	12	10mm	2	46	12000



Replacement Parts

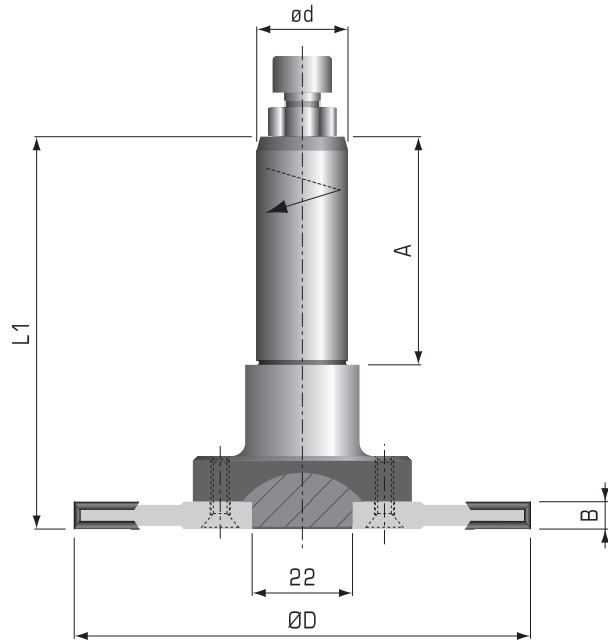
TOOL NO.	DESCRIPTION	KNIFE	KNIFE	SCREW FOR KNIFE
RD2720	PART NO.	RD2720A	-	W502315
	DIMENSIONS	50x21.5x2.0	-	M5x8
RD2722	PART NO.	RD2722B1	301200(B2)	W502306
	DIMENSIONS	12x13x1.5	12x12x1.5	M4x6



T-HANDLE TORX WRENCH
 PART NO. W400405 T15
 PART NO. W400420 T20

RD2760

GROOVING INSERT ROUTER CUTTER

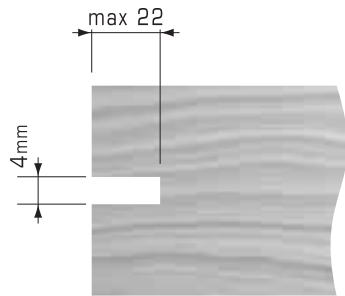


DESIGN:

- High tensile steel body with 4 teeth + 4 spurs
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

- For grooving in solid wood and panel materials
- On stationary and CNC routers



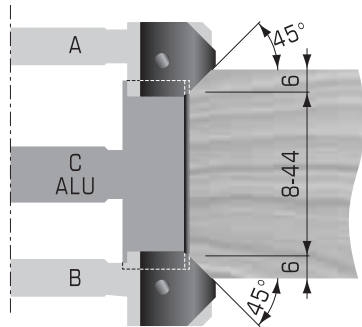
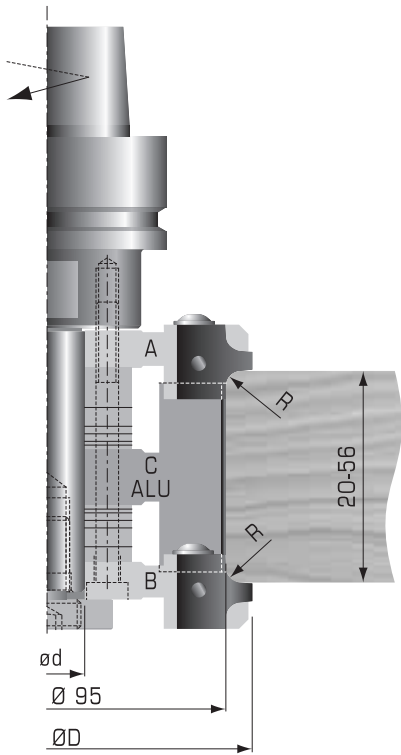
PART NO.	CUTTING DIAM. ØDmm	KERF B mm	SHANK DIAM. ød	NO. TEETH	NO. SPURS	OVERALL LENGTH L1mm	MAX. RPM
RD2760	100	4	3/4"	4	4	84	13200

Other sizes available upon request.

Replacement Parts					
DESCRIPTION	KNIFE	KNIFE SCREW SPUR SCREW	THREADED RING FOR KNIFE	SPUR	THREADED RING FOR SPUR
PART NO.	320301	W500401	W501101	301414	W501001
DIMENSIONS	18x18x1.95	M4x3.2	12x1.7	14x14x1.2	10x1.65

Screw for mounting groover (**Part No. IT13L**) on the shaft **W500603 M4x12**





DESIGN:

- High tensile steel body with 2 teeth, for cutter A & B
- Aluminum body with 2 teeth, for cutter C
- Cutter set supplied with toolholder as indicated
- Cutters adjustable with spacers and shims
- Tungsten carbide inserts

APPLICATION:

- For corner rounding and chamfering in solid wood and panel materials
- On stationary and CNC routers

PART NO.	DIAM. ØD mm	KERF B mm	BORE ød mm	NO. TEETH	TOOL HOLDER TYPE	RPM MIN.-MAX.
RD2770	109	20	20	2	ISO30	10000
RD2772	109	20	20	2	BT30	10000
RD2774	109	20	20	2	HSK63F	10000

Cutters (A+B) excluding knives.

Replacement Cutters

CUTTER TYPE	PART NO.	ØD mm	B mm	ød mm	NO. TEETH
A	RD2770A	109	20	20	2
C	RD2770C	95	50	20	2
B	RD2770B	109	20	20	2

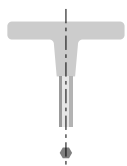
Cutters (A+B) excluding knives.

Replacement Knives

CUTTER TYPE	PART NO.	RADIUS/CHAMFER Rmm	DIMENSIONS mm
A-B	RD2770R2	2	20x21x2
A-B	RD2770R3	3	20x21x2
A-B	RD2770R4	4	20x21x2
A-B	RD2770R5	5	20x21x2
A-B	RD2770R6	6	20x21x2
A-B	RD2770-45	45°	20x21x2
C	305000	-	50x12x1.5

Replacement Parts

TOOL NO.	DESCRIPTION	GIB	SCREW FOR GIB
RD2770A	PART NO.	W341001	W501403
RD2770B	DIMENSIONS	16	M8x16
RD2770C	PART NO.	W341002	W501403
	DIMENSIONS	46	M8x16



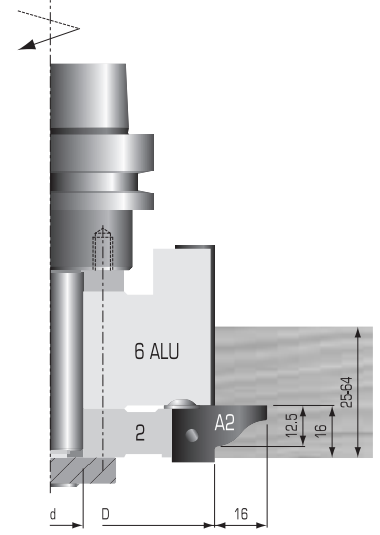
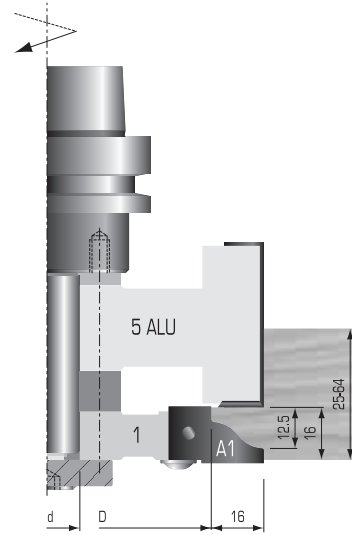
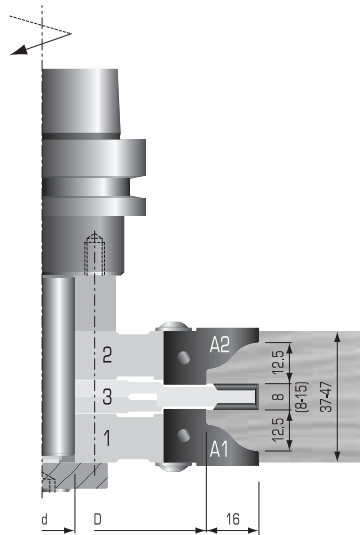
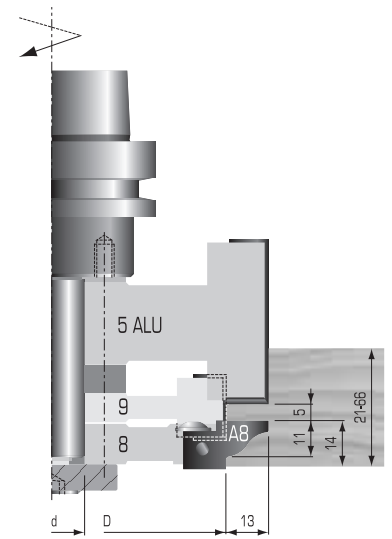
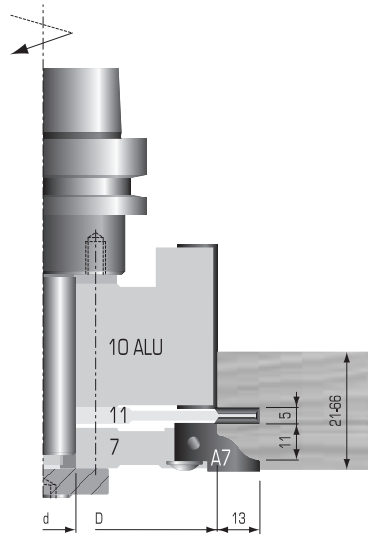
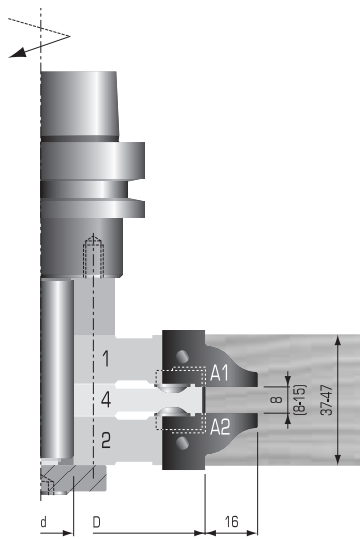
T-HANDLE ALLEN WRENCH
PART NO. W400114 4mm

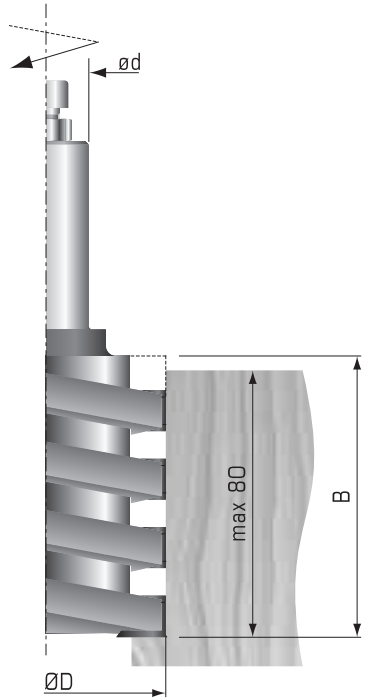
DESIGN:

- Router cutters custom manufactured to customer's specifications
- Tungsten carbide inserts

APPLICATION:

- To produce stile and rails in solid wood
- On stationary and CNC routers





DESIGN:

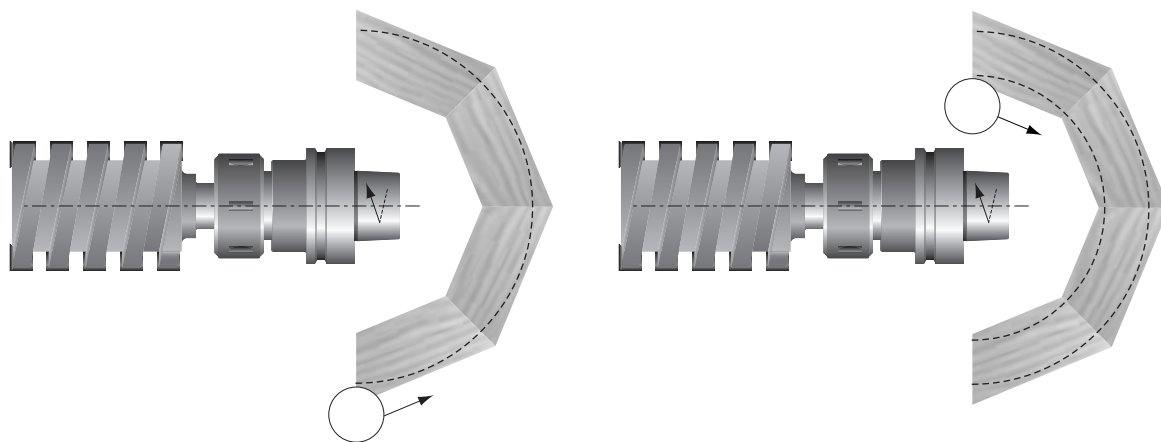
- High tensile steel body with spiral and staggered teeth
- Reversible tungsten carbide inserts with 4 cutting edges

APPLICATION:

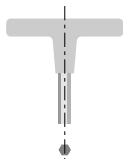
- For jointing and shaping solid wood components
- Ideal for arched window frame manufacturing
- On stationary and CNC routers

PART NO.	CUTTING DIAM. ØD mm	CUTTING LENGTH B mm	SHANK DIAM. ød	NO. TEETH	NO. SPURS	OVERALL LENGTH mm	MAX. RPM
RD2810	70	82	3/4"	4/16	2	140	14000

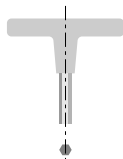
Other sizes available upon request.



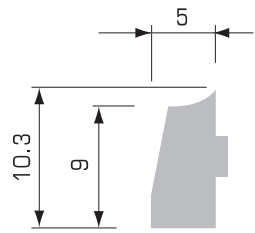
Replacement Parts					
DESCRIPTION	KNIFE	WEDGE	WEDGE SCREW	SPUR	SPUR SCREW
PART NO.	301200	W340033	W501414	301404	W500002
DIMENSIONS	12x12x1.5	9	M6x8	14x14x2	M5x6.5



T-HANDLE
TORX WRENCH
PART NO. W400405 T15



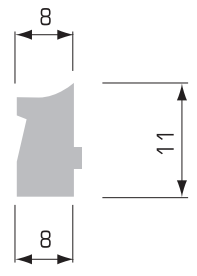
T-HANDLE
ALLEN WRENCH
PART NO. W400113 3MM



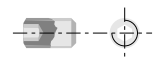
WEDGES	
PART NO.	DIMENSIONS mm
W302411	32
W302410	54



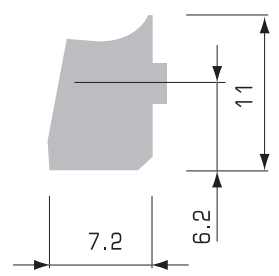
WEDGES	
PART NO.	DIMENSIONS mm
W300805	26 x 9.5 x 2.5
W300806	46 x 9.5 x 2.5
W300905	26 x 9.5 x 3.5
W300906	46 x 9.5 x 3.5



WEDGES	
PART NO.	DIMENSIONS mm
W303017	37
W303016	47
W303015	57



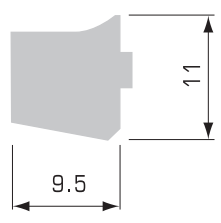
WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W501306	M6x10



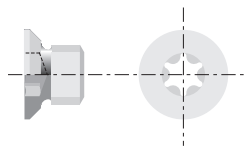
WEDGES	
PART NO.	DIMENSIONS mm
W340033	9
W340034	27



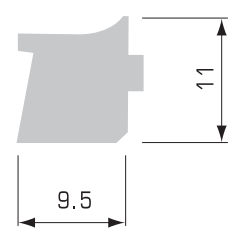
WEDGE SCREWS	
PART NO.	DIMENSIONS mm
W501414	M6x8
W501402	M6x10
W501412	M8x14
W501403	M8x16



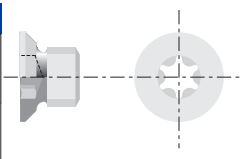
WEDGES	
PART NO.	DIMENSIONS mm
W340032	42
W340035	47



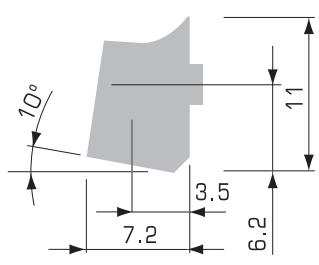
TORX SCREWS	
PART NO.	DIMENSIONS mm
W500002	M5x7



WEDGES	
PART NO.	DIMENSIONS mm
W341001	16
W341099	38
W341002	46



TORX SCREWS	
PART NO.	DIMENSIONS mm
W500401	M4x3.2



WEDGES	
PART NO.	DIMENSIONS mm
W340037	9

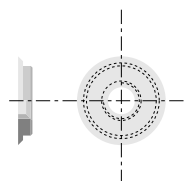


TORX SCREWS	
PART NO.	DIMENSIONS mm
WM350-P	M3.5 x 7.5
WM336	M6 x 10



TORX SCREWS

PART NO.	DIMENSIONS mm
WM350	3.5x6.0



THREADED RINGS

PART NO.	DIMENSIONS mm
W501001	10x1.65
W501101	12x1.7



TORX SCREWS

PART NO.	DIMENSIONS mm
WM350-PL	3.5x6.0



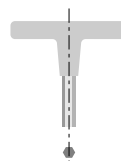
TORX WRENCHES

PART NO.	DIMENSIONS mm
W400406	T8
W400401	T9
W400405	T15



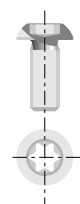
TORX SCREWS

PART NO.	DIMENSIONS mm
WM355	M3x5.5
WM356	M3.5 x 6.0
WM380	M3x8.0
WM420	M4x2.0



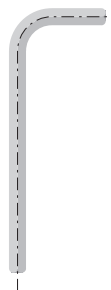
T-HANDLE TORX WRENCHES

PART NO.	DIMENSIONS mm
W400420	T20



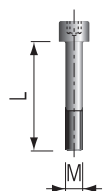
TORX SCREWS

PART NO.	DIMENSIONS mm
W502301	M4x6.0
W502302	M4x10
W502303	M4x12
W502306	M4x6
W502307	M3x7
W502310	M3.5x4.8
W502315	M5x8
W502331	M3x4



