



PROFESSIONAL CUTTING TOOLS

Best Woodworking Solution For CNC Cutting Tools

CITY TOOLS CO., LTD



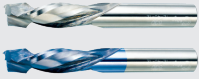
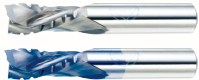
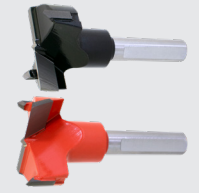
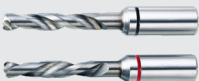
Solidwood

Appearance	Type	Description	Size	Page
	Z100-1252 Z100-1252TB	<i>Solid Carbide Roughing Tool - 2 Flute - Upcut</i>	Ø6~Ø16	10
	Z100-1253 Z100-1253TB	<i>Solid Carbide - Roughing Tool - 3 Flute - Upcut</i>	Ø6~Ø16	10
	Z105-1302 Z105-1302TB	<i>Solid Carbide - Roughing Tool - 2 Flute - Down cut</i>	Ø6~Ø16	11
	Z105-1303 Z105-1303TB	<i>Solid Carbide - Roughing Tool - 3 Flute - Down cut</i>	Ø6~Ø16	11
	Z200-1251	<i>Solid Carbide Spiral - 1 Flute - Upcut</i>	Ø3~Ø6	12
	Z200-1252 Z200-1253	<i>Solid Carbide - Spiral - 2 Flute or 3 Flute Upcut</i>	Ø6~Ø16	12
	Z205-1302 Z205-1303	<i>Solid Carbide - Spiral - 2 Flute or 3 Flute Down cut</i>	Ø6~Ø16	13
	Z300-1252 Z300-1253 Z300-1254	<i>Solid Carbide - Chipbreaker Finisher - 2 Flute or 3 Flute or 4 Flute - Upcut</i>	Ø6~Ø16	13
	Z305-1302 Z305-1303	<i>Solid Carbide - Chipbreaker Finisher - 2 Flute or 3 Flute - Down cut</i>	Ø6~Ø16	14
	ZDK100-1253	<i>Solid Carbide Lock - Case Cutter - 3 Flute - Upcut</i>	Ø14~Ø20	14

INDEX



Panels

Appearance	Type	Description	Size	Page
	Z50SP-1002 Z50SP-1003	<i>Solid Carbide Straight Bits - 2 Flute or 3 Flute</i>	Ø6~Ø12	15
	Z80-1302 Z80-1302TB	<i>Solid Carbide 2+2 Compression Spiral - 2 Flute</i>	Ø6~Ø16	15
	Z80-1303 Z80-1303TB	<i>Solid Carbide 2+2 Compression Spiral - 3 Flute</i>	Ø6~Ø16	16
	Z80A-1302	<i>TCT Router Bits Compression Spiral - 2 Flute</i>	Ø6~Ø16	16
	Z82-1302 Z82-1302TB	<i>Solid Carbide 2+2 Compression Spiral With Chipbreaker - 2 Flute</i>	Ø6~Ø16	17
	Z82-1303 Z82-1303TB	<i>Solid Carbide 3+3 Compression Spiral With Chipbreaker - 3 Flute</i>	Ø6~Ø16	17
	Z84-1302 Z84-1303	<i>Solid Carbide 2+2 or 3+3 Compression Spiral</i>	Ø6.35~ Ø19.05	18
	TC-50	<i>Carbide Tipped Hinge Boring Bits 2+2 - 2 Flute</i>	Ø15~Ø35	19
	VH450	<i>Solid Carbide Dowel Drill Bits - V Point - 2 Flute</i>	Ø3~Ø12.7	20
	WH550	<i>Solid Carbide Dowel Drill Bits - W Point - 2 Flute</i>	Ø3~Ø12.7	21
	Z400-1252	<i>Solid Carbide Spiral Bit - 2 Flute - Upcut</i>	Ø6~Ø12	23
	Z500-1252	<i>Solid Carbide Spiral Bit - 3 Flute - Upcut</i>	Ø12	23
	Z605-1301	<i>Solid Carbide Double Shank - 2 Flute - Down cut</i>	Ø6~Ø8	24

INDEX

<https://www.citytools.com.tw/>

Plastic

Appearance	Type	Description	Size	Page
	ZPO200P-1181	<i>Solid Carbide Spiral O Flute Mirror Finish - 1 Flute or 2</i>	Ø3~Ø10	28
	ZPO200P-1182	<i>Flute - Upcut</i>		
	ZPO205P-1181	<i>Solid Carbide Spiral O Flute Mirror Finish - 1 Flute or 2</i>	Ø3~Ø10	29
	ZPO205P-1182	<i>Flute - Down cut</i>		
	ZPO200P-1302	<i>Solid Carbide Spiral O Flute Mirror Finish - 2 Flute - Upcut</i>	Ø3~Ø10	30
	ZPO205P-1302	<i>Solid Carbide Spiral O Flute Mirror Finish - 2 Flute - Down cut</i>	Ø3~Ø10	31

Bearing

Appearance	Type	Description	Size	Page
	Z200B-1302	<i>Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Upcut</i>	Ø6~Ø12	34
	Z200B-1303			
	Z205B-1302	<i>Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Down cut</i>	Ø10~Ø12	34
	Z205B-1303			
	Z200B2-1302	<i>Solid Carbide Spiral - Double Bearing - 2 Flute or 3 Flute - Upcut</i>	Ø10~Ø12	35
	Z200B2-1303			
	Z205B2-1302	<i>Solid Carbide Spiral - Double Bearing - 2 Flute or 3 Flute - Down cut</i>	Ø10~Ø12	35
	Z205B2-1303			
	Z200BD-1302	<i>Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Upcut</i>	Ø10~Ø12	36
	Z200BD-1303			
	BURS-CR-B2	<i>Solid Carbide Burs - Bearing - Double cut</i>	Ø10~Ø12	36
	Z80B-1302	<i>Solid Carbide Compression Spiral - Bearing - 2 Flute</i>	Ø6~Ø12	37
	Z80B2-1302	<i>Solid Carbide Compression Spiral - Double Bearing - 2 Flute</i>	Ø10~Ø12	37
	Z80BD-1302	<i>Solid Carbide Compression Spiral - Bearing - 2 Flute</i>	Ø10~Ø12	38

INDEX



TCT

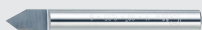
Appearance	Type	Description	Size	Page
	Z50A-1002	<i>TCT Router Bits Straight - 2 Flute</i>	Ø2~Ø12	44
	Z50A-1003	<i>TCT Router Bits Straight - 3 Flute</i>	Ø6~Ø12	45

Composite Fiberglass

Appearance	Type	Description	Size	Page
	FG10010	<i>Composite Series - Square Type - End Mill Point - Upcut</i>	Ø4~Ø10	48
	FG10510	<i>Composite Series - Square Type - End Mill Point - Down cut</i>	Ø4~Ø10	48
	FG20010	<i>Composite Series - Square Type - No Point</i>	Ø4~Ø10	49
	FG20510	<i>Composite Series - Square Type - No Point</i>	Ø4~Ø10	49
	FG30010	<i>Composite Series - Drill Point - 2 Point - Upcut</i>	Ø4~Ø10	50
	FG30510	<i>Composite Series - Drill Point - 2 Point - Down cut</i>	Ø4~Ø10	50
	FG40010	<i>Composite Series - Burr Point - Upcut</i>	Ø4~Ø10	51
	FG40510	<i>Composite Series - Burr Point - Down cut</i>	Ø4~Ø10	51
	FG10030	<i>Composite Series - Square Type - End Mill Point - Upcut</i>	Ø4~Ø10	52
	FG20030	<i>Composite Series - Square Type - No Point</i>	Ø4~Ø10	52
	FG30030	<i>Composite Series - Drill Point - 2 Point - Upcut</i>	Ø4~Ø10	53
	FG40030	<i>Composite Series - Burr Point - Upcut</i>	Ø4~Ø10	53
	FG500-1108	<i>Composite Series - End Mill Point - 8 Flute Upcut</i>	Ø4~Ø10	54
	FG600	<i>Composite Series - Drill Point - 2 Point - Upcut</i>	Ø4~Ø10	54



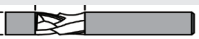
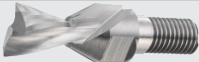
Engraving

Appearance	Type	Description	Size	Page
	Z40-1301	<i>Solid Carbide Engraving Tools - 1 Flute - 30°</i>	Ø0.25~Ø0.5	58
	Z40-1601	<i>Solid Carbide Engraving Tools - 1 Flute - 60°</i>	Ø0.25~Ø0.5	58
	Z40-1901	<i>Solid Carbide Engraving Tools - 1 Flute - 90°</i>	Ø0.25~Ø0.5	59
	ZTA200-8302 ZTA200-8303	<i>Solid Carbide Engraving Taper Ball Nose Tools - 2 Flute or 3 Flute</i>	Ø0.6~Ø1.6	59
	Z700-8302	<i>Solid Carbide Engraving Spiral Ball Nose - 2 Flute</i>	Ø4~Ø12	60
	Z700V-8302 Z700V-8602 Z700V-8902	<i>Solid Carbide Engraving "V" Spiral Tool - 2 Flute - 30°/ 60°/ 90°</i>	Ø6~Ø12	60
	Z48V-1303 Z48V-1603 Z48V-1903	<i>Solid Carbide V Groove Cutters - 3 Flute - 30°/ 60°/ 90°</i>	Ø15	61
	Z49V-1302 Z49V-1602 Z49V-1902	<i>Solid Tipped V Groove - 2 Flute</i>	Ø30	61
	Z41-1001	<i>Solid Carbide Flush Trimming Bits - 1 Flute</i>	Ø6	62
	Z42-1001	<i>Solid Carbide Flush Trimming Bits - 1 Flute</i>	Ø6	62
	Z43-1001	<i>Solid Carbide Round Bottom Veining Bits - 1 Flute</i>	Ø3~Ø6	63
	Z43V-1001	<i>Solid Carbide V - Groove and Scorer Bits - 1 Flute</i>	Ø3~Ø6	63
	Z44-1001	<i>Solid Carbide Rip & Slotter Bits - 1 Flute</i>	Ø6	64
	Z45-1001	<i>Solid Carbide Flush Trimming With Boring Point Bits - 1 Flute</i>	Ø6	64
	Z46-1001	<i>Solid Carbide Flute & Bevel Trimming Bits - 1 Flute</i>	Ø6	65
	Z47-1001	<i>Solid Carbide Bevel Trimming Bits - 1 Flute</i>	Ø4	65

