Wisconsin Knife Works

WKW™

www.wkwinc.com

Wisconsin Knife Works

Wisconsin Knife Works (WKW) has been in the business for over 90 years and is a manufacturer of industrial cutting tools for the woodworking and RV/mobile home industries. WKW's has tooling solutions for customers cutting natural wood as well as engineer materials.

Our knowledgeable staff would welcome the opportunity to assist you with a tooling solution.

Within the United States please contact us at

1-800-225-5959 Fax 1-800-336-1254

Outside of the United States please contact us at

1-608-363-5564 Fax 1-608-363-7892

E-mail us at *sales@wkwinc.com*

Web site: *wkwinc.com*

WKW™

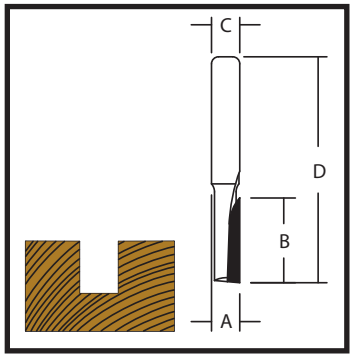
Wisconsin Knife Works, Inc.

ROUTER BITS

Order online @ www.wkwinc.com

CARBIDE TIPPED STRAIGHT "V" FLUTES

Available in both single and double flute, these universal tools are used in many applications, primarily in more abrasive materials where high speed steel doesn't hold up. Use a single flute for faster feed rates and chip removal, choose a double flute for a smoother finish. The ends of the tool are relieved for normal plunging jobs. For faster plunging and longer life in double fluted tools, plunging boring points (BP) or flat bottom points (FP) can be supplied in 3/8" diameter tool, or larger. For higher feed rates in dense materials, don't forget our chipbreaker bits (CB).



SINGLE FLUTES–FASTER FEED RATES

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
+68002	3/16	1/2	1/4	1-11/16
+68006	7/32	3/4	1/4	2
68012	1/4	3/4	1/4	2
+68016	1/4	1	1/4	2-1/4
+68020	1/4	1	1/4	2-7/8
+68312	3/8	1-1/4	3/8	2-1/2
+68402	1/4	1	1/2	2-1/2
68414	3/8	1	1/2	2-1/2
+68416	3/8	1-1/4	1/2	2-3/4
••68422	1/2	1-1/4	1/2	2-3/4
68424	1/2	1-1/4	1/2	4
••68426	1/2	1-1/2	1/2	3
68427	1/2	1-1/2	1/2	4
+••68428	1/2	2	1/2	4
+••68432	1/2	2-1/2	1/2	4-1/4

+Tool not guaranteed due to geometry.

•• Wisconsin Knife Works offers a re-tipping service for this bit.

ROUTER BIT RE-TIP PROGRAM

Wisconsin Knife Works has enhanced the popular re-tip program. Carbide tipped router bits identified with •• to the left of the part number are included in the re-tip program. To participate in the program, used bits are collected and sent back to Wisconsin Knife Works where the carbide tip(s) are replaced and the tool is reground. The lead time on this reconditioning process is 10 business days. These factory reconditioned tools are then resold to the customer that sent them in at attractive prices.

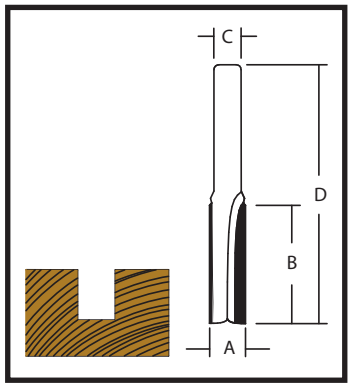
WKW offers re-tipping of other carbide tipped router bits with a 25 piece per part number minimum order.

COATED ROUTER BITS

Wisconsin Knife Works offers various coatings that are available for enhanced performance on Router Bits. Please contact WKW for more details.

DOUBLE FLUTES–SMOOTHER FINISH

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*68100	1/8	3/8	1/4	1-1/2
68104	3/16	1/2	1/4	1-7/8
68110	1/4	3/4	1/4	2
+68112	1/4	1	1/4	2-3/8
68114	1/4	3/4	1/4	2-5/8
+68116	1/4	1	1/4	2-7/8
+**68117	.248	1	1/4	3-1/4
+**68118	.248	1	1/4	3-3/4
68120	9/32	3/4	1/4	2
+68128	5/16	1	1/4	2-1/4
+68130	5/16	1-1/4	1/4	2-1/2
68136	3/8	1	1/4	2-1/4
+68138	3/8	1-1/4	1/4	2-1/2
68146	1/2	1	1/4	2-3/8
68150	9/16	3/4	1/4	2
68154	5/8	3/4	1/4	2
68158	3/4	3/4	1/4	2
68166	1	3/4	1/4	2-1/4
+68220	5/16	1	5/16	2-1/4
68328	3/8	1	3/8	2-1/4
+68332	3/8	1-1/4	3/8	3-3/8
68340	1/2	1	3/8	2-3/8
68350	3/4	3/4	3/8	2
68500	1/4	3/4	1/2	2-1/4
+68506	5/16	1	1/2	2-1/2
+68508	5/16	1	1/2	3
68518	3/8	1	1/2	2-1/2
+68520	3/8	1-1/4	1/2	2-3/4
68524	13/32	1	1/2	2-1/2
68530	7/16	1-1/4	1/2	2-3/4
••68536	1/2	1-1/4	1/2	2-3/4



\+ *Tools not guaranteed due to tool geometry.*

* *This tool is solid carbide.*

** *Bits used in air router for plastic and fiberglass applications.*

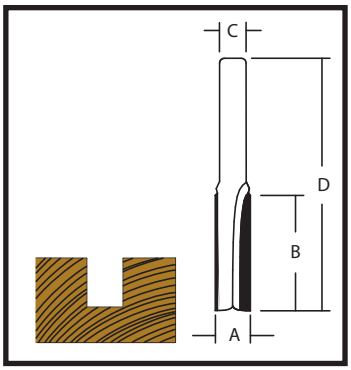
BP *Boring point - 10 day lead time*

CB *Chipbreaker - 10 day lead time*

FP *Flat boring point - 10 day lead time*

•• *Wisconsin Knife Works offers a re-tipping service for this bit. 25 piece per part number minimum quantity order.*

CARBIDE TIPPED ROUTER BITS



DOUBLE FLUTES (CONTINUED)

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
68538	1/2	1	1/2	3-1/4
•• 68542	1/2	1-1/2	1/2	3
68544	1/2	1-1/2	1/2	4-1/4
+68546	1/2	2	1/2	3-1/2
+••68548	1/2	2	1/2	4
+68549	1/2	2	1/2	5
+••68550	1/2	2-1/2	1/2	4-1/2
68558	17/32	1-1/4	1/2	2-7/8
68562	9/16	1-1/4	1/2	2-7/8
68568	5/8	1-1/4	1/2	2-7/8
+68572	5/8	2	1/2	3-3/4
68578	21/32	1-1/4	1/2	2-7/8
68582	11/16	1-1/4	1/2	2-7/8
68590	3/4	1-1/4	1/2	2-7/8
68592	3/4	1-1/2	1/2	2-7/8
68594	3/4	2	1/2	3-3/4
68600	25/32	1-1/4	1/2	2-7/8
68604	13/16	1-1/4	1/2	2-7/8
68610	7/8	1-1/4	1/2	2-7/8
68614	1	3/4	1/2	2-3/8
•• 68616	1	1-1/4	1/2	2-7/8
68618	1	1-1/2	1/2	2-7/8
68620	1	2	1/2	3-3/4
68628	1-1/8	1-1/4	1/2	2-7/8
68632	1-1/4	1-1/4	1/2	2-7/8
68638	1-1/2	1-1/4	1/2	2-7/8
68642	1-3/4	1-1/4	1/2	2-7/8
#68708	3/4	2	3/4	4
#+68774	3/4	2-1/2	3/4	5

+ Tools not guaranteed due to tool geometry.

BP Boring point - 10 day lead time

CB Chipbreaker - 10 day lead time

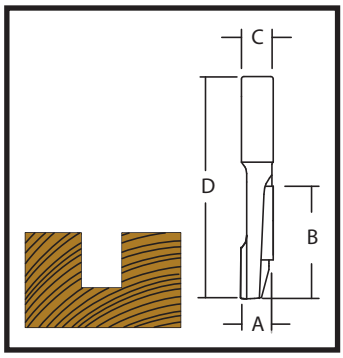
FP Flat boring point - 10 day lead time

 # Manufacturing specifications for CNC operations.

•• Wisconsin Knife Works offers a re-tipping service for this bit. 25 piece per part number minimum quantity order

CARBIDE TIPPED STAGGER TOOTH

Designed for cutting thick and/or abrasive laminated material where time, not finish, is a priority.



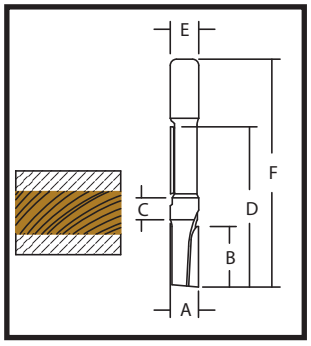
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
68800	3/8	1-3/8	3/8	2-3/4
68802	3/8	1-1/2	1/2	3
68804	3/8	1-5/8	1/2	3-1/2
••68806	1/2	1-3/4	1/2	3-1/4
••68808	1/2	2-1/4	1/2	4
*68809	1/2	2-1/4	1/2	4-1/4

* *This bit has special geometry for cutting .010–.015 thick steel or aluminum wall material.*

•• *Wisconsin Knife Works offers a re-tipping service for this bit.*

CARBIDE TIPPED STAGGER TOOTH WITH PILOT

Used in the RV industry for routing out sidewalls and ceilings. The frame acts as a template for the pilot and finish is not critical.



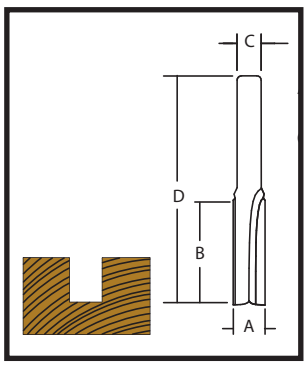
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	PILOT LENGTH (C)	OVERALL C.L. (D)	SHANK DIAMETER (E)	OVERALL LENGTH (F)
••68810	1/2	1-1/16	3/8	2-13/16	1/2	4-1/4
*••68811	1/2	1-1/16	3/8	2-13/16	1/2	4
*••68813	1/2	1-1/16	3/8	2-13/16	1/2	4-1/4
••68812	1/2	1-1/16	3/8	2-13/16	1/2	5

* *This bit has special geometry for cutting .010–.015 thick steel or aluminum wall material.*

•• *Wisconsin Knife Works offers a re-tipping service for this bit.*

CARBIDE TIPPED M.D.F. BITS

Specifically designed for cutting M.D.F. board and other composite materials. Made with a special carbide that holds a superior edge capable of handling the problems associated with cutting M.D.F. and other materials.



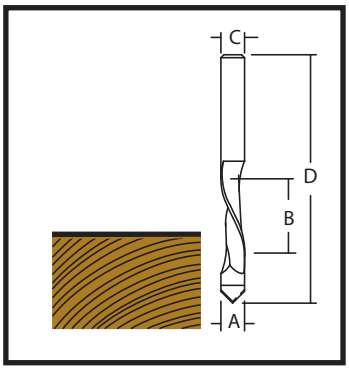
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
68732	1/2	1-1/4	1/2	2-3/4

HIGH SPEED PANEL PILOT BITS

These HSS tools featuring boring points and pilots are used to cut out openings in a wide range of materials such as; wood and vinyl paneling, wallboard, and thin layers of aluminum. These tools are the workhorses of RV and mobile home industries.

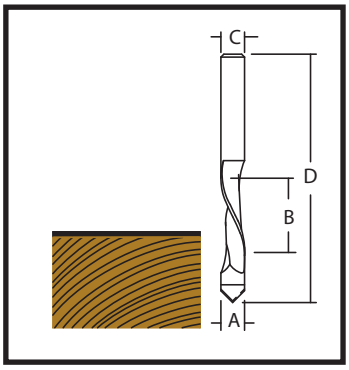
SINGLE FLUTE–WITH BORING POINT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*62000	1/4	3/4	1/4	2-1/2
**62001	1/4	3/4	1/4	2-1/2
62006	5/16	3/4	1/4	2-5/8
***62010	3/8	3/4	3/8	2-5/8
****62011	3/8	3/4	3/8	2-5/8
62012	3/8	7/8	3/8	3
62016	1/2	1	1/2	3-1/2



DOUBLE FLUTE–WITH BORING POINT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62100	1/4	3/4	1/4	2-5/8
62106	3/8	7/8	3/8	2-3/4



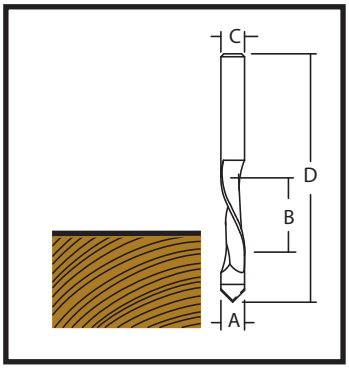
**62000 has a 20° clearance angle*
***62001 has a 13° clearance angle*
****62010 has a 20° clearance angle*
*****62011 has a 15° clearance angle*

HIGH SPEED STEEL SPIRAL PANEL PILOTS

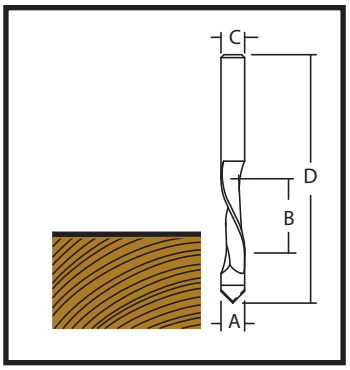
These down cut spiral bits are used in a variety of materials in the RV and mobile home industries for template cutout work when the finish is a priority.

SINGLE FLUTE–WITH BORING POINT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62300	1/4	3/4	1/4	2-5/8
62302	1/4	3/4	1/4	3-1/4
62304	3/8	7/8	3/8	3-1/2
62306	1/2	1-3/4	1/2	4-1/2
62310	1/4	9/16	1/4	2-11/16
62314	3/8	3/4	3/8	3



Used in the RV and mobile home industries where the materials being cut are too abrasive for high-speed steel.



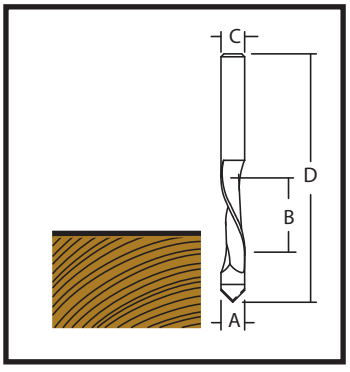
SINGLE FLUTE–WITH BORING POINT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*70000	1/4	3/4	1/4	2-1/2
**70001	1/4	3/4	1/4	2-1/2
••70004	3/8	1	3/8	2-7/8
••70008	1/2	1-3/16	1/2	3-1/2
70012	1/2	2	1/2	4-3/4

** 70000 has a 20° clearance angle*

*** 70001 has a 15° clearance angle*

•• Wisconsin Knife Works offers a re-tipping service for this bit. Please contact WKW for details.



DOUBLE FLUTE–WITH BORING POINT

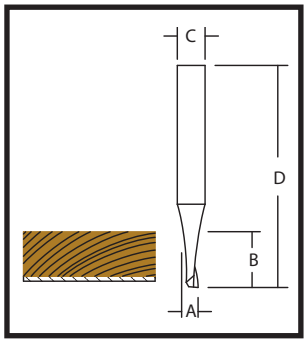
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
••70030	3/8	1	1/4	2-7/8
••70034	3/8	1	3/8	2-7/8
••70038	1/2	1-3/16	1/2	3-1/2
70042	1/2	2	1/2	4-3/4

•• Wisconsin Knife Works offers a re-tipping service for this bit.

SINGLE FLUTE UPCUTS

This is your tool if you need aggressive upward chip removal in your routing application. Designed to run in solid wood, wood composites, and some plastics at higher feed rates and with longer tool life than HSS bits.

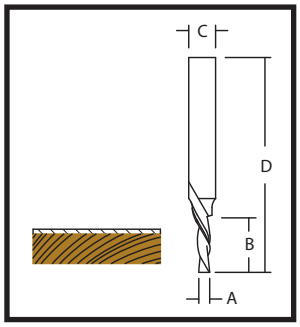
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74118	1/4	7/8	1/4	2-1/2
74124	5/16	1-1/8	5/16	3



DOUBLE FLUTE UPCUTS

Designed to run in solid wood, wood composites, and some plastics at higher feed rates and with longer tool life than HSS bits. This double flute design allows for an aggressive upward chip removal while leaving a higher quality finish.

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74512	1/8	1/2	1/4	2
74514	5/32	5/8	1/4	2
74516	3/16	3/4	1/4	2
74518	1/4	7/8	1/4	2-1/2
74558	1/4	3/4	1/4	2-1/2
*74559	1/4	3/4	1/4	2-1/2
74520	1/4	1	1/4	2-1/2
74523	9/32	1	5/16	2-1/2
74524	5/16	1-1/8	5/16	3
74526	3/8	1-1/8	3/8	3
74528	3/8	1-1/4	3/8	3
74529	7/16	1	1/2	3
74530	1/2	1-1/4	1/2	3-1/2
74532	1/2	1-5/8	1/2	3-1/2
74534	1/2	2-1/8	1/2	4
74540	17/32	1-1/8	1/2	3
74536	5/8	2-1/8	5/8	4



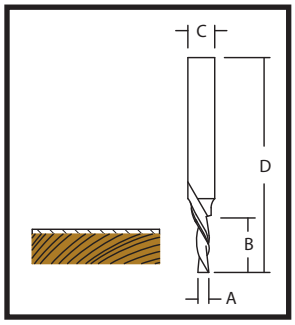
** Left hand rotation*

DOUBLE FLUTE DOWNCUTS

Designed to run solid wood, wood composites, and some plastics at higher feed rates and with longer tool life than HSS bits. This double flute design is used where a downward chip removal and a good finish on top is required.

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74612	1/8	1/2	1/4	2
74614	5/32	5/8	1/4	2
74616	3/16	3/4	1/4	2
74617	7/32	3/4	1/4	2-1/2
74618	1/4	7/8	1/4	2-1/2
**74619	1/4	7/8	1/4	2-1/2
74620	1/4	1	1/4	2-1/2
74623	9/32	1	5/16	2-1/2
74624	5/16	1-1/8	5/16	3
74626	3/8	1-1/8	3/8	3
74628	3/8	1-1/4	3/8	3
74629	7/16	1	1/2	3
74630	1/2	1-1/4	1/2	3-1/2
**74631	1/2	1-1/8	1/2	3
74632	1/2	1-5/8	1/2	3-1/2
**74633	1/2	1-5/8	1/2	3-1/2
74634	1/2	2-1/8	1/2	4
74640	17/32	1-1/8	1/2	3
74635	5/8	1-5/8	5/8	3-1/2
74636	5/8	2-1/8	5/8	4
74637	3/4	1-5/8	3/4	4
74638	3/4	2-1/8	3/4	4

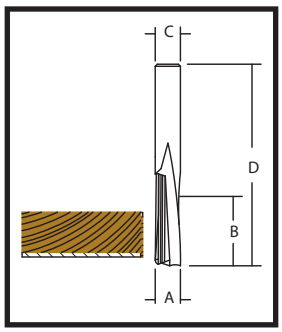
*** Specifically designed for softwoods*



THREE FLUTE UPCUTS

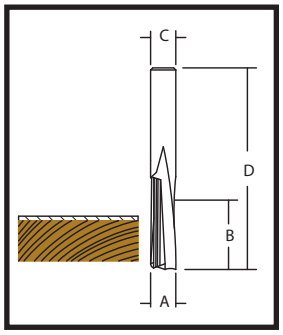
Designed for perfect balance and ultra smooth finish over a wide range of speeds in solid hard woods, wood composites, and finish cuts on acrylic.

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74730	3/8	1-1/8	3/8	3
74731	1/2	1-1/8	1/2	3-1/2
74733	1/2	1-5/8	1/2	4
74737	3/4	1-5/8	3/4	4
74738	3/4	2-1/8	3/4	5



THREE FLUTE DOWNCUTS

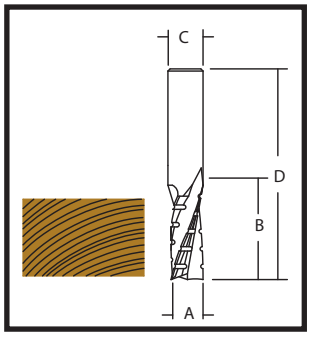
Designed for perfect balance and ultra smooth finish over a wide range of speeds in solid hard woods, wood composites, and finish cuts on acrylic.



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74830	3/8	1-1/8	3/8	3
74831	1/2	1-1/8	1/2	3-1/2
74833	1/2	1-5/8	1/2	4
74837	3/4	1-5/8	3/4	4

SOLID CARBIDE UPCUT CHIPBREAKER/FINISHER

For faster feed rates than a conventional double or three-flute design, this bit offers a smooth finish in solid hard woods, MDF, and even plywood.

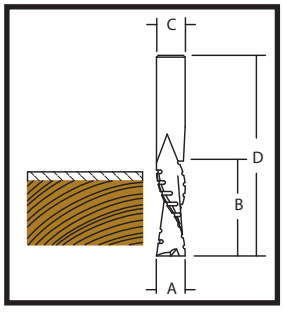


THREE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74730FC	1/2	1-1/8	1/2	3
74732FC	1/2	1-5/8	1/2	3-1/2

SOLID CARBIDE DOWNCUT CHIPBREAKER/FINISHER

Offering faster feed rates than a conventional double or three-flute design, while leaving a smooth finish in solid hard woods, MDF, and even plywood.



DOUBLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74632FC	1/2	1-5/8	1/2	3-1/2
74638FC	3/4	2-1/8	3/4	4

THREE FLUTE

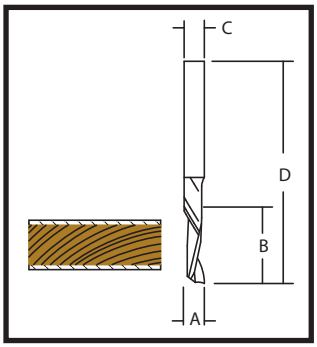
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74832FC	1/2	1-5/8	1/2	3-1/2

SOLID CARBIDE COMPRESSION SPIRALS

Designed with an up-cut and down-cut action in the same tool capable of providing faster feed rates and optimum edge finishes on your double sided laminated materials.

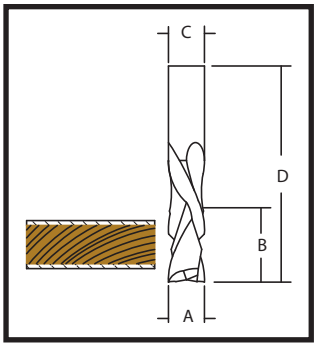
SINGLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74318	1/4	7/8	1/4	2-1/2
74344	1/2	1-3/8	1/2	3-1/2
74332	1/2	1-5/8	1/2	3-1/2



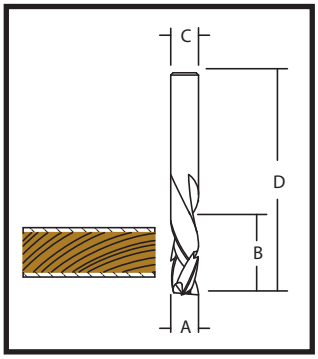
DOUBLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74365	1/4	7/8	1/4	2-1/2
74366	3/8	1-1/8	3/8	3
74370	1/2	1-1/8	1/2	3
74372	1/2	1-3/8	1/2	3-1/2
74384	1/2	1-5/8	1/2	4



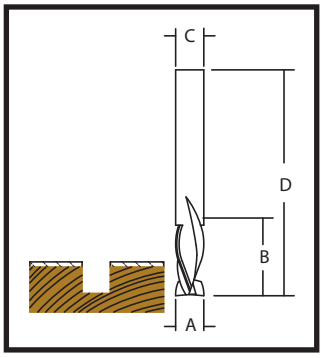
THREE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74302	3/8	1-1/8	3/8	3
74304	1/2	1-1/8	1/2	3
74306	1/2	1-5/8	1/2	3-1/2



SOLID CARBIDE MORTISE COMPRESSION SPIRALS

Designed with an up-cut and down-cut action in the same tool capable of providing faster feed rates. These bits offer a short up-cut action to allow for a mortise cut with a down-cut action ensuring an excellent finish.



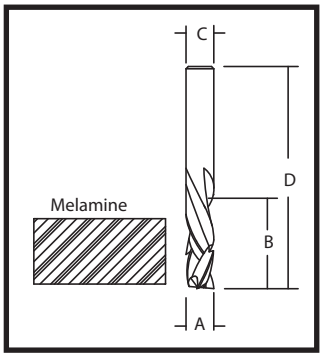
SINGLE FLUTE MORTISING

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74350	3/8	7/8	3/8	3
74356	1/2	7/8	1/2	3

DOUBLE FLUTE MORTISING

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74362	3/8	7/8	3/8	3

MELAMINE COMPRESSION LINE

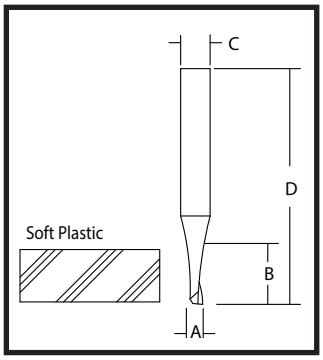


DOUBLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74260	1/2	7/8	1/2	3
74262	1/2	1-1/8	1/2	3
74264	1/2	1-3/8	1/2	3-1/2
74266	1/2	1-5/8	1/2	3-1/2

TRIPLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74280	3/8	7/8	3/8	3



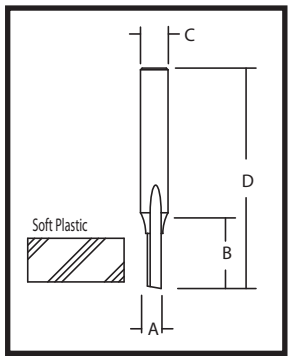
SOLID CARBIDE SINGLE FLUTE UPCUT
FOR SOFT PLASTICS

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74470	1/8	1/2	1/4	2
74478	1/4	3/4	1/4	2-1/2
74484	3/8	7/8	3/8	2-1/2

SOLID CARBIDE STRAIGHT "O" BITS
SINGLE FLUTE FOR SOFT PLASTICS

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74902	1/8	1/2	1/4	2
*74904	1/8	1/2	1/4	2
74905	1/8	5/8	1/4	4
74907	5/32	9/16	1/4	4
74910	3/16	5/8	1/4	2
*74912	3/16	5/8	1/4	2
74913	3/16	1	1/4	4
74917	1/4	3/8	1/4	2-1/2
74918	1/4	3/4	1/4	2-1/2
*74920	1/4	3/4	1/4	2-1/2
74922	1/4	3/4	1/4	3-1/4
*74924	1/4	3/4	1/4	3-1/4
74926	1/4	1	1/4	3-1/4
74928	1/4	1-1/4	1/4	4
74932	3/8	7/8	3/8	2-1/2

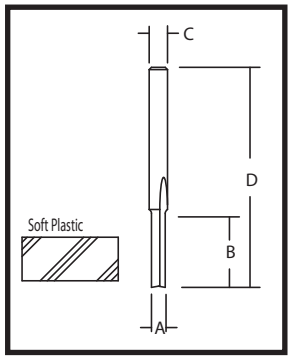
** - Left hand rotation*



For use in soft plastics such as ABS, Polycarbonate, Polyethylene, HDPE, Polystyrene, UHMW, Extruded Acrylic.

SOLID CARBIDE STRAIGHT "O" BITS
DOUBLE FLUTE FOR SOFT PLASTICS

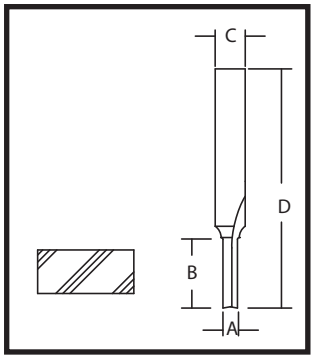
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74950	3/16	1	1/4	4
74954	1/4	1	1/4	2-1/2
74956	1/4	1	1/4	3-1/4



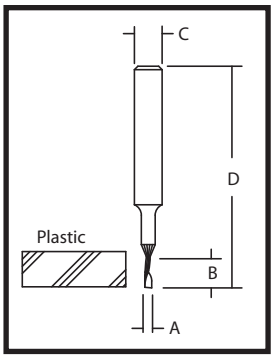
SOLID CARBIDE STRAIGHT "V" BITS
DOUBLE FLUTE FOR RIGID PLASTICS

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74750	1/8	1/4	1/4	2
74754	3/16	5/8	1/4	2
*74756	3/16	5/8	1/4	2
74762	1/4	3/4	1/4	2-1/2
*74764	1/4	3/4	1/4	2-1/2
74770	3/8	7/8	3/8	2-1/2

** - Left hand rotation*

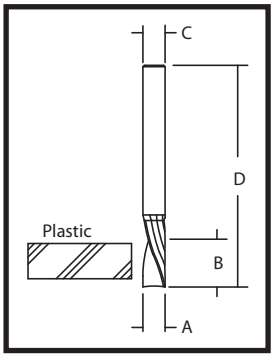


For use in hard plastics such as Cast Acrylic, Nylon, PVC, Vinyl.



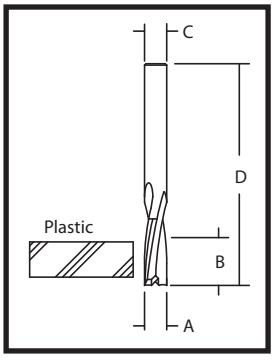
SINGLE FLUTE UPCUT "O"

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74700	1/16	1/4	1/4	2
74704	1/8	1/2	1/4	2
74708	3/16	5/8	1/4	2
74712	1/4	3/4	1/4	2-1/2



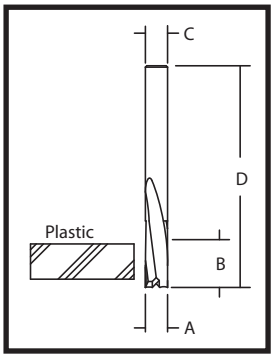
SINGLE FLUTE DOWNCUT "O"

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74724	1/4	3/4	1/4	2-1/2



DOUBLE FLUTE UPCUT "O"

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74782	1/4	3/4	1/4	2-1/2
74784	3/8	1	3/8	3

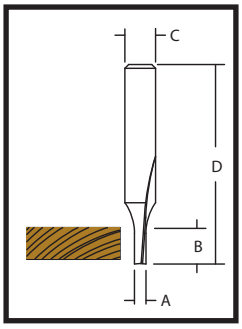


DOUBLE FLUTE DOWNCUT "O"

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74792	1/4	3/4	1/4	2-1/2
74794	3/8	1	3/8	3

HSS STRAIGHT "V" FLUTES

These double flute V router bits are a well-balanced, aggressive, and universal tool used in many applications. Primarily used in natural woods of medium to hard density and hardness, as well as rigid non-abrasive plastic where a smooth finish is critical. These high production tools are used on automatic and hand fed machines.



DOUBLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
60002	3/32	1/4	1/4	1-5/8
+60006	1/8	5/8	1/4	2
+60020	3/16	5/8	1/4	2
60028	1/4	3/4	1/4	2
+60030	1/4	1	1/4	2-1/4
+60034	1/4	1-1/2	1/4	2-3/4
+60038	1/4	2	1/4	3-1/4
60058	3/8	1	1/4	2-1/4
60064	1/2	3/4	1/4	2
60072	3/4	3/4	1/4	1-3/4
+60208	3/8	1-1/4	3/8	2-3/4
60304	1/4	3/4	1/2	2-3/8
+60312	5/16	1-1/4	1/2	2-3/4
60314	3/8	1-1/16	1/2	2-9/16
+60318	3/8	1-1/2	1/2	3
60328	1/2	1-1/4	1/2	2-3/4
+60332	1/2	2	1/2	4
60340	5/8	1-1/4	1/2	2-3/4
60344	3/4	1-1/4	1/2	2-3/4
60350	7/8	1-1/2	1/2	3
60352	1	1-1/4	1/2	2-3/4
60358	1-1/4	1-1/4	1/2	2-3/4
60360	1-3/8	1-1/4	1/2	2-3/4

+ Tools not guaranteed due to tool geometry.

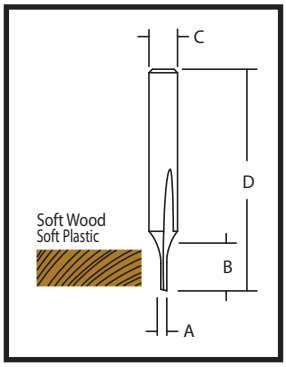
HSS STRAIGHT "O" FLUTES

Available in both single and double flutes, primary use is in soft, flexible, non-abrasive plastic. Secondary usage being soft to medium density natural woods. Choose a single flute for faster feed rates and chip removal. If you're looking for a smoother finish, use a double flute.

SINGLE FLUTES–FASTER FEED RATE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
+61000	1/16	1/4	1/4	1-15/16
+61008	3/32	3/8	1/4	2
61012	1/8	3/8	1/4	1-15/16
+61014	1/8	5/8	1/4	2-3/16
+61018	5/32	1/2	1/4	2
+61028	3/16	3/4	1/4	2-13/16
61040	1/4	3/4	1/4	2
+61042	1/4	1	1/4	2-1/4
+61044	1/4	1-1/4	1/4	2-1/2
61614	1/2	1-1/4	1/2	3-1/8

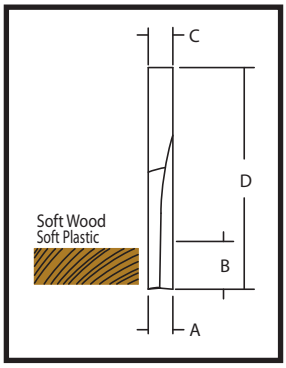
+ Tools not guaranteed due to tool geometry.



DOUBLE FLUTE–SMOOTHER FINISH

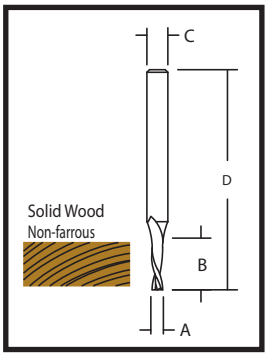
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
+61114	1/4	1	1/4	2-1/4

+ Tool not guaranteed due to tool geometry.



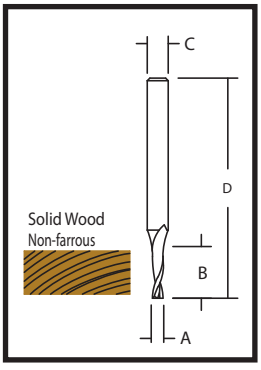
HIGH SPEED STEEL SPIRALS

Designed to run in solid woods, non-ferrous, and some plastics at higher feed rates than double flutes.



SINGLE FLUTE UPCUT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62350	1/8	3/8	1/4	2-5/8
62354	3/16	5/8	1/4	2-7/8
62358	1/4	5/8	1/4	2-3/4
62360	1/4	3/4	1/4	2-3/4
62362	1/4	3/4	1/2	3-1/4
62364	1/4	1	1/4	3
62366	5/16	1	5/16	3
62372	5/16	1	1/2	3-1/2
62374	3/8	1	3/8	3
62376	3/8	1	1/2	3-1/2



SINGLE FLUTE DOWNCUT

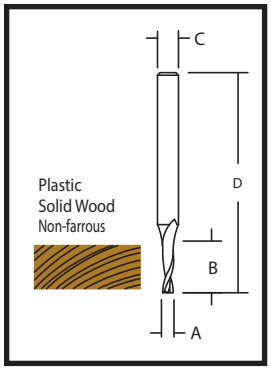
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62454	3/16	5/8	1/4	2-7/8
62460	1/4	3/4	1/4	2-3/4
62462	1/4	3/4	1/2	3-1/4
62464	1/4	1	1/4	3
62470	5/16	1	5/16	3
62472	5/16	1	1/2	3-1/2
62478	3/8	1	1/2	3-1/2

HIGH SPEED STEEL SPIRALS

Designed to run in solid woods, non-ferrous, and some plastics. Double flutes will produce a better finish than single flutes.

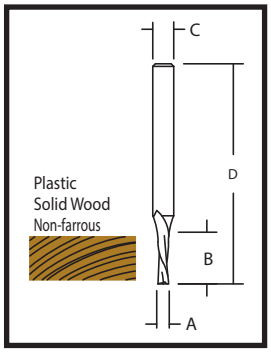
DOUBLE FLUTE UPCUT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62500	1/8	3/8	1/4	2-5/8
62502	3/16	5/8	1/4	2-7/8
62506	1/4	5/8	1/4	2-3/4
62508	1/4	3/4	1/4	2-3/4
62510	1/4	3/4	1/2	3-1/4
62512	1/4	1	1/4	3
62514	5/16	3/4	5/16	3
62518	5/16	1	5/16	3
62524	5/16	3/4	1/2	3-1/4
62526	3/8	1	3/8	3
62528	3/8	1	1/2	3-1/2
62530	3/8	1-1/4	1/2	3-3/4
62534	1/2	1-1/4	1/2	3-1/4
62536	1/2	1-1/2	1/2	3-1/2
62538	3/4	1-1/4	1/2	3-1/4



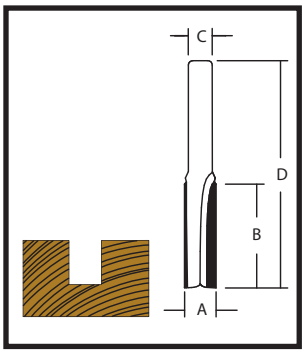
DOUBLE FLUTE DOWNCUT

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
62550	1/8	5/16	1/4	2-5/8
62552	3/16	5/8	1/4	2-7/8
62554	1/4	5/8	1/4	2-3/4
62556	1/4	3/4	1/4	2-3/4
62558	1/4	3/4	1/2	3-1/4
62560	1/4	1	1/4	3
62570	5/16	1	1/2	3-1/2
62576	3/8	1	1/2	3-1/2
62582	1/2	1-1/4	1/2	3-1/4
62584	1/2	1-1/2	1/2	3-1/2
62586	3/4	1-1/4	1/2	3-1/4



VEINING BIT

Veining bits produce a flat bottom decorative design in all types of material.

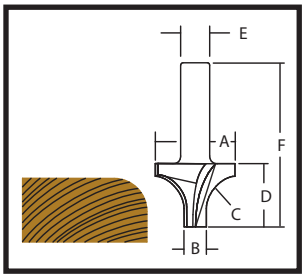


PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
68104	3/16	1/2	1/4	1-7/8

Veining bits are also available in solid carbide see page 22.

ROUNDING OVER BITS

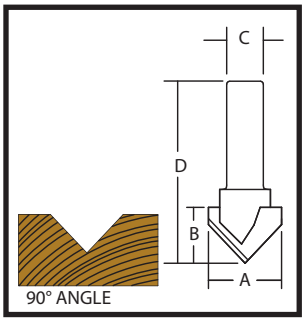
Used for putting a radius on the corner of material in operations where boring through may be required.



PART NUMBER	LARGE DIAMETER (A)	SMALL DIAMETER (B)	RADIUS (C)	CUTTING LENGTH (D)	SHANK DIAMETER (E)	OVERALL LENGTH (F)
69100	3/4	1/4	1/4	3/8	1/2	2-1/8
69104	1	1/4	3/8	1/2	1/2	2-1/4
69106	1-3/8	3/8	1/2	3/4	1/2	2-9/16

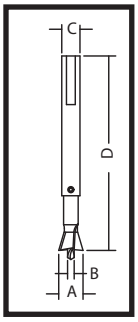
"V" GROOVING BITS

Designed for "V" grooving, beveling, and general decorative cuts in natural solid woods and wood composites.



PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
69300	1/4	5/32	1/4	1-5/8
69302	3/8	3/16	1/4	1-15/16
69304	5/8	5/16	1/2	2-1/8
69306	3/4	3/8	1/2	2-1/4
69308	1	1/2	1/2	2-1/4
69312	1-1/2	3/4	1/2	2-3/4

*Note: 90° angle is intended for decorative use, **not** miter fold.*



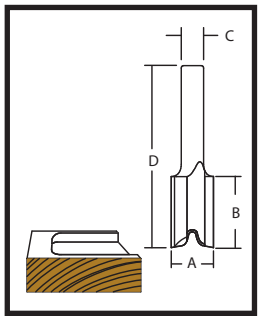
FACE FRAME BIT

PART NUMBER	COUNTERBORE DIAMETER (A)	PILOT DIAMETER (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
71354	3/8	#29	3/8	4

Replacement drill - 71355

CARBIDE TIPPED MORTISING BITS

Designed to route recesses for hardware in natural solid woods and wood composites. The deep center gullet allows for maximum chip removal. Can be used with all standard makes of templates.

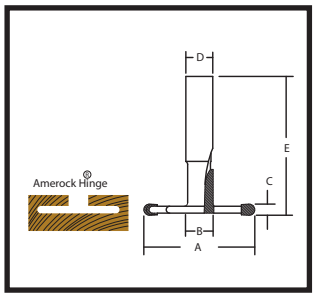


PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
69000	1/2	3/4	1/4	1-15/16
69002	5/8	3/4	1/4	1-15/16
69004	3/4	3/4	1/4	2-1/16
69006	1-1/4	9/16	1/4	2

Note: Any straight double flute bit 1/2" diameter or larger may be modified to a mortising tool. Call Wisconsin Knife Works for more information.

CARBIDE TIPPED HINGE MORTISING BITS

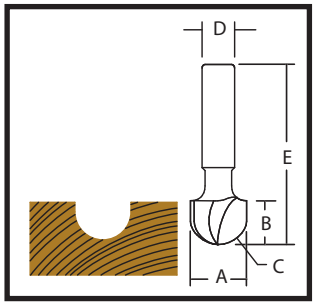
Designed specifically for the Amerock® hinge system.



PART NUMBER	LARGE DIAMETER (A)	SMALL DIAMETER (B)	KERF (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
72296	1-1/8	7/16	3/16	3/8	1-15/16
72298	1-19/32	3/8	5/32	3/8	1-15/16

CORE BOX CUTTERS

These tools are designed to give a perfect radius in natural solid woods and non-abrasive plastics.



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
69206	3/8	1/4	3/16	1/4	1-1/2
69208	1/2	11/32	1/4	1/4	1-5/8
69210	5/8	3/8	5/16	1/4	1-5/8
69212	3/4	15/32	3/8	1/4	2
69214	3/8	1	3/16	1/2	2-1/2
69216	1/2	1-1/4	1/4	1/2	2-3/4
69220	5/8	1-1/4	5/16	1/2	2-3/4
69222	3/4	1-1/4	3/8	1/2	2-3/4
69226	1	1-1/4	1/2	1/2	2-3/4

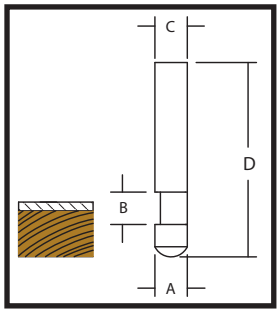
SOLID CARBIDE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
69202	3/16	1/4	3/32	1/4	1-1/2
69204	1/4	5/16	1/8	1/4	1-1/2

SOLID CARBIDE FLUSH TRIMMER BIT

Designed with a pilot to trim laminates and plastic parts to a flush, square corner.

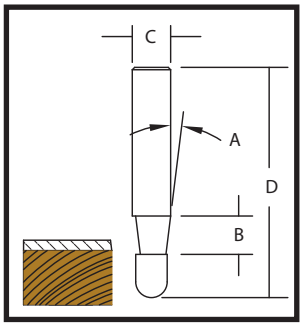
PART NUMBER	TYPE OF CUT	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74000	FLUSH	1/4	1/4	1/4	1-1/2



SOLID CARBIDE BEVEL TRIMMER BIT

Designed with a pilot to trim laminates and plastic parts with a 7° bevel.