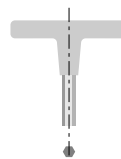
ALLEN WRENCHES

PART NO.	DIMENSIONS mm
W400002	3
W400003	4



HEX SCREWS

PART NO.	DIMENSIONS mm
W501730	M6x60
W501731	M6x75
W501732	M6x85



T-HANDLE ALLEN WRENCHES

PART NO.	DIMENSIONS mm
W400113	3
W400111	4 (LONG)
W400114	4

INSERT ROUTER BIT TABLE OF CONTENTS/INDEX

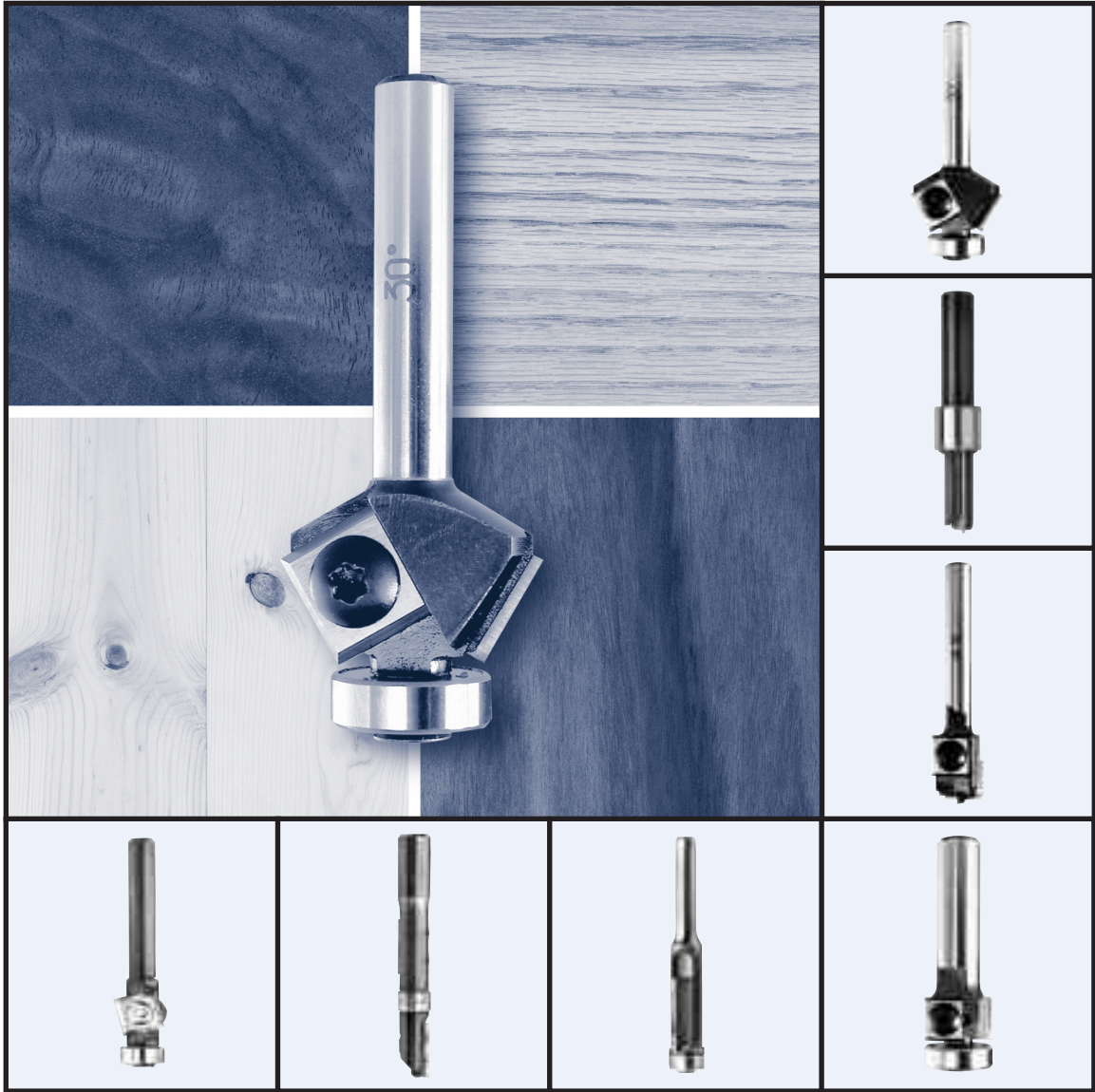
CONTENT

Bevel Trimming Bits	FD2 & FD5
Flush Trimming Bits	FD1 & FD4
Replacement Parts and Knives	FD3 & FD5
Staggered Tooth Router Bits	FD2 & FD5
Straight Router Bits	FD1 & FD4

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D1B22 to D1B45A	FD5
D1C to D1CA	FD4
D1D10 to D1D45A	FD5
D1E to D1A15A	FD4
RD2062	
RD2062 to RD2069S	FD1
RD2067L to RD2069L	FD1
RD2070 to RD2077	FD1
RD2080 to RD2087	FD1
RD2203	
RD2203 to RD2204	FD2
RD3300 to RD3302	FD2
RD3400 to RD3408	FD1

ROUTER BITS WITH DISPOSABLE KNIVES



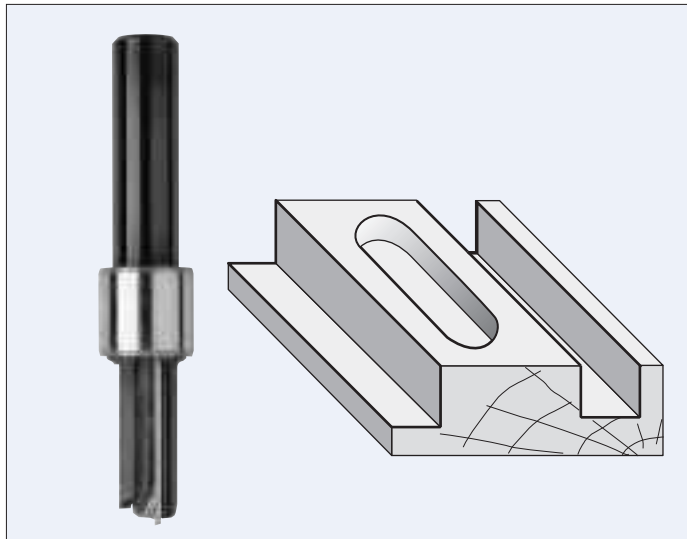
- Reduces Downtime
- Eliminates the Need for Back-up Tooling
- Reduces Production Costs
- Cutting Diameter Never Changes
- Precision Tolerances

STANDARD KNIFE FEATURES:

- Ground to 0.1 micron mirror finish for extended life and flawless cuts
- Sub-micron grade solid carbide
- Reversible (2 cutting edges)

STANDARD BODY FEATURES:

- Available in 1/4", 1/2" and 3/4" shanks
- High-tensile strength steel bodies
- Knives automatically positioned for concentricity
- Spare parts kit supplied with each tool

RD2062
STRAIGHT ROUTER BITS WITH REVERSIBLE KNIVES


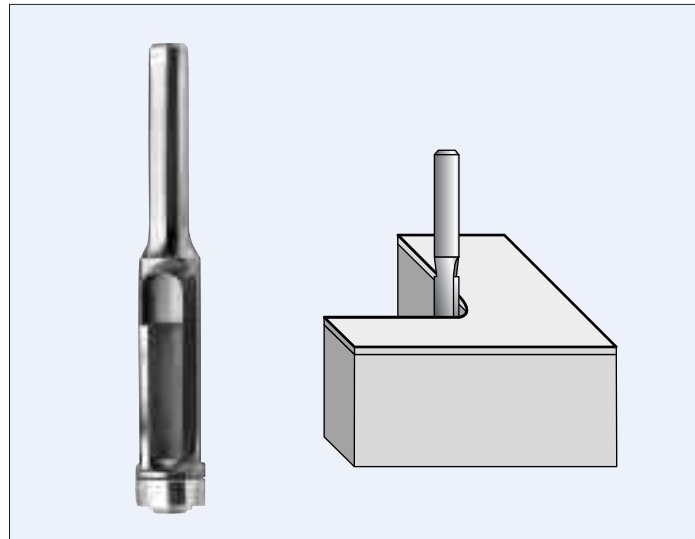
PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	NO. OF FLUTES	OVERALL LENGTH
RD2062	3/8"	1"	1/2"	1	3-1/8"
RD2066	1/2"	1"	1/2"	1	3-3/8"
RD2067	1/2"	1-1/4"	1/2"	1	3-1/2"
RD2067S ▲	1/2"	1-1/4"	1/2"	1	3-1/2"
RD2068 ■	1/2"	1-1/4"	1/2"	1	3-1/2"
RD2069	1/2"	1-1/2"	1/2"	1	4"
RD2069S ▲	1/2"	1-1/2"	1/2"	1	4"
RD2070 ■	1/2"	1-1/2"	1/2"	1	4"
RD2071	1/2"	2"	1/2"	1	4-1/8"
RD2077	5/8"	1-1/4"	1/2"	1	3-1/2"
RD2080 ■	5/8"	2"	5/8"	1	4-3/8"
RD2084	3/4"	1"	1/2"	1	3-3/8"
RD2086 ■	3/4"	1-1/2"	3/4"	1	4"
RD2087 ■	3/4"	2"	3/4"	1	4-3/8"

- ▲ Standard type without reinforcing ring
- With carbide plunge point

LEFT HAND ROTATION

PART NO.	CUTTING DIAM.	FLUTE LENGTH	SHANK DIAM.	NO. OF FLUTES	OVERALL LENGTH
RD2067L	1/2"	1-1/4"	1/2"	1	3-1/2"
RD2069L	1/2"	1-1/2"	1/2"	1	4"

Replacement Parts
See page FD3

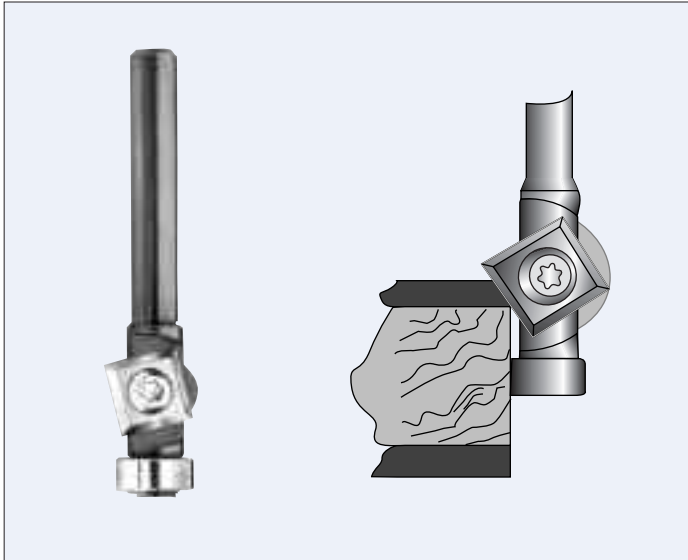
RD3400
FLUSH TRIMMING BITS WITH BALL BEARING GUIDE


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	NO. OF FLUTES	OVERALL LENGTH
RD3400	3/8"	1"	1/4"	1	2-5/8"
RD3401	3/8"	1/2"	1/4"	1	2-1/8"
RD3402	1/2"	1"	1/4"	1	2-5/8"
RD3403	1/2"	1-1/2"	1/4"	1	2-1/8"
RD3405	1/2"	1"	1/2"	1	2-3/4"
RD3407	1/2"	1-1/2"	1/2"	1	3-5/8"
RD3408	1/2"	2"	1/2"	1	4-1/4"

Replacement Parts
See page FD3

RD3300

**BEVEL TRIMMING INSERT BITS
WITH BALL BEARING GUIDE
1/4" SHANK DIAM.**

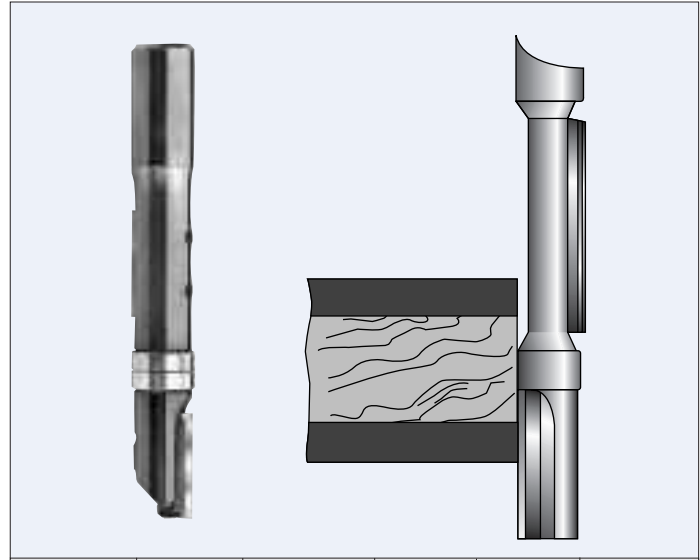


PART NO.	CUTTING DIAM.	CUTTING LENGTH	DEG. BEVEL	NO. OF FLUTES	OVERALL LENGTH
RD3300	3/8"	3/8"	15°	1	2-1/8"
RD3302	3/8"	3/8"	45°	1	2-1/8"

Replacement Parts
See page FD3

RD2203

**STAGGERED TOOTH
INSERT FLUSH TRIMMING WITH
CENTRE BALL BEARINGS**



PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	NO. OF FLUTES	OVERALL LENGTH
RD2203	1/2"	3/4"+3/4"	1/2"	1+1	3-7/8"
RD2204 ■	1/2"	3/4"+3/4"	1/2"	1+1	3-7/8"

■ With carbide plunge point

Replacement Parts
See page FD3

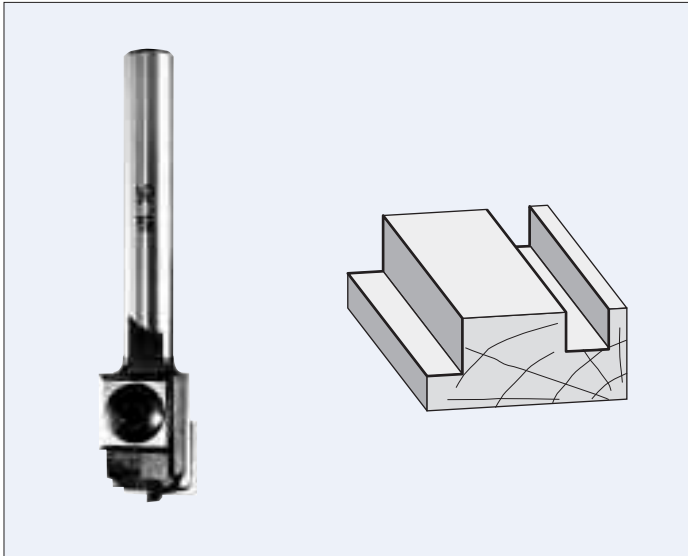
ROUTER BITS WITH DISPOSABLE KNIVES

REPLACEMENT PARTS

ROUTER BIT PART NO.	KNIFE PART NO.	WEDGE PART NO.	WEDGE SIZE	BEARING PART NO.	SNAP RING PART NO.	SET SCREW PART NO.	WRENCH PART NO.	LOOSENING JIG PART NO.
RD2062	303511M	W2062	33X5X4.6	-	-	WM303	WT015	W0001
RD2066	303011M	W2066	28X5X4.6	-	-	WM303	WT015	W0001
RD2067	303511M	W2062	33X5X4.6	-	-	WM303	WT015	W0001
RD2067L	303511M	W2062L	33X5X4.6	-	-	WM303	WT015	W0001
RD2068	303511M	W2068	33X5X4.6	-	-	WM303	WT015	W0001
RD2069	304511M	W2069	43X5X4.6	-	-	WM303	WT015	W0001
RD2069L	304511M	W2069L	43X5X4.6	-	-	WM303	WT015	W0001
RD2070	304511M	W2070	43X5X4.6	-	-	WM303	WT015	W0001
RD2071	306011M	W2071	58X5X4.6	-	-	WM303	WT015	W0001
RD2077	303511M	W2077	33X8.5X3.5	-	-	WM306	WT025	-
RD2080	306011M	W2087	58X8.5X3.5	-	-	WM308	WT025	-
RD2084	303011M	W2084	28X8.5X3.5	-	-	WM308	WT025	-
RD2086	304511M	W2086	43X8.5X3.5	-	-	WM308	WT025	-
RD2087	306011M	W2087	58X8.5X3.5	-	-	WM308	WT025	-
RD3400	302511M	W3400	23X4X4.3	BD2	WC050	WM303	WT015	-
RD3401	301211M	W3401	11X4X4.3	BD2	WC050	WM303	WT015	W0001
RD3402	302511M	W3400	23X4X4.3	BD3	WC060	WM303	WT015	W0001
RD3403	304011M	W3403	38X4X4.3	BD3	WC060	WM303	WT015	W0001
RD3405	302511M	W3400	23X4X4.3	BD3	WC060	WM303	WT015	W0001
RD3407	304011M	W3403	38X4X4.3	BD3	WC060	WM303	WT015	W0001
RD3408	305011M	W3408	48X4X4.3	BD3	WC060	WM303	WT015	W0001
RD3300	300911M	-	-	BD2	WC050	WM306	W400401	-
RD3302	300911M	-	-	BD2	WC050	WM306	W400401	-
RD2203	302011M	UPPER						
		W2200	19X4X4.3	BD4	-	WM303	WT015	W0001
		LOWER						
		W2203	18X5X4.6					
RD2204	302011M	UPPER						
		W2200	19X4X4.3	BD4	-	WM303	WT015	W0001
		LOWER						
		W2204	18X5X4.6					