INDEX



Engraving

Appearance	Type	Description	Size	Page
	Z48-1302	<i>Solid Carbide Spiral Trimming Bits - 2 Flute - Down cut</i>	Ø6	66
	Z49-1302	<i>Solid Carbide Compression Spiral Trimming Bits - 2 Flute</i>	Ø6	66
	Z50-1001-CR	<i>Solid Carbide Burr Trimming Bits</i>	Ø6	67
	ZDV100	<i>Solid Carbide Dovetail Cutters - 1 Flute</i>	Ø13.5	67
	ZDV200	<i>Solid Carbide Dovetail Cutters - 2 Flute</i>	Ø13.5	68
	ZDV300	<i>Solid Carbide Dovetail Cutters With threads - 2 Flute</i>	Ø13.5	68

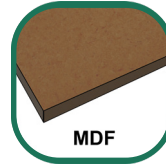
Burs

Appearance	Type	Description	Size	Page
	Type A	<i>Type A - Cylinder</i>	Ø3~Ø6	72
	Type B	<i>Type B - Cylinder + End Cut</i>	Ø3~Ø6	72
	Type C	<i>Type C - Ball Nosed Cylinder</i>	Ø3~Ø6	73
	Type D	<i>Type D - Ball</i>	Ø3~Ø6	73
	Type E	<i>Type E - Oval</i>	Ø3~Ø6	74
	Type F	<i>Type F - Ball Nosed Tree</i>	Ø3~Ø6	74
	Type G	<i>Type G - Tree</i>	Ø3~Ø6	75
	Type L	<i>Type L - Ball Nosed Cone</i>	Ø3~Ø6	75
	Type M	<i>Type M - Cone</i>	Ø3~Ø6	76
	Type H	<i>Type H - Flame</i>	Ø3~Ø6	76
	Type N	<i>Type N - Inverted Cone</i>	Ø3~Ø6	77
	Type O	<i>Type O - Cylinder - Corner Radius</i>	Ø3~Ø6	77
	Type J	<i>Type J - Countersink 60°</i>	Ø3~Ø6	78
	Type K	<i>Type K - Countersink 90°</i>	Ø3~Ø6	78

Material Icon Guide



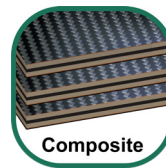
Hard / Soft
Wood



MDF



Hard / Soft
Plywood



Composite



Hard / Soft
Plastic



Fiberglass
Carbon Fiber

ROUGHING END MILL

Roughing End Mill flutes and suitable for heavy milling with good chip release, excellent cutting ability and high Feed cutting rate.

The major characteristic of TB coating end mills:

TB coating with light blue in color, has a hard, smooth finish which offers improved wear and built up edge resistance. TB coating has good adhesion, toughness for processing high hardness, and High performance in dry cutting, with high abrasive wear and heat resistance to chipping and performs well. Suitable to process MDF, Hard woods and plywood.



SOLID WOOD / PANEL



*Solid Carbide - Roughing Tool - 2 Flute - Upcut***Z100-1252 / Z100-1252TB**

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

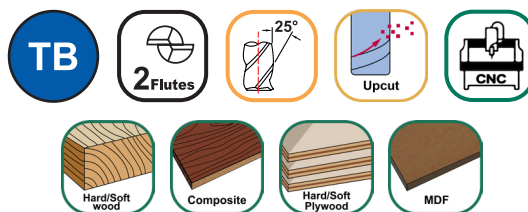
Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	

*Solid Carbide - Roughing Tool - 3 Flute - Upcut***Z100-1253 / Z100-1253TB**

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide - Roughing Tool - 2 Flute - Down cut

Z105-1302 / Z105-1302TB

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

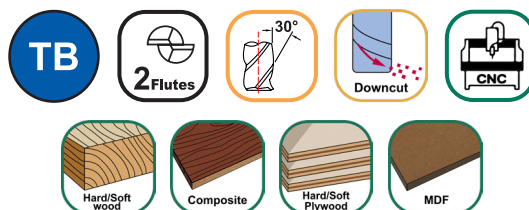
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide - Roughing Tool - 3 Flute - Down cut

Z105-1303 / Z105-1303TB

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

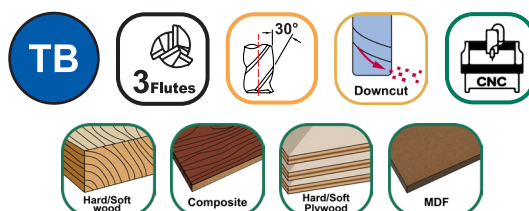
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



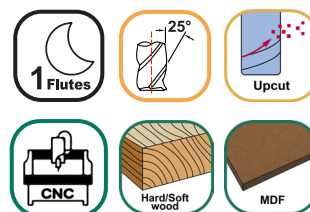
*Solid Carbide - Spiral - 1 Flute - Upcut***Z200-1251**

Designed for routing where aggressive upward chip removal is necessary in hand-fed or CNC applications. Long tool life, and high quality finish are characteristic of these tools.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	12	3	50	
4	16	4	50	
5	20	5	50	
6	24	6	60	

*Solid Carbide - Spiral - 2 Flute or 3 Flute Upcut***Z200-1252 / Z200-1253**

Designed for routing where upward chip removal, long tool life and high quality finish is desired.

Usage : Natural wood and wood composites, solid surface.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide - Spiral - 2 Flute or 3 Flute Down cut

Z205-1302 / Z205-1303

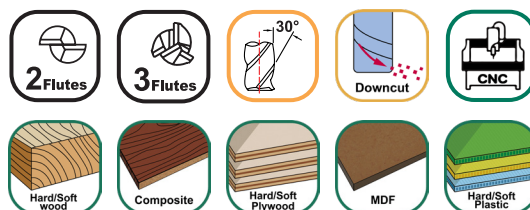
Designed for routing where Downward chip removal, long tool life and high quality finish is desired.

Usage : Natural wood and wood composites, solid surface and some plastic.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide - Chipbreaker Finisher - 2 Flute or 3 Flute or 4 Flute - Upcut

Z300-1252 / Z300-1253 / Z300-1254

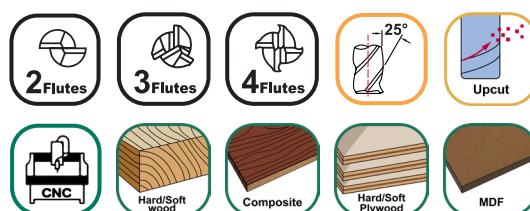
For additional balance at fast feed rates with a smooth finish.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



*Solid Carbide - Chipbreaker Finisher - 2 Flute
or 3 Flute - Down cut*

Z305-1302 / Z305-1303

Designed for additional balance at fast feed rates with a smooth finish. It provides excellent chip removal function. Best for using for both fine finishing and roughing surfaces. Usage : Natural wood and wood composites.

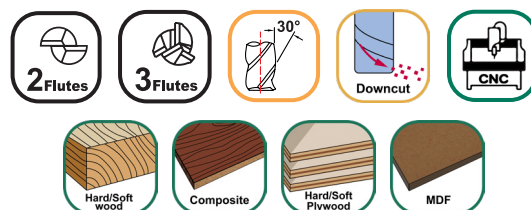
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide Lock - Case Cutter - 3 Flute - Upcut

ZDK100-1253

Designed for cutting lock cases and face-plates in doors. Cutting edges with chip breakers and positive spiral allow for optimum chip evacuation. Three flute design only for lock cases and also for high hogging performance with low power consumption due to cutting edges in roughing design. The peculiarity of an unique from that reduces wide cutting resistance and noise.

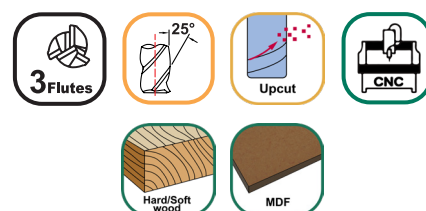
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
14	30	16*50	170	
16	30	16*50	170	
20	45	16*50	175	
14	90	16*50	170	
16	105	16*50	170	
20	100	16*50	175	

unit: inch

CED	CEL	SD	OAL	USD/each
5/8	2"	5/8	6-1/2	
5/8	4-1/2	5/8	6-1/2	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Straight Bits - 2 Flute or 3 Flute

Z50SP-1002 / Z50SP-1003

The tool provides a superior finish in a variety of materials and optimum cutter life.