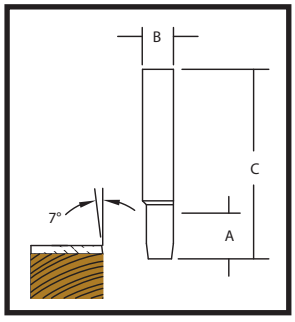
PART NUMBER	TYPE OF CUT (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74004	7°	1/4	1/4	1-1/2



SOLID CARBIDE COMBINATION TRIMMER BIT

Designed with both flush and 7° bevel for trimming laminates and plastic parts. No pilot is available and must be run with a guide system.

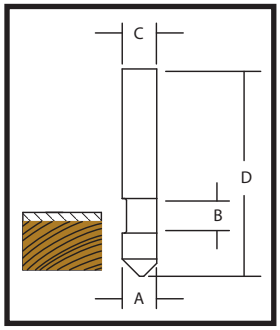
PART NUMBER	TYPE OF CUT	CUTTING LENGTH (A)	SHANK DIAMETER (B)	OVERALL LENGTH (C)
74008	7° & FLUSH	3/8	1/4	1-1/2



SOLID CARBIDE DRILL FLUSH TRIMMER BITS

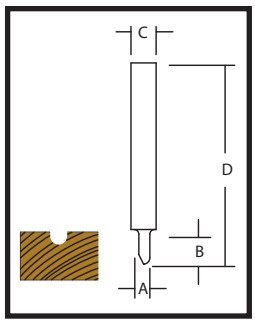
Designed with a boring point to bore its own starting hole. To trim laminated materials that have precut openings under the laminate and still leave a clean, flush, square corner.

PART NUMBER	TYPE OF CUT	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74012	DRILL/FLUSH	1/4	1/4	1/4	1-1/2
74014	DRILL/FLUSH	1/4	3/8	1/4	1-1/2



SOLID CARBIDE VEINING BITS

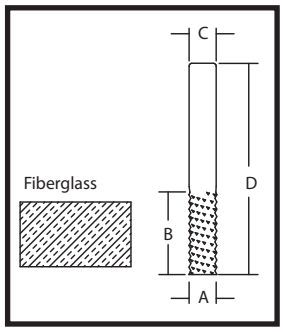
Designed to make decorative patterns in all types of materials.



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
68100	1/8	3/8	1/4	1-1/2
74200	1/8	1/4	1/4	2

SOLID CARBIDE FIBERGLASS BITS

Designed with a diamond cut to cut phenolic-epoxy glass and other non-metallic abrasive materials. Available with a drill point for plunging purposes.



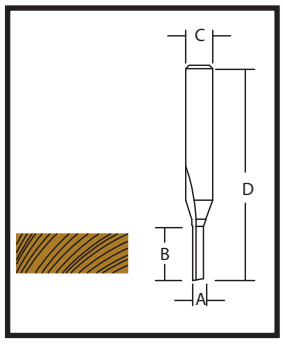
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*74604	1/4	3/4	1/4	2
**74606	1/4	3/4	1/4	2

** Without drill point*

*** With drill point*

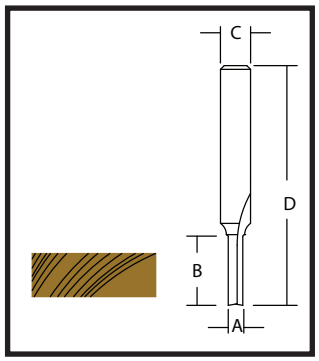
SOLID CARBIDE STRAIGHT “V” BITS

Designed for longer, superior finishes than HSS in solid woods, wood composites, and abrasive plastics.



SINGLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*+74440	1/8	1/2	1/4	2
74446	1/4	7/8	1/4	2-1/2



DOUBLE FLUTE

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
74400	1/8	1/2	1/4	2
74402	3/16	3/4	1/4	2
74404	1/4	3/4	1/4	2
74406	5/16	1-1/8	5/16	3
74408	3/8	1-1/8	3/8	3
74414	1/2	1-1/8	1/2	3
74416	1/2	1-5/8	1/2	3-1/2

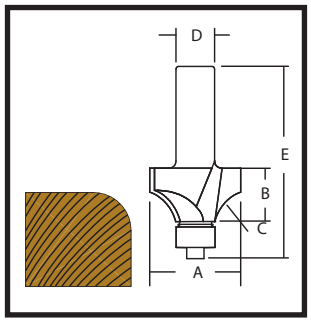
+ - Tools not guaranteed due to tool geometry.

** - This item is supplied with fiber adaptor # 75200 (1/4" O.D.)*

CORNER ROUNDING BEARING BITS

Provides a decorative radius on edges where needed.

PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71196	5/8	1/4	1/16	1/4	1-7/8
71198	3/4	1/2	1/8	1/4	2-13/16
71200	7/8	1/2	3/16	1/4	2-1/8
71202	1	1/2	1/4	1/4	2-1/8
71204	1-1/8	17/32	5/16	1/4	2-3/16
71206	1-1/4	5/8	3/8	1/4	2-1/4
71208	1-1/2	3/4	1/2	1/4	2-3/8
71210	7/8	1/2	3/16	1/2	2-3/8
71212	1	1/2	1/4	1/2	2-3/8
71214	1-1/8	17/32	5/16	1/2	2-3/8
71216	1-1/4	5/8	3/8	1/2	2-1/2
71218	1-1/2	3/4	1/2	1/2	2-9/16
71220	2	15/16	3/4	1/2	2-3/4
71222	2-1/2	1-1/4	1	1/2	3
71225	3-1/4	1-5/8	1-1/4	1/2	3-25/32
71226	3-3/4	1-7/8	1-1/2	1/2	4-1/16

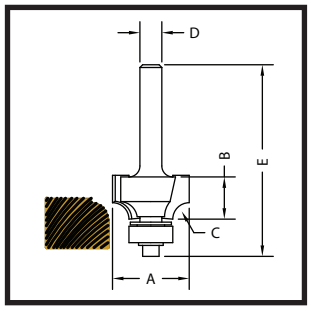


Replacement bearing - 75004 (1/2") • Replacement dust shield - 75308
Replacement screw - 75318
To convert to a Beading bit substitute bearing 75000 (3/8") & dust shield 75306

BEADING BEARING BITS

Provides a decorative edge where a combined corner rounding and edge bead is needed.

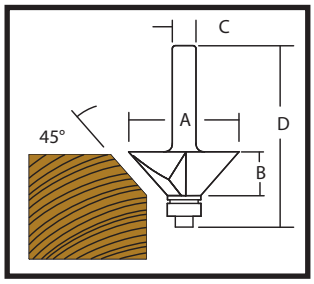
PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71300	7/8	1/2	3/16	1/4	2-1/8
71302	1	1/2	1/4	1/4	1-15/16
71304	1-1/8	9/16	5/16	1/4	2
71306	1-1/4	5/8	3/8	1/4	2-1/4
71308	1-1/2	3/4	1/2	1/4	2-3/16
71312	1	1/2	1/4	1/2	2-3/8
71316	1-1/4	5/8	3/8	1/2	2-5/16
71318	1-1/2	3/4	1/2	1/2	2-3/8



Replacement bearing - 75000 (3/8") • Replacement dust shield - 75306
Replacement screw - 75318
To convert to a Corner Rounding bit substitute bearing 75004 (1/2") & dust shield 75308

CHAMFERING BEARING BITS

Designed to give a beveled or decorative edge on finished solid wood and wood composites.

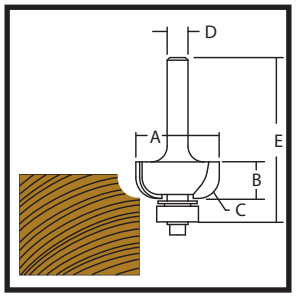


PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
71500	1-1/4	7/16	1/4	1-13/16
71504	1-1/4	1/2	1/2	2-1/8
71508	2	13/16	1/2	2-3/4
71512	2-1/2	1-1/16	1/2	2-3/4

45° angle chamfer
Replacement bearing for 71500 & 71504 - 75004 (1/2")
Replacement bearing for 71508 & 71512 - 75004 (1/2")
Replacement dust shield for 71508 & 71512 - 75308
Replacement dust shield for 71500 & 71508 - 75308
Replacement screw - 75318

COVE BEARING BITS

Designed for a decorative inverted radius on edges of solid wood and wood composites.

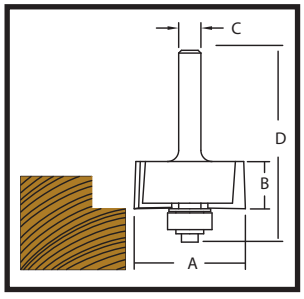


PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71000	1	1/2	1/4	1/4	2-1/8
71002	1-1/4	5/8	3/8	1/4	2-1/8
71004	1-1/2	3/4	1/2	1/4	2-1/4
71008	1-1/4	5/8	3/8	1/2	2-1/2
71010	1-1/2	3/4	1/2	1/2	2-1/2
71012	2	15/16	3/4	1/2	2-3/4

Replacement Bearing - 75002 (3/8") • *Replacement dust shield - 75310*
Replacement screw - 75318

RABBETING BEARING BITS

Designed to cut a step on the edge of your work piece for cabinet doors, lap joints, or simply a decorative edge.



PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
71100	1-1/4	1/2	1/4	2-1/8
71104	1-1/4	1/2	1/2	2-3/8

Rabbeting Bearing Kits include rabbeting bit and a bearing package. This allows for rabbeting depths of 1/4", 5/16", 3/8" and 7/16". Rabbeting Bearing Kit 71101 includes 1/4" shank rabbeting bit part number 71100. Rabetting Bearing Kit 71105 includes 1/2" shank rabbeting bit part number 71104.

Replacement bearing - 75004 (1/2") Replacement dust shield - 75308

Replacement screw - 75318

Rabbet depth - 3/8"

Note: To cut a 1/2" deep rabbet, use replacement bearing 75000 (3/8") & replacement dust shield - 75306

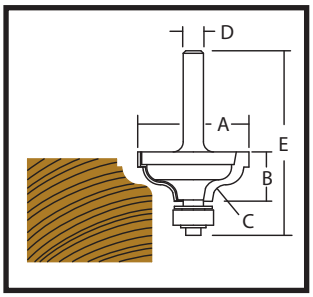
OGEE BEARING BITS

Designed to cut decorative edges where an Ogee design is desired. Available with a single or double fillet in wood, wood composites, and plastics.

SINGLE FILLET

PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71720	1-3/8	9/16	3/16	1/4	2-1/4
71724	1-3/8	9/16	3/16	1/2	2-1/4
71728	1-5/8	11/16	1/4	1/2	2-1/2

Replacement bearing - 75004 (1/2")
Replacement dust shield - 75308
Replacement screw - 75318

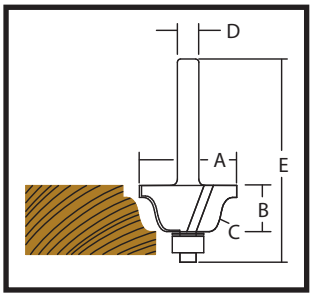


ROMAN OGEE BEARING BITS

Designed to cut a decorative Ogee style edge in solid woods, wood composites, and plastics.

PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71400	1-1/8	9/16	5/32	1/4	2-1/8
71402	1-1/2	3/4	1/4	1/4	2-1/4
71404	1-1/8	9/16	5/32	1/2	2-7/16
71406	1-1/2	11/16	1/4	1/2	2-9/16

Replacement bearing - 75002 (3/8")
Replacement dust shield - 75310
Replacement screw - 75318

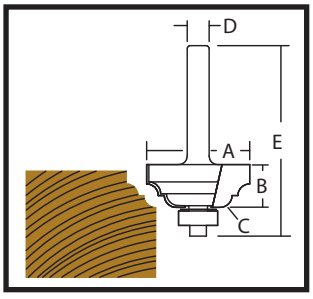


CLASSICAL BEARING BITS

Designed to cut a decorative classical style edge in solid woods, wood composites, and plastics.

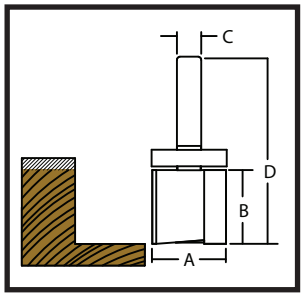
PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	RADIUS (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71704	1-1/8	1/2	1/8	1/4	2-1/8
71708	1-1/8	1/2	1/8	1/2	2-3/8
71712	1-1/4	5/8	5/32	1/4	2-3/8
71716	1-1/4	11/16	5/32	1/2	2-1/2

Replacement bearing - 75004 (1/2")
Replacement dust shield - 75308
Replacement screw - 75318



SHANK MOUNTED BEARING BITS

Designed for use with a template for trimming, cutting, dadoing, mortising, tenoning, and dovetails.

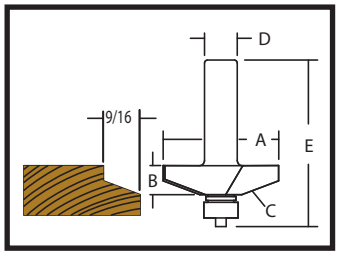


PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
73070	3/4	1	1/4	2-1/2
73072	3/4	1-1/4	1/4	2-3/4
73074	1-1/8	1-1/4	1/2	2-7/8

Replacement bearing for 3/4" diameter tool - 75006
Replacement bearing for 1-1/8" diameter tool - 75012

RAISED PANEL BEARING BIT

Designed for cutting a traditional raised panel in solid woods and wood composites.

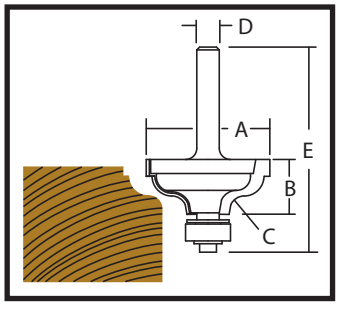


PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	CUTTING ANGLE (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
71700	1-5/8	7/16	30°	1/2	2-3/8

Replacement bearing - 75004 (1/2")
Replacement dust shield - 75308
Replacement screw - 75318

OGEE RAISED BEARING BIT

Designed to cut an Ogee style raised panel in solid wood and wood composites.



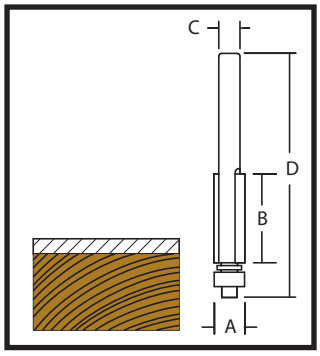
PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	RADIUS 1 (C)		SHANK DIAMETER (D)	OVERALL LENGTH (E)
71430	2-5/8	11/16	7/8	5/8	1/2	2-5/8

Replacement bearing - 75004 (1/2")
Replacement dust shield - 75308
Replacement screw - 75318

CARBIDE TIPPED FLUSH TRIM BEARING BITS

Precision ground design to give a smooth finished edge on abrasive laminated materials and plastics.

DOUBLE FLUTE



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
*73000	3/8	1	1/4	2-3/4
*73002	3/8	1/2	1/4	2-1/4
**73004	1/2	1	1/4	2-7/8
**73006	1/2	1/2	1/4	2-3/8
73008	1/2	1	1/2	3-1/4
73010	1/2	1/2	1/2	2-3/4
73012	1/2	1-1/2	1/4	3-3/8
**73014	1/2	2	1/2	4-1/4
•***73016	1/2	2-1/2	1/2	4-1/2
•**73020	11/16	9/32	1/4	2-1/8
•***73030	3/4	9/32	1/4	2-1/8

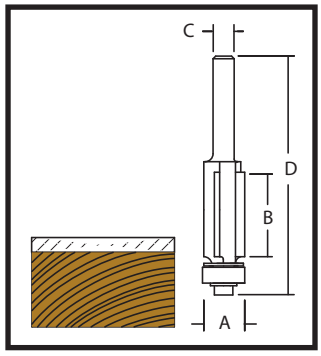
** Replacement screw - 75314*

*** Replacement screw - 75318*

**** Replacement screw - 75322*

• 15° Beveled edge trim bits: Dust shield – 75310, Bearing – 75004

THREE FLUTE

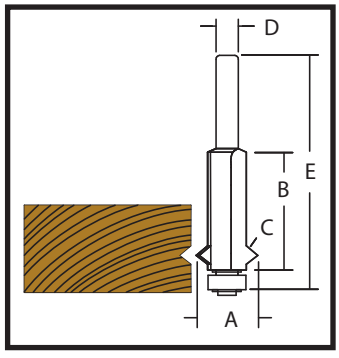


PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	SHANK DIAMETER (C)	OVERALL LENGTH (D)
73050	1/2	1	1/4	2-7/8
73052	1/2	1/2	1/4	2-3/8
73054	1/2	1	1/2	3-1/4

Replacement bearing for 1/2" cutting diameter - 75004
Replacement dust shield for 1/2" cutting diameters (73020 & 73030) - 75308
Replacement bearing for 3/8" cutting diameter - 75002
Replacement dust shield for 3/8" cutting diameters - 75310
Replacement screw - 75318

FACE FRAME BEARING BITS

Designed to remove excess overhang while making a decorative “V” detail where frame and cabinet sides join.

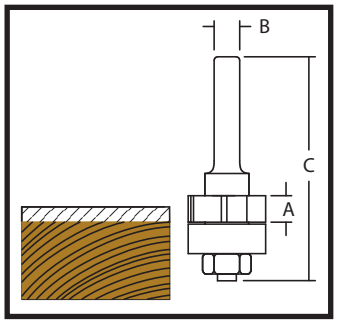


PART NUMBER	LARGE DIAMETER (A)	CUTTING LENGTH (B)	ANGLE (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
73034	5/8	1	45°	1/4	2-13/16
73038	5/8	1	45°	1/2	3-1/4

Replacement bearing - 75004 (1/2")
Replacement dust shield - 75308
Replacement screw - 75318

FOUR FLUTE TRIMMER BEARING BITS

Designed for trimming rigid plastic laminates.

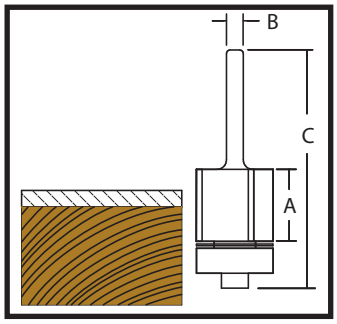


PART NUMBER	ANGLE	CUTTING LENGTH (A)	SHANK DIAMETER (B)	OVERALL LENGTH (C)
73100	FLUSH	1/4	1/4	2-1/2
73110	15°	1/4	1/4	2-1/2

Replacement arbors - 75100 (1/4" shank); 75102 (3/8" shank); 75104 (1/2" shank)
Replacement cutters - 73140 (flush); 73150 (15°)
Replacement bearing - 75008 (7/8")
Replacement nut - 75300
Replacement dust shield - 75304

HELIX TRIMMER BEARING BIT

Designed for chip free trimming of your laminated items.

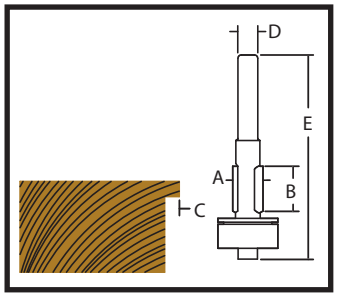


PART NUMBER	TYPE OF CUT	CUTTING LENGTH (A)	SHANK DIAMETER (B)	OVERALL LENGTH (C)
73200	FLUSH	5/8	1/4	2-1/2

Replacement bearing - 75006 (3/4")
Replacement dust shield - 75313
Replacement screw - 75322

OVERHANG TRIMMER BEARING BIT

Designed to eliminate chipping on the finish cut, this bit will leave excess stock in the roughing operation



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)	OVERHANG (C)	SHANK DIAMETER (D)	OVERALL LENGTH (E)
73500	3/8	1/2	3/16	1/4	2-7/8
73502	3/8	1/2	3/8	1/4	2-7/8

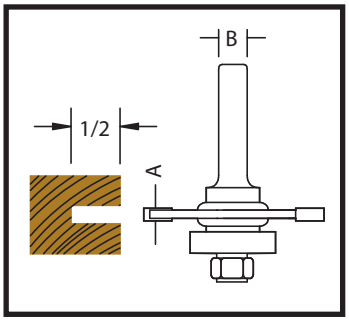
Replacement bearing 3/16–75006 (3/4")
3/8–75005; 75259 bearing sleeve
Replacement dust shield - 75313
Replacement screw - 75322

Designed specifically for slotting plywood and core boards for "T" moldings. Available as a complete assembly, or purchase replacement cutter only. All cutters are 1-7/8" diameter, 5/16" bore, and cut 1/2" deep. All assemblies come with a ball bearing guide.