SPARE KNIVES C4 MICRO GRAIN MIRROR FINISH			
PART NO.	LENGTH mm	WIDTH mm	THICKNESS mm
300911M	9	9	1.5
301211M	12	5.5	1.1
301511M	15	5.5	1.1
302011M	20	5.5	1.1
302511M	25	5.5	1.1
303011M	30	5.5	1.1
303511M	35	5.5	1.1
304011M	40	5.5	1.1
304511M	45	5.5	1.1
305011M	50	5.5	1.1
306011M	60	5.5	1.1

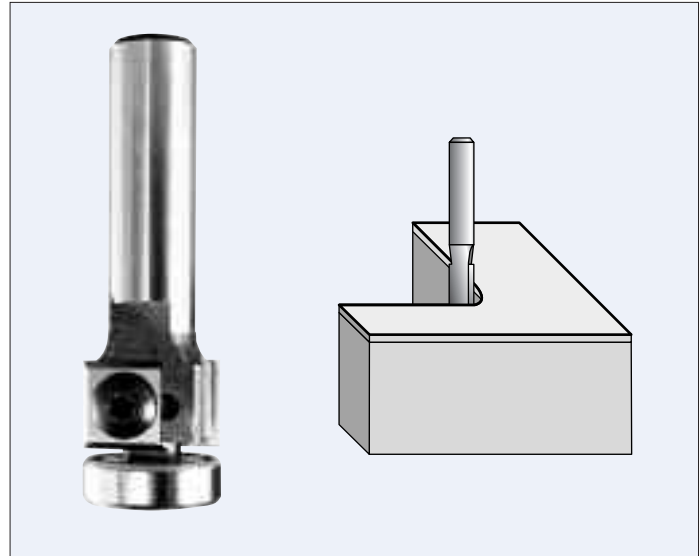
SPARE KNIVES STANDARD FINISH			
PART NO.	LENGTH mm	WIDTH mm	THICKNESS mm
303011S	30	5.5	1.1
303511S	35	5.5	1.1
304011S	40	5.5	1.1
304511S	45	5.5	1.1
305011S	50	5.5	1.1
306011S	60	5.5	1.1

D1A
**STAGGERED TOOTH BITS
ONE + ONE FLUTE WITH PLUNGE POINT**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
D1A15A	15mm	20mm	1/4"	2"
D1A16A	16mm	20mm	1/4"	2"
D1A18A	18mm	20mm	1/4"	2"
D1A20A	20mm	20mm	1/4"	2"
D1A22A	22mm	20mm	1/4"	2"

Replacement Parts

Spare Knife 301200 Screw D1V

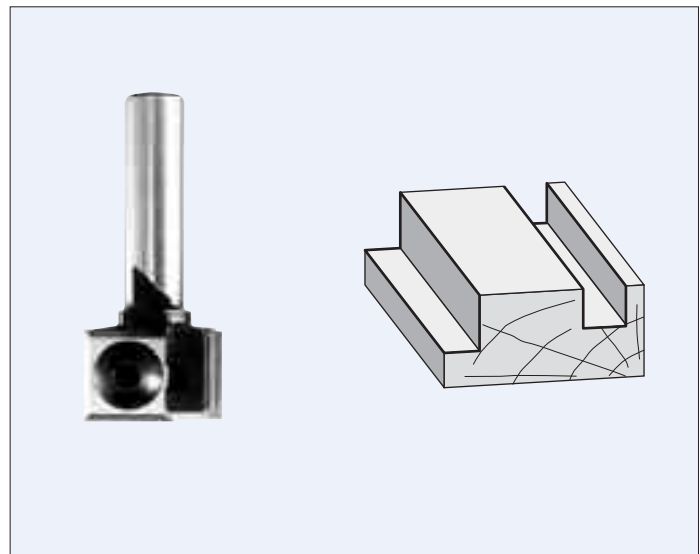
D1C
**FLUSH TRIM BITS
WITH BALL BEARING GUIDE TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
D1C	19mm	12mm	6mm	55mm
D1CA	19mm	12mm	1/4"	2-3/16"

Replacement Parts

 Spare Knife 301200
Screw for Knife D1V

 Ball Bearing B3-6
Screw for Bearing D1V5

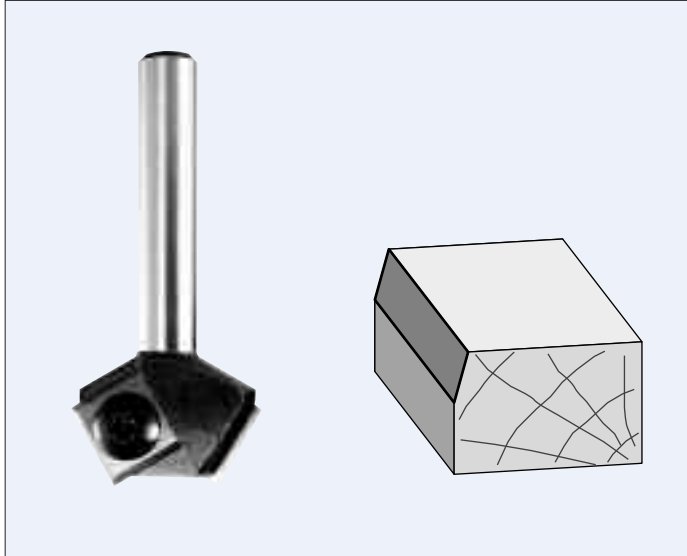
D1E
**STRAIGHT ROUTER BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	OVERALL LENGTH
D1E	19mm	12mm	6mm	45mm
D1EA	19mm	12mm	1/4"	1-3/4"

Replacement Parts

Spare Knife 301200

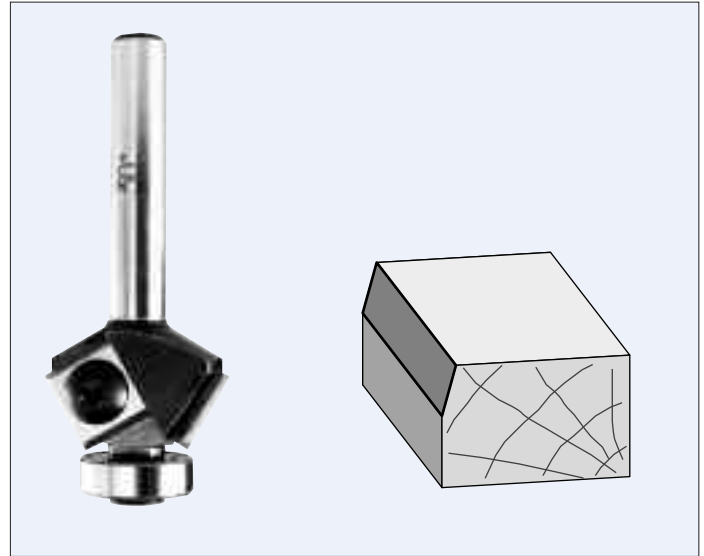
Screw D1V

D1B
**BEVEL TRIM BITS
TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	DEGREE OF CUT	OVERALL LENGTH
D1B22	24mm	12mm	6mm	22°	45mm
D1B22A	24mm	12mm	1/4"	22°	1-3/4"
D1B30	26mm	12mm	6mm	30°	45mm
D1B30A	26mm	12mm	1/4"	30°	1-3/4"
D1B45	29mm	12mm	6mm	45°	45mm
D1B45A	29mm	12mm	1/4"	45°	1-3/4"

Replacement Parts

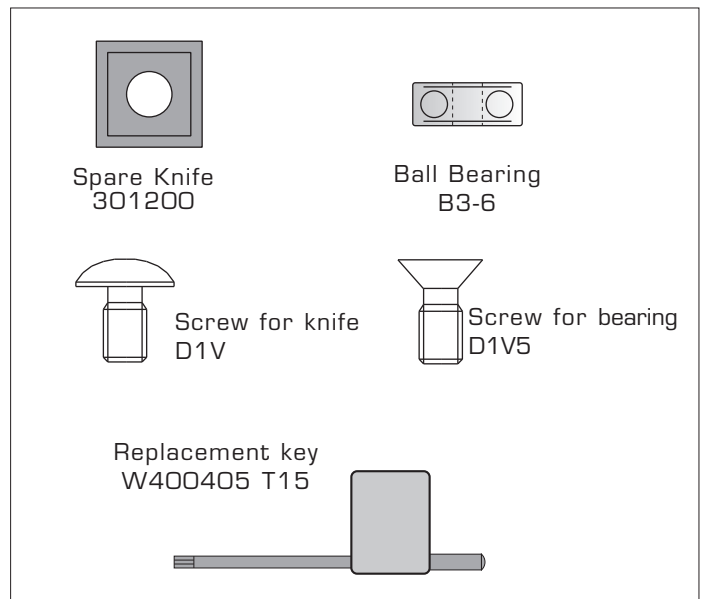
Spare Knife 301200 Screw D1V

D1D
**BEVEL TRIM BITS
WITH BALL BEARING GUIDE TWO FLUTES**


PART NO.	CUTTING DIAM.	CUTTING LENGTH	SHANK DIAM.	DEGREE OF CUT	OVERALL LENGTH
D1D22	24mm	12mm	6mm	22°	55mm
D1D22A	24mm	12mm	1/4"	22°	2-3/16"
D1D30	26mm	12mm	6mm	30°	55mm
D1D30A	26mm	12mm	1/4"	30°	2-3/16"
D1D45	29mm	12mm	6mm	45°	55mm
D1D45A	29mm	12mm	1/4"	45°	2-3/16"

Replacement Parts

 Spare Knife 301200 Ball Bearing B3-6
 Screw for knife D1V Screw for bearing D1V5

D1A:E
REPLACEMENT PARTS


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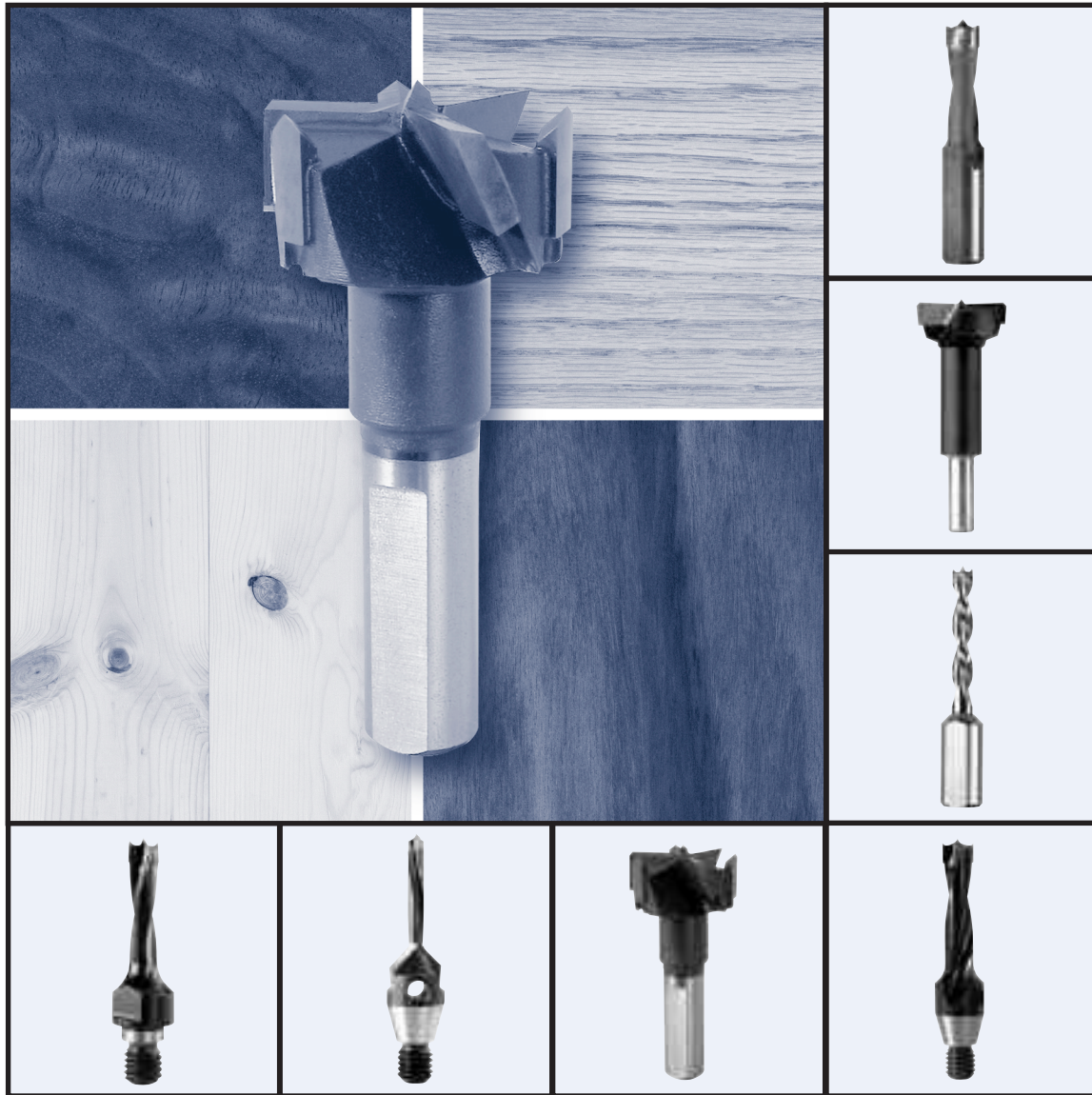
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Brad Point Drills TC Tipped - Standard Production	G4-G7
Brad Point Drills - Solid Carbide	G2, G11
Brad Point Drills TC Tipped - Threaded Shank	G3
Brad Point Drills TC Tipped - 8mm Shank Diam.	G10
Countersinks TC Tipped - Standard Production	G11
Counterbore/Countersinks TC Tipped - Custom Made	G15
Hinge Boring Bits TC Tipped	G12-G14
Hinge Boring Bits with Reversible Inserts	G14
Through Hole Drills TC Tipped - High Precision	G1
Through Hole Drills TC Tipped - Standard Production	G8, G9
Through Hole Drills - Solid Carbide	G2
Through Hole Drills TC Tipped - 8mm Shank Diam.	G10

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D0014L to D0014R	G16	D40M05L to D40M10R	G1	D50HS20L to D50HS40R	G11	D50U	
D0020 to D0040	G11	D40N05L to D40N08R	G1	D50I		D50UL to D50UR	G11
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		D50GL05L to D50GL12R	G5				
		D50GX05L to D50GX12R	G5				

BORING BITS

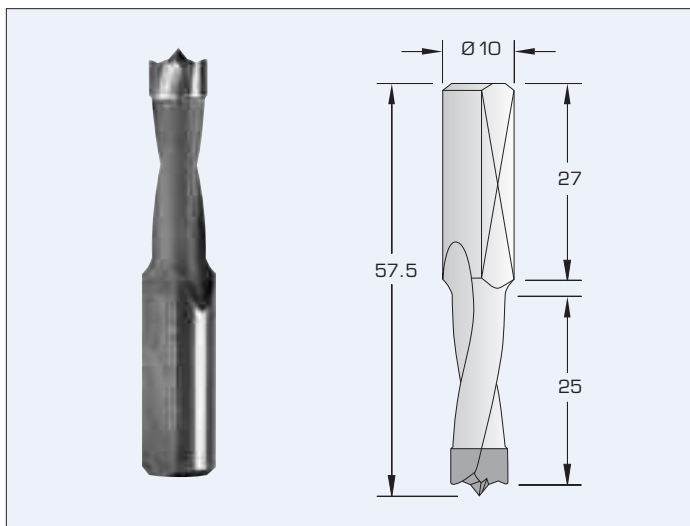


BORING BITS, HINGE BORING BITS, MORTISE BITS

- Carbide tipped, solid carbide and insert type
- Precision made using the latest CNC grinding machines and CNC machining centers
- Bits carefully inspected to ensure constant quality
- Large selection of stock items for immediate delivery
- Special sizes custom manufactured to customer specifications

D40L

HIGH PRECISION DOWEL DRILLS FOR CHIP-FREE HOLE EDGES
SHANK 10mm DIAM. x 27mm LONG

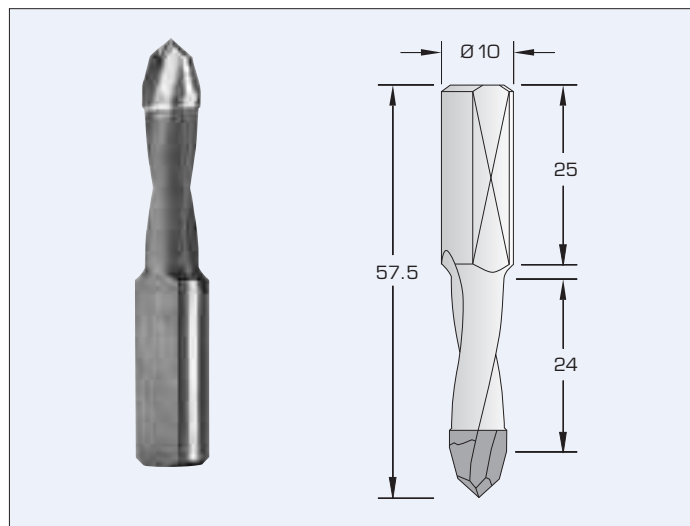


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D40L05L	D40L05R	5	25	57.5
D40L08L	D40L08R	8	25	57.5