Designed for rout extremely hard materials, and longer durability.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	75	
12	42	12	90	
12	52	12	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	



Solid Carbide 2+2 Compression Spiral - 2 Flute

Z80-1302 / Z80-1302TB

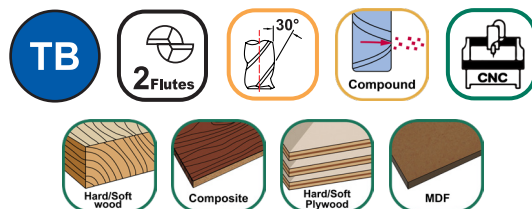
Designed for fast feed rates and optimum edge finish on double-sided laminated material. Also, it can prevent chipping or fizing on the top and the bottom of the cut.

Usage : Double sided laminated, veneered, natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide 3+3 Compression Spiral - 3 Flute

Z80-1303 / Z80-1303TB

Compression design for ultra high feed rates and optimum edge finish on both sides of laminated material.

Usage : Double sided laminated, veneered, natural wood and wood composites.

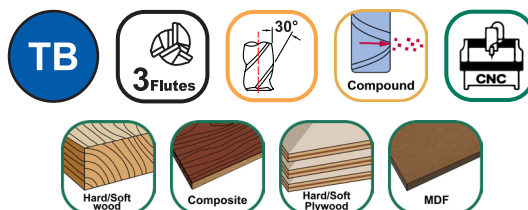
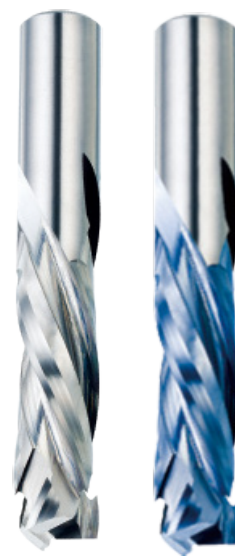
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



TCT Router Bits Compression Spiral - 2 Flute

Z80A-1302

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

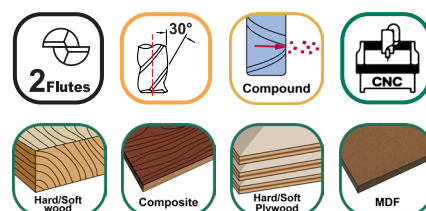
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	USD/each
6	20	12	
8	25	12	
10	25	12	
12	32	12	
12	42	12	
12	51	12	
16	42	12	
16	51	12	

unit: inch

CED	CEL	SD	USD/each
1/4	3/4	1/2	
3/8	1-1/4	1/2	
1/2	1-1/8	1/2	
5/8	1-5/8	1/2	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide 2+2 Compression Spiral With Chipbreaker - 2 Flute

Z82-1302 / Z82-1302TB

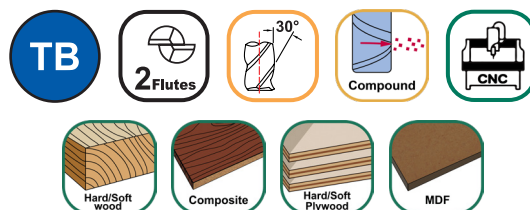
The tool is suitable for cutting double - sided laminated. It can prevent chipping or fizzling on the top and the bottom of the cut. This tool produces extremely smooth cutting, be part of light cutting.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



Solid Carbide 3+3 Compression Spiral With Chipbreaker - 3 Flute

Z82-1303 / Z82-1303TB

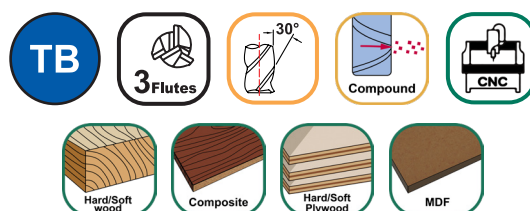
The tool is suitable for cutting double - sided laminated. It can prevent chipping or fizzling on the top and the bottom of the cut. This tool produces extremely smooth cutting, be part of light cutting.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	25	8	75	
10	25	10	75	
12	32	12	80	
12	42	12	90	
12	51	12	100	
16	42	16	90	
16	51	16	100	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	2-1/2	
3/8	1-1/4	3/8	3"	
1/2	1-1/8	1/2	3"	
5/8	1-5/8	5/8	4"	



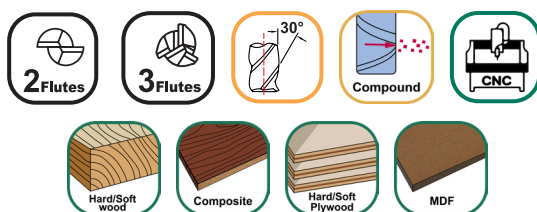
Solid Carbide 2+2 or 3+3 Compression Spiral

Z84-1302 / Z84-1303

Compression design for ultra high feed rates and optimum edge finish on both sides of laminated material.

Usage : Double sided laminated, veneered, natural wood and wood composites.

Remark : Custom sizes available per your specifications.



Up cut

unit: inch

CED	CEL	Up cut	SD	OAL	Flute	USD/each
1/4	7/8	9/32	1/4	2-1/2	2	
3/8	1"	3/16	3/8	3"	2	
1/2	1-1/8	15/64	1/2	3"	2	
3/4	2"	43/64	3/4	4"	2	

unit: inch

CED	CEL	Up cut	SD	OAL	Flute	USD/each
3/8	1"	9/32	3/8	3"	3	
1/2	1-1/4	23/64	1/2	3"	3	



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Carbide Tipped Hinge Boring Bits 2+2 - 2 Flute

TC-50

Two cutting edges, two spurs and a center point provide clean hole boring for concealed hinges. Cylindrical 10mm shanks have a flat chucking surface and adjustable set screw for optimum clamping. All boring bits are available in right and left hand rotation.

Material : Carbide Tipped Material

Usage : All natural wood, hardwood and plastic materials.

Remark : (1) Custom sizes available per your specifications.

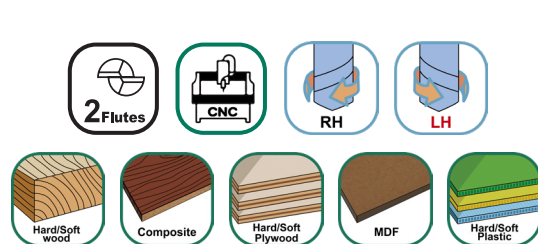
(2) Left hand: Groove mark on the shank.

unit:mm

CED	SD	OAL	USD/each
15	10*26	57	
20	10*26	57	
25	10*26	57	
30	10*26	57	
35	10*26	57	

unit: mm

CED	SD	OAL	USD/each
15	10*30	70	
20	10*30	70	
25	10*30	70	
30	10*30	70	
35	10*30	70	



Solid Carbide Dowel Drill Bits - V Point - 2 Flute

VH450

Solid carbide body of V-point tip for clean through hole drilling and flat chucking surface with adjustable set screw available in right and left hand rotation. These tools will not cause fluff or fracture problems while reproducing.

Usage : All natural wood, hardwood and plastic materials.
Cutting material: Solid Carbide.

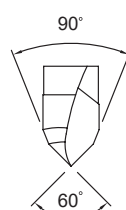
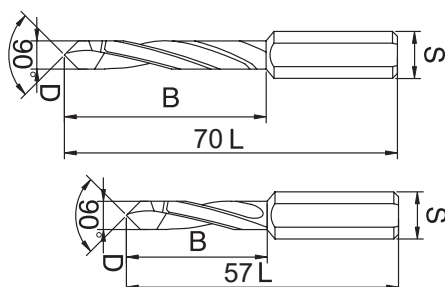
Remark : (1) Custom sizes available per your specifications.
(2) Left hand: Groove mark on the shank.



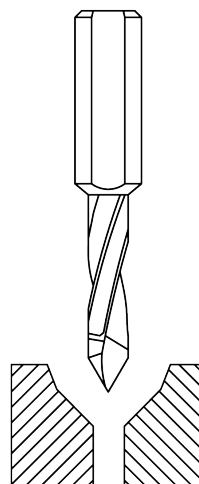
unit:mm

CED	CEL	SD	OAL	USD/each
3	30	10*30	57	
4	30	10*30	57	
4.76	30	10*30	57	
5	30	10*30	57	
5.55	30	10*30	57	
6	30	10*30	57	
6.35	30	10*30	57	
7	30	10*30	57	
8	30	10*30	57	
9	30	10*30	57	
9.52	30	10*30	57	
10	30	10*30	57	
11	30	10*30	57	
12	30	10*30	57	
12.7	30	10*30	57	

CED	CEL	SD	OAL	USD/each
3	43	10*30	70	
4	43	10*30	70	
4.76	43	10*30	70	
5	43	10*30	70	
5.55	43	10*30	70	
6	43	10*30	70	
6.35	43	10*30	70	
7	43	10*30	70	
8	43	10*30	70	
9	43	10*30	70	
9.52	43	10*30	70	
10	43	10*30	70	
11	43	10*30	70	
12	43	10*30	70	
12.7	43	10*30	70	



V Shape





Solid Carbide Dowel Drill Bits - W Point - 2 Flute

WH550

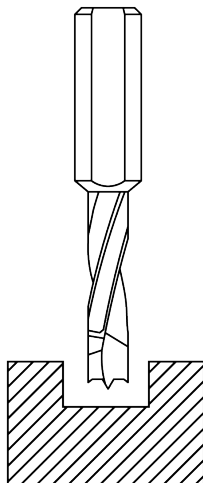
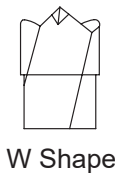
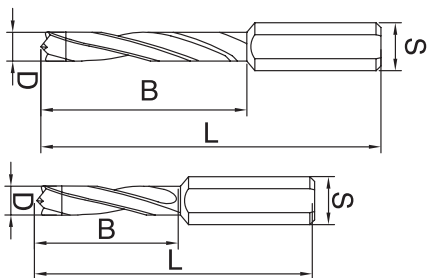
Solid carbide body of W-point tip for clean blind hole drilling and flat chucking surface with adjustable set screw available in right and left hand rotation. These tools will not cause fluff or fracture problems while reproducing.