TWO-WING CUTTER ASSEMBLIES

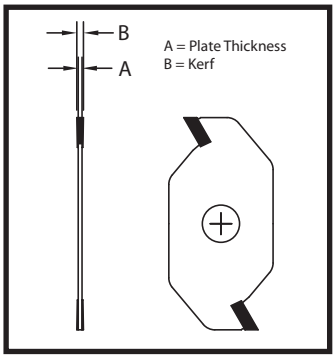
PART NUMBER	KERF (A)	SHANK DIAMETER (B)
72204	.062 (1/16)	1/4
72208		1/2
72234	.078 (5/64)	1/4
72238		1/2
72254	.093 (3/32)	1/4
72258		1/2
72274	.125 (1/8)	1/4
72278		1/2
72284	.250 (1/4)	1/4

Replacement bearing - 75008 (7/8")
Extra stiffening collars - 75334
Replacement washers - 75304
Replacement nut - 75300



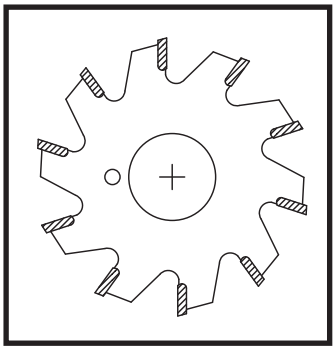
REPLACEMENT TWO-WING CUTTERS

PART NUMBER	PLATE THICKNESS (A)	KERF (B)
72201	.032	.062 (1/16)
72231	.042	.078 (5/64)
72251	.059	.093 (3/32)
72271	.058	.125 (1/8)
72281	.177	.250 (1/4)



CARBIDE TIPPED SAWS

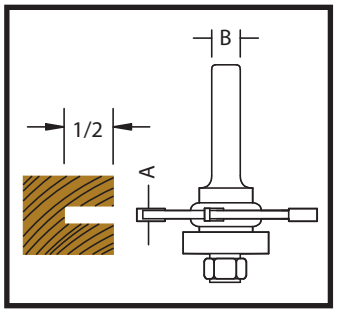
PART NUMBER	CUTTING DIAMETER	# OF TEETH	KERF	RAKE
72500	2	10	.095	0
72514	3	20	.095	0
72524	3	10	.095	-5



FOR CARBIDE TIPPED SAWS

PART NUMBER	SHANK DIAMETER	OVERALL LENGTH
72552	1/2	4-1/2

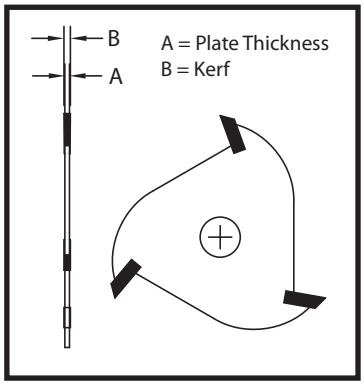
CARBIDE TIPPED SLOTTING CUTTERS



THREE-WING CUTTER ASSEMBLIES

PART NUMBER	KERF (A)	SHANK DIAMETER (B)
72324	.062 (1/16)	1/4
72326		3/8
72328		1/2
72348		1/2
72354	.078 (5/64)	1/4
72358		1/2
72394	.093 (3/32)	1/4
72398		1/2
72414	.125 (1/8)	1/4
72418		1/2
72434	.156 (5/32)	1/4
72438		1/2
72444	.187 (3/16)	1/4
72448		1/2
72464	.250 (1/4)	1/4
72468		1/2

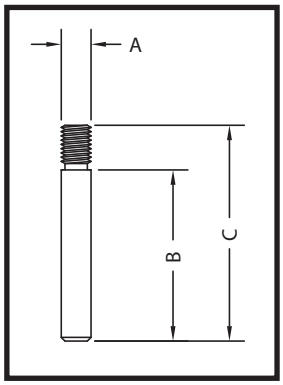
Replacement bearing - 75008 (7/8")
Extra stiffening collars - 75334
Replacement washer - 75304
Replacement nut - 75300



REPLACEMENT THREE-WING CUTTERS

PART NUMBER	PLATE THICKNESS (A)	KERF (B)
72301	.032	.050
72311	.032	.055
72321	.032	.062 (1/16)
72331	.032	.065
72341	.043	.070
72351	.043	.078 (5/64)
72381	.062	.090
72391	.062	.093 (3/32)
72401	.059	.110
*72411	.085	.125 (1/8)
72421	.094	.140 (9/64)
72431	.085	.156 (5/32)
72441	.114	.187 (3/16)
*72461	.180	.250 (1/4)

**Replacement Arbor – 75101*

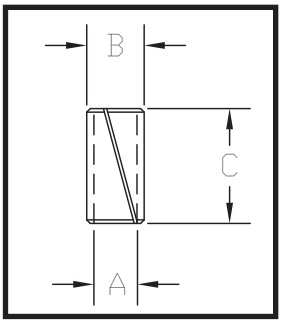


FOR SLOTTING CUTTERS

PART NUMBER	SHANK DIAMETER (A)	THREADS	ARBOR LENGTH (B)	OVERALL LENGTH (C)
75100	1/4	5/16-24	7/8	2-3/8
75103	3/8	5/16-24	7/8	2-3/8
75104	1/2	5/16-24	7/8	2-3/8

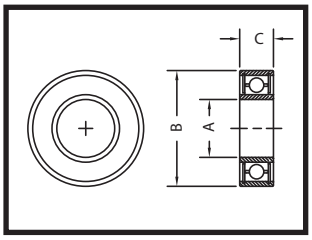
FIBER ADAPTORS

Designed as a temporary substitute for the proper size collets. Adaptors are not recommended for production routing. In an effort to reduce breakage, bits should be ordered with the cutting edges and shank diameters as close as possible in size.



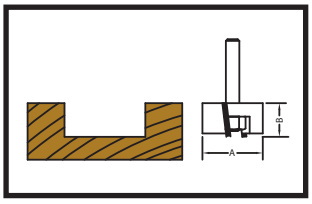
PART NUMBER	INSIDE DIAMETER (A)	OUTSIDE DIAMETER (B)	OVERALL LENGTH (C)
75200	1/8	1/4	1
75202	3/16	1/4	1
75206	1/4	1/2	1
75210	3/8	1/2	1-1/2

REPLACEMENT BEARINGS



PART NUMBER	INSIDE DIAMETER (A)	OUTSIDE DIAMETER (B)	WIDTH (C)
75000	3/16	3/8	1/8
75002	1/8	3/8	5/32
75004	3/16	1/2	.196
75005	1/4	1/2	3/16
75006	1/4	3/4	9/32
75008	5/16	7/8	.276
75012	1/2	1-1/8	5/16

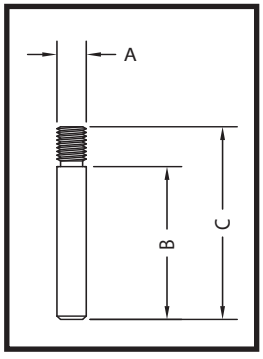
TWO-WING MORTISE CUTTER



PART NUMBER	CUTTING DIAMETER (A)	CUTTING LENGTH (B)
71360	1-1/4	5/8

REPLACEMENT ARBORS

FOR MORTISE CUTTERS



PART NUMBER	SHANK DIAMETER (A)	THREADS	ARBOR LENGTH (B)	OVERALL LENGTH (C)
71362	1/4	1/4-28	1-7/16	1-13/16
71363	3/8	1/4-28	1-7/16	1-13/16
71364	1/2	1/4-28	1-1/2	1-3/4

ROUTER BIT USAGE AND GUIDELINES

The choice application for machining wood, wood by-products, plastics, composites, and other non-ferrous material is undoubtedly, routing.

TOOL SELECTION

HSS - Best suited for aluminum, natural woods, and most plastics. An advantage of the high-speed steel is the ability to machine a much sharper cutting edge than carbide. These bits are capable of maintaining their sharp edge in these materials.

Carbide Tipped - Best suited for abrasive or resin based products, as well as laminated and composition wood materials.

Solid Carbide - The tool of choice for longer life and faster feed rates in the more difficult to cut materials such as hard woods, wood composites, plastics, and other composite materials.

Before selecting, you must consider all of the following: product finish, production demands, production environment, tool life expectations, and price.

Single Edge - Speed is your primary need and finish is of less importance.
Double Flute - Finish is a top priority.
Upcut Spiral - Fast chip removal, grooving, and slotting are primary uses of this bit.
Downcut Spiral - Cutting through material and/or faster feed rates.

Tool cut length is a critical factor affecting the finish of your product. For an ideal finish, use the shortest available edge length that can make the required depth of cut. Additional length will cause vibration and deflection, in turn leading to poor product finish and wear to the machinery.

TOOL BREAKAGE

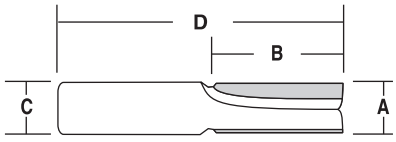
Wisconsin Knife Works recommends the cutting length of a bit not to exceed three times the cut diameter. A length exceeding three times the diameter will lead to breakage.

Adaptor bushings used to reduce collet size are not recommended for use in production applications.

Preventative collet maintenance is an important step to increase tool life and reduce breakage of your router bit. To avoid the downtime of changing tooling, clean and inspect the collet fixturing on a scheduled basis. One common culprit is the brown resin that will collect on the inside of the collet. You must remove this resin build up to ensure a proper collet hold on the shank of the bit.

TERMINOLOGY

Cut Diameter (A) - The diameter of the cutting edge - tip point to tip point.
Cut Length (B) - The length of the cutting edge.
Shank Diameter (C) - Diameter of the tool that is fitted into the collet.
(OAL) Overall Length (D) - Length of the bit from end of the shank to the cutting edge point.



CNC ROUTER BIT FEED CHART

Based on 18,000 RPM, 1/2" cut dia., 3/4" depth of cut

The following feed rate guidelines are in inches per minute. Actual speeds and feeds will vary w/machinery. For longer life, start at a “slower” rate, then increase the feed to a desirable rate–high enough to maintain a good finish while keeping the tool below a breakage point. Faster feed rates help the cutting edge last longer.

PART NUMBER	SOFT WOOD	HARD WOOD	PARTICLE BOARD	PLYWOOD	MDF	LAMINATE MDF	FLEXIBLE PLASTIC	RIGID PLASTIC	ALUMINUM W/COOLANT
61000	200						150		
62000									120
74400	200	300	400	400	400	350			
74300	350	350	500	500	500	500			
74700	250	300						150	
74750	200						250	300	
74440	200	250	300	300	300				
74200	200	250	300	300	300				125

WKW™

Wisconsin Knife Works, Inc.

KNIVES

Order online @ www.wkwinc.com

Wisconsin Knife Works BAK-PAK® and EURO BAK-PAK™ carbide knife systems are the ideal solution for a multitude of moulding applications from MDF and glued materials to natural woods. Wisconsin Knife Works now offers two corrugations systems, a fully corrugated system (BAK-PAK) and a system utilizing micro corrugations (EURO BAK-PAK). Both systems are made from premium C-3 micro grain carbide for ultimate wear resistance and performance.

Total thickness of the carbide and the steel backer for both BAK-PAK and EURO BAK-PAK is 10 mm (.394) allowing either system to be used in any 60 degree corrugated head that will accept 3/8" or 10 mm knives.

38 MM BAK-PAK® AND EURO BAK-PAK™ CARBIDE KNIFE SYSTEMS

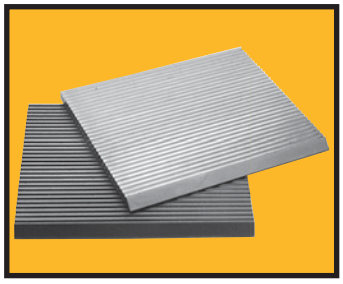
BAK-PAK SET PART NUMBER	BAK-PAK CARBIDE ONLY PART NUMBER	LENGTH mm	WIDTH mm	EURO BAK-PAK SET PART NUMBER	EURO BAK-PAK CARBIDE ONLY PART NUMBER
40510	40511	10	38	41510	41511
40514	40515	20	38	41514	41515
40518	40519	30	38	41518	41519
40522	40523	40	38	41522	41523
40526	40527	50	38	41526	41527
40530	40531	60	38	41530	41531
40534	40535	70	38	41534	41535
40538	40539	80	38	41538	41539
40542	40543	90	38	41542	41543
40546	40547	100	38	41546	41547
40550	40551	110	38	41550	41551
40554	40555	120	38	41554	41555
40558	40559	130	38	41558	41559
40562	40563	140	38	41562	41563
40566	40567	150	38	41566	41567
40570	40571	160	38	41570	41571
40574	40575	170	38	41574	41575
40578	40579	180	38	41578	41579
40582	40583	190	38	41582	41583
40586	40587	200	38	41586	41587
40590	40591	210	38	41590	41591
40594	40595	220	38	41594	41595
40598	40599	230	38	41598	41599

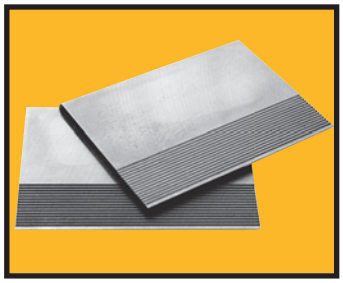
Note: *Please see WKW's price list for a complete listing of part numbers and pricing for backers.*

Carbide Thickness -1/8"/3mm

Backer Thickness – 17/64"/7mm

Total Thickness – 25/64"/10mm





50 MM BAK-PAK® AND EURO BAK-PAK™ CARBIDE KNIFE SYSTEMS

BAK-PAK SET PART NUMBER	BAK-PAK CARBIDE ONLY PART NUMBER	LENGTH mm	WIDTH mm	EURO BAK-PAK SET PART NUMBER	EURO BAK-PAK CARBIDE ONLY PART NUMBER
40310	40311	10	50	41310	41311
40314	40315	20	50	41314	41315
40318	40319	30	50	41318	41319
40322	40323	40	50	41322	41323
40326	40327	50	50	41326	41327
40330	40331	60	50	41330	41331
40334	40335	70	50	41334	41335
40338	40339	80	50	41338	41339
40342	40343	90	50	41342	41343
40346	40347	100	50	41346	41347
40350	40351	110	50	41350	41351
40354	40355	120	50	41354	41355
40358	40359	130	50	41358	41359
40362	40363	140	50	41362	41363
40366	40367	150	50	41366	41367
40370	40371	160	50	41370	41371
40374	40375	170	50	41374	41375
40378	40379	180	50	41378	41379
40382	40383	190	50	41382	41383
40386	40387	200	50	41386	41387
40390	40391	210	50	41390	41391
40394	40395	220	50	41394	41395
40398	40399	230	50	41398	41399

Note: *Please see WKW's price list for a complete listing of part numbers and pricing for backers.*

BAK-PAK® Grinding Instructions

Best results are obtained by rough grinding the carbide with a 100 to 120 grit diamond wheel and the finish grinding with a grit of 220 to 320 or finer. 3,000 RPM will generally give the best results when both rough and finish grinding. Best results are obtained with a bevel on the carbide of 45 to 50 degrees and a bevel on the steel backer of 35 to 40 degrees.

Jointing may be accomplished by using a 150 to 230 grit aluminum oxide stone.

60 MM BAK-PAK® AND EURO BAK-PAK™ CARBIDE KNIFE SYSTEMS

BAK-PAK SET PART NUMBER	BAK-PAK CARBIDE ONLY PART NUMBER	LENGTH mm	WIDTH mm	EURO BAK-PAK SET PART NUMBER	EURO BAK-PAK CARBIDE ONLY PART NUMBER
40410	40411	10	60	41410	41411
40414	40415	20	60	41414	41415
40418	40419	30	60	41418	41419
40422	40423	40	60	41422	41423
40426	40427	50	60	41426	41427
40430	40431	60	60	41430	41431
40434	40435	70	60	41434	41435
40438	40439	80	60	41438	41439
40442	40443	90	60	41442	41443
40446	40447	100	60	41446	41447
40450	40451	110	60	41450	41451
40454	40455	120	60	41454	41455
40458	40459	130	60	41458	41459
40462	40463	140	60	41462	41463
40466	40467	150	60	41466	41467
40470	40471	160	60	41470	41471
40474	40475	170	60	41474	41475
40478	40479	180	60	41478	41479
40482	40483	190	60	41482	41483
40486	40487	200	60	41486	41487
40490	40491	210	60	41490	41491
40494	40495	220	60	41494	41495
40498	40499	230	60	41498	41499

Note: *Please see WKW's price list for a complete listing of part numbers and pricing for backers.*

70 MM BAK-PAK® CARBIDE KNIFE SYSTEM

BAK-PAK SET PART NUMBER	BAK-PAK CARBIDE ONLY PART NUMBER	LENGTH mm	WIDTH mm
40810	40811	10	70
40814	40815	20	70
40818	40819	30	70
40822	40823	40	70
40826	40827	50	70
40830	40831	60	70
40834	40835	70	70
40838	40839	80	70
40842	40843	90	70
40846	40847	100	70
40850	40851	110	70
40854	40855	120	70
40858	40859	130	70
40862	40863	140	70
40866	40867	150	70
40870	40871	160	70
40874	40875	170	70
40878	40879	180	70

Note: *Please see WKW's price list for a complete listing of part numbers and pricing for backers.*

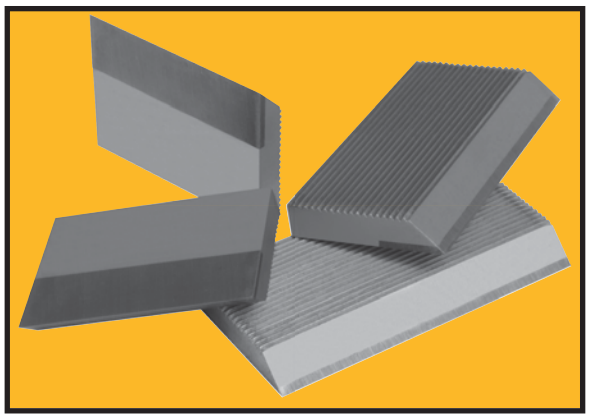
DELRIN® FILLER STRIPS

Order your Delrin® filler strips now for grinding BAK-PAK® carbide if your current grinding abrasives cannot grind carbide and steel together.

PART NUMBER	LENGTH	WIDTH	THICKNESS
40700	180 MM	1-1/2	3/32
40701	230 MM	1-1/2	3/32
40711	230 MM	2	3/32
40713	230 MM	2-1/2	3/32

CORRUGATED CARBIDE INLAYED KNIVES

Corrugated Carbide Inlayed Knives are used in applications where longer cutting edge life is required over premium steel. Applications include man-made materials, wood materials with glue lines and natural hard woods with abrasive characteristics. Corrugated Carbide Inlayed Knives are manufactured with a 45° bevel and 16-60° corrugations.

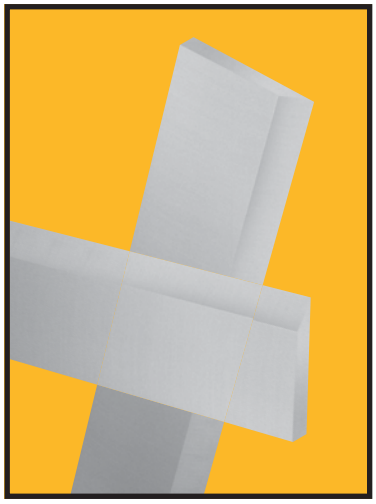


32mm WIDE 15mm INLAY		38mm WIDE 15mm INLAY		45mm WIDE 20mm INLAY		50mm WIDE 25mm INLAY		60mm WIDE 35mm INLAY	
PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm
44010	10	44210	10	44410	10	44610	10	44929	10
44014	20	44214	20	44414	20	44614	20	44931	20
44018	30	44218	30	44418	30	44618	30	44933	30
44022	40	44222	40	44422	40	44622	40	44935	40
44026	50	44226	50	44426	50	44626	50	44937	50
44030	60	44230	60	44430	60	44630	60	44939	60
44034	70	44234	70	44434	70	44634	70	44941	70
44038	80	44238	80	44438	80	44638	80	44943	80
44042	90	44242	90	44442	90	44642	90	44945	90
44046	100	44246	100	44446	100	44646	100	44947	100
44050	110	44250	110	44450	110	44650	110	44949	110
44054	120	44254	120	44454	120	44654	120	44951	120
44058	130	44258	130	44458	130	44658	130	44953	130
44062	140	44262	140	44462	140	44662	140	44955	140
44066	150	44266	150	44466	150	44666	150	44957	150
44070	160	44270	160	44470	160	44670	160	44959	160
44074	170	44274	170	44474	170	44674	170	44961	170
44078	180	44278	180	44478	180	44678	180	44963	180
44082	190	44282	190	44482	190	44682	190	44965	190
44086	200	44286	200	44486	200	44686	200	44967	200
44090	210	44290	210	44490	210	44690	210	44969	210
44094	220	44294	220	44494	220	44694	220	44971	220
44098	230	44298	230	44498	230	44698	230	44973	230
44099	240	44299	240	44499	240	44699	240	44975	240
44001	635	44201	635	44401	635	44601	635	44801	635

Note: *All corrugated carbide inlayed knives have a thickness of 8mm. Lengths between 240mm and 635mm are available. Please contact WKW for prices.*

Carbide Inlayed Thin Knives are used in applications where longer cutting edge life is required over premium steel. Applications include man-made materials, wood materials with glue lines and natural hardwoods with abrasive characteristics.

25mm WIDE 3mm THICKNESS 10mm INLAY		30mm WIDE 3mm THICKNESS 10mm INLAY		35mm WIDE 3mm THICKNESS 10mm INLAY		38mm WIDE 6mm THICKNESS 10mm INLAY	
PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm	PART NUMBER	LENGTH mm
45103	640	45205	650	45305	650	45502	610
45107	10	45207	10	45307	10	45707	10
45109	20	45209	20	45309	20	45709	20
45111	30	45211	30	45311	30	45711	30
45113	40	45213	40	45313	40	45713	40
45115	50	45215	50	45315	50	45715	50
45117	60	45217	60	45317	60	45717	60
45119	70	45219	70	45319	70	45719	70
45121	80	45221	80	45321	80	45721	80
45123	90	45223	90	45323	90	45723	90
45125	100	45225	100	45325	100	45725	100
45127	110	45227	110	45327	110	45727	110
45129	120	45229	120	45329	120	45729	120
45131	130	45231	130	45331	130	45731	130
45133	140	45233	140	45333	140	45733	140
45135	150	45235	150	45335	150	45735	150
45137	160	45237	160	45337	160	45737	160
45139	170	45239	170	45339	170	45739	170
45141	180	45241	180	45341	180	45741	180
45143	190	45243	190	45343	190	45743	190
45145	200	45245	200	45345	200	45745	200
45147	210	45247	210	45347	210	45747	210
45149	220	45249	220	45349	220	45749	220
45151	230	45251	230	45351	230	45751	230
45153	240	45253	240	45353	240	45753	240



Wisconsin Knife Works has manufactured woodworking knives for nearly 100 years. In fact, knives were our first and most important product, as our name implies. For reliable, long lasting knives at a competitive price look to Wisconsin Knife Works, the #1 company for quality cutting tools.

Precision grinding and machining to tight tolerances, heat-treating for long life, and custom machining for special knife patterns are just some of our manufacturing capabilities. Knives are 100% inspected for tight tolerance, conformity, craftsmanship and material. Uniform thickness allows for reduced balance and set-up time. Wisconsin Knife Works has a diverse inventory of standard stock knives for immediate delivery. Custom knives made to order.