- High precision, new cutting geometry for chip-free hole edges
- Tool life increased up to 10 times compared to traditional dowel drills

D40N

HIGH PRECISION THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 25mm LONG

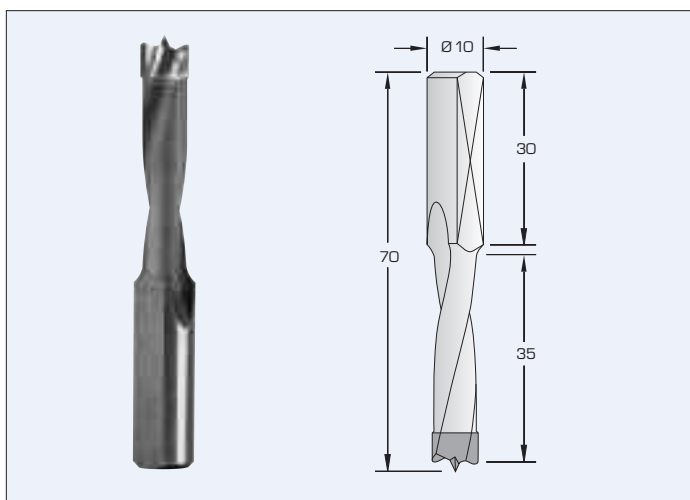


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D40N05L	D40N05R	5	24	57.5
D40N08L	D40N08R	8	24	57.5

- High precision, new cutting geometry for virtually chip-free through holes
- Tool life increased up to 10 times compared to traditional through hole drill bits

D40M

HIGH PRECISION DOWEL DRILLS FOR CHIP-FREE HOLE EDGES
SHANK 10mm DIAM. x 30mm LONG

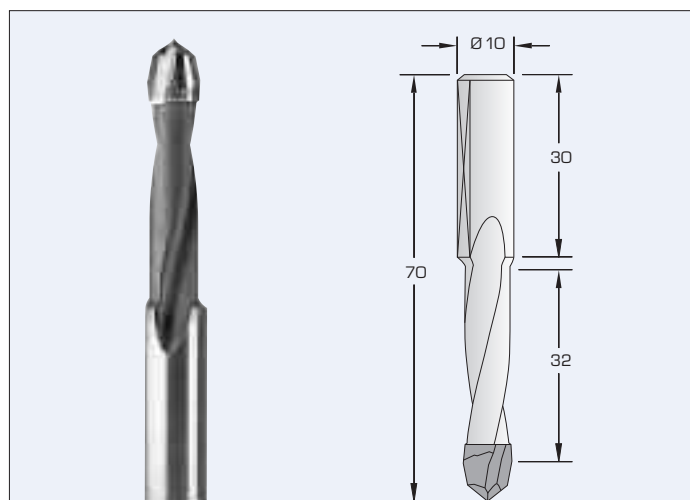


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D40M05L	D40M05R	5	35	70
D40M08L	D40M08R	8	35	70
D40M10L	D40M10R	10	35	70

- High precision, new cutting geometry for chip-free hole edges
- Tool life increased up to 10 times compared to traditional dowel drills

D40Y

HIGH PRECISION THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 30mm LONG

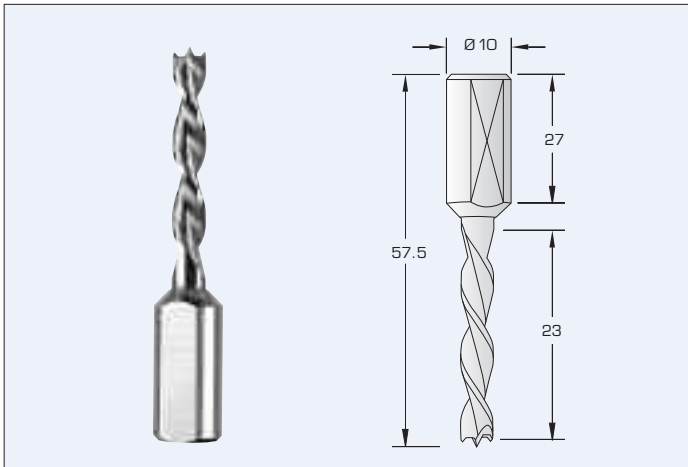


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D40Y05L	D40Y05R	5	32	70
D40Y08L	D40Y08R	8	32	70

- High precision, new cutting geometry for virtually chip-free through holes
- Tool life increased up to 10 times compared to traditional through hole drill bits

D45L

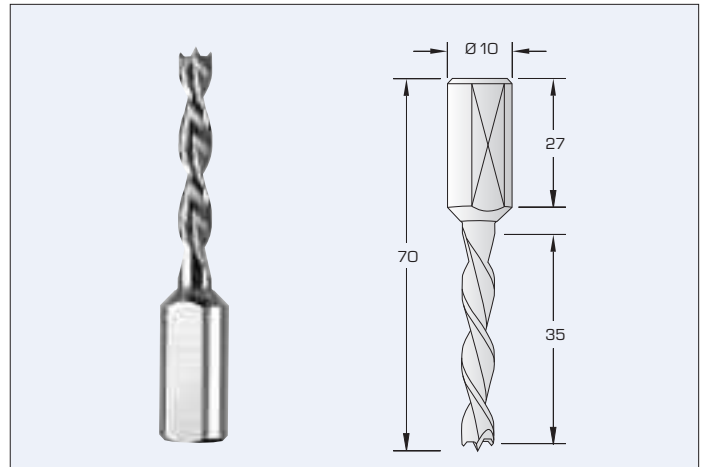
**SOLID CARBIDE
SPECIAL DOWEL DRILL BITS
SHANK 10mm DIAM. x 27mm LONG**



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D45L03L *	D45L03R *	3	13	57.5
D45L04L	D45L04R	4	23	57.5
D45L05L	D45L05R	5	23	57.5
D45L06L	D45L06R	6	23	57.5
D45L08L	D45L08R	8	23	57.5
D45L10L	D45L10R	10	23	57.5
D45L12L	D45L12R	12	23	57.5

D45M

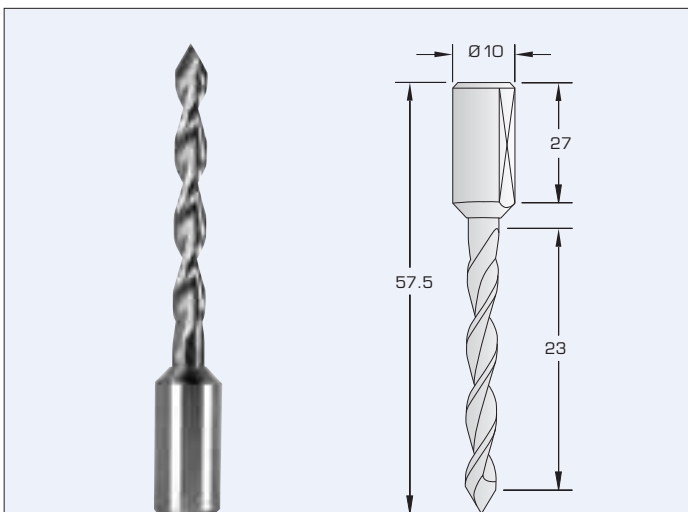
**SOLID CARBIDE
SPECIAL DOWEL DRILL BITS
SHANK 10mm DIAM. x 27mm LONG**



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D45M04L	D45M04R	4	35	70
D45M05L	D45M05R	5	35	70
D45M06L	D45M06R	6	35	70
D45M08L	D45M08R	8	35	70
D45M10L	D45M10R	10	35	70
D45M12L	D45M12R	12	35	70

D45N

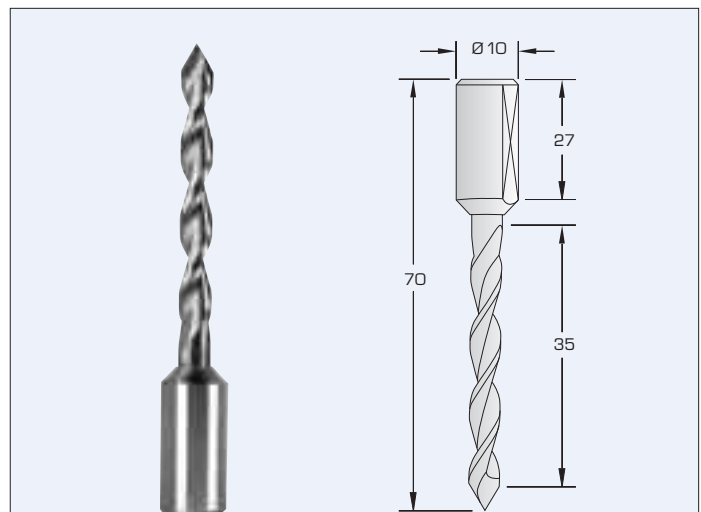
**SOLID CARBIDE
SPECIAL THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 27mm LONG**



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D45N03L	D45N03R	3	23	57.5
D45N04L	D45N04R	4	23	57.5
D45N05L	D45N05R	5	23	57.5
D45N06L	D45N06R	6	23	57.5
D45N08L	D45N08R	8	23	57.5

D45Y

**SOLID CARBIDE
SPECIAL THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 27mm LONG**

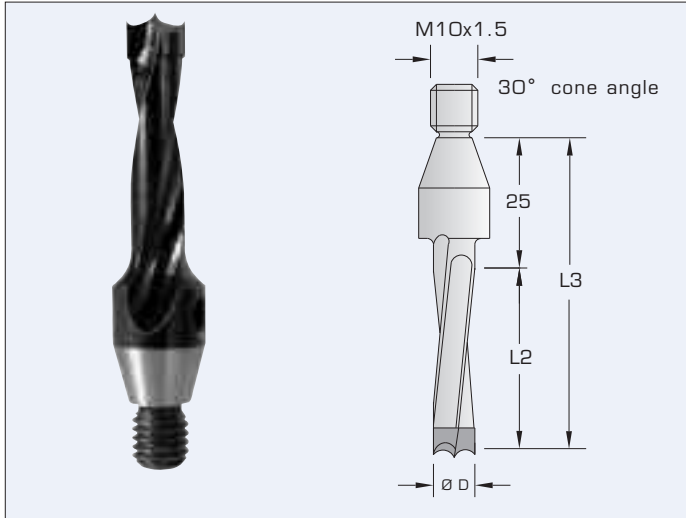


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D45Y04L	D45Y04R	4	35	70
D45Y05L	D45Y05R	5	35	70
D45Y06L	D45Y06R	6	35	70
D45Y08L	D45Y08R	8	35	70

* Shank 10mm DIAM. x 39mm LONG x 13mm C.L.

D50P

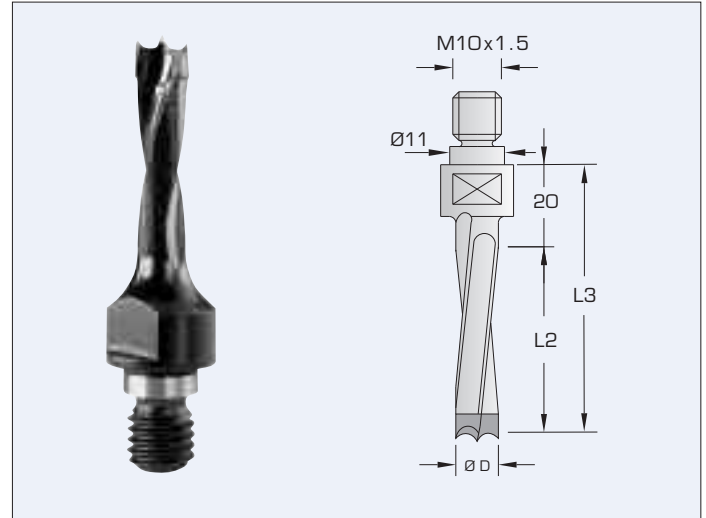
DOWEL DRILL BITS THREADED SHANK



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	L2 mm	L3 mm
D50P05L	D50P05R	5	40	65
D50P06L	D50P06R	6	40	65
D50P08L	D50P08R	8	40	65
D50P10L	D50P10R	10	40	65
D50P12L	D50P12R	12	40	65
D50P14L	D50P14R	14	40	65

D50R

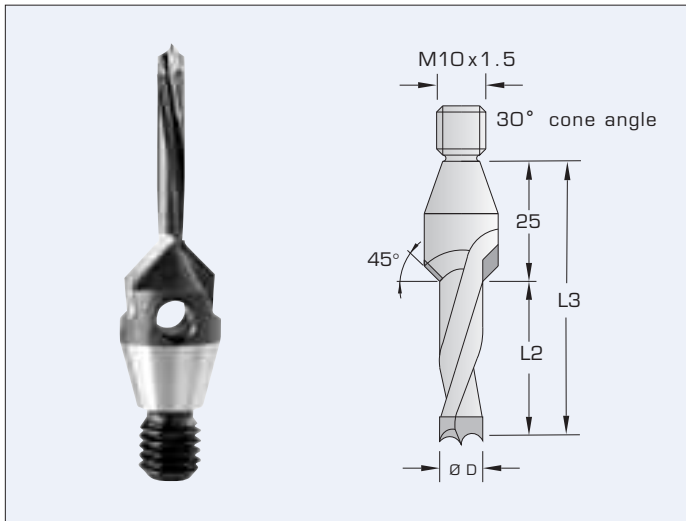
DOWEL DRILL BITS THREADED SHANK



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	L2 mm	L3 mm
D50R05L	D50R05R	5	40	60
D50R06L	D50R06R	6	40	60
D50R08L	D50R08R	8	40	60
D50R10L	D50R10R	10	40	60
D50R12L	D50R12R	12	40	60
D50R14L	D50R14R	14	40	60

D50PS

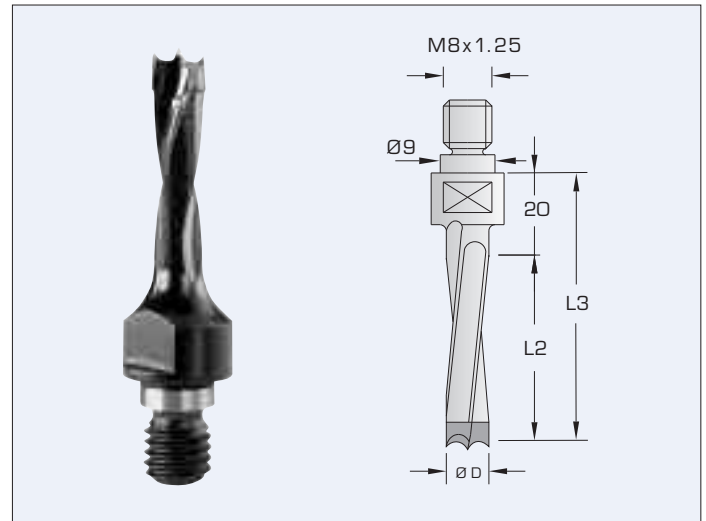
DOWEL DRILL BITS WITH COUNTER- SINK THREADED SHANK



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	L2 mm	L3 mm
D50PS05L	D50PS05R	5	25	50
D50PS06L	D50PS06R	6	25	50
D50PS08L	D50PS08R	8	25	50
D50PS10L	D50PS10R	10	25	50
D50PS12L	D50PS12R	12	25	50
D50PS14L	D50PS14R	14	25	50

D50RM

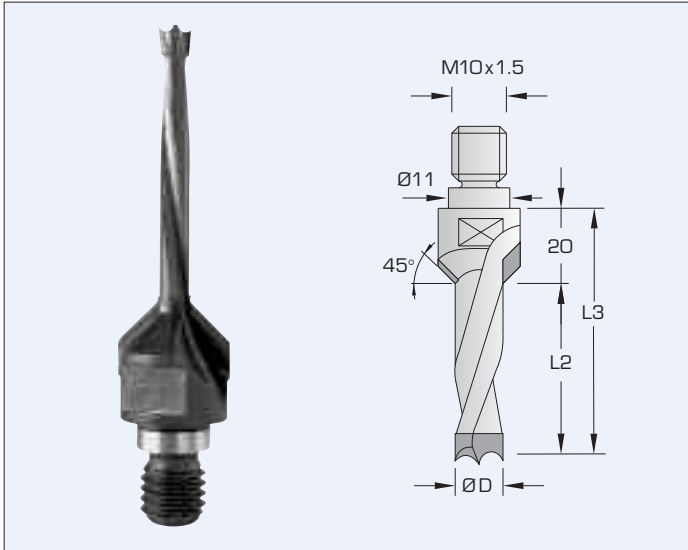
DOWEL DRILL BITS THREADED SHANK



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	L2 mm	L3 mm
D50RM04L	D50RM04R	4	40	60
D50RM05L	D50RM05R	5	40	60
D50RM06L	D50RM06R	6	40	60
D50RM08L	D50RM08R	8	40	60
D50RM10L	D50RM10R	10	40	60
D50RM12L	D50RM12R	12	40	60

