## **Woodruff Keyseat Cutters High Speed Steel**

## **Straight Tooth**

- · Designed to mill standard and Woodruff keyseats as well as perform general purpose milling operations
- · High speed steel is suitable for cutting ferrous and non-ferrous materials
- · All sizes have 1/2" diameter shanks



## Staggerted Tooth

- · Use primarily for milling T-slots in tables and beds and other similar machine tools
- · Staggered teeth provide maximum chip clearance
- · Features standard shanks to fit end mill arbors
- · 1/2" and 3/4" provided with one flat;1" and 1-1/4" provided with two flats



Model No.		Die	Face	OAL
Straight Tooth	Staggerted Tooth	Dia.	Width	OAL
WKC-202	WKCS-202	1/4"	1/16"	2-1/16"
WKC-202-1/2B	WKCS-202-1/2B	5/16"	1/16"	2-1/16"
WKC-302-1/2	WKCS-302-1/2	5/16"	3/32"	2-3/32"
WKC-203	WKCS-203	3/8"	1/16"	2-1/16"
WKC-303	WKCS-303	3/8"	3/32"	2-3/32"
WKC-403	WKCS-403	3/8"	1/8"	2-1/8"
WKC-204	WKCS-204	1/2"	1/16"	2-1/16"
WKC-304	WKCS-304	1/2"	3/32"	2-3/32"
WKC-305	WKCS-305	5/8"	3/32"	2-3/32"
WKC-404	WKCS-404	1/2"	1/8"	2-1/8"
WKC-405	WKCS-405	5/8"	1/8"	2-1/8"
WKC-406	WKCS-406	3/4"	1/8"	2-1/8"
WKC-505	WKCS-505	5/8"	5/32"	2-5/32"
WKC-605	WKCS-605	5/8"	3/16"	2-3/16"
WKC-506	WKCS-506	3/4"	5/32"	2-5/32"
WKC-806	WKCS-806	3/4"	1/4"	2-1/4"
WKC-507	WKCS-507	7/8"	5/32"	2-5/32"
WKC-606	WKCS-606	3/4"	3/16"	2-3/16"
WKC-607	WKCS-607	7/8"	3/16"	2-3/16"
WKC-707	WKCS-707	7/8"	7/32"	2-7/32"
WKC-608	WKCS-608	1"	3/16"	2-3/16"
WKC-708	WKCS-708	1"	7/32"	2-7/32"
WKC-1208	WKCS-1208 WKCS-609	1"	3/8"	2-3/8"
WKC-609 WKC-807	WKCS-807	1-1/8" 7/8"	3/16" 1/4"	2-3/16" 2-1/4"
WKC-807	WKCS-808	7/6 1"	1/4"	2-1/4 2-1/4"
WKC-709	WKCS-709	ı 1-1/8"	7/32"	2-1/4 2-7/32"
WKC-709 WKC-809	WKCS-809	1-1/8"	1/32 1/4"	2-1/32
WKC-610	WKCS-610	1-1/4"	3/16"	2-1/4
WKC-710	WKCS-710	1-1/4"	7/32"	2-7/32"
WKC-810	WKCS-810	1-1/4"	1/4"	2-1/4"
WKC-811	WKCS-811	1-3/8"	1/4"	2-1/4"
WKC-812	WKCS-812	1-1/2"	1/4"	2-1/4"
WKC-1008	WKCS-1008	1"	5/16"	2-5/16"
WKC-1009	WKCS-1009	1-1/8"	5/16"	2-5/16"
WKC-1010	WKCS-1010	1-1/4"	5/16"	2-5/16"
WKC-1011	WKCS-1011	1-3/8"	5/16"	2-5/16"
WKC-1012	WKCS-1012	1-1/2"	5/16"	2-5/16"
WKC-1210	WKCS-1210	1-1/4"	3/8"	2-3/8"
WKC-1211	WKCS-1211	1-3/8"	3/8"	2-3/8"
WKC-1212	WKCS-1212	1-1/2"	3/8"	2-3/8"

## **10 Piece Keyseat Cutter Set High Speed Steel**

Set Consists of 1 Each: WKC-204,305,403,404,406,505 606.608.806.808.