HIGH-SPEED STEEL THIN KNIVES 35° BEVEL

Lumber and woodworking plants the world over specify M-2 High-Speed Steel knives to produce the finest finish cuts in planer, jointer, moulder and tenoner operations. The consistent hardness and high molybdenum content give an excellent edge and allows for easy grinding. High-Speed Steel is ideal for medium to long runs. Use Wisconsin Knife Works BAK-PAK® and Carbide Inlayed Knives when cutting abrasive materials.

WKW can cut knives to other lengths upon request.

PART NUMBER	LENGTH	WIDTH	THICKNESS
42000	25	3/4	1/8
42004	25	7/8	1/8
42006	25	1	1/8
42012	25	1-1/8	1/8
42018	25	1-1/4	1/8
42019	31	1-1/4	1/8
42021	36	1-1/4	1/8
42026	25	1-3/8	1/8
42027	31	1-3/8	1/8
42029	36	1-3/8	1/8
42034	25	1-1/2	1/8
42035	31	1-1/2	1/8
42037	36	1-1/2	1/8
42058	25	1-1/4	5/32
42059	31	1-1/4	5/32
42061	36	1-1/4	5/32
42066	25	1-1/2	5/32
42067	31	1-1/2	5/32
42069	36	1-1/2	5/32
42074	25	1-3/4	5/32
42075	31	1-3/4	5/32
42077	36	1-3/4	5/32
**42078	31	1-7/8	5/32
*42079	7-1/2	2	5/32
*42080	12	2	5/32
*42081	15	2	5/32
42082	25	2	5/32
42083	31	2	5/32
42085	36	2	5/32

*These knives have a 30° bevel.
**Custom 4 week lead time.

OPTI® THIN KNIVES 45° BEVEL

An exclusive product offered by Wisconsin Knife Works, this is a knife "specially treated" in a state-of-the-art process that produces an ultra-hard surface which, unlike coating, will not chip, flake, or peel. It is specifically designed for natural woods where you want to obtain the finish of High-Speed Steel tooling, but want up to 50% or more longer life.

PART NUMBER	LENGTH	WIDTH	THICKNESS
46606	25	1	1/8
46654	31	1-1/4	5/32
46660	31	1-1/2	5/32
46666	31	1-3/4	5/32
46672	31	2	5/32

OPTI® Knife Grinding Instructions
When grinding WKW's exclusive OPTI® knife, the procedure is the same as on regular steel knives with a couple of exceptions. The best results are achieved when the knife is ground to a 45° or 50° bevel, or in other words, a more "blunt" bevel that leaves more knife material at the cutting edge. On most profile grinders, this is obtained by setting the clearance angle on the grinder at either 35° or 30° for a 10° hook angle head or by setting the clearance angle at 25° to 20° for a 20° hook angle head.

In addition, it is important to be careful not to chip the cutting edge on the OPTI® knife as it is much harder than conventional tool steels. A better finish will be obtained on OPTI® knives if the grinding wheel RPM is increased by 500 RPM above the normal tool steels for the rough and finish grind. Be sure, however, to check with your wheel manufacturer and never exceed maximum recommended RPM.

Never grind or hone the face on OPTI® knives as this may remove ultra hard surface of the knife.

WKW can cut knives to other lengths upon request.

KARBO-KROME® THIN KNIVES 30° BEVEL

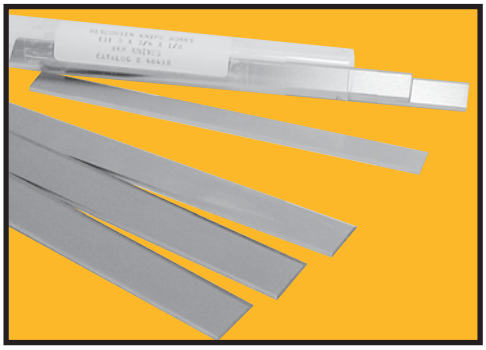
Karbo-Krome® is a high-carbon, high-chrome knife steel particularly favored on the West Coast where moisture content and acid conditions are troublesome with other types of steel. Typically not recommended for use on dry hardwoods.

WKW can cut knives to other lengths upon request.

PART NUMBER	LENGTH	WIDTH	THICKNESS
42167	31	1-1/2	5/32
42175	31	1-3/4	5/32
42180	25	2	5/32
42182	15	2	5/32
42183	31	2	5/32
*42183SB	31	2	5/32
42190	31	2-1/4	5/32
42198	31	2-1/2	5/32

**42183SB are sandblasted on one side.*

HIGH-SPEED STEEL JOINTER & PLANER KNIFE SETS



WKW can provide other lengths and widths of jointer and planer knife sets. Please contact WKW for details.

Many additional size sets available on a custom basis. Call Wisconsin Knife Works for pricing and lead times.

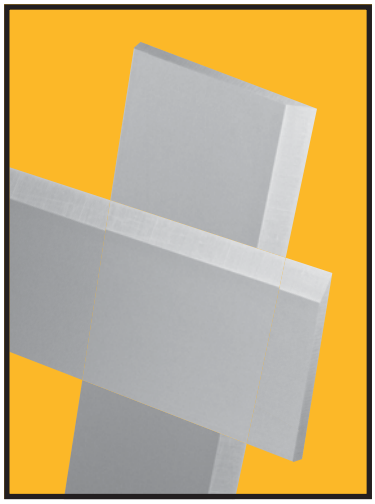
PART NUMBER	LENGTH	WIDTH	THICK-NESS	# OF KNIVES	MACHINE
46700	6-1/8	19/32	3/32	3	DELTA
46714	6	5/8	1/8	3	ROCKWELL/DELTA
46730	6	3/4	1/8	3	POWERMATIC
46702	8-1/16	5/8	3/32	3	DELTA
46722	8	5/8	1/8	3	ROCKWELL/DELTA
46738	8	3/4	1/8	3	POWERMATIC
46756	13-1/8	1	1/8	3	ROCKWELL/DELTA
*46802	13-1/8	11/16	5/32	3	ROCKWELL/DELTA
46760	15	1	1/8	3	VARIOUS
46810	18-1/4	1-1/4	5/32	3	POWERMATIC

** Knives are notched on ends.*

VALUE EDGE M2 THIN KNIVES 30° BEVEL

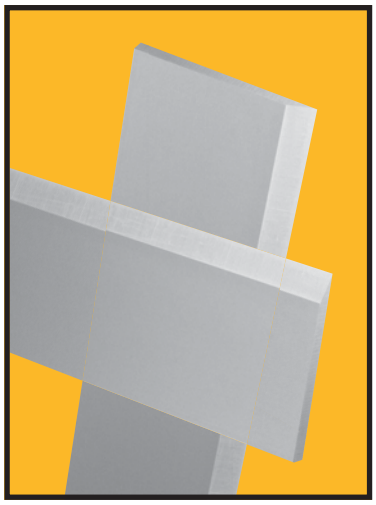
1-1/2 WIDE 5/32 THICKNESS		1-3/4 WIDE 5/32 THICKNESS		2 WIDE 5/32 THICKNESS	
PART NUMBER	LENGTH	PART NUMBER	LENGTH	PART NUMBER	LENGTH
VE067030	3	VE075030	3	VE083030	3
VE067035	3.5	VE075035	3.5	VE083035	3.5
VE067040	4	VE075040	4	VE083040	4
VE067045	4.5	VE075045	4.5	VE083045	4.5
VE067050	5	VE075050	5	VE083050	5
VE067055	5.5	VE075055	5.5	VE083055	5.5
VE067060	6	VE075060	6	VE083060	6
VE067065	6.5	VE075065	6.5	VE083065	6.5
VE067070	7	VE075070	7	VE083070	7
VE067075	7.5	VE075075	7.5	VE083075	7.5
VE067080	8	VE075080	8	VE083080	8
VE067085	8.5	VE075085	8.5	VE083085	8.5
VE067090	9	VE075090	9	VE083090	9
VE067095	9.5	VE075095	9.5	VE083095	9.5
VE067100	10	VE075100	10	VE083100	10
VE067105	10.5	VE075105	10.5	VE083105	10.5
VE067110	11	VE075110	11	VE083110	11
VE067115	11.5	VE075115	11.5	VE083115	11.5
VE067120	12	VE075120	12	VE083120	12
VE067125	12.5	VE075125	12.5	VE083125	12.5
VE067130	13	VE075130	13	VE083130	13
VE067135	13.5	VE075135	13.5	VE083135	13.5
VE067140	14	VE075140	14	VE083140	14
VE067145	14.5	VE075145	14.5	VE083145	14.5
VE067150	15	VE075150	15	VE083150	15
VE067155	15.5	VE075155	15.5	VE083155	15.5
VE067160	16	VE075160	16	VE083160	16
VE067165	16.5	VE075165	16.5	VE083165	16.5
VE067170	17	VE075170	17	VE083170	17
VE067175	17.5	VE075175	17.5	VE083175	17.5
VE067180	18	VE075180	18	VE083180	18
VE067185	18.5	VE075185	18.5	VE083185	18.5
VE067190	19	VE075190	19	VE083190	19
VE067195	19.5	VE075195	19.5	VE083195	19.5
VE067200	20	VE075200	20	VE083200	20
VE067205	20.5	VE075205	20.5	VE083205	20.5
VE067210	21	VE075210	21	VE083210	21
VE067215	21.5	VE075215	21.5	VE083215	21.5
VE067220	22	VE075220	22	VE083220	22
VE067225	22.5	VE075225	22.5	VE083225	22.5
VE067230	23	VE075230	23	VE083230	23
VE067235	23.5	VE075235	23.5	VE083235	23.5
VE067240	24	VE075240	24	VE083240	24
VE067245	24.5	VE075245	24.5	VE083245	24.5
VE067250	25	VE075250	25	VE083250	25
VE067255	25.5	VE075255	25.5	VE083255	25.5
VE067260	26	VE075260	26	VE083260	26
VE067265	26.5	VE075265	26.5	VE083265	26.5
VE067270	27	VE075270	27	VE083270	27
VE067275	27.5	VE075275	27.5	VE083275	27.5
VE067280	28	VE075280	28	VE838280	28
VE067285	28.5	VE075285	28.5	VE083285	28.5
VE067290	29	VE075290	29	VE083290	29
VE067295	29.5	VE075295	29.5	VE083295	29.5
VE067300	30	VE075300	30	VE083300	30
VE067305	30.5	VE075305	30.5	VE083305	30.5
VE067310	31	VE075310	31	VE083310	31

WKW is pleased to offer a cost competitive knife for applications where a 'value' priced knife is appropriate. Value Edge M2 Thin Knives are manufactured in our plant in Beloit, Wisconsin and are made using quality materials and our stringent in-house heat treat process yielding consistent quality knives, order after order.



VALUE EDGE D2 THIN KNIVES 30° BEVEL

WKW is pleased to offer a cost competitive knife for applications where a 'value' priced knife is appropriate. Value Edge D2 Thin Knives are manufactured in our plant in Beloit, Wisconsin and are made using quality materials and our stringent in-house heat treat process yielding consistent quality knives, order after order.



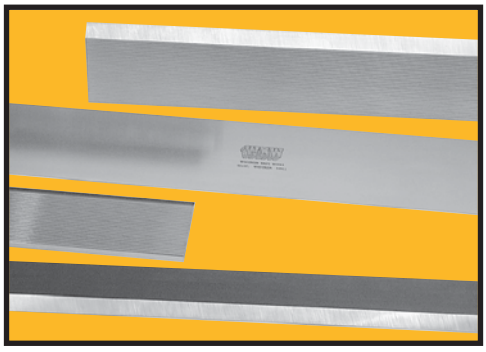
1-1/2 WIDE 5/32 THICKNESS		1-3/4 WIDE 5/32 THICKNESS		2 WIDE 5/32 THICKNESS	
PART NUMBER	LENGTH	PART NUMBER	LENGTH	PART NUMBER	LENGTH
VE167030	3	VE175030	3	VE183030	3
VE167035	3.5	VE175035	3.5	VE183035	3.5
VE167040	4	VE175040	4	VE183040	4
VE167045	4.5	VE175045	4.5	VE183045	4.5
VE167050	5	VE175050	5	VE183050	5
VE167055	5.5	VE175055	5.5	VE183055	5.5
VE167060	6	VE175060	6	VE183060	6
VE167065	6.5	VE175065	6.5	VE183065	6.5
VE167070	7	VE175070	7	VE183070	7
VE167075	7.5	VE175075	7.5	VE183075	7.5
VE167080	8	VE175080	8	VE183080	8
VE167085	8.5	VE175085	8.5	VE183085	8.5
VE167090	9	VE175090	9	VE183090	9
VE167095	9.5	VE175095	9.5	VE183095	9.5
VE167100	10	VE175100	10	VE183100	10
VE167105	10.5	VE175105	10.5	VE183105	10.5
VE167110	11	VE175110	11	VE183110	11
VE167115	11.5	VE175115	11.5	VE183115	11.5
VE167120	12	VE175120	12	VE183120	12
VE167125	12.5	VE175125	12.5	VE183125	12.5
VE167130	13	VE175130	13	VE183130	13
VE167135	13.5	VE175135	13.5	VE183135	13.5
VE167140	14	VE175140	14	VE183140	14
VE167145	14.5	VE175145	14.5	VE183145	14.5
VE167150	15	VE175150	15	VE183150	15
VE167155	15.5	VE175155	15.5	VE183155	15.5
VE167160	16	VE175160	16	VE183160	16
VE167165	16.5	VE175165	16.5	VE183165	16.5
VE167170	17	VE175170	17	VE183170	17
VE167175	17.5	VE175175	17.5	VE183175	17.5
VE167180	18	VE175180	18	VE183180	18
VE167185	18.5	VE175185	18.5	VE183185	18.5
VE167190	19	VE175190	19	VE183190	19
VE167195	19.5	VE175195	19.5	VE183195	19.5
VE167200	20	VE175200	20	VE183200	20
VE167205	20.5	VE175205	20.5	VE183205	20.5
VE167210	21	VE175210	21	VE183210	21
VE167215	21.5	VE175215	21.5	VE183215	21.5
VE167220	22	VE175220	22	VE183220	22
VE167225	22.5	VE175225	22.5	VE183225	22.5
VE167230	23	VE175230	23	VE183230	23
VE167235	23.5	VE175235	23.5	VE183235	23.5
VE167240	24	VE175240	24	VE183240	24
VE167245	24.5	VE175245	24.5	VE183245	24.5
VE167250	25	VE175250	25	VE183250	25
VE167255	25.5	VE175255	25.5	VE183255	25.5
VE167260	26	VE175260	26	VE183260	26
VE167265	26.5	VE175265	26.5	VE183265	26.5
VE167270	27	VE175270	27	VE183270	27
VE167275	27.5	VE175275	27.5	VE183275	27.5
VE167280	28	VE175280	28	VE183280	28
VE167285	28.5	VE175285	28.5	VE183285	28.5
VE167290	29	VE175290	29	VE183290	29
VE167295	29.5	VE175295	29.5	VE183295	29.5
VE167300	30	VE175300	30	VE183300	30
VE167305	30.5	VE175305	30.5	VE183305	30.5
VE167310	31	VE175310	31	VE183310	31

Wisconsin Knife Works corrugated back knives feature controlled uniform hardness and quality crush ground corrugations. Available in 16-60° and 16-90° corrugations, these knives are ground to exacting dimensions for perfect balance. A must for use on profile knife grinders.

HIGH SPEED STEEL CORRUGATED KNIVES 35° BEVEL

Lumber and woodworking plants the world over specify M-2 High-Speed Steel knives to produce the finest finish cuts in planer, jointer, moulder, and tenoner operations. The consistent hardness and high molybdenum content give an excellent edge and allows for easy grinding. High-Speed Steel is ideal for medium to long runs. See Wisconsin Knife Works BAK-PAK® when cutting abrasive materials.

Knives with 16-90 corrugations available on a custom order basis.

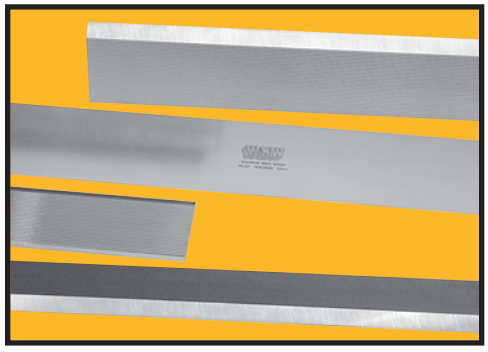


PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
45503	25	1-1/2	3/16	16-60
45505	25	1-3/4	3/16	16-60
45507	25	2	3/16	16-60
45515	25	1-1/4	1/4	16-60
45517	25	1-1/2	1/4	16-60
45519	25	1-3/4	1/4	16-60
45521	25	2	1/4	16-60
45523	25	2-1/4	1/4	16-60
45525	25	2-1/2	1/4	16-60
45533	25	1-1/4	5/16	16-60
45535	25	1-1/2	5/16	16-60
45537	25	1-3/4	5/16	16-60
45539	25	2	5/16	16-60
45541	25	2-1/4	5/16	16-60
45543	25	2-1/2	5/16	16-60
45545	25	2-3/4	5/16	16-60
45547	25	3	5/16	16-60
45551	25	2-1/2	3/8	16-60
45553	25	2-3/4	3/8	16-60
45555	25	3	3/8	16-60
45557	25	3-1/4	3/8	16-60
45559	25	3-1/2	3/8	16-60

BADGER® CORRUGATED KNIVES 35° BEVEL

BADGER Knives are produced using a process developed exclusively for Wisconsin Knife Works. In certain applications BADGER Knives have demonstrated FOUR times the life of M-2 knife steel.

PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
45933	25	1-1/4	5/16	16-60
45935	25	1-1/2	5/16	16-60
45937	25	1-3/4	5/16	16-60
45939	25	2	5/16	16-60
45941	25	2-1/4	5/16	16-60
45943	25	2-1/2	5/16	16-60
45945	25	2-3/4	5/16	16-60



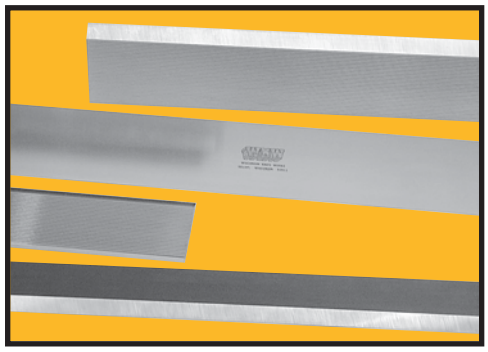
Knives with 16-90 corrugations available on a custom order basis.

M-3 CORRUGATED KNIVES 35° BEVEL

M-3 Knife Steel has characteristics that can provide better finish and longer run times than other knife steels in certain applications. M-3 knives with 16-90 corrugations are available on a custom order basis.

PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
45635	25	1-1/2	5/16	16-60
45637	25	1-3/4	5/16	16-60
45639	25	2	5/16	16-60
45641	25	2-1/4	5/16	16-60
45643	25	2-3/8	5/16	16-60
45649	25	2-1/2	5/16	16-60
45645	25	2-3/4	5/16	16-60
45647	25	3	5/16	16-60

(please note M3 Knives have a ground heel bevel)



OPTI® CORRUGATED KNIVES 45° BEVEL

An exclusive product offered by Wisconsin Knife Works, this is a knife "specially treated" in a state-of-the-art process that produces an ultra-hard surface which, unlike coating, will not chip, flake, or peel. It is specifically designed for natural woods where you want to obtain the finish of High-Speed Steel tooling, but want up to 50% or more longer life.

OPTI® Knife Grinding Instructions

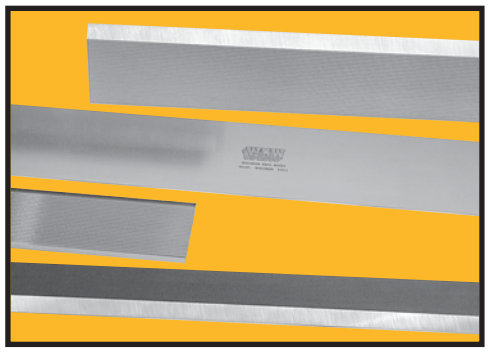
When grinding WKW's exclusive OPTI® knife, the procedure is the same as on regular steel knives with a couple of exceptions. The best results are achieved when the knife is ground to a 45° or 50° bevel, or in other words, a more "blunt" bevel that leaves more knife material at the cutting edge. On most profile grinders, this is obtained by setting the clearance angle on the grinder at either 35° or 30° for a 10° hook angle head or by setting the clearance angle at 25° to 20° for a 20° hook angle head.

In addition, it is important to be careful not to chip the cutting edge on the OPTI® knife as it is much harder than conventional tool steels. A better finish will be obtained on OPTI® knives if the grinding wheel RPM is increased by 500 RPM above the normal tool steels for the rough and finish grind. Be sure, however, to check with your wheel manufacturer and never exceed maximum recommended RPM.

Never grind or hone the face on OPTI® knives as this may remove the ultra hard surface of the knife.

PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
46921	25	1-1/4	1/4	16-60
46923	25	1-1/2	1/4	16-60
46925	25	1-3/4	1/4	16-60
46927	25	2	1/4	16-60
46929	25	2-1/4	1/4	16-60
46931	25	2-1/2	1/4	16-60
46933	25	1-1/4	5/16	16-60
46935	25	1-1/2	5/16	16-60
46937	25	1-3/4	5/16	16-60
46939	25	2	5/16	16-60
46941	25	2-1/4	5/16	16-60
46943	25	2-1/2	5/16	16-60
46945	25	2-3/4	5/16	16-60
46947	25	3	5/16	16-60

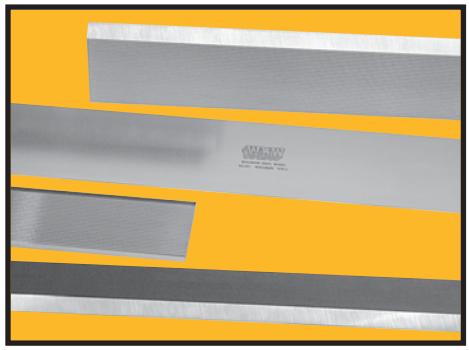
Knives with 16-90 corrugations available on a custom order basis.