D50RS

DOWEL DRILL BITS WITH COUNTER-SINK THREADED SHANK



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	L2 mm	L3 mm
D50RS05L	D50RS05R	5	25	60
D50RS06L	D50RS06R	6	25	60
D50RS08L	D50RS08R	8	25	60
D50RS10L	D50RS10R	10	25	60
D50RS12L	D50RS12R	12	25	60
D50RS14L	D50RS14R	14	25	60

D50E

DOWEL DRILLS SHANK 10mm DIAM. x 20mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50E05L	D50E05R	5	25	50
D50E06L	D50E06R	6	25	50
D50E07L	D50E07R	7	25	50
D50E08L	D50E08R	8	25	50
D50E09L	D50E09R	9	25	50
D50E10L	D50E10R	10	25	50
D50E11L	D50E11R	11	25	50
D50E12L	D50E12R	12	25	50
D50E14L	D50E14R	14	25	50
D50E1/4L	D50E1/4R	1/4"	25	50
D50E3/8L	D50E3/8R	3/8"	25	50
D50E1/2L	D50E1/2R	1/2"	25	50

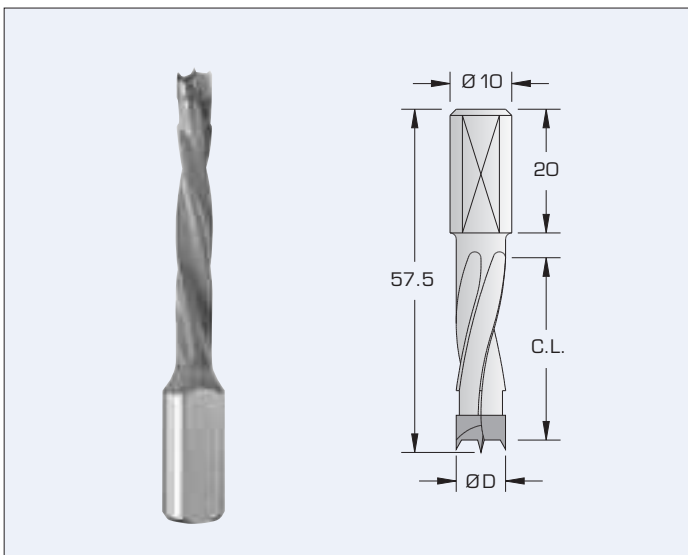
D50F

DOWEL DRILLS SHANK 10mm DIAM. x 20mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50F04L	D50F04R	4	30	57.5
D50F05L	D50F05R	5	30	57.5
D50F052L	D50F052R	5.2	30	57.5
D50F055L	D50F055R	5.5	30	57.5
D50F06L	D50F06R	6	30	57.5
D50F065L	D50F065R	6.5	30	57.5
D50F067L	D50F067R	6.7	30	57.5
D50F07L	D50F07R	7	30	57.5
D50F08L	D50F08R	8	30	57.5
D50F08L-H	D50F08R-H	8	23	45
D50F082L	D50F082R	8.2	30	57.5
D50F09L	D50F09R	9	30	57.5
D50F10L	D50F10R	10	30	57.5
D50F11L	D50F11R	11	30	57.5
D50F12L	D50F12R	12	30	57.5
D50F14L	D50F14R	14	30	57.5
D50F15L	D50F15R	15	30	57.5
D50F16L	D50F16R	16	30	57.5
D50F3/16L	D50F3/16R	3/16"	30	57.5
D50F1/4L	D50F1/4R	1/4"	30	57.5
D50F3/8L	D50F3/8R	3/8"	30	57.5
D50F1/2L	D50F1/2R	1/2"	30	57.5
D50F5/8L	D50F5/8R	5/8"	30	57.5

D50E:F

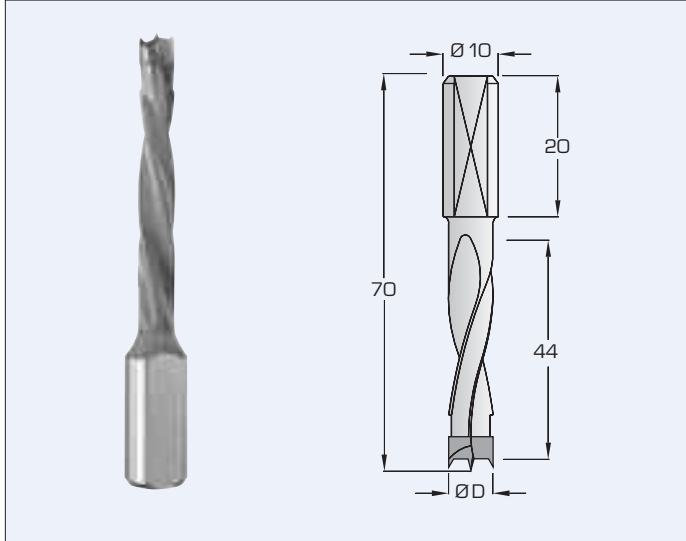
DOWEL DRILLS SHANK 10mm DIAM. x 20mm LONG



D50E:F Cont'd...

D50G

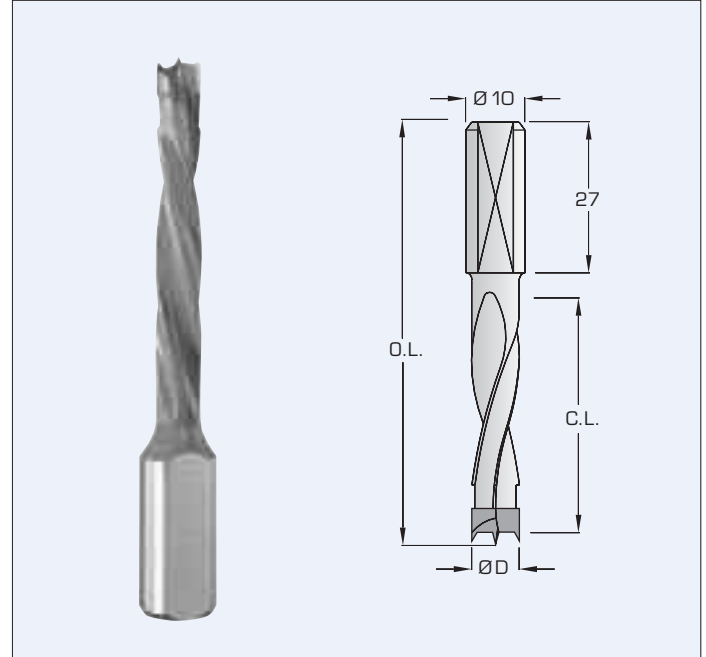
DOWEL DRILLS
SHANK 10mm DIAM. x 20mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50G04L	D50G04R	4	44	70
D50G05L	D50G05R	5	44	70
D50G052L	D50G052R	5.2	44	70
D50G055L	D50G055R	5.5	44	70
D50G06L	D50G06R	6	44	70
D50G065L	D50G065R	6.5	44	70
D50G067L	D50G067R	6.7	44	70
D50G07L	D50G07R	7	44	70
D50G075L	D50G075R	7.5	44	70
D50G079L	D50G079R	7.9	44	70
D50G08L	D50G08R	8	44	70
D50G09L	D50G09R	9	44	70
D50G10L	D50G10R	10	44	70
D50G11L	D50G11R	11	44	70
D50G12L	D50G12R	12	44	70
D50G13L	D50G13R	13	44	70
D50G14L	D50G14R	14	44	70
D50G15L	D50G15R	15	44	70
D50G16L	D50G16R	16	44	70
D50G17L	D50G17R	17	44	70
D50G3/16L	D50G3/16R	3/16"	44	70
D50G1/4L	D50G1/4R	1/4"	44	70
D50G3/8L	D50G3/8R	3/8"	44	70
D50G7/16L	D50G7/16R	7/16"	44	70
D50G1/2L	D50G1/2R	1/2"	44	70
D50G5/8L	D50G5/8R	5/8"	44	70

D50GL:X

DOWEL DRILLS
SHANK 10mm DIAM. x 27mm LONG



D50GL

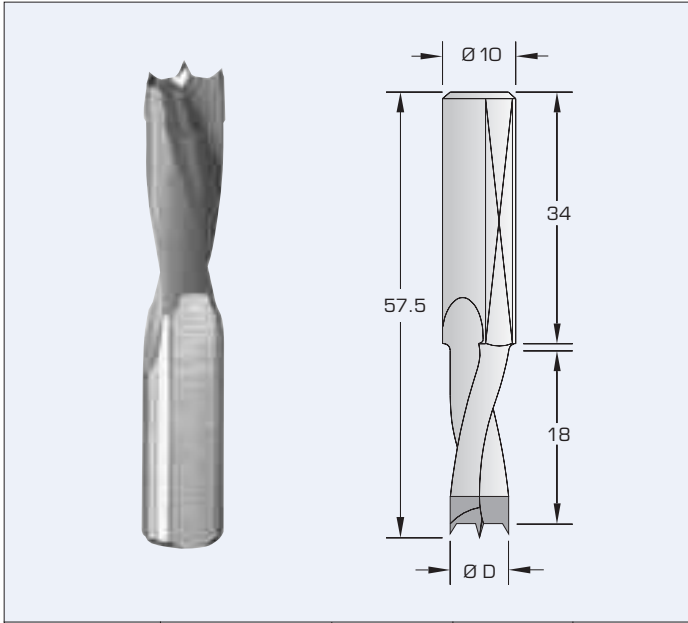
DOWEL DRILLS
SHANK 10mm DIAM. x 27mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50GL05L	D50GL05R	5	50	85
D50GL06L	D50GL06R	6	50	85
D50GL08L	D50GL08R	8	50	85
D50GL10L	D50GL10R	10	50	85
D50GL12L	D50GL12R	12	50	85

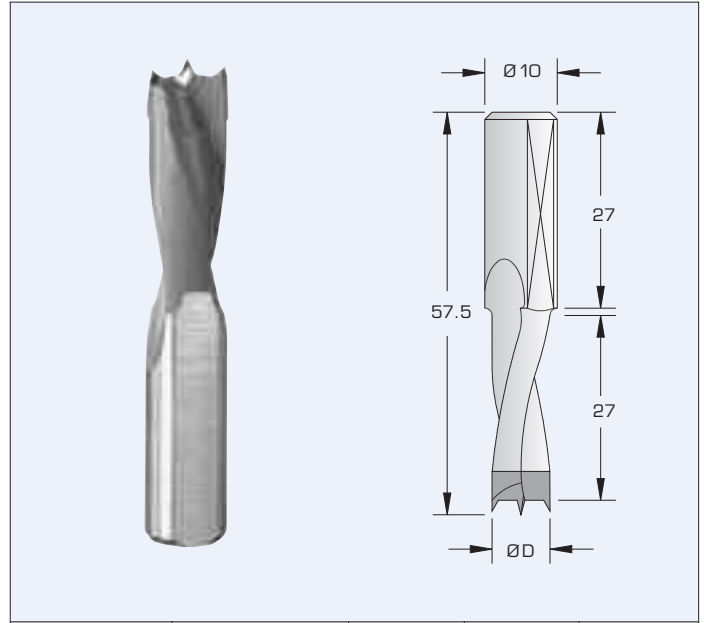
D50GX

DOWEL DRILLS
SHANK 10mm DIAM. x 27mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50GX05L	D50GX05R	5	70	105
D50GX06L	D50GX06R	6	70	105
D50GX08L	D50GX08R	8	70	105
D50GX10L	D50GX10R	10	70	105
D50GX12L	D50GX12R	12	70	105

D50I**DOWEL DRILLS
SHANK 10mm DIAM. x 34mm LONG**

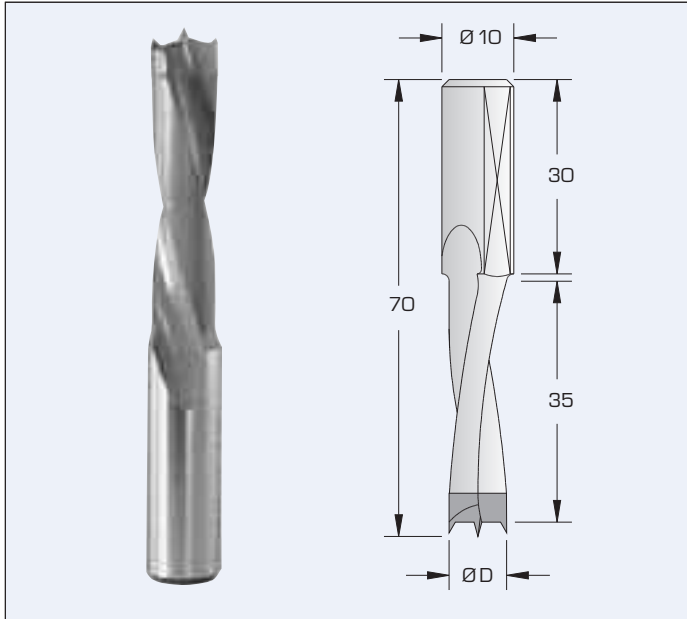
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50I05L	D50I05R	5	18	57.5
D50I06L	D50I06R	6	18	57.5
D50I07L	D50I07R	7	18	57.5
D50I08L	D50I08R	8	18	57.5
D50I10L	D50I10R	10	18	57.5

**D50L****DOWEL DRILLS
SHANK 10mm DIAM. x 27mm LONG**

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50L04L	D50L04R	4	27	57.5
D50L05L	D50L05R	5	27	57.5
D50L052L	D50L052R	5.2	27	57.5
D50L055L	D50L055R	5.5	27	57.5
D50L06L	D50L06R	6	27	57.5
D50L07L	D50L07R	7	27	57.5
D50L08L	D50L08R	8	27	57.5
D50L082L	D50L082R	8.2	27	57.5
D50L09L	D50L09R	9	27	57.5
D50L10L	D50L10R	10	27	57.5
D50L11L	D50L11R	11	27	57.5
D50L12L	D50L12R	12	27	57.5
D50L13L	D50L13R	13	27	57.5
D50L14L	D50L14R	14	27	57.5
D50L15L	D50L15R	15	27	57.5
D50L16L	D50L16R	16	27	57.5
D50L1/4L	D50L1/4R	1/4"	27	57.5
D50L3/8L	D50L3/8R	3/8"	27	57.5
D50L1/2L	D50L1/2R	1/2"	27	57.5
D50L5/8L	D50L5/8R	5/8"	27	57.5

D50M

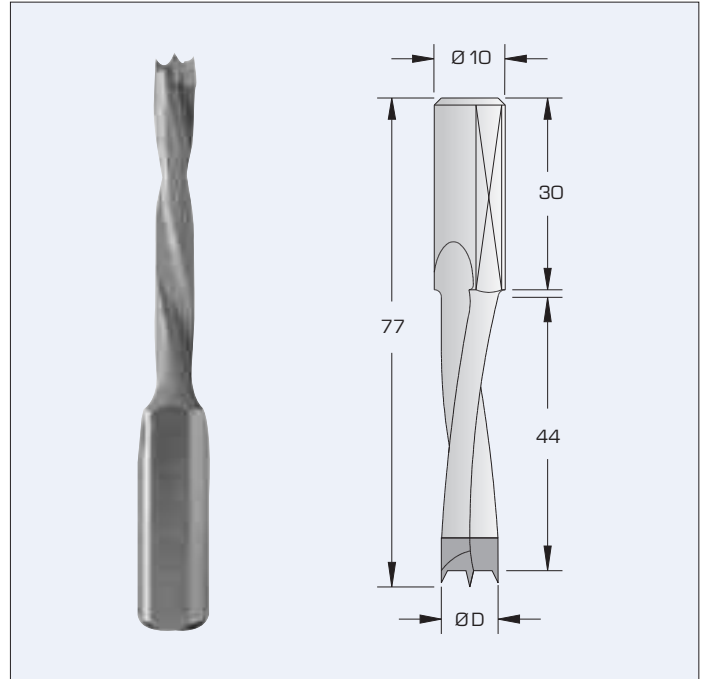
DOWEL DRILLS
SHANK 10mm DIAM. x 30mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50M04L	D50M04R	4	35	70
D50M05L	D50M05R	5	35	70
D50M055L	D50M055R	5.5	35	70
D50M06L	D50M06R	6	35	70
D50M07L	D50M07R	7	35	70
D50M08L	D50M08R	8	35	70
D50M082L	D50M082R	8.2	35	70
D50M09L	D50M09R	9	35	70
D50M10L	D50M10R	10	35	70
D50M11L	D50M11R	11	35	70
D50M12L	D50M12R	12	35	70
D50M13L	D50M13R	13	35	70
D50M14L	D50M14R	14	35	70
D50M15L	D50M15R	15	35	70
D50M16L	D50M16R	16	35	70
D50M1/4L	D50M1/4R	1/4"	35	70
D50M3/8L	D50M3/8R	3/8"	35	70
D50M1/2L	D50M1/2R	1/2"	35	70
D50M5/8L	D50M5/8R	5/8"	35	70