Model No.:WKCS-10



## **Single Angle Dovetail Cutters High Speed Steel**

- · Use to produce dovetail slideways in machine tool tables jigs and fixtures-designed to take the place of arbor type cutters
- Can be used in both manual and **CNC** machines
- · High speed steel end mill are suitable for use in a wide range of ferrous and non-ferrous materials



Model No.	Cutter. Dia.	Cutter Width	Shank Dia.	OAL
		45°		
DC45-3/8	3/8"	1/8"	3/8"	2-1/8"
DC45-1/2	1/2"	5/32"	3/8"	2-1/8"
DC45-3/4	3/4"	1/4"	3/8"	2-1/8"
DC45-1-3/8	1-3/8"	7/16"	5/8"	2-7/8"
DC45-1-7/8	1-7/8"	9/16"	7/8"	3-1/4"
DC45-2-1/4	2-1/4"	5/8"	1"	3-1/4"
DC45-2-1/2	2-1/2"	3/4"	1"	3-3/4"
		60°		
DC60-3/8	3/8"	3/16"	3/8"	2-1/8"
DC60-1/2	1/2"	1/4"	3/8"	2-1/8"
DC60-3/4	3/4"	5/16"	3/8"	2-1/8"
DC60-1-3/8	1-3/8"	9/16"	5/8"	2-7/8"
DC60-1-7/8	1-7/8"	13/16"	7/8"	3-1/4"
DC60-2-1/4	2-1/4"	1-1/16"	1"	3-1/4"
DC60-2-1/2	2-1/2"	1-1/8"	1"	3-3/4"

## **5 Pieces Dovetail Cutter Sets**

Sets consist of 1 each: 3/8,1/2,3/4,1-3/8 & 1-7/8" Complete with stand

> 45°Model No.: DC45S-5 60°Model No.: DC60S-5



## **T-Slot Cutters**

### Features:

Used primarily for milling T-slots in tables and beds of machine tools and similar applications. A vertical slot must be cut first, so the neck and shank can enter the cut.

### Straight Shank

Model No.	Bolt Size	Diar Cutter	neter Shank	Cutter Width	OAL
CTS-1/4 CTS-5/16 CTS-3/8 CTS-1/2 CTS-5/8 CTS-3/4 CTS-1	1/4" 5/16" 3/8" 1/2" 5/8" 3/4"	9/16" 21/32" 25/32" 31/32" 1-1/4" 1-15/32" 1-27/32"	1/2" 1/2" 3/4" 3/4" 1" 1" 1-1/4"	15/64" 17/64" 21/64" 25/64" 31/64" 5/8" 53/64"	2-19/32" 2-11/16" 3-1/4" 3-7/16" 3-15/16" 4-7/16" 4-13/16"
CTSS-7	7 PC	Set			

### 7 Pieces T-Slot Cutter Sets

Sets consist of 1 each: 1/4,5/16,3/8,1/2,5/8,3/4 and 1" **Comes complete** with wood stand.



Model No.: CTSS-7

## Fly Cutter Heads & Sets Corner Rounding

- · Made of durable hardened steel
- · Utilizes standard tool bits
- · Counter balanced
- · Cuts flat & smooth surface with a single cut

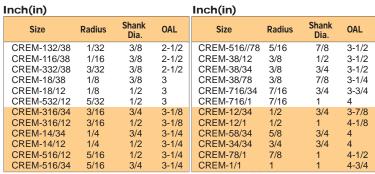


### Inch(in)

	Tool Bit Size	dius Shank	Ra Head	Model No.
3PC.SET Model No.:FCHS-3A	3/16 1/4 5/16	1/2 1/2 1/2	3/4 1-1/8 1-1/2	FCH-34/12 FCH-118/12 FCH-112/12
3PC.SET Model No.:FCHS-3B	5/16 5/16 5/16	3/4 3/4 3/4	1-1/2 2 2-1/2	FCH-112/34 FCH-2/34 FCH-212/34
5PC.SET Model No.:FCHS-5	3/16 1/4 5/16 3/8 1/2	1/2 1/2 1/2 1/2 5/8	7/8 1-1/4 1-5/8 2 2-1/2	FCH-78/12 FCH-114/12 FCH-158/12 FCH-2/12 FCH-212/58