KARBO-KROME® CORRUGATED KNIVES 35° BEVEL

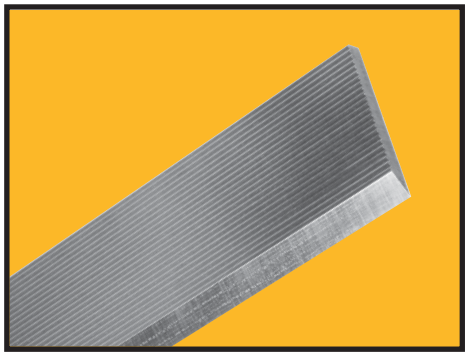
Karbo-Krome® is a high-carbon, high-chrome knife steel particularly favored on the West Coast where moisture content and acid conditions are troublesome with other types of steel. Typically not recommended for use on dry, hardwoods.

PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
45381	25	1-1/2	1/4	16-60
45383	25	1-3/4	1/4	16-60
45385	25	2	1/4	16-60
45387	25	2-1/4	1/4	16-60
45389	25	2-1/2	1/4	16-60
45401	25	1-1/2	5/16	16-60
45403	25	1-3/4	5/16	16-60
45405	25	2	5/16	16-60
45407	25	2-1/4	5/16	16-60
45409	25	2-1/2	5/16	16-60



VALUE EDGE M2 CORRUGATED

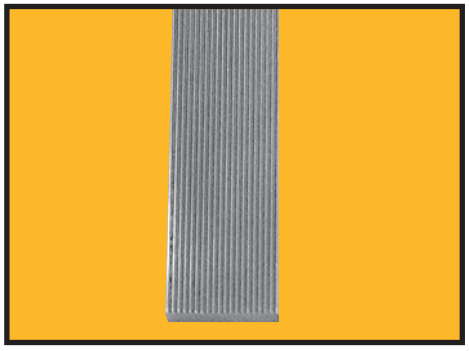
A cost competitive knife for applications where a 'value' priced knife is appropriate. Value Edge M2 Corrugated Knives, manufactured in our plant in Beloit, Wisconsin, are made using quality materials, a stringent in-house heat treat process and feature crush ground corrugations yielding consistent quality knives.



PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
VE10503	25	1-1/2	3/16	16-60
VE10505	25	1-3/4	3/16	16-60
VE10507	25	2	3/16	16-60
VE10517	25	1-1/2	1/4	16-60
VE10519	25	1-3/4	1/4	16-60
VE10521	25	2	1/4	16-60
VE10523	25	2-1/4	1/4	16-60
VE10525	25	2-1/2	1/4	16-60
VE10533	25	1-1/4	5/16	16-60
VE10535	25	1-1/2	5/16	16-60
VE10537	25	1-3/4	5/16	16-60
VE10539	25	2	5/16	16-60
VE10541	25	2-1/4	5/16	16-60
VE10543	25	2-1/2	5/16	16-60
VE10545	25	2-3/4	5/16	16-60
VE10547	25	3	5/16	16-60

CORRUGATED FILLER STOCK

Corrugated filler stock is used to fill unused knife slots in a head, and is made to Wisconsin Knife Works same high standards. WKW corrugated filler stock is marked with an identifying line for proper orientation and balance.

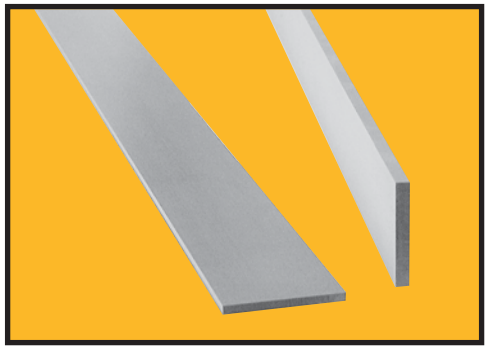


PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
45421	25	1	1/4	16-60
45425	25	1-3/16	1/4	16-60
45427	25	1	5/16	16-60
45429	25	1-3/16	5/16	16-60
45431	25	1	3/8	16-60

HIGH-SPEED STEEL SQUARE EDGE

Wisconsin Knife Works square edge steel is manufactured from the finest quality steels available and is heat treated and ground to tight tolerances for maximum performance and life. For less than full bar lengths, specify length required.

PART NUMBER	LENGTH	WIDTH	THICKNESS
42402	31	1	5/32
42404	31	1-1/4	5/32
42406	31	1-1/2	5/32
42408	31	1-3/4	5/32
42410	31	2	5/32
42412	31	2-1/4	5/32
42414	31	2-1/2	5/32
42416	31	1	3/16
42418	31	1-1/4	3/16
42420	31	1-1/2	3/16
42422	31	1-3/4	3/16
42424	31	2	3/16
42426	31	2-1/4	3/16
42428	31	2-1/2	3/16
42430	31	1	1/4
42432	31	1-1/4	1/4
42434	31	1-1/2	1/4
42436	31	1-3/4	1/4
42438	31	2	1/4
42440	31	2-1/4	1/4
42442	31	2-1/2	1/4



KARBO-KROME® SQUARE EDGE STEEL

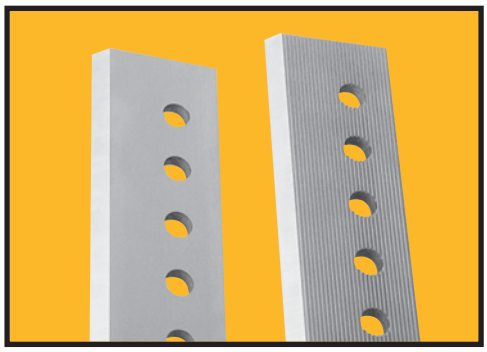
Wisconsin Knife Works square edge steel is manufactured from the finest quality steels available and is heat treated and ground to tight tolerances for maximum performance and life. For less than full bar lengths, specify length required.

PART NUMBER	LENGTH	WIDTH	THICKNESS
42510	31	2	5/32
42512	31	2-1/4	5/32
42514	31	2-1/2	5/32
42520	31	2	3/16
42522	31	2-1/4	3/16
42524	31	2-1/2	3/16

HIGH-SPEED SHAPER STEEL 30° BEVEL

Notching of one or both sides of a full bar of shaper steel can be done upon request. Note that we cannot notch anything under 1" wide.

PART NUMBER	LENGTH	WIDTH	THICKNESS
41220	25	1/2	1/4
41222	25	3/4	1/4
41224	25	1	1/4
41226	25	1-1/4	1/4
41228	25	1-1/2	1/4
41230	25	1-3/4	1/4
41232	25	2	1/4
41234	25	2-1/4	1/4
41236	25	2-1/2	1/4
41254	25	3/4	5/16
41256	25	1	5/16
41258	25	1-1/4	5/16
41260	25	1-1/2	5/16
41262	25	1-3/4	5/16
41264	25	2	5/16
41266	25	2-1/4	5/16
41268	25	2-1/2	5/16
41270	25	2-3/4	5/16
41272	25	3	5/16
41288	25	1	3/8
41290	25	1-1/4	3/8
41292	25	1-1/2	3/8
41294	25	1-3/4	3/8
41296	25	2	3/8
41298	25	2-1/4	3/8
41300	25	2-1/2	3/8
41302	25	2-3/4	3/8
41304	25	3	3/8
41306	25	3-1/4	3/8

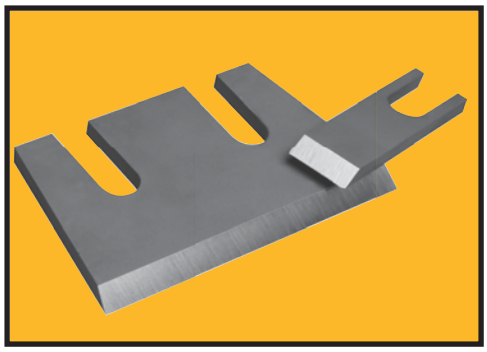


Williams and Hussey knives are manufactured with an additional 1/16 grind stock on the width.

WILLIAMS AND HUSSEY KNIVES 45° BEVEL

PART NUMBER	LENGTH	WIDTH	THICKNESS	CORRUGATIONS
KA26388	25	1-3/4	3/16	Plain Back
KA26388A	25	2	3/16	Plain Back
KA26388B	25	2	1/4	Plain Back
KA26388C	25	2-1/4	1/4	Plain Back
KA26388D	25	2-1/2	1/4	Plain Back
KA26388E	25	2-1/2	5/16	Plain Back
KA26383	25	1-3/4	3/16	16-60
*KA26383A	25	2	3/16	16-60
KA26383B	25	2	1/4	16-60
KA26383C	25	2-1/4	1/4	16-60
KA26383D	25	2-1/2	1/4	16-60
KA26383E	25	2-1/2	5/16	16-60

** Custom knife with 4 week lead time*

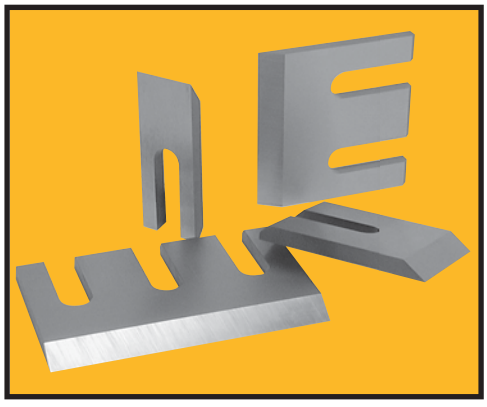


WKW Lathe Knives made from M-2 steel, are manufactured using state of the art manufacturing processes and are specially heat treated to deliver a consistent hardness through the entire knife.

Other sizes are available on a custom order basis.

WKW LATHE KNIVES 40° BEVEL

PART NUMBER	SLOTS	WIDTH	LENGTH
LK249S	1	3	1-1/4
LK250S	1	3	1-1/2
LK301S	1	3	1-3/4
LK251S	1	3	2
LK252S	1	3	2-1/2
LK253S	1	3	3
LK260S	2	3	6



HIGH-SPEED STEEL SLOTTED KNIVES 35° BEVEL

PART NUMBER	LENGTH	WIDTH	THICKNESS	# OF SLOT(S)
KN 164	2	4-1/2	3/8	1
KN 165	1-1/2	4-1/2	3/8	1
KN 341	1-1/2	4	3/8	1
KN 342	2	4	3/8	1
KN 343	2-1/2	4	3/8	1
KN 344	3	4	3/8	1
KN 348	4	4	3/8	2
KN 349	4	4-1/2	3/8	2
KN 465	6	4	3/8	3

Standard slot is 11/16 wide x 2-1/4 long to work with 5/8 bolts.

WHAT IS A MILLED TO PATTERN (MTP) BIT?

All WKW Milled-To-Pattern Bits are precision machined for accuracy and finish. Made to your exact specifications, Milled-To-Pattern bits use AISI M-2 High-Speed Steel, carbide, or other tool steels, and are heat-treated for maximum wear. Machined to exacting tolerances, each bit is projected on an optical comparator to ensure minute detail accuracy.

Milled-To-Pattern bits can be designed to fit most standard makes of cutterheads. This means your pattern will provide constant and dependable production. Send us a drawing or sample of your pattern.

Milled-To-Pattern bits are recommended where long runs or frequent runs of the same moulding or pattern are made. The term "Milled-To-Pattern" bits is used because of the way the bits were originally manufactured. However, with the coming of modern technology, we now do 90-95% of our Milled-To-Pattern bits on our Wire E.D.M. computer-controlled machines. Our engineers utilize CAD-CAM to develop the proper information for the computer program. If bits are reordered by the part number stamped on the bits, you will receive the identical bit.

Wood patterns are cut with the bits and profiles are checked on our comparator against pattern drawings. All bits are balanced in sets for faster setup.

Milled-To-Pattern bits are easy to maintain. When they become dull, it is a simple process to face-sharpen them by taking off only a few thousands. (This is true with a proper maintenance schedule.)

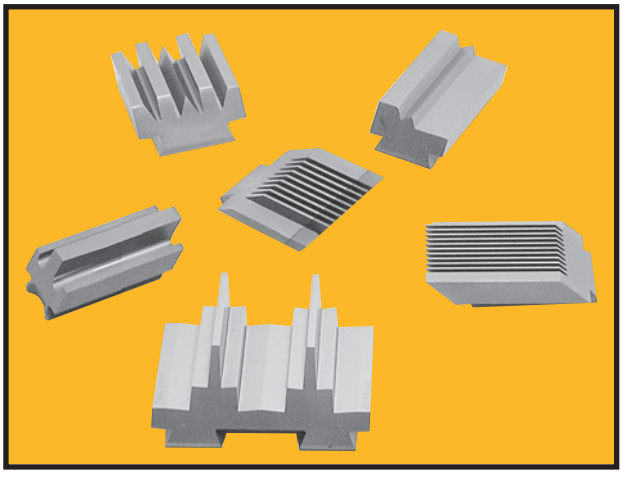
When face-sharpening, it is important to follow the same angle that is milled on the face. (If this angle is changed, the bit will not cut the correct pattern.) When bits are assembled in a head, they must be set to the head angle (see proper set-up sheet). When bits with corrugations are sharpened back 1/16 of an inch, they should be reset to the head angle. "L"-type bits must be ground to adjust for proper cutting angle.

The bevel that is milled on the face of the bit determines the cutting angle. Bits are designed to give the proper cutting angle when cutting a specific kind of wood. Bits will have more than one dovetail for wide patterns.

Bits are usually made from high-grade tool steels, including M-2, carbide-tipped and OPTI.

COMMON MTP APPLICATIONS

- Multiple dowel profiles
- Louvre slats
- Very long runs
- Critical fitting parts
- Rail and Stile



NOTES

WKW™

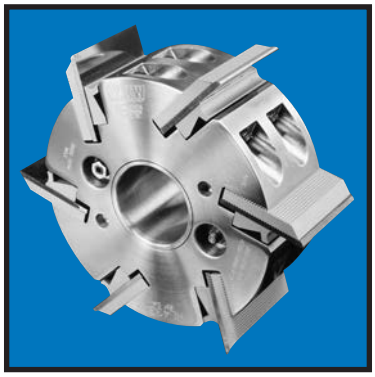
Wisconsin Knife Works, Inc.

CUTTERHEADS

Order online @ www.wkwinc.com

HYDRO-LOC™

Made from premium steel with a hardened sleeve. Two chamber sleeve construction for accuracy, uniformity and perfect concentricity.

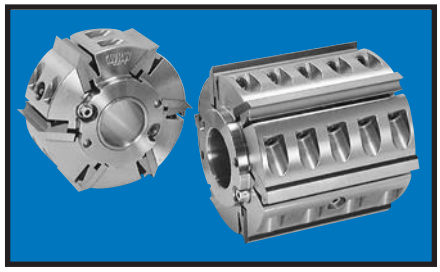


QUICK-LOC™

Fully enclosed, dual chamber, hardened steel, hydraulic sleeve cutterheads. High pressure grease gun is **NOT** required.

AXIAL CONSTANT

Precision Machined with hubs for axial constant setup system.



STRAIGHT BORE

Premium hardened steel body. Precision machined for true concentricity.

Wisconsin Knife Works Standard Cutterhead line includes thousands of combinations of bore sizes, cutting angles, cutting lengths, body diameters and number of knife slots. The following type of cutterheads are included in the Standard Cutterhead line: HYDRO-LOC™, QUICK-LOC™, STRAIGHT BORE and AXIAL CONSTANT.

The Wisconsin Knife Works Standard Cutterhead line offers quality cutterheads to fit most common moulder applications. All Standard Cutterheads are corrugated to accept 16-60° knives up to 10mm thick. Please remember to use a locking collar when running any hydraulic style cutterhead.

STRAIGHT BORE CUTTERHEADS

The Standard Cutterhead Program includes Straight Bore cutterheads in the following configurations:

BORE SIZE:	1-1/4"; 35mm; 1-1/2"; 40mm; 1-13/16"; 50mm; 2-1/8"
CUT ANGLE:	5° - 22° (including dual angle)
CUT LENGTH:	40mm - 240mm
# OF KNIVES:	4, 6, or 8
BODY DIAMETER:	122mm - 230mm

Please contact WKW for your specific Straight Bore Cutterhead needs.

STRAIGHT BORE SHAPER CUTTERHEADS

The following Straight Bore Shaper Cutterheads are available on the Standard Cutterhead Program.

BORE SIZE:	3/4"; 1"; 1 1/4"; 1 1/2"
CUT ANGLE:	15° - 20°
CUT LENGTH:	2, 3, 4-6
# OF KNIVES:	2, 3, or 4
BODY DIAMETER:	2 3/4", 3 1/2" - 4"

HYDRAULIC BORE CUTTERHEADS

HYDRO-LOC™, AXIAL CONSTANT, QUICK-LOC™.

137MM BODY DIAMETER

BORE	CUT ANGLE	CUT LENGTH	# OF KNIVES
40mm	5° - 25° *(including dual angle)*	60mm - 240mm	4 or 6

137MM BODY DIAMETER

BORE	CUT ANGLE	CUT LENGTH	# OF KNIVES
50mm	10° - 25° *(including dual angle)*	60mm - 240mm	4 or 6

150MM BODY DIAMETER

BORE	CUT ANGLE	CUT LENGTH	# OF KNIVES
40mm, 1-13/16", 50mm, 2-1/8"	5° - 25° *(including dual angle)*	60mm - 240mm	4, 6 or 8

163MM BODY DIAMETER

BORE	CUT ANGLE	CUT LENGTH	# OF KNIVES
2-1/8"	10° - 20°	60mm - 240mm	8

LOCK RINGS

Wisconsin Knife Works always recommends using a locking collar when running hydraulic sleeved cutterheads.

PART NUMBER	BORE	PIN SPACING
SE 1653	40mm	2.56 (65MM)
SE 1590	1-13/16"	3.15 (80MM)
SE 1648	50mm	3.15 (80MM)
SE 1591	2-1/8"	3.15 (80MM)

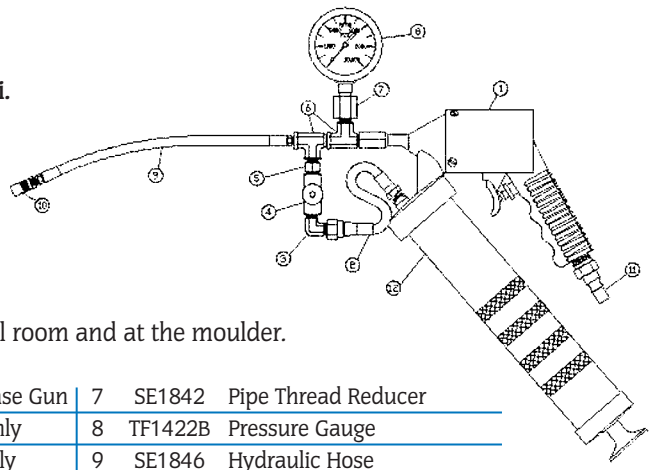
Thousands of cutterheads to choose from. Call WKW for your specific applications.

WKW's High Pressure Pneumatic Grease Gun can be used in place of current high pressure guns. Many high pressure grease guns frequently break down and are difficult and time consuming to maintain. Regular maintenance on some grease guns is required due to the many parts that tend to fail internally and must be repaired for the gun to work properly. You may have even noticed that some of the replacement parts are now being made from plastic and tend to fail even faster.

Wisconsin Knife Works has developed a Pneumatic Grease Gun which is built from the highest quality high pressure standard fittings rated up to 10,000 p.s.i. Similar systems are used daily in our own factory and are used for pressurizing hydro tooling during the manufacturing process. The Pneumatic Grease Gun is ideal for tool rooms and the shop floor. It can be set to produce exact repeatable pressures time after time eliminating damage that can occur as a result of over or under pressurization.

High Pressure Pneumatic Grease Gun:

1. Heavy duty high quality construction.
2. Connects to any air hose and **operates best at an air pressure of 90 p.s.i.**
3. Easily connects and disconnects from standard air lines.
4. High pressure fittings are standard parts in stock.
5. The gun is rated for 10,000 p.s.i., nearly double what is required to pressurize heads.
6. Ideal for tool rooms, at the profile grinder, and on the shop floor.
7. Air pressure setting insures consistent pressurization of heads in the tool room and at the moulder.
8. Heads can be pressurized at the moulder to the identical pressure used when the knives were profile ground. Duplicating the pressure on the head on the moulder with the same pressure used when profile grinding increases head accuracy, knife tracking, improves finishes, and eliminates human error.
9. No over or under pressurization of SE1841 Male Run Tee heads which can cause damage, reduce repeatability and consistency from grinder to moulder.



	SE1836B	Full Assembled Grease Gun	7	SE1842	Pipe Thread Reducer
1	SE1836	Grease Gun Body Only	8	TF1422B	Pressure Gauge
2	SE1840	Crimp Hose Assembly	9	SE1846	Hydraulic Hose
3	SE1845	Male Elbow	10	36338	Grease Coupling
4	SE1844	Flow Control	11	SE1858	Quick Disconnect
5	SE1843	Pipe Nipple	12	36361	Grease Cartridge
6	SE1841	Male Run Tee			

Note: Wisconsin Knife Works recommends that a lithium NLGI grade 2 grease be used.