D50W

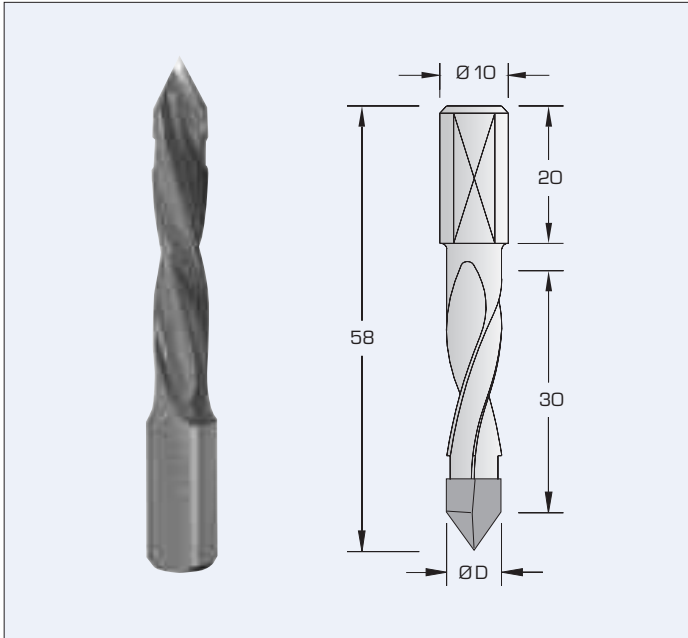
DOWEL DRILLS
SHANK 10mm DIAM. x 30mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50W04L	D50W04R	4	44	77
D50W05L	D50W05R	5	44	77
D50W06L	D50W06R	6	44	77
D50W07L	D50W07R	7	44	77
D50W08L	D50W08R	8	44	77
D50W09L	D50W09R	9	44	77
D50W10L	D50W10R	10	44	77
D50W11L	D50W11R	11	44	77
D50W12L	D50W12R	12	44	77

D50H

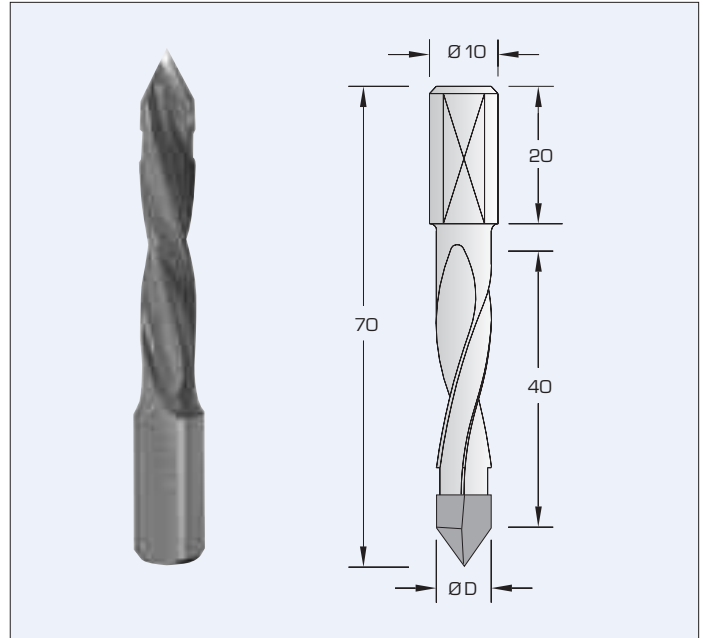
THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 20mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50H04L	D50H04R	4	30	58
D50H05L	D50H05R	5	30	58
D50H06L	D50H06R	6	30	58
D50H07L	D50H07R	7	30	58
D50H08L	D50H08R	8	30	58
D50H09L	D50H09R	9	30	58
D50H10L	D50H10R	10	30	58
D50H12L	D50H12R	12	30	58
D50H1/4L	D50H1/4R	1/4"	30	58
D50H3/8L	D50H3/8R	3/8"	30	58
D50H7/16L	D50H7/16R	7/16"	30	58

D50K

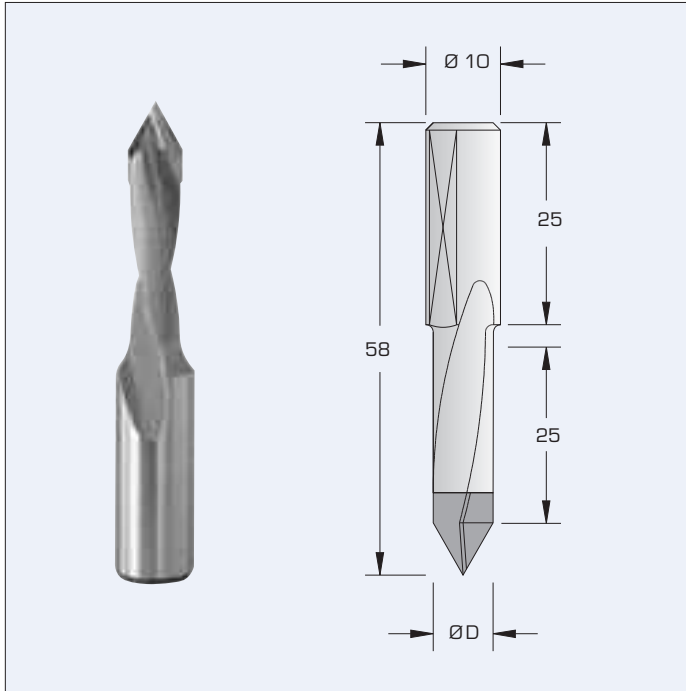
THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 20mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50K04L	D50K04R	4	40	70
D50K045L	D50K045R	4.5	40	70
D50K0483L	D50K0483R	4.83	40	70
D50K05L	D50K05R	5	40	70
D50K055L	D50K055R	5.5	40	70
D50K06L	D50K06R	6	40	70
D50K065L	D50K065R	6.5	40	70
D50K07L	D50K07R	7	40	70
D50K08L	D50K08R	8	40	70
D50K09L	D50K09R	9	40	70
D50K10L	D50K10R	10	40	70
D50K11L	D50K11R	11	40	70
D50K12L	D50K12R	12	40	70
D50K1/4L	D50K1/4R	1/4"	40	70
D50K3/8L	D50K3/8R	3/8"	40	70
D50K7/16L	D50K7/16R	7/16"	40	77
D50K1/2L	D50K1/2R	1/2"	40	70

D50N

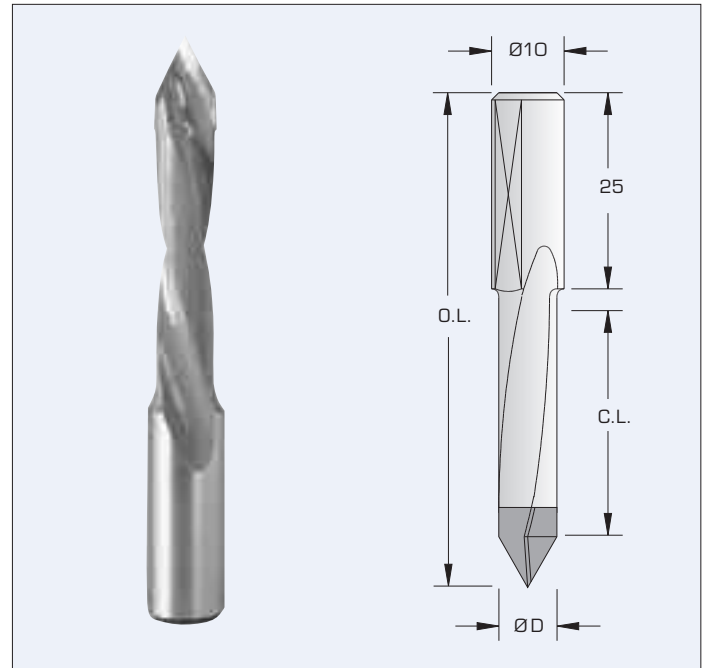
THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 25mm LONG



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50N04L	D50N04R	4	25	58
D50N05L	D50N05R	5	25	58
D50N06L	D50N06R	6	25	58
D50N07L	D50N07R	7	25	58
D50N08L	D50N08R	8	25	58
D50N10L	D50N10R	10	25	58
D50N12L	D50N12R	12	25	58

D50Y:Z

THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 25mm LONG



D50Y

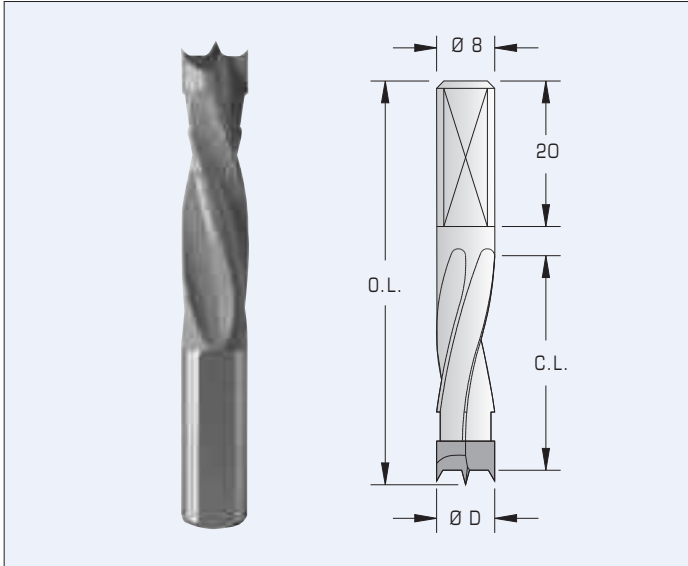
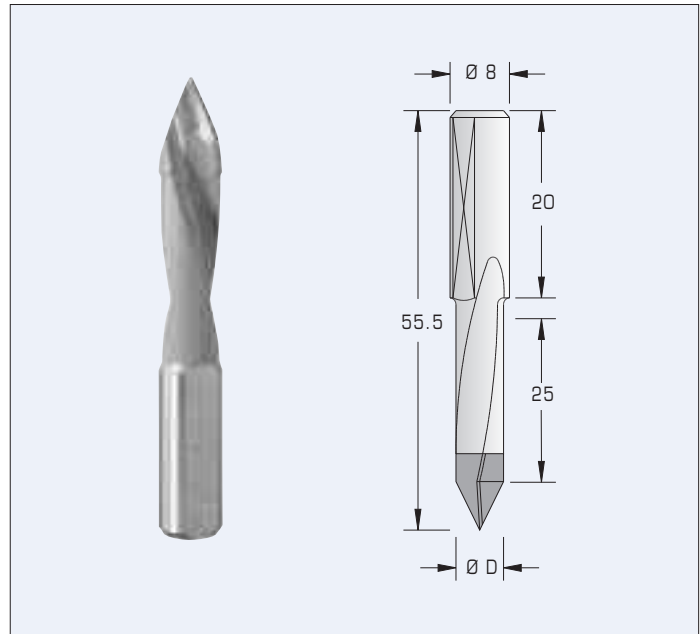
THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 25mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50Y04L	D50Y04R	4	35	70
D50Y05L	D50Y05R	5	35	70
D50Y06L	D50Y06R	6	35	70
D50Y07L	D50Y07R	7	35	70
D50Y08L	D50Y08R	8	35	70
D50Y09L	D50Y09R	9	35	70
D50Y10L	D50Y10R	10	35	70
D50Y11L	D50Y11R	11	35	70
D50Y12L	D50Y12R	12	35	70

D50Z

THROUGH HOLE DRILL BITS
SHANK 10mm DIAM. x 25mm LONG

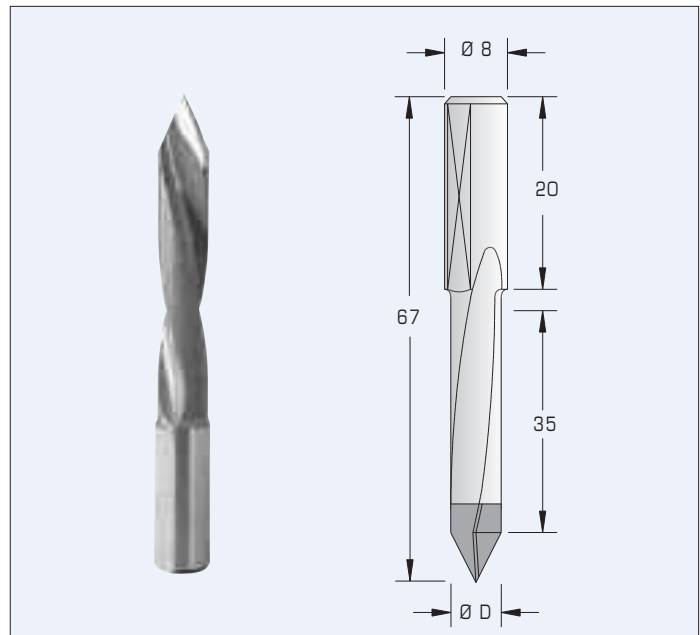
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50Z05L	D50Z05R	5	45	77
D50Z052L	D50Z052R	5.2	45	77
D50Z06L	D50Z06R	6	45	77
D50Z08L	D50Z08R	8	45	77
D50Z10L	D50Z10R	10	45	77
D50Z12L	D50Z12R	12	45	77

D50A:B
DOWEL DRILL BITS
SHANK 8mm DIAM. x 20mm LONG

D50C
THROUGH HOLE DRILL BITS
SHANK 8mm DIAM. x 20mm LONG


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50C05L	D50C05R	5	25	55.5
D50C08L	D50C08R	8	25	55.5

D50A
DOWEL DRILL BITS
SHANK 8mm DIAM. x 20mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50A05L	D50A05R	5	30	55.5
D50A06L	D50A06R	6	30	55.5
D50A07L	D50A07R	7	30	55.5
D50A08L	D50A08R	8	30	55.5
D50A09L	D50A09R	9	30	55.5
D50A10L	D50A10R	10	30	55.5
D50A11L	D50A11R	11	30	55.5
D50A12L	D50A12R	12	30	55.5

D50D
THROUGH HOLE DRILL BITS
SHANK 8mm DIAM. x 20mm LONG


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50D05L	D50D05R	5	35	67
D50D08L	D50D08R	8	35	67

D50B
DOWEL DRILL BITS
SHANK 8mm DIAM. x 20mm LONG

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	CUTTING LENGTH	OVERALL LENGTH
D50B05L	D50B05R	5	40	67
D50B06L	D50B06R	6	40	67
D50B07L	D50B07R	7	40	67
D50B08L	D50B08R	8	40	67
D50B09L	D50B09R	9	40	67
D50B10L	D50B10R	10	40	67
D50B11L	D50B11R	11	40	67
D50B12L	D50B12R	12	40	67

D50HS HIGH PRECISION SOLID CARBIDE DRILL BITS



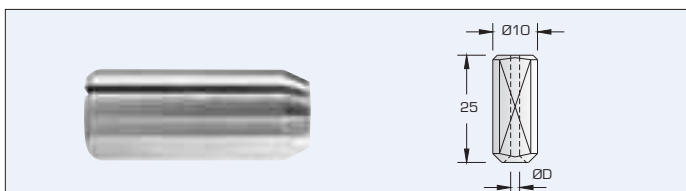
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ØD mm	CL mm	L mm
D50HS20L	D50HS20R	2	20	49
D50HS25L	D50HS25R	2.5	25	55
D50HS30L	D50HS30R	3	25	55
D50HS32L	D50HS32R	3.2	25	55
D50HS35L	D50HS35R	3.5	25	55
D50HS40L	D50HS40R	4	25	55

D0020 DRILL ADAPTORS WITH RETAINING SCREW



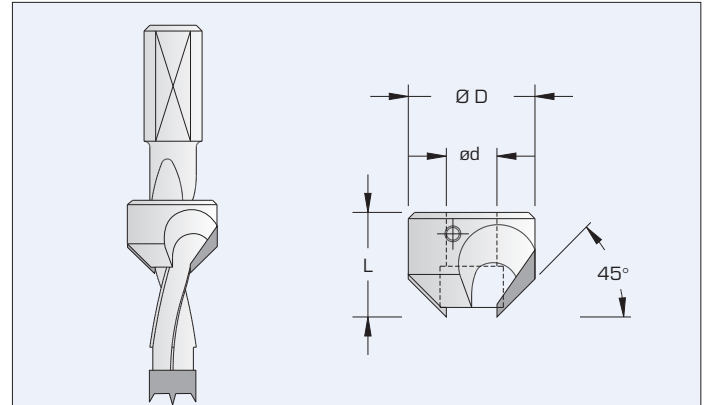
PART NO. LEFT-HAND	ØD mm	SHANK SIZE	OVERALL LENGTH
D0020	2	10x20	35
D0025	2.5	10x20	35
D0030	3	10x20	35
D0032	3.2	10x20	35
D0035	3.5	10x20	35
D0040	4	10x20	35

D00520 DRILL BUSHINGS "SPLIT" TYPE



PART NO. LEFT-HAND	ØD mm	OUTSIDE DIAM.	OVERALL LENGTH
D00520	2	10	25
D00525	2.5	10	25
D00530	3	10	25
D00532	3.2	10	25
D00535	3.5	10	25
D00540	4	10	25

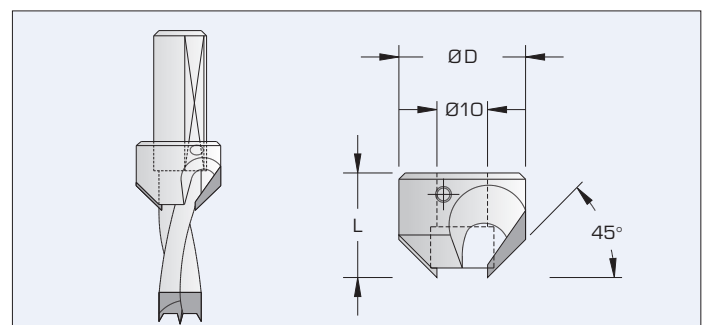
D50S COUNTERSINKS CARBIDE TIPPED



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	ød mm	ØD mm	L mm
D50S04L	D50S04R	4	14	12
D50S05L	D50S05R	5	14	12
D50S06L	D50S06R	6	16	14
D50S07L	D50S07R	7	16	14
D50S08L	D50S08R	8	16	16
D50S09L	D50S09R	9	18	16
D50S10L	D50S10R	10	20	18
D50S11L	D50S11R	11	20	18
D50S12L	D50S12R	12	20	18
D50S1/4L	D50S1/4R	1/4"	16	14