Usage : All natural wood, hardwood and plastic materials.
Cutting material: Solid Carbide.

Remark : (1)Custom sizes available per your specifications.
(2)Left hand: Groove mark on the shank

unit:mm				
CED	CEL	SD	OAL	USD/each
3	30	10*30	57	
4	30	10*30	57	
4.76	30	10*30	57	
5	30	10*30	57	
5.55	30	10*30	57	
6	30	10*30	57	
6.35	30	10*30	57	
7	30	10*30	57	
8	30	10*30	57	
9	30	10*30	57	
9.52	30	10*30	57	
10	30	10*30	57	
11	30	10*30	57	
12	30	10*30	57	
12.7	30	10*30	57	

CED	CEL	SD	OAL	USD/each
3	43	10*30	70	
4	43	10*30	70	
4.76	43	10*30	70	
5	43	10*30	70	
5.55	43	10*30	70	
6	43	10*30	70	
6.35	43	10*30	70	
7	43	10*30	70	
8	43	10*30	70	
9	43	10*30	70	
9.52	43	10*30	70	
10	43	10*30	70	
11	43	10*30	70	
12	43	10*30	70	
12.7	43	10*30	70	





Specialized Series

PantoRouter



Solid carbide custom tools use for Precision Woodworking Joinery Machine. processing Mortise And Tenon - Simple Angle Joinery - Compound Angle Joinery Multiple Mortise & Tenon, Custom Shaped, Fast & Accurate Dovetails Fast & Accurate Box Joints .



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

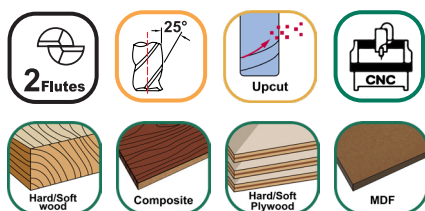
Solid Carbide Spiral Bit - 2 Flute - Upcut

Z400-1252

Designed for routing where Downward chip removal, long tool life and high quality finish is desired.

Usage : Double sided laminated, veneered, natural wood and wood composites.

Remark : Custom sizes available per your specifications.



unit:mm

CED	CEL	SD	OAL	USD/each
6	35	8	75	
8	42	8	90	
10	45	8	90	
12	50	8	90	

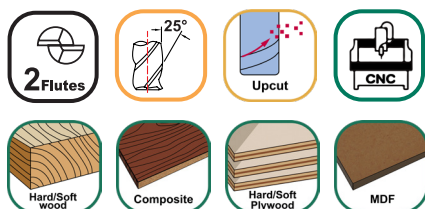
Solid Carbide Spiral Bit - 2 Flute - Upcut

Z500-1252

Designed for routing where Downward chip removal, long tool life and high quality finish is desired.

Usage : Double sided laminated, veneered, natural wood and wood composites.

Remark : Custom sizes available per your specifications.



unit:mm

CED	CEL	SD	OAL	USD/each
12	50	8	95	



Solid Carbide Double Shank - 1 Flute Down cut

Z605-1301

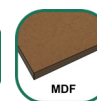
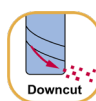


Broach refers to the tool for the majority of heavy-duty tool and fine sharpener, which is mainly installed in broaching machine.

Broach is a kind of high productivity and high precision multi thread tool. It can broach various shapes of internal surface (e.g. circular hole, polygonal hole and various spline holes) and external surface (e.g. indentation at the root of the blades of steam turbine, external gear, semicircle orifice of connecting bar and rabbet surface etc.) The broach used to broach the internal surface is called inside broach, and the broach used to broach the external broach is called broach. The majority of the broaching forces are tensile forces, however some are compression forces.

Remark : Custom sizes available per your specifications.

- Short machining time and high efficiency .
- High machining precision, small deviation
- Good surface roughness of the machining surface.
- The machining method is economic, and the operator who is not skilled can also work.
- If the axle of irregular shape and straightforward multi shapes are in the same axle, it can also be machined.
- It will be just all right is the axle of irregular shape and straightforward multi shapes are in the same axle and direction.



unit:mm

Type	CED	CEL	SD	OAL	USD/each
Z605-1301	8	80	8	170	
	6	80	6	170	
	6	120	6	210	
Z625-1301	6	80	6	170	



BURS

Engraving

**COMPOSITE
FIBERGLASS**

TCT

BEARING

PLASTICS

PANELS

SOLID WOOD



PLASTICS





O Flute Design

Designed to combine the fast free cutting of O flute geometry with the tool life available from solid carbide particularly in small diameters.

O Flute Design

Produce super clean, smooth cuts, especially in acrylic materials, other plastics and wood.

Bits are made according to strict tolerances from an exclusive carbide grade and polished to a mirror finish. Designed to eject chips either up or down. Ideal for industrial applications and CNC machines. Right hand helix, right hand cut.

Usage

Used for routing harder and more rigid plastics in the following materials: Acrylic, Acetal, Nylon, PCV, ABS, Phenolic, Corian, Poly (PMMA), Acrylic Stone, Coroplast, etc.



Solid Carbide Spiral O Flute Mirror Finish - 1 Flute or 2 Flute - Upcut

ZPO200P-1181 / ZPO200P-1182

The polished flute allows for razor sharp cutting edge and easy chip evacuation. The tool is available in a upcut or down cut spiral for improved chip evacuation.

Usage : plastic, wood, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

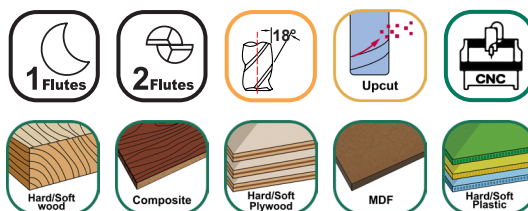


unit:mm

CED	CEL	SD	OAL	USD/each
3	8	3	38	
4	12	4	50	
4	20	4	60	
4	30	4	65	
6	20	6	60	
6	30	6	75	
6	38	6	75	
8	25	8	70	
8	38	8	76	
10	30	10	76	
10	35	10	76	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
3/16	5/8	1/4	2-1/2	
1/4	3/4	1/4	2-1/2	
1/4	1-1/4	1/4	3"	
1/4	1-1/2	1/4	3"	
3/8	3/4	3/8	3"	
3/8	1-1/8	3/8	3"	





Solid Carbide Spiral O Flute Mirror Finish - 1 Flute or 2 Flute - Down cut

ZPO205P-1181 / ZPO205P-1182

The polished flute allows for razor sharp cutting edge and easy chip evacuation. The tool is available in a upcut or down cut spiral for improved chip evacuation.

Usage : plastic, wood, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

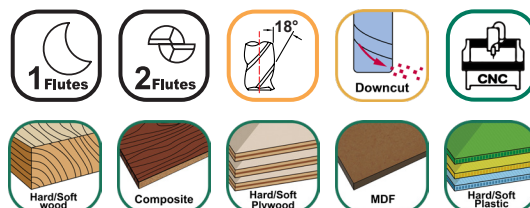


unit:mm

CED	CEL	SD	OAL	USD/each
3	8	3	38	
4	12	4	50	
4	20	4	60	
4	30	4	65	
6	20	6	60	
6	30	6	75	
6	38	6	75	
8	25	8	70	
8	38	8	76	
10	30	10	76	
10	35	10	76	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
3/16	1/4	5/8	2-1/2	
1/4	3/4	1/4	2-1/2	
1/4	1-1/4	1/4	3"	
1/4	1-1/2	1/4	3"	
3/8	3/4	3/8	3"	
3/8	1-1/8	3/8	3"	



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Spiral O Flute Mirror Finish - 2 Flute - Upcut

ZPO200P-1302

The polished flute allows for razor sharp cutting edge and easy chip evacuation. The tool is available in a upcut or down cut spiral for improved chip evacuation.

Usage : plastic, wood, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
3	8	3	38	
4	12	4	50	
4	20	4	60	
4	30	4	65	
6	20	6	60	
6	30	6	75	
6	38	6	75	
8	25	8	70	
8	38	8	76	
10	30	10	76	
10	35	10	76	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
3/16	1/4	5/8	2-1/2	
1/4	3/4	1/4	2-1/2	
1/4	1-1/4	1/4	3"	
1/4	1-1/2	1/4	3"	
3/8	3/4	3/8	3"	
3/8	1-1/8	3/8	3"	





Solid Carbide Spiral O Flute Mirror Finish - 2 Flute - Down cut

ZPO205P-1302

The polished flute allows for razor sharp cutting edge and easy chip evacuation. The tool is available in a upcut or down cut spiral for improved chip evacuation.