# **End Mills**

**High Speed Steel** 



### **Corner Rounding End Mill Sets 8 Piece**

· Ideal for your Bridgeport type machines Each set contains:

- · 1/16,3/32"x3/8 shank
- · 1/8,5/32,3/16,1/4,5/16,3/8x1/2 shank



## NEW) HSS Keyway Broach Sets

HSS keyway broach sets are used to cut keyways in gears, pullys, etc., using a shop arbor press. Sets include all necessary shims.

### No.00 Precision sets Model: KBS-9

Cuts 15 different keyways for small keyways & bores.

Consists of 3 broaches (1/16" A,3/32"A, 1/8"A) and 5 collared bushings (A,1/4",5/16",3/8",7/16" & 1/2").

### No.60 Keyway Set Model: KBMS-6

The most common metric keyway combination for small keyways and bores. 2 broaches and 3 collared bushings= 6 keyway combinations.

- · Keyway sizes: 2mm & 3mm
- · Broach style: A
- · Bushing diameters (bore sizes): 6mm.8mm&10mm

### No.10 Standard Sets Model: KBS-18A

Cuts 18 different keyways. Consists of 4 broaches (1/8"B, 3/16"B, 1/4"C, 3/8"C) and these 9 collared bushings:B, 1/2",5/8",3/4",7/8"and C,1", 1-1/8",1-1/4",1-3/8" & 1-1/2".

### **No.70 Combination Set** Model: KBMS-22

Cuts 26 different keyway. Consists of 4 broaches (B-1 4mm,5mm, C-1 6mm, 8mm) and 13 collared bushings (B-1 12mm, 14mm, 15mm, 16mm, and C-1 18mm, 19mm, 20mm, 22mm, 24mm,25mm,26mm,28mm & 30mm).

### **No.10-10A Combination Sets** Model: KBS-27

Cuts 36 different keyways. Consists of 4 broaches (1/8"B,3/16"B,1/4"C, 3/8"C) and these 18 collared bushings: B, 1/2", 9/16", 5/8",11/16",3/4",13/16,7/8,and C 15/16,1",1-1/16",1-1/8",1-3/16,1-1/4,1-5/16, 1-3/8,1-7/16,1-1/2 & 1-9/16".

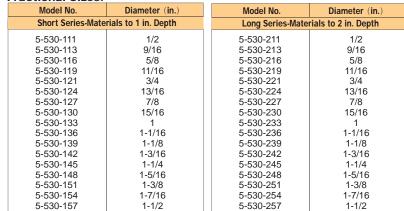
### **No.80 Standard Sets** Model: KBMS-21

Cuts 36 different keyway Consists of 3 broaches (D-1 10mm, 12mm,14mm) and 12 plain bushings (D-1 32mm, 34mm, 35mm, 36mm, 38mm, 40mm,42mm,44mm,45mm,46mm, 48mm & 50mm). Plain bushings only.

# **Annular Cutters** — High Speed Steel

Eliminates multi-step drilling. Lower cost per hole. More accurate and clear holes.

**Fractional Sizes:** 





Metric				
Model No.	Diameter (mm.)			
Short Series-Materials to 1 in. Depth				
5-531-114	14			
5-531-116	16			
5-531-118	18			
5-531-122	22			
5-531-124	24			
5-531-128	28			
5-531-130	30			
Long Series-Materials to 2 in. Depth				
5-531-216	16			
5-531-218	18			
5-531-220	20			
5-531-222	22			
5-531-224	24			
5-531-225	25			
5-531-228	28			
5-531-230	30			





1-9/16