D50S Type mounts on twist part of drill bits.
Mounts on following drill types;
D50A, D50B, D50C, D50D, D50E, D50F, D50G, D50GL, D50GX, D50H, D50K

D50T:D50U COUNTERSINKS CARBIDE TIPPED

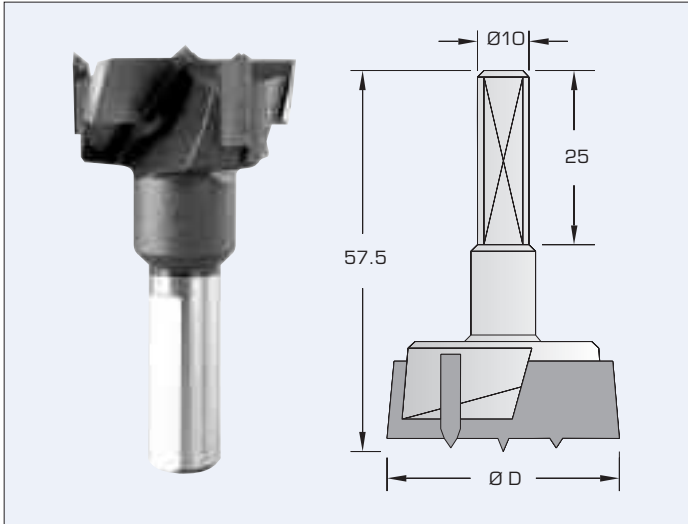


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	FOR DRILL DIAM. mm	ØD mm	L mm
D50TL	D50TR	4-10	20	15
D50UL	D50UR	11-12	22	16

D50T - D50U Type mounts on shank of drill bits.
Mounts on following drill types;
D50I, D50L, D50M, D50N, D50W, D50Y, D50Z

D14A

HINGE BORING BITS 2 TEETH + 2 SPURS

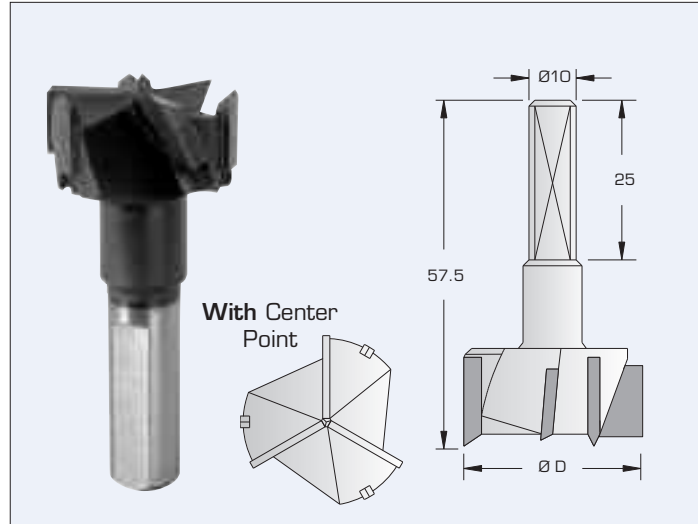


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14A15L	D14A15R	15	10	57.5
D14A16L	D14A16R	16	10	57.5
D14A18L	D14A18R	18	10	57.5
D14A20L	D14A20R	20	10	57.5
D14A22L	D14A22R	22	10	57.5
D14A24L	D14A24R	24	10	57.5
D14A25L	D14A25R	25	10	57.5
D14A26L	D14A26R	26	10	57.5
D14A28L	D14A28R	28	10	57.5
D14A30L	D14A30R	30	10	57.5
D14A30L-H*	D14A30R-H*	30	10	47
D14A32L	D14A32R	32	10	57.5
D14A34L	D14A34R	34	10	57.5
D14A35L	D14A35R	35	10	57.5
D14A35L-H*	D14A35R-H*	35	10	47
D14A36L	D14A36R	36	10	57.5
D14A38L	D14A38R	38	10	57.5
D14A40L	D14A40R	40	10	57.5
D14A5/8L	D14A5/8R	5/8"	10	57.5
D14A3/4L	D14A3/4R	3/4"	10	57.5
D14A7/8L	D14A7/8R	7/8"	10	57.5

* Fits Holz-Her Machines

D14B

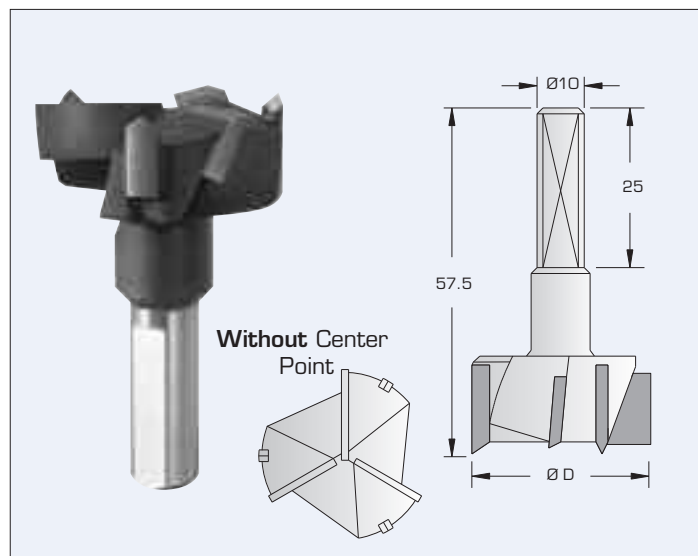
HINGE BORING BITS 3 TEETH + 3 SPURS



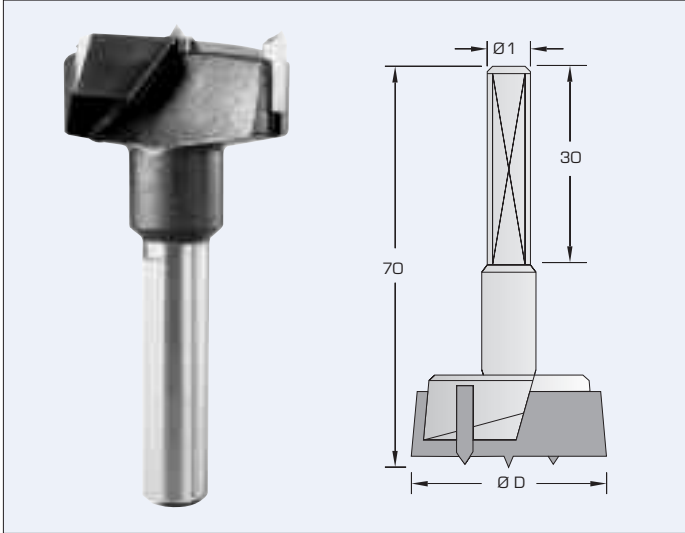
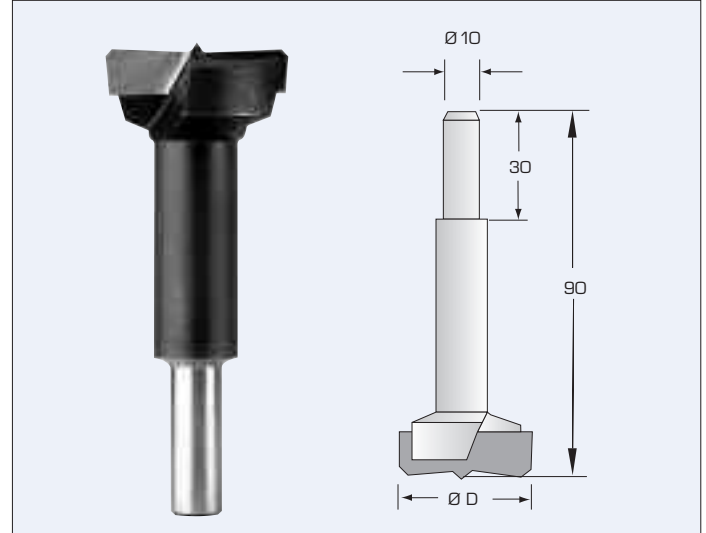
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14B25L	D14B25R	25	10	57.5
D14B30L	D14B30R	30	10	57.5
D14B35L	D14B35R	35	10	57.5
D14B40L	D14B40R	40	10	57.5

D14H

HINGE BORING BITS 3 TEETH + 3 SPURS



PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14H25L	D14H25R	25	10	57.5
D14H30L	D14H30R	30	10	57.5
D14H35L	D14H35R	35	10	57.5
D14H40L	D14H40R	40	10	57.5

D15:16A
**HINGE BORING BITS
2 TEETH + 2 SPURS**

D14C
**HINGE BORING BITS
2 TEETH (WITHOUT SPURS)**

D15A
**HINGE BORING BITS
2 TEETH + 2 SPURS**

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D15A15L	D15A15R	15	10	70
D15A20L	D15A20R	20	10	70
D15A25L	D15A25R	25	10	70
D15A26L	D15A26R	26	10	70
D15A30L	D15A30R	30	10	70
D15A35L	D15A35R	35	10	70
D15A9/16L	D15A9/16R	9/16"	10	70
D15A3/4L	D15A3/4R	3/4"	10	70

PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14C15	15	10	90
D14C20	20	10	90
D14C25	25	10	90
D14C28	28	10	90
D14C30	30	10	90
D14C35	35	10	90
D14C38	38	10	90
D14C40	40	10	90

D16A
**HINGE BORING BITS
2 TEETH + 2 SPURS**

PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D16A15L	D16A15R	15	10	77
D16A20L	D16A20R	20	10	77
D16A25L	D16A25R	25	10	77
D16A26L	D16A26R	26	10	77
D16A30L	D16A30R	30	10	77
D16A35L	D16A35R	35	10	77

Design

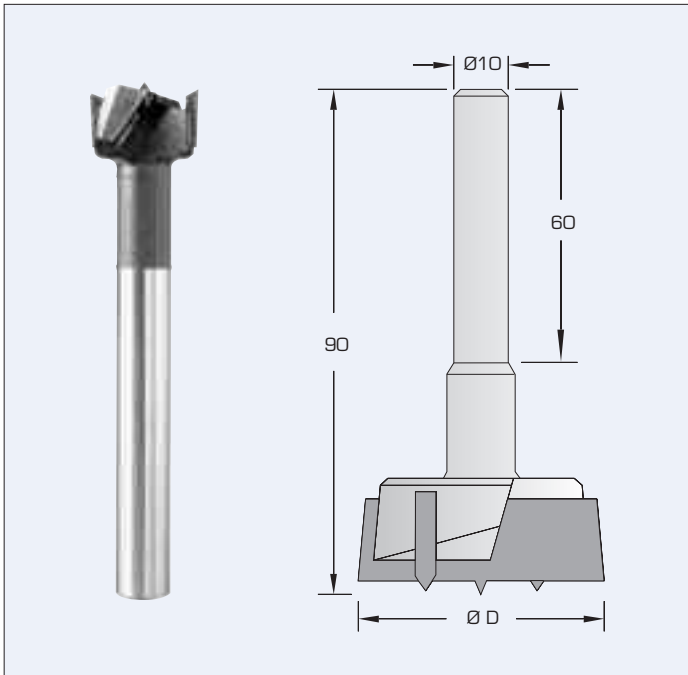
- Two teeth (without spurs)
- Tapered sides
- Cylindrical shank (10x30mm)
(No flat on shank)

Application

- For through boring hole

D14D

HINGE BORING BITS 2 TEETH + 2 SPURS

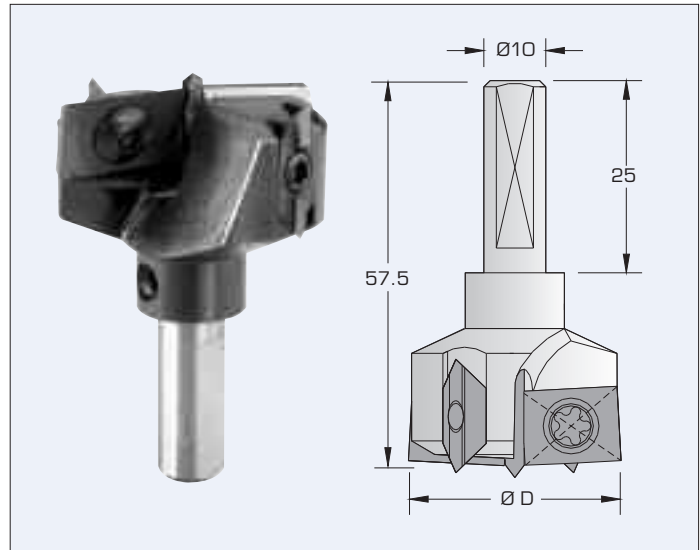


PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14D15	15	10	90
D14D16	16	10	90
D14D18	18	10	90
D14D20	20	10	90
D14D22	22	10	90
D14D24	24	10	90
D14D25	25	10	90
D14D26	26	10	90
D14D28	28	10	90
D14D30	30	10	90
D14D32	32	10	90
D14D34	34	10	90
D14D35	35	10	90
D14D35L *	35	10	90
D14D36	36	10	90
D14D38	38	10	90
D14D40	40	10	90
D14D5/8	5/8"	10	90
D14D3/4	3/4"	10	90

*(Left Hand Rotation)

D14E

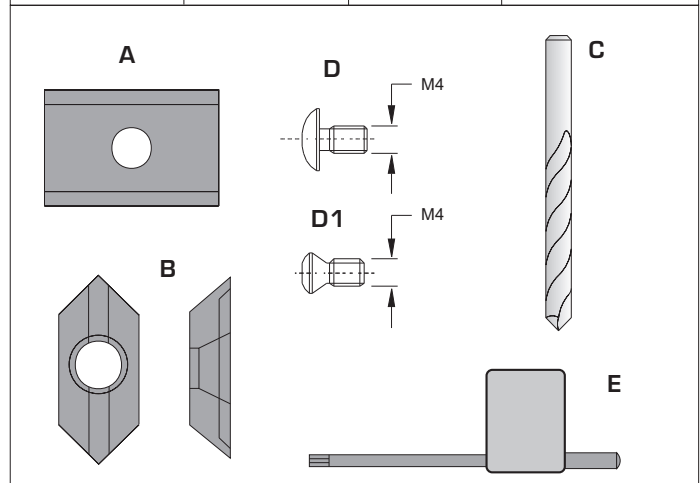
HINGE BORING BITS WITH REVERSIBLE INSERTS 2 TEETH + 2 SPURS



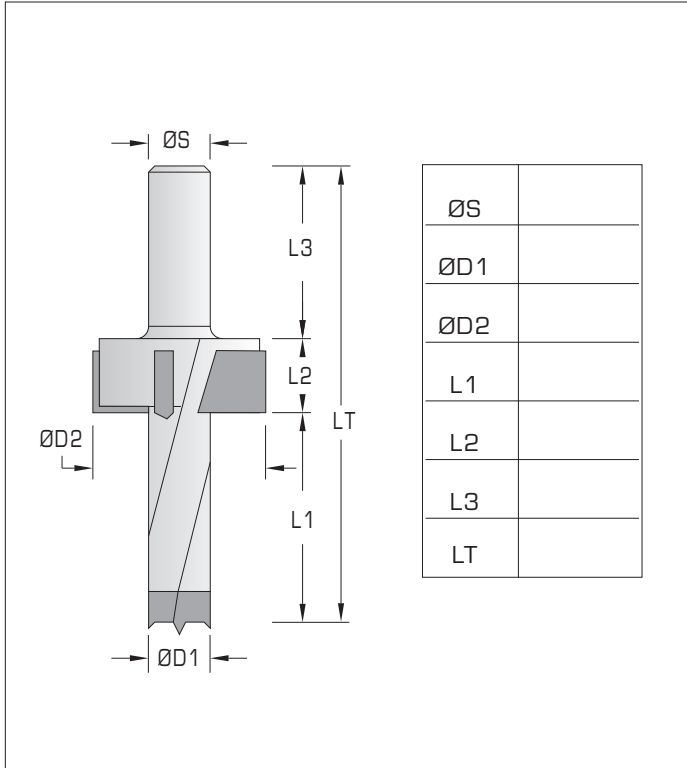
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	CUTTING DIAM.	SHANK DIAM.	OVERALL LENGTH
D14E25L	D14E25R	25	10	57.5
D14E26L	D14E26R	26	10	57.5
D14E30L	D14E30R	30	10	57.5
D14E35L	D14E35R	35	10	57.5
D14E40L	D14E40R	40	10	57.5