Usage : plastic, wood, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

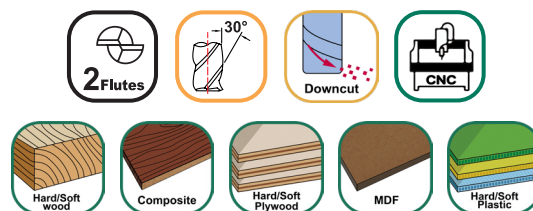


unit:mm

CED	CEL	SD	OAL	USD/each
3	8	3	38	
4	12	4	50	
4	20	4	60	
4	30	4	65	
6	20	6	60	
6	30	6	75	
6	38	6	75	
8	25	8	70	
8	38	8	76	
10	30	10	76	
10	35	10	76	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
3/16	1/4	5/8	2-1/2	
1/4	3/4	1/4	2-1/2	
1/4	1-1/4	1/4	3"	
1/4	1-1/2	1/4	3"	
3/8	3/4	3/8	3"	
3/8	1-1/8	3/8	3"	



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS



Bearing



A double bearing guide ensures smooth cutting action around a template
It also has longer useful life and durability

Solid Carbide ultimate bits, chip-free finish in laminate, melamine, solid surface, fragile veneers and for template work for all kinds.

The twin ball-bearing pilot enhances the stability of the tool with three types:

B (bearing on top), BD (bearing at bottom), and B2 (both up and down)

Available in 'Up-Cut' spirals, 'Down-Cut' spirals and composite spirals.



Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Upcut

Z200B-1302 / Z200B-1303

Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.

Usage : Best for trimming stacked wood on laminate, melamine, and template work.

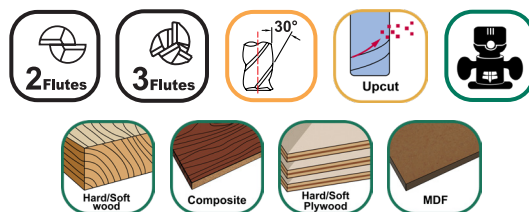
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	75	
10	20	6	75	
12	31	6	80	
10	20	12	75	
12	31	12	80	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	3"	
3/8	1"	1/4	3-1/4	
1/2	1-1/8	1/4	3-1/2	
3/8	1"	1/2	3-1/4	
1/2	1-1/8	1/2	3-1/2	



Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Down cut

Z205B-1302 / Z205B-1303

Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.

Usage : Best for trimming stacked wood on laminate, melamine, and template work.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
10	20	6	80	
12	31	6	85	

unit: inch

CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3-1/2	
1/2	1-1/8	1/4	4"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Spiral - Double Bearing - 2 Flute or 3 Flute - Upcut

Z200B2-1302 / Z200B2-1303

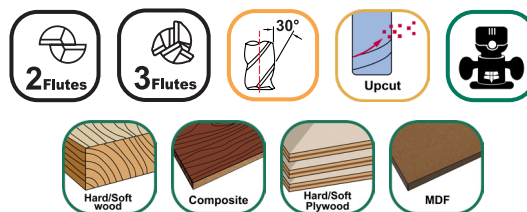
Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.

Usage : Best for trimming stacked wood on laminate, melamine, and template work.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
10	20	6	70	
12	31	6	75	

unit: inch				
CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3"	
1/2	1-1/8	1/4	3"	



Solid Carbide Spiral - Double Bearing - 2 Flute or 3 Flute - Down cut

Z205B2-1302 / Z205B2-1303

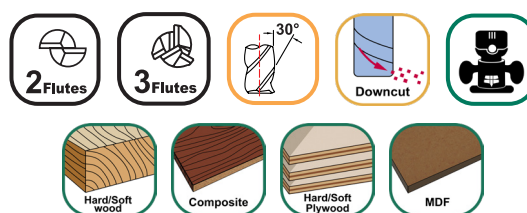
Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.

Usage : Best for trimming stacked wood on laminate, melamine, and template work.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
10	20	6	80	
12	31	6	85	

unit: inch				
CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3-1/2	
1/2	1-1/8	1/4	4"	



Solid Carbide Spiral - Bearing - 2 Flute or 3 Flute - Upcut

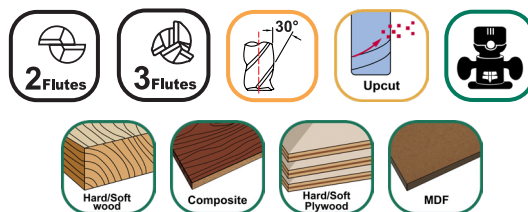
Z200BD-1302 / Z200BD-1303

Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.
Usage : Best for trimming stacked wood on laminate, melamine, and template work.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
10	20	6	70	
12	31	6	75	

unit: inch				
CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3"	
1/2	1-1/8	1/4	3"	



Solid Carbide Burs - Bearing - Double cut

BURS-CR-B2

Designed to trim stacked sheets of wood. A double bearing guide ensures smooth cutting action around a template.
Usage : Best for trimming stacked wood on laminate, melamine, and template work.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
10	20	6	70	
12	25	6	75	

unit: inch				
CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3-1/2	
1/2	1-1/8	1/4	4"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Compression Spiral - Bearing - 2 Flute

Z80B-1302

Designed for fast feed rates and optimum edge finish on double- sided laminated material. Also, it can prevent chipping or fizzing on the top and the bottom of the cut.

Usage : Double sided laminated, veneered, natural wood and wood composites.

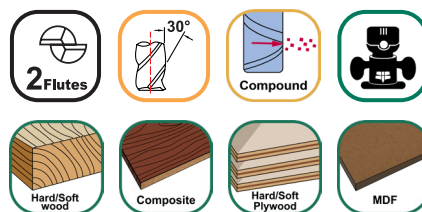
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	75	
10	20	6	75	
12	31	6	80	
10	20	12	75	
12	31	12	80	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/4	1/4	3"	
3/8	1"	1/4	3-1/4	
1/2	1-1/8	1/4	3-1/2	
3/8	1"	1/2	3-1/4	
1/2	1-1/8	1/2	3-1/2	



Solid Carbide Compression Spiral - Double Bearing - 2 Flute

Z80B2-1302

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

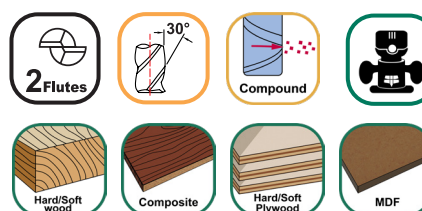
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
10	20	6	80	
12	31	6	85	

unit: inch

CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3-1/2	
1/2	1-1/8	1/4	4"	



Solid Carbide Compression Spiral - Bearing - 2 Flute

Z80BD-1302

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

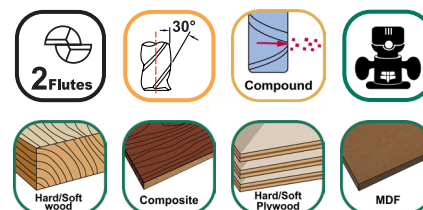
Remark : Custom sizes available per your specifications.

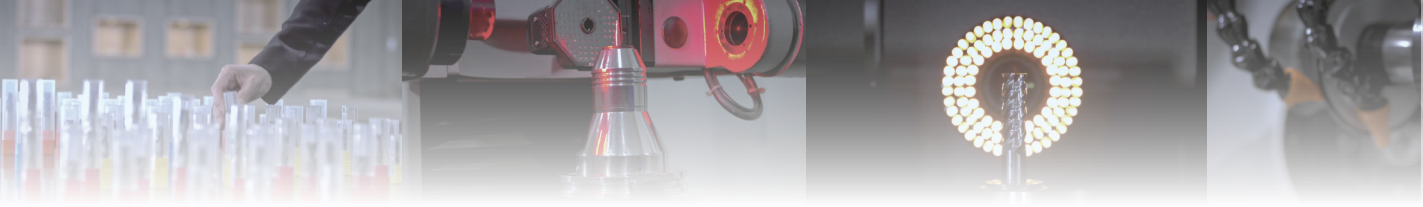
unit:mm

CED	CEL	SD	OAL	USD/each
10	20	6	70	
12	31	6	75	

unit: inch

CED	CEL	SD	OAL	USD/each
3/8	1"	1/4	3"	
1/2	1-1/8	1/4	3"	