Instructions:

1. This is a single action gun. This means that each time the trigger button is depressed, a measured amount of grease is dispensed from the hydraulic coupler. For first time use, the trigger button must be pressed and released repeatedly until grease begins to appear at the edge of the fitting. After the grease fills the hose up to the coupler, depressing the trigger button twice should pressurize a hydro head completely and consistently.
2. The High Pressure Pneumatic Grease Gun will come fully assembled and ready to use. Simply connect the gun to an air supply hose at the connector on the bottom of the handle.
3. A pressure regulator (SE1855) can be installed to an air line to precisely control the pressure produced by the High Pressure Pneumatic Grease Gun.
4. We recommend that the air supply line pressure be set to 90 p.s.i. which will generate approx. 350 bar or 5,000 p.s.i

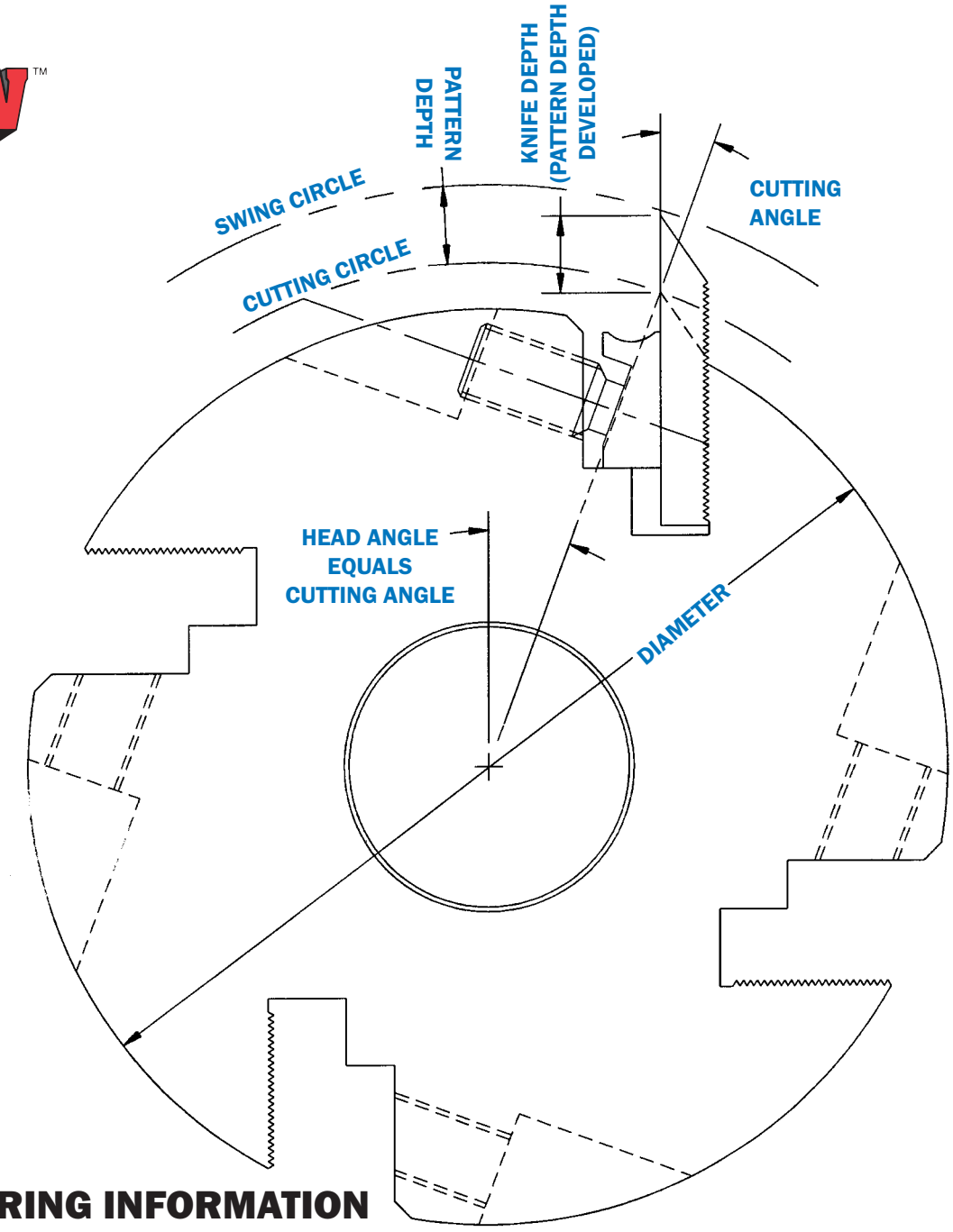
Air Line	Bar	PSI
83psi	300	4300
85psi	325	4500
90psi	350	5000
100psi	375	5400
105psi	400	5800
110psi	425	6100
115psi	450	6500

Conversions:

Bar to psi
Bar x 14.504 = psi
Example: 350 Bar = 5076 psi

Psi to Bar
Psi ÷ 14.504 = Bar
Example: 5076 psi = 350 Bar

5. Do not connect an air supply to the gun with a pressure greater than 130 p.s.i. or less than 83 p.s.i.
6. After the head is pressurized, simply turn the knob on the flow control counter clockwise to release the pressure and allow easy disengagement of the coupler and the grease fitting. When this is done, the pressure release allows the grease to flow back into the grease tube eliminating any grease leakage.



ORDERING INFORMATION

WKW is able to supply cutterheads for virtually any machine, in virtually any configuration. To help us in determining your needs, please have the following information available when calling or faxing.

- Make and model of machine.
- Cutting circle and body diameter.
- Length of cut.
- Gib type (pocket type is standard; wedge type furnished on request).
- Number of knives or wings.
- Type of knives (i.e. corrugated, plain, etc.)
- Bore size.
- Type of bore (i.e. Hydro-Loc™, Quick-Loc™, Straight Bore, Mechanical Sleeve)
- Cutting angle or species being cut (dual cutting angle heads available).

CUTTERHEAD TYPES

TYPE OF HEAD	TYPE OF CUTTING
Clamp T-Slot Heads	Lineal Cutting
Round Heads	Lineal, Cross, End Grain Cutting
Clamp-Type Heads	Lineal or End Grain Cutting
Vise Grip Heads	Lineal Cutting
Square Heads	Lineal Cutting
Shaper Tooling	Lineal or End Grain Cutting
Cope	Cross or End Grain Cutting
Semi Clamp-Type Heads	End Grain Cutting
Finger Joint Heads	End Grain Cutting

WHERE SOME HEADS ARE USED

TYPE OF CUTTERHEAD	MAX RPM*	MOULDER	TENONER	SHAPER
Clamp T-Slot	6000	X		
Clamp-Type	7200	X		X
Combination Disc and Vise Grip Cope	7200		X	
Combination Shaper	7200			X
Disc Cope	7200		X	
Finger Joint	3600		X	X
Round Head Corrugated Back Knife Under 6 inches diameter	8300	X		X
Round Head Corrugated Back Knife 6 inches or greater diameter	7200	X		X
Round Head Plain Back Knife	3600	X		
Round Head L-Type & Lug-Type Bits	7200	X	X	
Groover Disc	7200		X	
Round Shaper Corrugated Back Knife	8300			X
Semi Clamp-Type Cope	7200		X	
Square Cope	7200		X	
Vise Grip Moulder	7200	X		
Vise Grip Shaper	7200			X
XL Moulder HD	8300	X		X
Saw Sleeve	7200	X	X	

**Max RPM is Wisconsin Knife Works' recommended RPM for safest operation.*

HYDRO-LOC™ & QUICK-LOC™ HEAD MAINTENANCE

The arbor or spindle on your machine must be free from runout and wear. For your cutterhead to properly lock on the arbor and to produce the optimum finish, the arbor size should be no more than .0005 less than the nominal size. Runout in your spindle will also prevent your cutterhead from performing properly.

Hydro-Loc™, and Quick-Loc™ heads rely on grease pressure and are equipped with a filler and a release valve, or a set screw in the case of a **Quick-Loc™** head. The following steps should be observed. When using **Hydro-Loc™** or **Quick-Loc™** heads, **always use a locking collar** to guard against unexpected pressure loss that could lead to damage of the arbor and/or cutterhead.

Hydro-Loc™ Heads

1. Place the head in the desired location on the spindle. Never pressurize a head when it is not on a spindle or when your spindle is .001 inch or more under the nominal diameter. Damage to the head could result.
2. Connect the grease gun to the filler nipple. Always use the WKW recommended grease gun. A regular grease gun will not pressurize the head to a high enough pressure.
3. Loosen the screw valve on the gauge block, and pump until grease flows out the release valve. This will remove any air pockets inside the head.
4. Tighten the screw in the release valve on the head and pressurize to 300 to 350 bar (4350 to 5075 PSI). Tighten the screw valve on the gauge block and loosen the grease release valve on the gun. Remove the grease gun.
5. If there is no pressure loss within two minutes, install and tighten the lock ring. You may proceed if you have read and understand the information provided by the machine manufacturer. Never operate a Hydro-Loc™ cutterhead without a lock ring.
6. Always be sure to check for any pressure loss each morning, after each shift change, or after the machine has been idle for more than eight hours.
7. If cleaning the head with a heated solution, always be sure that pressure release fitting is left open to prevent sleeve damage.

Quick-Loc™ heads also rely on grease pressure and are equipped with one or two set screws. Only one screw needs to be used to pressurize and release the head. To lock the head to the arbor, the set screw should be tightened *by hand* until it bottoms out, using the allen wrench that is provided. Do not use a torque wrench or any device to add torque. Simple hand pressure is adequate. To remove the head, from the arbor, merely loosen the screw one or two rotations or until the head loosens on the arbor. It is not necessary to remove the screw.

Re-charging Quick-Loc™ Heads is recommended after every 100 hours of use. To re-charge the head, merely place it on an arbor, tighten the pressurizing screws until they bottom out, and re-charge to 300–350 bar (4350–5075 PSI) with a grease gun. Do not over- or under-pressurize. Periodic checking of the pressure is recommended in this manner. Never pressurize when the head is not on a properly sized arbor.

Observe all other precautions as listed for Hydro-Loc™ heads above. For more information, please contact the factory with the part number of your cutterhead.

FINISH AND RATES OF FEED*

$$\frac{\text{R.P.M. x NO. KNIVES}}{\text{FT. PER MIN. x 12}} = \text{KNIFE MARKS PER INCH}$$

R.P.M.	KNIFE MARKS PER INCH	NUMBER OF KNIVES CUTTING								
		1	2	4	6	8	10	12	14	16
3,600	10	30 Ft.	60 Ft	120 Ft.	180 Ft.	240 Ft.	300 Ft.	360 Ft.	420 Ft.	480 Ft.
	12	25	50	100	150	200	250	300	350	400
	14	21	42	85	128	171	214	257	300	342
	16	18	37	75	112	150	187	225	262	300
	18	16	33	66	100	133	166	200	233	266
	20	15	30	60	90	120	150	180	210	240
4,800	10	40 Ft.	80 Ft.	160 Ft.	240 Ft.	320 Ft.	400 Ft.	480 Ft.	560 Ft.	640 Ft.
	12	33	66	133	200	266	333	400	466	533
	14	28	57	114	171	228	285	342	400	457
	16	25	50	100	150	200	250	300	350	400
	18	22	44	88	133	177	222	266	311	355
	20	20	40	80	120	160	200	240	290	320
6,000	10	50 Ft.	100 Ft.	200 Ft.	300 Ft.	400 Ft.	500 Ft.	600 Ft.	700 Ft.	800 Ft.
	12	41	83	166	250	333	416	500	583	666
	14	35	71	142	214	285	357	428	500	571
	16	31	62	125	187	254	312	375	457	500
	18	27	55	111	166	222	277	333	388	444
	20	25	50	100	150	200	250	300	350	400
7,200	10	60 Ft.	120 Ft.	240 Ft.	360 Ft.	480 Ft.	600 Ft.	720 Ft.	840 Ft.	960 Ft.
	12	50	100	200	300	400	500	600	700	800
	14	42	85	171	257	342	428	514	600	685
	16	37	75	150	225	300	375	450	525	600
	18	33	66	133	200	266	333	400	466	555
	20	30	60	120	180	240	300	360	420	480
8,000	10	66 Ft.	133 Ft.	266 Ft.	400 Ft.	533 Ft.	666 Ft.	800 Ft.	933 Ft.	1,066 Ft.
	12	55	111	222	333	444	555	666	777	888
	14	47	95	190	285	380	476	571	666	761
	16	41	83	166	250	333	416	500	583	666
	18	37	74	148	222	296	370	444	518	592
	20	33	66	133	200	266	333	400	466	533
10,000	10	83 Ft.	166 Ft.	333 Ft.						
	12	69	138	277						
	14	59	119	238						
	16	52	104	204						
	18	46	92	185						
	20	41	83	166						
12,000	10	100	200	300						
	12	82	164	246						
	14	70	140	210						
	16	62	124	186						
	18	54	108	162						

- *Finish of material is directly related to the feed and speed of your machine*
- *No steel made will stand up if the feed rate is too slow*
- *The heat generated will make the knives dull fast • Too many knives at a slow feed rate will also create burning.*

**Please contact WKW engineering for finish/feed rates recommended for other speeds.*

KNIFE MARKS PER INCH

Knife finish ranges are generally recommended according to wood species:

Wood	Knife Marks Per Inch
Ash	11 to 14
Basswood	8 to 12
Beech	12 to 14
Birch (plain)	12 to 14
Birch (curly)	13 to 16
Cedar	8 to 12
Cherry	12 to 14
Cottonwood	8 to 12
Cypress	8 to 12
Elm (hard)	10 to 13
Elm (soft)	8 to 12
Fir	8 to 12
Gum	9 to 13
Hemlock	8 to 12
Hickory	12 to 15
Mahogany (plain)	12 to 14
Mahogany (figured)	14 to 16
Maple	12 to 14
Oak	12 to 14
Pine (yellow)	9 to 13
Pine (white)	9 to 13
Poplar	9 to 13
Redwood	8 to 12
Spruce	8 to 12
Sycamore	11 to 14
Walnut	12 to 14
MDF	10 TO 12

CUTTING ANGLES

	Kiln Dried 7% Moisture or Less Cutting Angle	Wet or Green More than 9% Cutting Angle
Ash	10°	15°
Basswood	10	20
Beech	10	15
Birch	10	15
Cedar	20	25
Cherry	10	15
Chestnut	5	10
Cottonwood	5	10
Cypress	5	10
Elm, Hard	0	5
Elm, Soft	5	10
Fir	15	15
Gum	20	25
Hemlock	15	20
Hickory	5	10
Mahogany	10	15
Maple	5	10
Oak	10	15
Oak Qtd.	10	15
Pine, Yellow	20	25
Pine, White	20	30
Pine, Ponderosa	20	30
Poplar	20	35
Redwood	5	15
Spruce	20	25
Sycamore	5	10
Walnut	5	10

WKW™

Wisconsin Knife Works, Inc.

FINGER JOINTS

Order online @ www.wkwinc.com

LENGTHS OF FINGER JOINTS

REVERSIBLE

By far the most common joint. Requires two heads; one with thick cutter at top of stack and one with thick cutter at bottom of stack. This joint may also be achieved on a single head shaper by reversing alternate pieces of stock machined.

MALE-FEMALE OR END MATCH

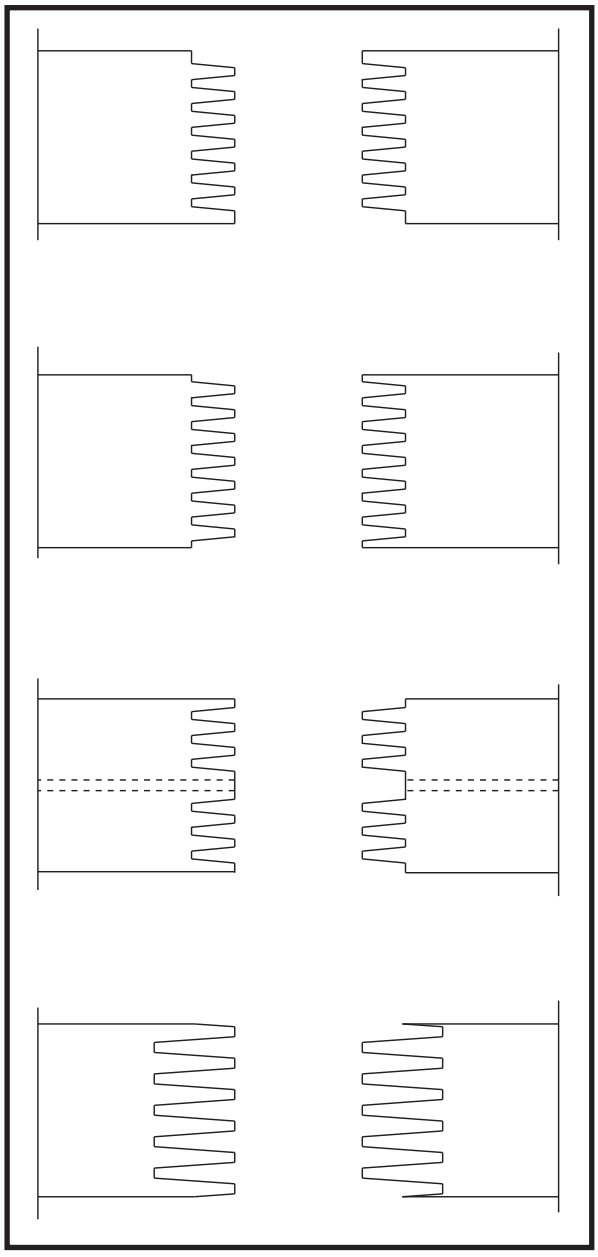
Less common joint than reversible. Always requires two heads; one with all thin cutters and one with a thick cutter at both top and at bottom of stack.

RE-SAW

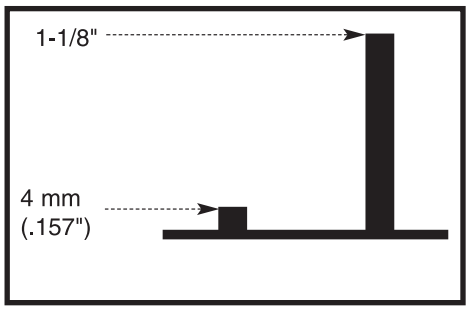
Special joint with thick cutter at center of stack to allow for finger jointed stock to be split or re-sawn into two pieces.

SCARF OR FEATHER JOINT

Usually requires no thick cutters. Used when dimensions of stock will vary significantly.

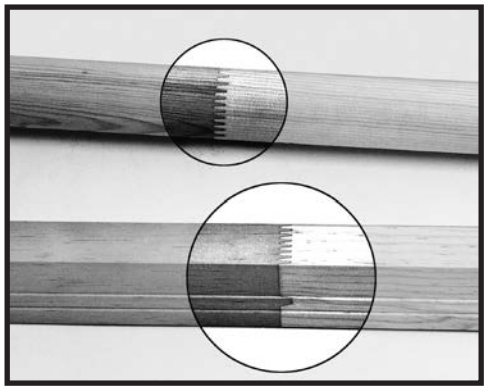


Finger joints are used in a wide variety of applications. The reasons for finger jointing may be varied. One goal is to remove knots and defects and then to produce usable long pieces of wood by finger jointing the short pieces. Another reason for finger jointing is to produce a finished component that has a greater strength than ordinary wood. A properly finger jointed length of wood will have a strength factor greater than the same piece of wood that has not been finger jointed.



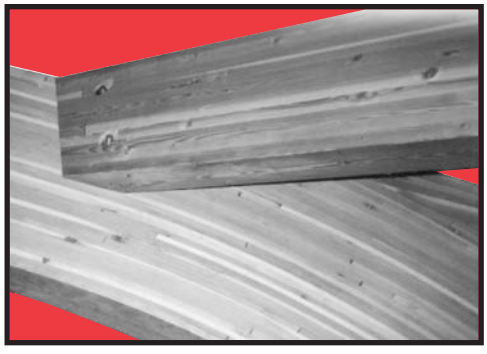
LENGTHS OF JOINTS

Joint length will vary with the application. Increasing wood costs have necessitated the development of shorter joints. 4 and 5 mm joints are becoming more common in non-structural applications. Keep in mind that with very small joints, the finger joint machine and assembly components must be in top operating condition to facilitate the assembly of the joint.



NON-STRUCTURAL JOINTS

Millwork, mouldings, trim, door, and window components are some of the main uses for these joints. Typically 1/4" or 3/8" joints have been used, however, many users are finding that 4 or 5 mm joints will save enough material to pay for the cost of tooling conversion in a short time. See formulas for calculating potential dollar savings in section entitled “Technical Information and Formulas”.



STRUCTURAL JOINTS

Laminated beam and I-beams utilize the strength of the finger joint to produce load bearing components for an industry where joint strength is closely monitored and tested. Typically a 1-1/8" or 7/8" joint is used.

For sub-structural joints such as finger jointed 2X4 studs, a 5/8" joint is used.

WKW™

FINGER JOINT CUTTERS

PART NUMBER	JOINT LENGTH	CUTTER RADIUS	TIP THICKNESS	TIP INDEX	THIN OR THICK	GRINDING TEMPLATE
BG 1394	.177(4.5mm)	1-1/2	.044	.121	THIN	T684
BG 1395	.177(4.5mm)	1-1/2	.250	.327	THICK	T684
BG 1258	.197(5mm)	1-1/2	.040	.118	THIN	T684
BG 1259	.197(5mm)	1-1/2	.250	.328	THICK	T684
BG 1137	.250	1-1/2	.045	.138	THIN	T684
BG 1138	.250	1-1/2	.250	.343	THICK	T684
BG 1515	.250	1-1/2	.047	.139	THIN	T1462
BG 1516	.250	1-1/2	.252	.344	THICK	T1462
BG 919	.375	1-1/2	.045	.169	THIN	T684
BG 920	.375	1-1/2	.250	.374	THICK	T684
BG 1420	.375	1-1/2	.046	.1685	THIN	T684
BG 1421	.375	1-1/2	.251	.3735	THICK	T684
BG 1079	.375	1-7/8	.049	.168	THIN	T683
BG 1080	.375	1-7/8	.254	.373	THICK	T683
BG 1305	.406	1-1/4	.045	.169	THIN	T981
BG 1306	.406	1-1/4	.250	.374	THICK	T981
BG 1315	.375	1-1/4	.394	.518	THICK	T981
BG 854	.500	1-7/8	.030	.152	THIN	T683
BG 855	.500	1-7/8	.343	.465	THICK	T683
BG 1434	.610	1-1/2	.046	.2085	THIN	T684
BG 1435	.610	1-1/2	.2124	.375	THICK	T684
BG 737	.625	1-7/8	.062	.214	THIN	T683
BG 738	.625	1-7/8	.343	.495	THICK	T683
BG 741*	1.113	2-1/8	.030	.248	THIN	T685
BG 742*	1.113	2-1/8	.343	.561	THICK	T685
BG 1101	1.113	2-1/8	.030	.264	THIN	T685
BG 1102	1.113	2-1/8	.343	.577	THICK	T685
BG 751*	1.113	2-3/8	.031	.243	THIN	T686
BG 752*	1.113	2-3/8	.283	.495	THICK	T686
BG 1280	4mm	1-1/2	.042	.110	THIN	T684
BG 1281	4mm	1-1/2	.250	.318	THICK	T684
BG 1285	.406	1-1/2	.136	.260	THIN	T684
BG 1284	.406	1-1/2	.250	.374	THICK	T684
BG 1411	.221	1-1/2	.044	.125	THIN	T684
BG 1412	.221	1-1/2	.250	.331	THICK	T684
BG 854**	.500	1-7/8	.030	.152	THIN	T683
BG 855**	.500	1-7/8	.343	.465	THICK	T683
BG 896***	.300	1-7/8	.045	.153	THIN	T683
BG 897***	.300	1-7/8	.250	.358	THICK	T683
BG 899****	.312	1-1/2	.045	.153	THIN	T684
BG 900****	.312	1-1/2	.250	.358	THICK	T684

**NOTE: These cutters are used for producing joints for structural applications, and are used with spacer plates between the individual cutters. Please contact a Wisconsin Knife Works engineer for more information regarding these cutters.*

***For .625 joint length use .023 spacers*

****For .376 joint length use .016 spacers*

PRECISION TOLERANCES

Due to the demanding nature of the finger joint and the scrutiny that the finished joint is often subjected to, there is no room for either a sloppy or poor fitting joint. Some joints are required to be of a paint grade, meaning that the joint itself must be invisible when the finished product is painted. Other joints are used in structural products that must be certified to demanding strength and pull-test specifications.