REPLACEMENT PARTS AND KNIVES

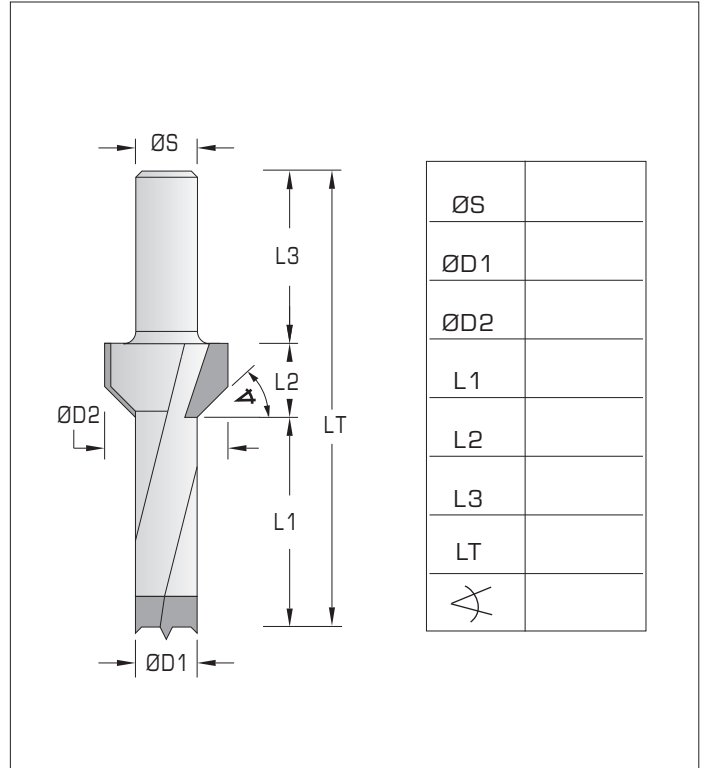
PART NO. LH	PART NO. RH	CUTTING DIAM.	PART TYPE
D14E25A	D14E25A	25	A INSERT
D14E26A	D14E26A	26	A INSERT
D14E30A	D14E30A	30	A INSERT
D14E35A	D14E35A	35	A INSERT
D14E40A	D14E40A	40	A INSERT
D14E40B	D14E40B	25:40	B SPUR
D14E40CL	D14E40CR	25:40	C CENT.POINT
D14EM4F	D14EM4F	25:40	D SCREW
D14EM4T	D14EM4T	25:40	D1 SCREW
W400405	W400405	25:40	E Wrench T15



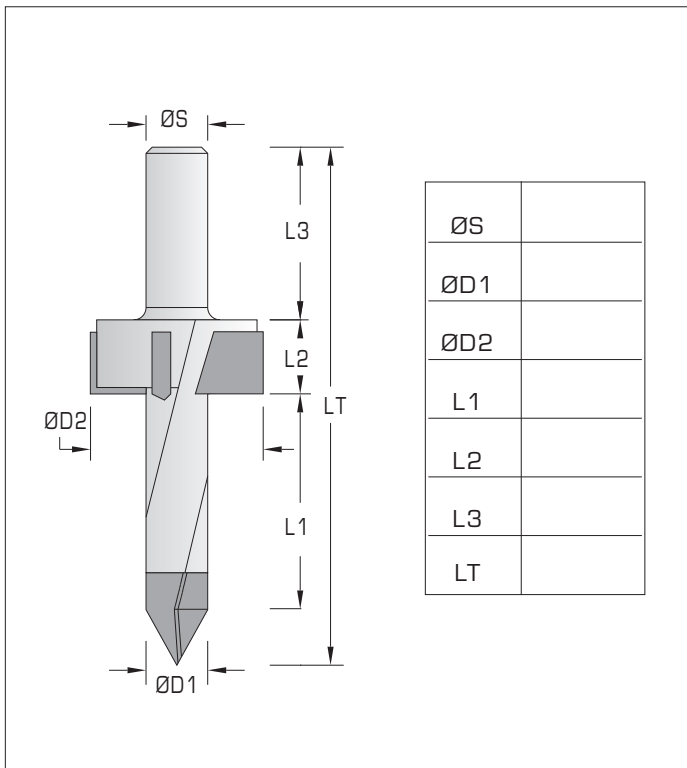
D60F1 COUNTERBORE BITS WITH BRAD POINT DRILL BIT



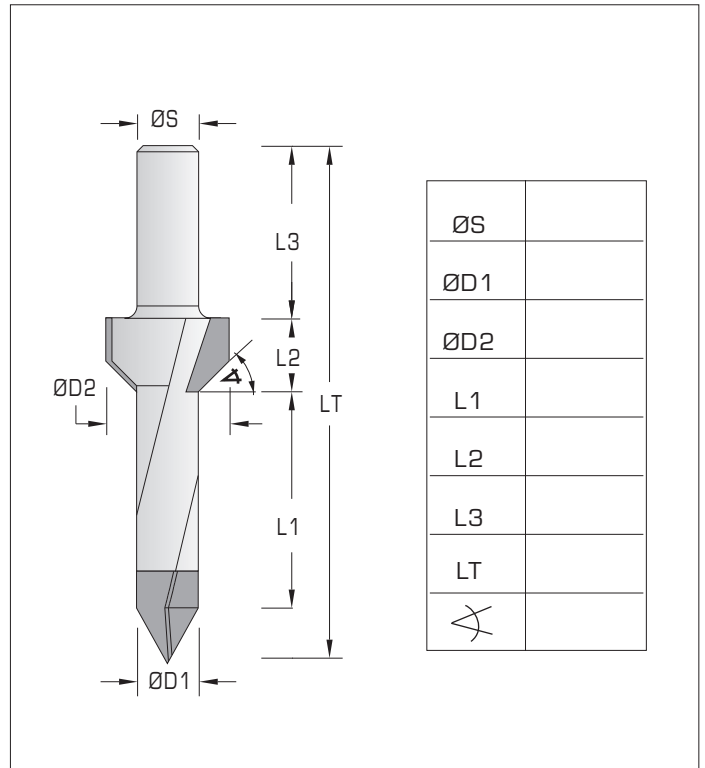
D60F2 COUNTERSINK BITS WITH BRAD POINT DRILL BIT

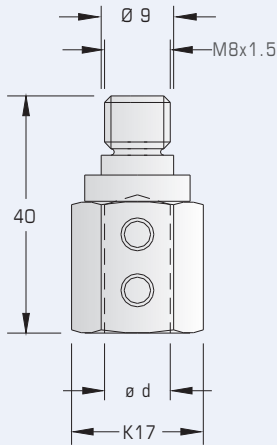


D60N1 COUNTERBORE BITS WITH THROUGH HOLE DRILL BIT

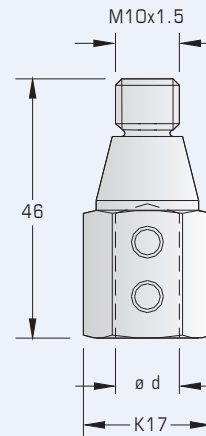


D60N2 COUNTERSINK BITS WITH THROUGH HOLE DRILL BIT

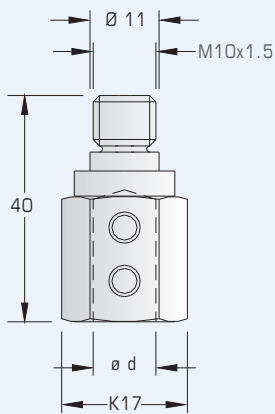


D0012
**DRILL ADAPTORS
M8 SHANK**


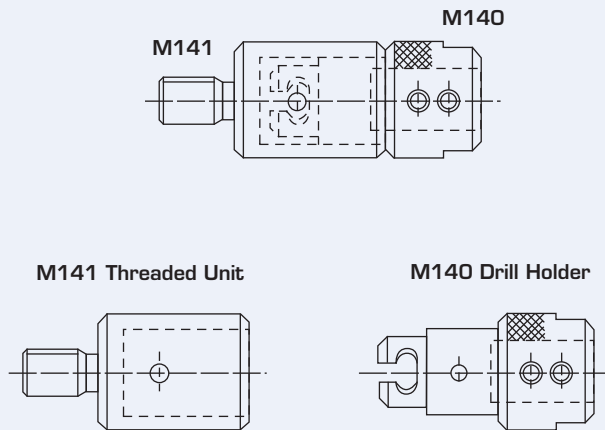
PART NO. LEFT-HAND	PART NO. RIGHT-HAND	INSIDE DIAM. ød mm
D001208L	D001208R	8
D001210L	D001210R	10

D0014
**DRILL ADAPTORS
M10 SHANK - TAPERED**


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	INSIDE DIAM. ød mm
D001408L	D001408R	8
D0014L	D0014R	10

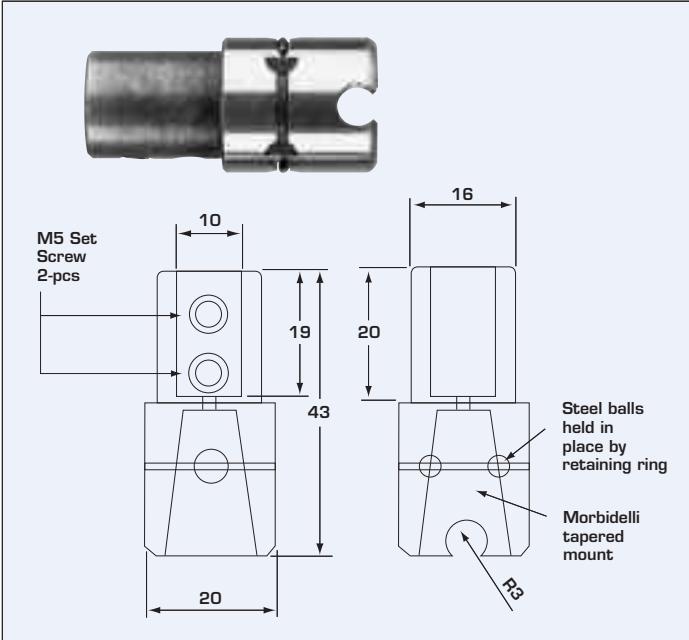
D0013
**DRILL ADAPTORS
M10 SHANK**


PART NO. LEFT-HAND	PART NO. RIGHT-HAND	INSIDE DIAM. ød mm
D001308L	D001308R	8
D0013L	D0013R	10

M140
**QUICK - CHANGE
DRILL ADAPTORS**


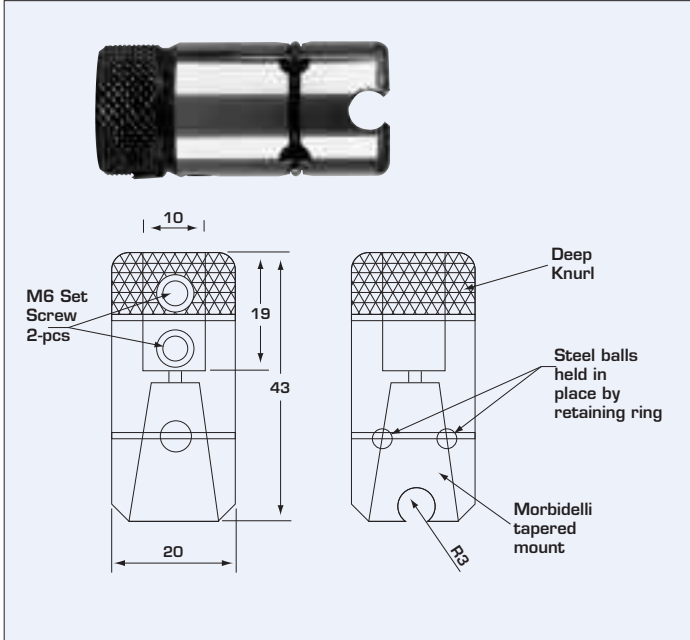
PART No.	DESCRIPTION
M140	Drill holder for 10mm shanks
M141L	Threaded unit M10 Left-hand
M141R	Threaded unit M10 Right-hand

M160 QUICK-CHANGE DRILL ADAPTORS "TRACK" STYLE MORBIDELLI ADAPTORS



PART NO.	DESCRIPTION
M160	Drill adaptor for 10mm drill shanks

D60F2 QUICK-CHANGE DRILL ADAPTORS "STANDARD" STYLE MORBIDELLI ADAPTORS

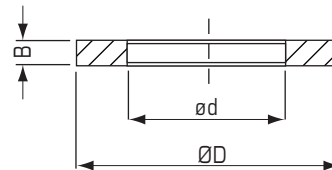


PART NO.	DESCRIPTION
M165	Drill adaptor for 10mm drill shanks

053

SPACERS

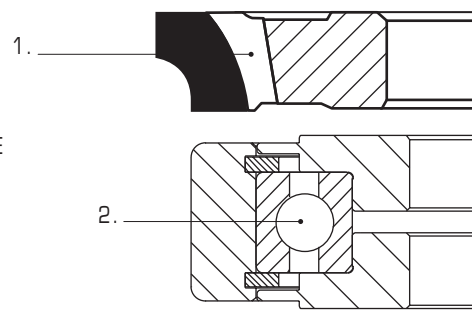
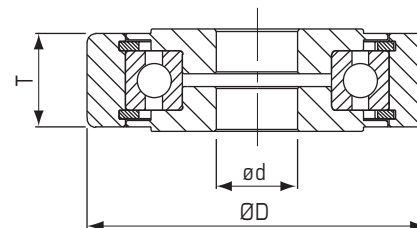
ØD mm	50	55	60	70
ød mm	30	35	40	50
ØD mm	50	55	60	70
ød inch	1-1/4"	1-3/8"	1-9/16"	1-13/16"
B mm	B Inch			
0.1 - 0.2 - 0.5 - 1.0	.004" - .008" - .020" - .040"			
2.0	.040"			
5.0	3/16"			
10.0	25/64"			
8.1 - 20	5/16" - 3/4"			
20.1 - 30	53/64" - 1-3/16"			
30.1 - 40	1-3/16" - 1-9/16"			
40.1 - 50	1-9/16" - 2"			



057

BALL BEARING GUIDES

PART NO.	O.D. ØD	I.D. ød	THICKNESS T
W057114-3	3"	1-1/4"	7/8"
W057114-4	4"	1-1/4"	7/8"
W057114-80	80mm	40mm	18mm

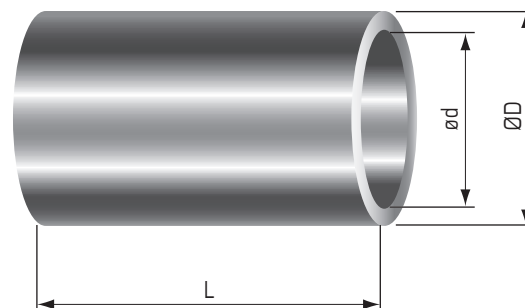


- 1= CUTTER
- 2= BALL BEARING GUIDE

035

SLEEVES

SPECIAL PRODUCTION						
ØD mm	ød mm	ØD INCH	ød INCH			
35	30	1-1/4"	3/4"			
40	30-35	1-13/16"	1-1/4"			
50	30-35-40					
L=mm	2	5	10	15	20	30
L= inch	5/64"	3/16"	3/8"	5/8"	3/4"	1-3/16"

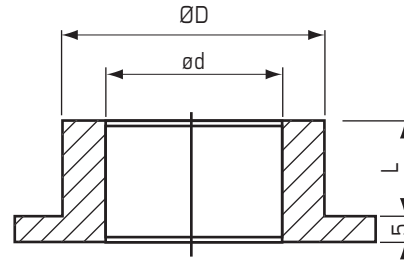


054

FLANGED SLEEVES

PART NO.	O.D. ØD	I.D. ød	LENGTH Lmm
054-3175-1905	1-1/4"	3/4"	20
054-3175-254	1-1/4"	1"	20
054-40-3175	40mm	1-1/4"	20

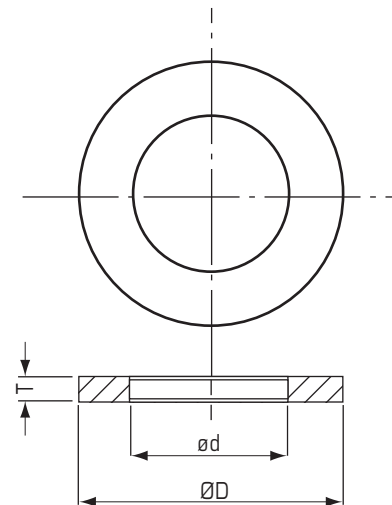
Other sizes available upon request.



058

BUSHINGS FOR SAW BLADES

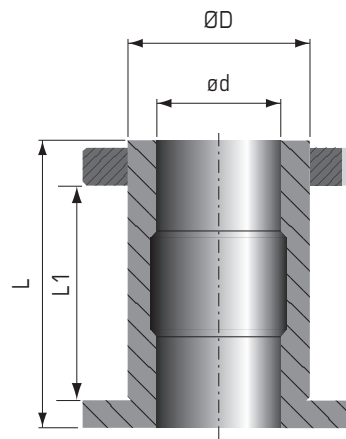
PART NO.	O.D. ØD	I.D. ød	THICKNESS T mm
058-114001	1-1/4"	1"	2.1
058-114034	1-1/4"	3/4"	2.1
058-114058	1-1/4"	5/8"	2.1
058-118001	1-1/8"	1"	2.1
058-001034	1"	3/4"	2.1
058-001058	1"	5/8"	2.1
058-020038	20mm	3/8"	2.1
058-020058	20mm	5/8"	2.1
058-022020	22mm	20mm	2.1
058-022034	22mm	3/4"	2.1
058-022058	22mm	5/8"	2.1
058-034058	3/4"	5/8"	2.1
058-030001	30mm	1"	2.1
058-030034	30mm	3/4"	2.1
058-030058	30mm	5/8"	2.1
058-032020	32mm	20mm	2.1
058-040114	40mm	1-1/4"	2.1
058-040138	40mm	1-3/8"	2.1



SPECIAL PRODUCTION

O.D. ØD	I.D. ød	USABLE LENGTH L1 mm	OVERALL LENGTH L mm	ROTATION
50	1-1/4"	70	90	RH/LH
50	1-1/4"	85	105	RH/LH
50	1-1/2"	85	105	RH/LH
50	40mm	70	90	RH/LH
50	40mm	90	112	RH/LH
60	1-1/4"	85	105	RH/LH
60	1-1/2"	85	105	RH/LH
60	40mm	90	112	RH/LH

Other sizes available.



ØD mm	ød mm	ØD INCH	ød INCH
60	30	2-3/8"	5/8" - 1"
80	30	3-1/8"	5/8" - 1"
100	30	4"	5/8" - 1"
125	30	5"	5/8" - 1"
150	30	6"	5/8" - 1"