BURS

Engraving

**COMPOSITE
FIBERGLASS**

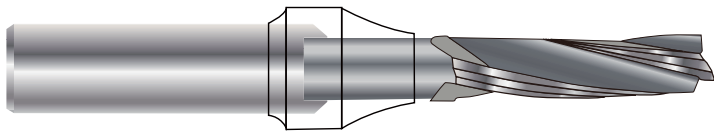
TCT

BEARING

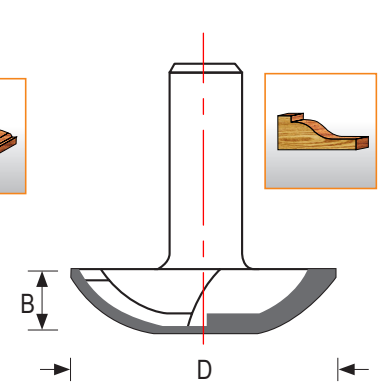
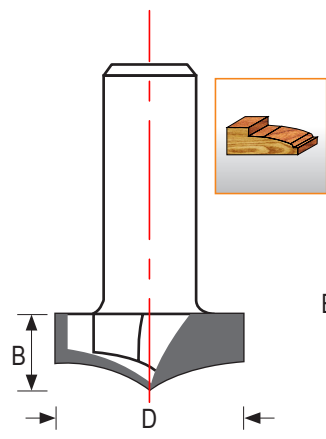
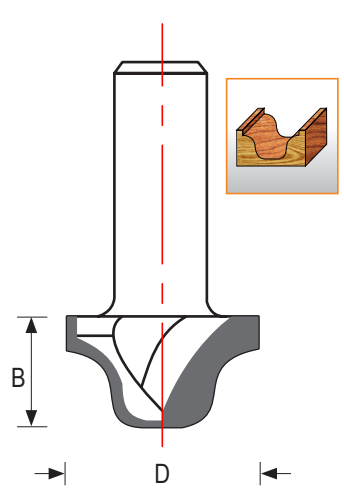
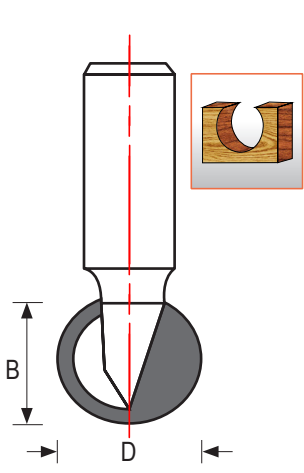
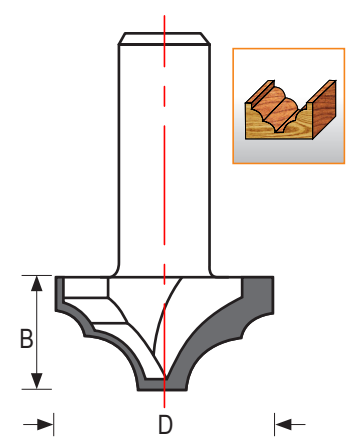
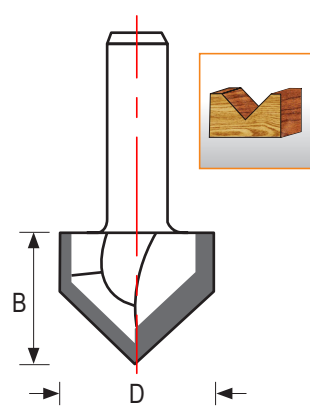
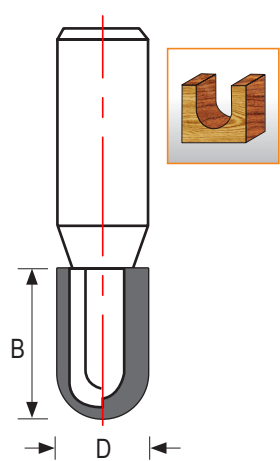
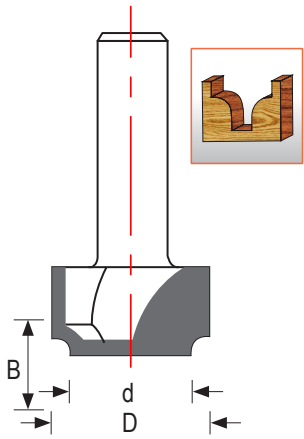
PLASTICS

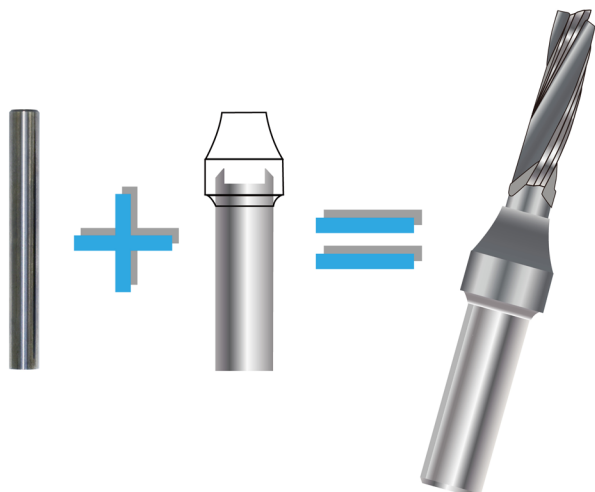
PANELS

SOLID WOOD



TCT *Carbide Router Bits*





YOUR BEST SOLUTION FOR HIGH SPEED CUTTING

In the early years of establishment, we devoted ourselves to producing and developing all kinds of cutting tools for woodworking. We use high standard material from Luxembourg and advanced CNC tool grinding machines from Germany to produce high quality tools.

Type

1 Straight Bits



2 Spiral Bits



3 Roughing



4 Compression Spiral



5 Drill Bits



6 For Plastic



7 Engraving



8 Other



Flute

1 Straight Bits



2 Spiral Bits



3 Roughing



4 Compression Spiral



5 Drill Bits



Turn Right



Turn Left

6 For Plastic



7 Engraving



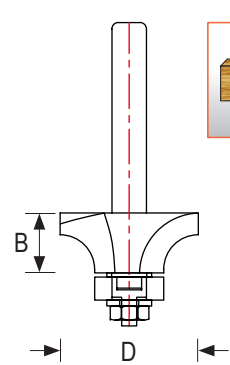
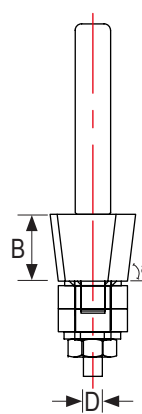
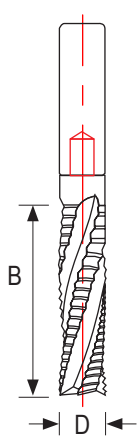
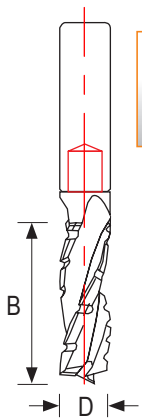
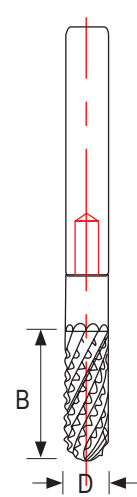
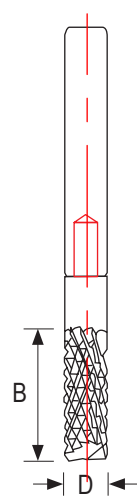
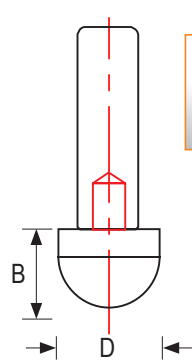
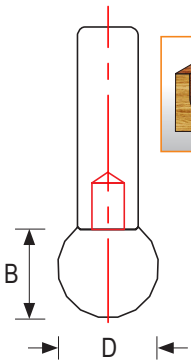
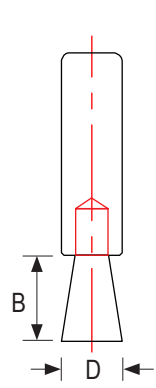
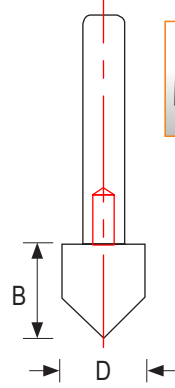
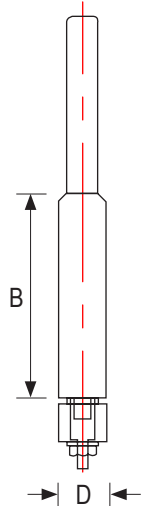
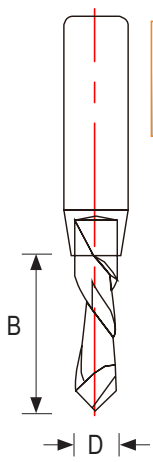
• Helix angle : 0° ~ 60°

• Size : 1~12.7mm

• Coating :



New Item

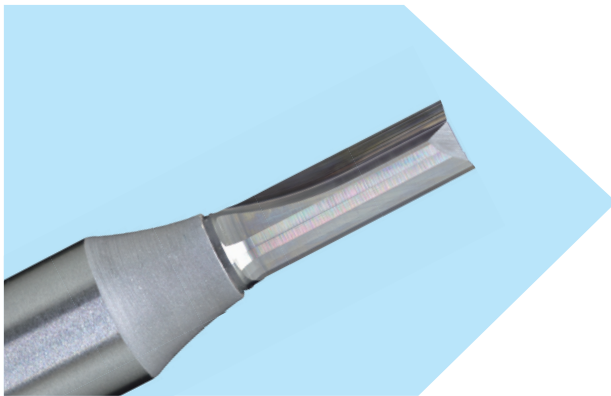


Reference



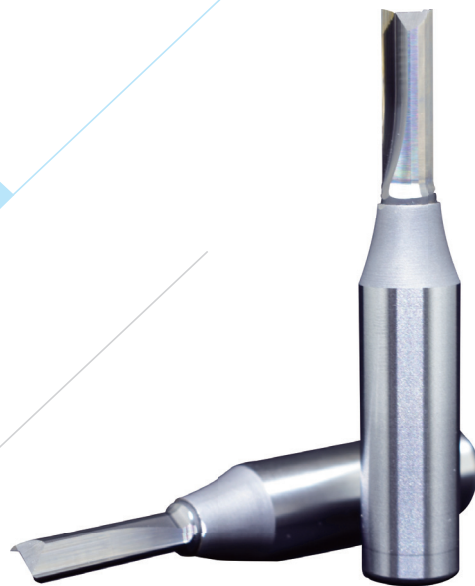
Five Advantages

- 1.Low Cost
- 2.High Precision
- 3.Long tools life
- 4.Reliable
- 5.High Quality



Your best solution

With conscientious designing and developing for cutting angle, we raise operating efficiency, improve durability and noise reduction.



Unique & Quality

In high-speed processing procedure, our products maintain sharp point for high quality, raise production rate and long life time.