For these reasons, WKW cutters are produced to incredibly tight tolerances. Cutter thickness, tip centrality, tip thickness, flatness, cutter angles, and other critical dimensions for each cutter are unsurpassed in the industry. As the industry has evolved over the years, we have incorporated the best technologies available to continually improve the geometric specifications of our cutters.

You can rest assured that you will never have a tolerance problem with WKW cutters. Most cutters are held to an amazing thickness tolerance of plus or minus .0001, or one tenth of one thousandth of an inch. Whether your cutter stack is five cutters high or fifty cutters high, WKW cutters are held to exacting specifications that ensure you of an accurate joint with no significant accumulated dimensional variations.

HIGH SPEED STEEL FINGER JOINT CUTTERS

Most solid wood finger jointing is accomplished using Molybdenum HSS (High Speed Steel) tool steels such as A.I.S.I. M-2. This tool steel is especially well suited for natural woods, and has been the standard choice at WKW for years. With the exception of a few custom applications, 95% of the steel cutters furnished by WKW are A.I.S.I. M-2.

A.I.S.I. M-2 is a very specific blend of tool steel that uses the alloying elements Molybdenum, Chromium, Vanadium, Tungsten, and Cobalt to produce a cutting tool that exhibits excellent wear resistance, ease of grinding and superior cutting edge retention. Other alloys are available and may be necessary in certain applications, however, M-2 remains the best choice of tool steels for natural wood finger jointing.

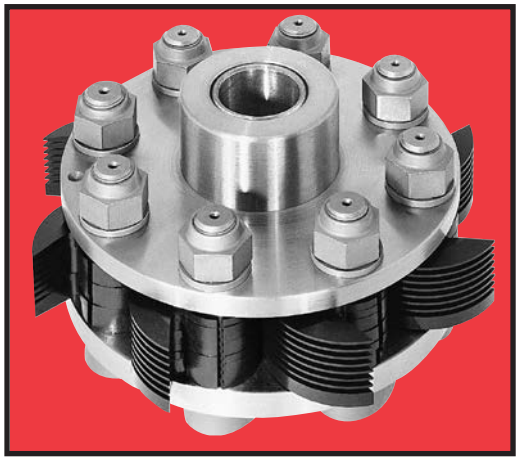
OPTI® AND CARBIDE FINGER JOINT CUTTERS

The normal cutting material for finger joint cutters is HSS (High Speed Steel). Usually a high Molybdenum tool steel such as M-2 is used. In some applications a different cutting material is required.

WKW pioneered the finger jointing of engineered lumber products such as LVL (laminated veneer lumber), and other man-made wood products. Exotic hardwoods and very abrasive woods have also been successfully finger jointed using WKW tooling.

OPTI® FINGER JOINT CUTTERS

OPTI® finger joint cutters are specially-treated and designed primarily for natural woods. The extremely hard cutting surface of OPTI® cutters generally produces run times that are up to three times longer between sharpenings, as compared to conventional High Speed Steel cutters. OPTI® cutters have been used at several of the largest finger jointing facilities in the United States.



The OPTI® process is a patented process that produces an ultra-hard surface on the cutter. Unlike the coatings used by other manufacturers, OPTI® will not chip, peel, or flake off. Extremely long run times may be obtained under certain circumstances. Check with WKW for specifics as to whether these cutters are correct for you. The grinding process with OPTI® cutters is slightly different than the grinding of HSS M-2 cutters. The same abrasives are used, however, the grinding procedure is a little more demanding.

SOLID CARBIDE/CARBIDE TIPPED CUTTERS

WKW Carbide finger joint cutters are often the solution to finger jointing very abrasive natural woods, as well as man-made and engineered lumber products containing glues. Plywoods and other laminated materials that were once impossible to finger joint are now being successfully finger jointed. WKW was the innovator of these types of cutters.

Man-made materials such as LVL (laminated veneer lumber), plywoods, particle board, M.D.F., and other products containing glues or other non-wood products are much too abrasive for tool steel or OPTI® cutters. Carbide tipped cutters are often the answer to these problems. In some cases, carbide tipped cutters may be used to produce extremely long run times in solid woods, but generally speaking, the high cost of these cutters suits them for only the most extreme applications.

Carbide tipped cutters, are available in a variety of joint configurations. Please contact WKW for assistance in determining the correct solution to your unique finger jointing application.

CUSTOM PROFILES

In addition to the stock cutters listed previously, WKW has designed and manufactured scores of other finger joint configurations. Our Engineering files contain hundreds of profiles. Many of these profiles were developed as the result of close work between a user and our engineers. From micro joints to large structural joints, if a standard profile is not suitable for your application, WKW engineers will assist in the development of a finger joint profile to get the job done.

CUSTOM CUTTER MATERIALS

M-2, Carbide, and OPTI® are used in the majority of applications, however, difficult and unusual applications are welcomed at WKW. D-2 tool steel, high cobalt alloys, and other materials may be the answer for you. As always, WKW engineers are your best source of information here.

Whether your needs are for a specific finger joint profile, a custom designed cutterhead to fit your machine, or a cutter material to machine a particularly hard or abrasive wood product, WKW has the technical support that you need.

See the following chart for information on OPTI®, carbide, and other alternate cutting materials.

MATERIAL	APPLICATIONS	COMMENTS
HSS M-2	Normal woods	Very good run times and clean cut
OPTI®	Normal woods*	Extra long life
CARBIDE	Man-made materials*	Excellent life and performance
D-2 Karbo Krome®	Very wet woods*	Only used in difficult applications

**Contact WKW's engineers for assistance in these applications.*

COATED FINGER JOINT CUTTERS

Various coatings are available for enhanced performance. Please contact WKW for more details.

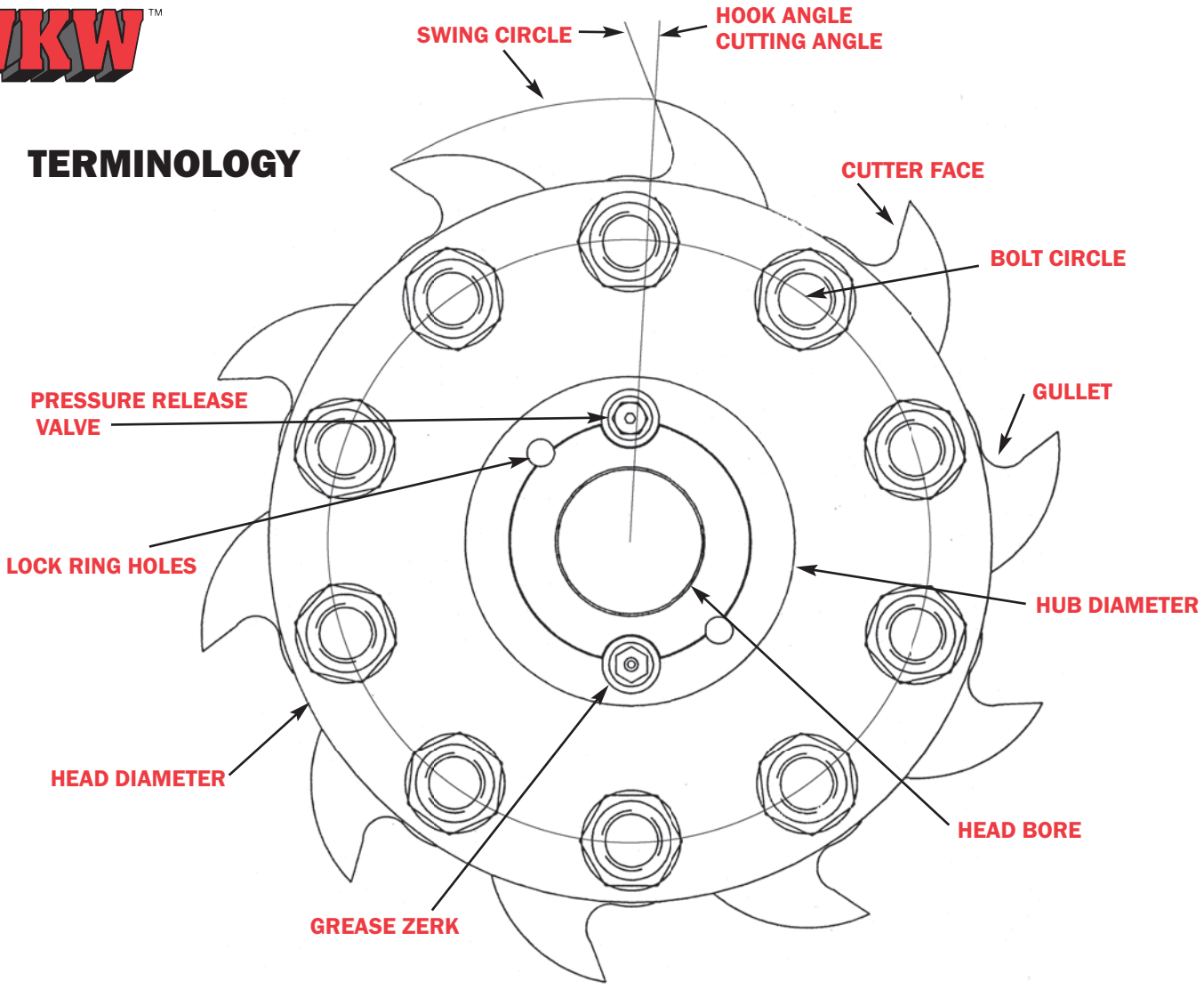
Titanium Nitride - TiN coating has very good corrosion resistance, heat tranmission and excellent wear resistance.

Zirconium Nitride - Zrn works in applications where TiN has not performed well. It has excellent erosion resistance, good lubricity and ductility. It works well in non-ferrous applications like aluminum, brass, glass filled plastics, fiberglass, nylon most polymer materials and zinc. Not recommended for carbon steel.

Titanium Aluminum Carbo-Nitride - TiAlCN a low friction, good oxidation coating. This coating is for a wide range of carbide and HSS tooling.

Duro-Max - An integrated matrix film, consisting of an ultra-hard ceramic coating combined with a film that has extremely low coefficient of friction. It has shown significant improvement in the tool life. The coating provides an effective lubrication on the cutting surface which reduces friction, operating temperature, pitch buildup and plugging.

TERMINOLOGY



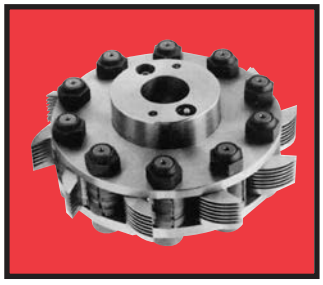
ORDERING INFORMATION

- Machine make and model number
- Head Number* (if re-ordering same heads, use number engraved on head)
- Swing Circle or maximum diameter
- Bore diameter and type (i.e. Hydro-Loc™, Quick-Loc™, collet style, etc)
- Number of bolts or wings
- Bolt length (if known) or number of thick and thin cutters per bolt
- Joint length or cutter number desired
- Type of joint (i.e. reversible, end match, etc) and species of wood.
- Wood Thickness
- If assembled, number of cutters per bolt, and assembly configuration

**Note: Always provide the part number engraved on head or cutters when re-ordering the same items.*

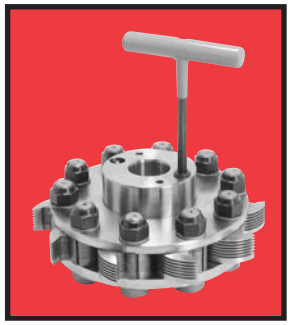
HYDRO-LOC™ BORE

WKW Hydro-Loc™ cutterheads are affixed to the machine spindle by means of a pressurized inner sleeve. The inner sleeve is compressed onto the spindle by charging or pressurizing the sleeve with a special high pressure grease gun. Locking collars are always recommended as an additional measure of safety. See Accessories and Set Up sections for more information.



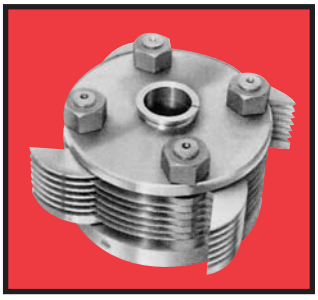
QUICK-LOC™ BORE

These heads are similar to the Hydro-Loc™ heads above except that they do not require the use of a grease gun to pressurize them. The head is pressurized by merely tightening a screw with an allen wrench.



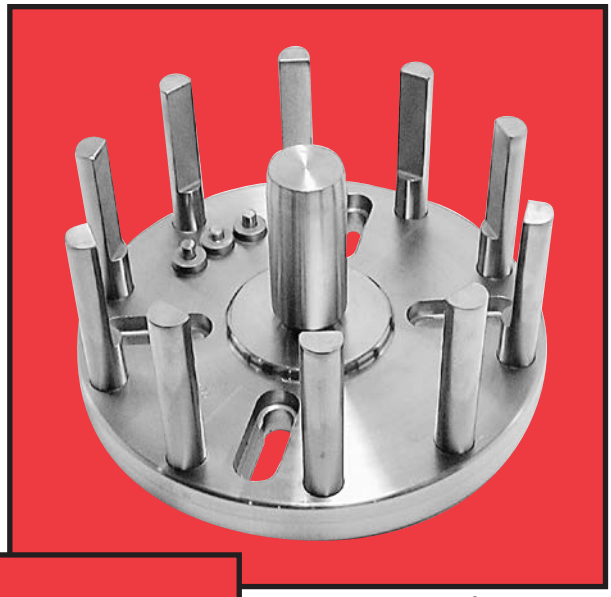
STRAIGHT BORE COLLET HEADS

Although not as common as they once were, these heads rely on self-centering tapered collets (or cones) to center the head on the spindle when the spindle nut is tightened.

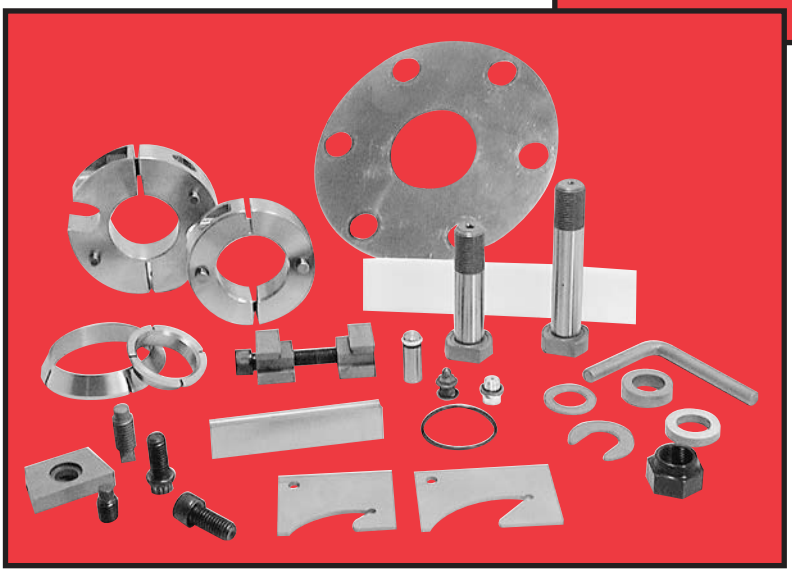


LAMINATED BEAM CUTTERHEADS

The production of structural joints, as used in laminated beams, (see pg. F-3) requires very sophisticated tooling. Cutter stacks of up to twelve inches demand that the cutter thickness and tip centrality on each individual cutter be held to a very high degree of accuracy and consistency. WKW has produced the tooling used by the major producers of structural beam products. Three and four wing heads are used to produce joints 1 inch or longer. In most cases, these applications require special spacer plates (shown) between each cutter. For information on spacers, see Accessories section.



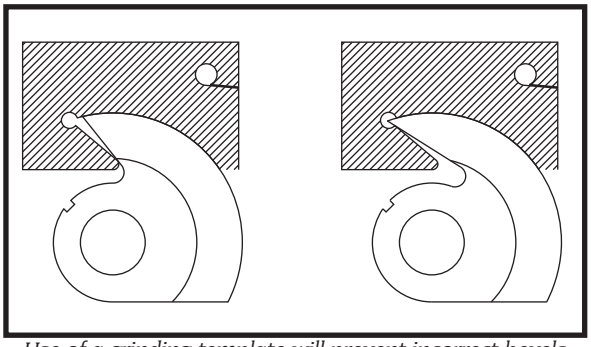
Ten post set up fixture.



Accessories.

SET UP FIXTURES

SWING CIRCLE	CUTTER RADIUS	BORE	SINGLE POST	6 POST	8 POST	10 POST
9"	1-1/2	1-1/2	36442	TF1818-B	TF1834-B	——
9"	1-1/2	1-13/16	36446	TF1818-A	TF1834-A	——
9"	1-7/8	1-1/2	TF1344-B	TF1963-B	——	——
9"	1-7/8	1-13/16	TF1344-A	TF1963-A	——	——
9"	2-1/8	1-1/2	TF1598-B	——	——	——
9"	2-1/8	1-13/16	TF1598-A	——	——	——
10-1/2"	1-1/2	1-1/2	TF1964-B	TF1965-B	TF1966-B	TF1967-B
10-1/2"	1-1/2	1-13/16	36444	TF1965-A	36448	36450
10-1/2"	1-7/8	1-1/2	TF1968-B	TF1969-B	TF1886-B	——
10-1/2"	1-7/8	1-13/16	TF1968-A	TF1969-A	TF1886-A	——
10-1/2"	2-1/8	1-1/2	TF1970-B	TF1971-B	——	——
10-1/2"	2-1/8	1-13/16	TF1970-A	TF1971-A	——	——



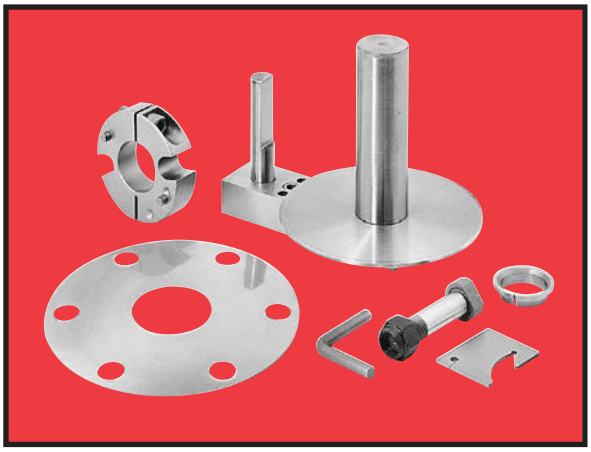
Use of a grinding template will prevent incorrect bevels (above) that lead to poor-fitting joint. See troubleshooting section for correct grinding.

GRINDING TEMPLATES (HOOK GAUGES)

PART NUMBER	CUTTER RADIUS
T683	1-7/8
T684	1-1/2
T685	2-1/8
T686	2-3/8
T981	1-1/4

COLLETS (OR CONES)

PART NUMBER	BORE & TAPER
SB 536	1-1/2 X 5/16-20°
SB 755	1-13/16 X 5/16-20°

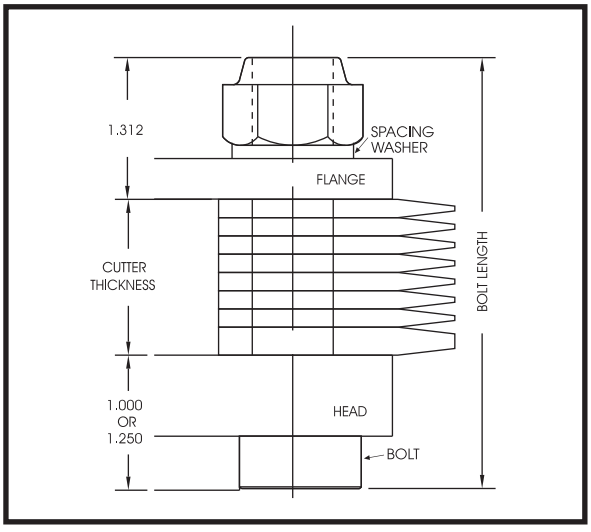


CLOSE TOLERANCE SPACING WASHERS

Available in various thicknesses. Used for replacing cutters or for stacking between cutters. Call for info.

LOCK RINGS

PART NUMBER	Bore	Pin Spacing
SE 1624-A	1-1/2	2.56
SE 1590	1-13/16	3.14
SE 1646	1-13/16	2.56



FINGER JOINT BOLTS, NUTS & WASHERS

Length	RH Thread	LH Thread
4-3/4	DC503-J	DC591-C
4-1/2	DC503-H	DC591
4-1/4	DC503-G	DC591-G
4	DC503-F	DC591-A
3-3/4	DC503-E	DC591-F
3-1/2	DC503-D	DC591-B
NUT	NB207	NB207-C
1/8 Washer	W405	
1/4 Washer	W405B	
3/8 Washer	W405C	
1/2 Washer	W405D	
C Washer	W329-A	

**Please refer to drawing at left to determine length of bolt.*

NOTES

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