TCT Router Bits Straight - 2 Flute

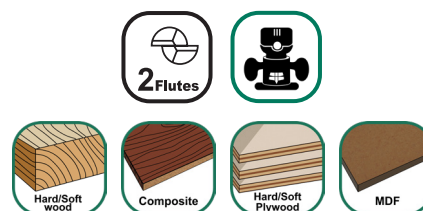
Z50A-1002

In the early years of establishment, we devoted ourselves to producing and developing all kinds of cutting tools for woodworking. We use high standard material from Luxembourg and advanced CNC tool grinding machines from Germany to produce high quality tools.

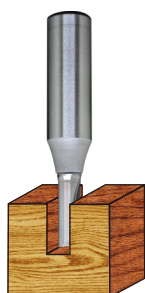
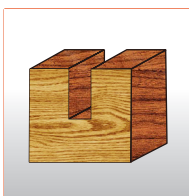
Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm			
CED	CEL	SD	USD/each
2	8	12	
3	12	12	
3	15	12	
3	20	12	
4	12	12	
4	15	12	
4	20	12	
4	25	12	
4	30	12	
5	15	12	
5	20	12	
5	25	12	
5	30	12	
6	15	12	
6	20	12	
6	25	12	
6	30	12	
7	20	12	
7	25	12	
7	30	12	
8	20	12	
8	25	12	
8	30	12	
8	35	12	
8	40	12	
9	20	12	
9	30	12	
9	35	12	
9	40	12	
10	30	12	
10	35	12	
10	40	12	
12	30	12	
12	35	12	
12	40	12	



processing shape and schematic diagram



flute schematic diagram



2 Flute
Z50A-1002



Shank(in)	1/4"	1/2"
can be adjust(mm)	6mm	12mm



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

TCT Router Bits Straight - 3 Flute

Z50A-1003

In the early years of establishment, we devoted ourselves to producing and developing all kinds of cutting tools for woodworking. We use high standard material from Luxembourg and advanced CNC tool grinding machines from Germany to produce high quality tools.

Usage : Natural wood and wood composites.

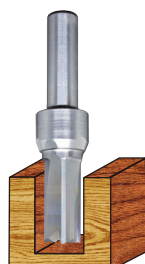
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	USD/each
6	15	12	
6	20	12	
6	25	12	
6	30	12	
7	20	12	
7	25	12	
7	26	12	
7	30	12	
8	20	12	
8	25	12	
8	30	12	
8	35	12	
8	40	12	
9	25	12	
9	30	12	
9	35	12	
9	40	12	
10	30	12	
10	35	12	
10	40	12	
12	30	12	
12	35	12	
12	40	12	
8	35	12	
8	40	12	
9	20	12	
9	30	12	
9	35	12	
9	40	12	
10	30	12	
10	35	12	
10	40	12	
12	30	12	
12	35	12	
12	40	12	



processing shape and
schematic diagram



flute schematic
diagram



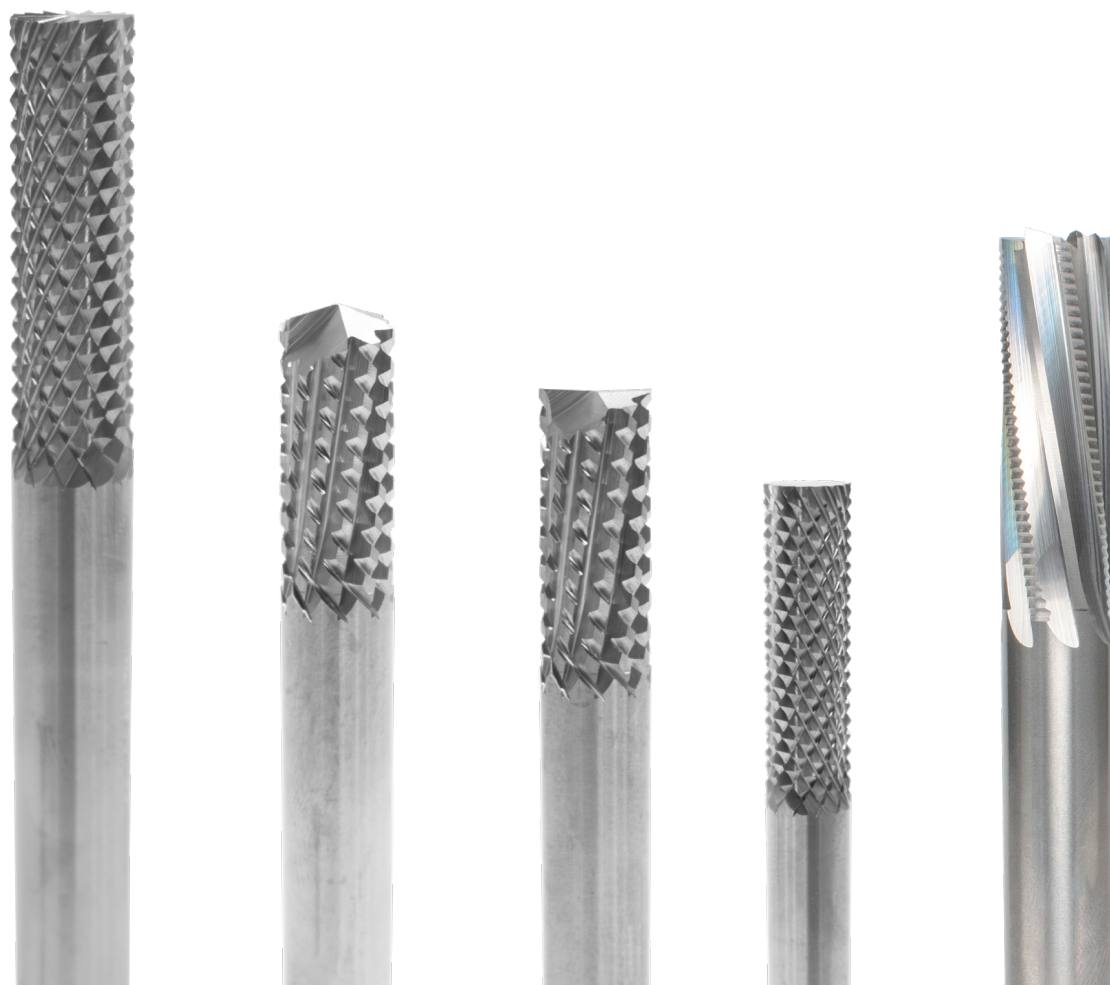
3 Flute
Z50A-1003



Shank(in)	1/4"	1/2"
can be adjust(mm)	6mm	12mm



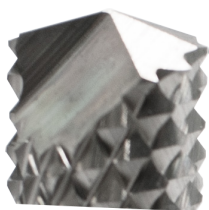
COMPOSITE FIBERGLASS



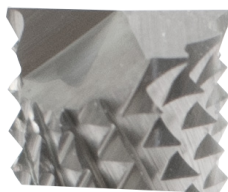
Fiberglass router burrs

Fiberglass router burrs incorporate reciprocating diamond-fluted geometry, strong negative rake angles and generous fluting to provide the best cutting action in a wide variety of woven resin bond fiberglass and composite materials

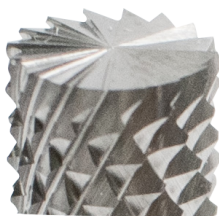
Different End Face



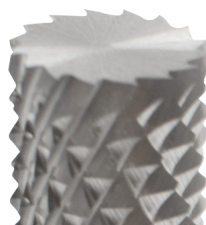
Drill



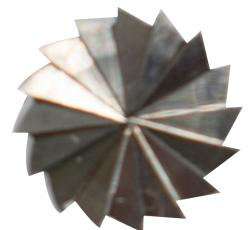
End mill 2 Flutes



Cylinder End mill



Cylinder



Different End Face

Composite Series - Square Type - End Mill Point - Upcut

FG10010

The new High Performance Composite Router is designed for more efficient routing of composite materials, in both hand-fed and in CNC applications. Coated for increased tool life.

Usage : Composites and fiberglass.

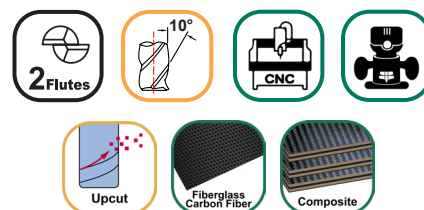
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Square Type - End Mill Point - Down cut

FG10510

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

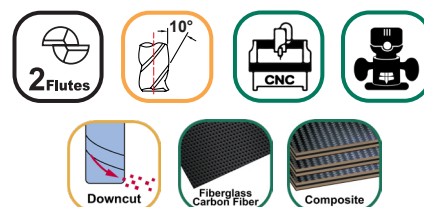
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Composite Series - Square Type - No Point

FG20010

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

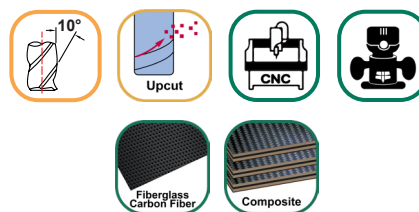
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Square Type - No Point

FG20510

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

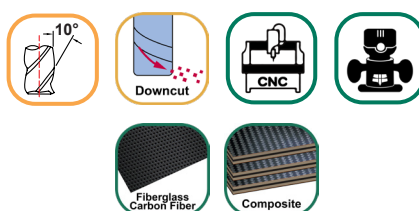
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



*Composite Series - Drill Point - 2 Point - Upcut***FG30010**

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

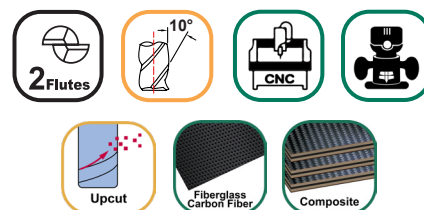
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	

*Composite Series - Drill Point - 2 Point - Down cut***FG30510**

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

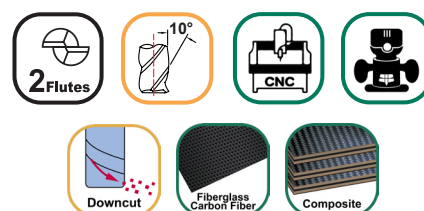
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Composite Series - Burr Point - Upcut

FG40010

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Burr Point - Down cut

FG40510

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Square Type - End Mill Point - Upcut

FG10030

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

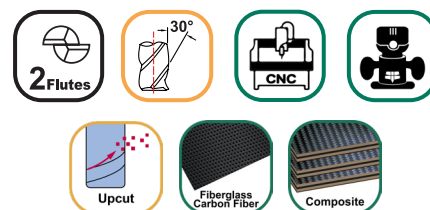
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Square Type - No Point

FG20030

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

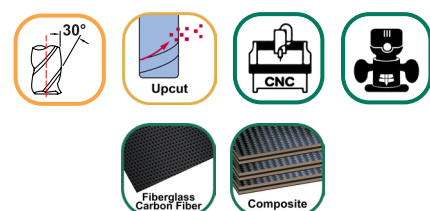
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Drill Point - 2 Point - Upcut

FG30030

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

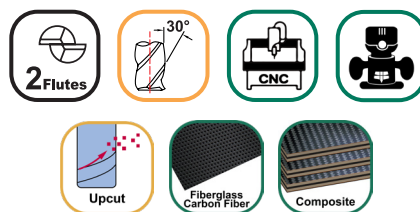
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - Burr Point - Upcut

FG40030

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

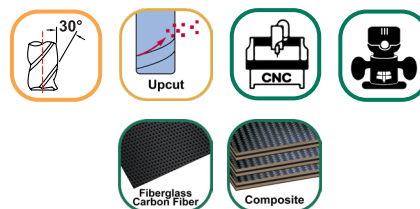
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Composite Series - End Mill Point - 8 Flute Upcut (Four Flute Finishing + Four Flute Roughing Tool)

FG500-1108

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

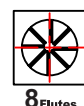
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



8 Flutes



Upcut



Fiberglass Carbon Fiber



Composite

Composite Series - Drill Point - 2 Point - Upcut

FG600

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
4	16	4	50	
6	25	6	75	
8	25	8	75	
10	25	10	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	1-1/2	
3/16	5/8	3/16	2"	
1/4	1"	1/4	3"	
1/4	1-1/2	1/4	3-1/2	
3/8	1"	3/8	3"	



Fiberglass Carbon Fiber



Composite



BURS

Engraving

**COMPOSITE
FIBERGLASS**

TCT

BEARING

PLASTICS

PANELS

SOLID WOOD



Engraving



Engraving

This engraving system was engineered to quickly interchange inserts while tool body can remain mounted in CNC machine. This minimizes downtime and helps to maintain consistent cutting accuracy.

CNC Tool bodies are expertly balanced for virtually no vibration to provide superior results.



TG Coating(TIN)

Golden color,Duel layer,for copper processing and coating properties contain high wear resistance and excellent sliding properties to against chip adhesion while cutting.



Solid Carbide Engraving Tools - 1 Flute - 30°

Z40-1301

This engraving tool is offered with a wide range of tip sizes angles to accommodate many engraving styles.

Usage : Wood, plastic, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

unit:mm

A	D1	SD	OAL	USD/each
30°	0.25	6	50	
30°	0.5	6	50	

unit: inch

A	D1	SD	OAL	USD/each
30°	0.005"	1/4	2"	
30°	0.010"	1/4	2"	



Solid Carbide Engraving Tools - 1 Flute - 60°

Z40-1601

This engraving tool is offered with a wide range of tip sizes angles to accommodate many engraving styles.

Usage : Wood, plastic, aluminum and solid surface.

Remark : Custom sizes available per your specifications.

unit:mm

A	D1	SD	OAL	USD/each
60°	0.25	6	50	
60°	0.5	6	50	

unit: inch

A	D1	SD	OAL	USD/each
60°	0.005"	1/4	2"	
60°	0.010"	1/4	2"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Engraving Tools - 1 Flute - 90°

Z40-1901

This engraving tool is offered with a wide range of tip sizes angles to accommodate many engraving styles.

Usage : Wood, plastic, aluminum and solid surface.

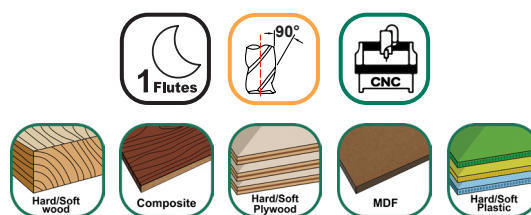
Remark : Custom sizes available per your specifications.

unit:mm

A	CED	SD	OAL	USD/each
60°	0.25	6	50	
60°	0.5	6	50	

unit: inch

A	CED	SD	OAL	USD/each
60°	0.005"	1/4	2"	
60°	0.010"	1/4	2"	



Solid Carbide Engraving Taper Ball Nose Tools - 2 Flute or 3 Flute

ZTA200-8302 / ZTA200-8303

The taper tool is available with a variety of taper angles and come standard with a ball nose point. The tools are designed to produce a good edge finish in a wide variety of materials.

Usage : Wood, plastic and aluminum.

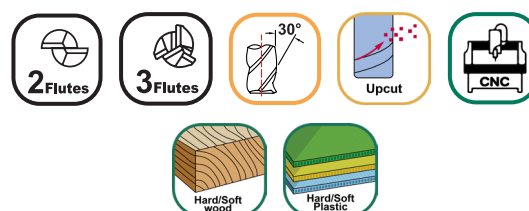
Remark : Custom sizes available per your specifications.

unit:mm

R	A	D1	CEL	SD	OAL	USD/each
0.3R	5.5°	0.6	28.33	6	60	
0.5R	5.5°	1.0	26.46	6	60	
0.8R	5.5°	1.6	23.61	6	60	

unit:mm

R	A	D1	CEL	SD	OAL	USD/each
0.3R	5.5°	0.6	28.33	6.35	60	
0.5R	5.5°	1.0	26.46	6.35	60	
0.8R	5.5°	1.6	23.61	6.35	60	



Solid Carbide Engraving Spiral Ball Nose - 2 Flute

Z700-8302

The tool can be used for carving and producing a smooth edge cut.

Usage : Plastic, Solid Surface, block & plate aluminum natural wood and wood composite.

Remark : Custom sizes available per your specifications.

unit:mm

R	CED	CEL	SD	OAL	USD/each
2R	4	10	4	50	
3R	6	20	6	60	
4R	8	25	8	75	
5R	10	25	10	75	
6R	12	30	12	75	

unit: inch

R	CED	CEL	SD	OAL	USD/each
1/16	1/8	1/2	1/8	2"	
1/8	1/4	7/8	1/4	2-1/2	
5/32	5/16	3/4	5/16	2"	
3/16	3/8	1-1/8	3/8	3"	
1/4	1/2	1-1/8	1/2	3"	



Solid Carbide Engraving "V" Spiral Tool - 2 Flute - 30°/ 60°/ 90°

Z700V-8302 / Z700V-8602 / Z700V-8902

The tool can be used for carving and on a smooth edge cut.

Usage : plastic, solid carbide, block & plate aluminum natural wood and wood composite.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	20	6	60	
8	30	8	75	
10	30	10	75	
12	30	12	75	

unit: inch

CED	CEL	SD	OAL	USD/each
1/8	1/2	1/8	2"	
1/4	7/8	1/4	2-1/2	
5/16	3/4	5/16	2"	
1/2	1-1/8	1/2	3"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide V Groove Cutters - 3 Flute - 30°/ 60°/ 90°

Z48V-1303 / Z48V-1603 / Z48V-1903

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

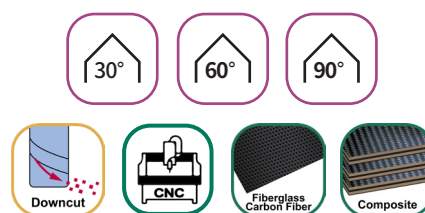
Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.



unit:mm				
A	CED	CEL	SD	USD/each
30°	15	22	6	
60°	15	22	6	
90°	15	22	6	

unit: inch				
A	CED	CEL	SD	USD/each
30°	9/16	7/8	1/4	
60°	9/16	7/8	1/4	
90°	9/16	7/8	1/4	



Solid Tipped V Groove - 2 Flute

Z49V-1302/ Z49V-1602/ Z49V-1902

These tools will produce a rippled edge cut and extremely quiet and smooth cutting.

Designed for use when faster rates cannot be achieved or on low horsepower machines.

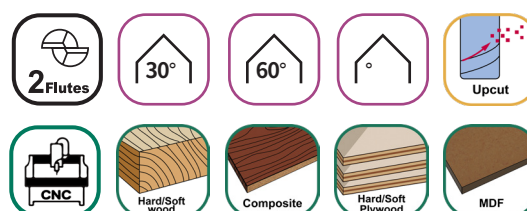
Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.



unit:mm				
A	CED	CEL	SD	USD/each
30°	30	55.98	12	
60°	30	25.98	12	
90°	30	15	12	

unit: mm				
A	CED	CEL	SD	USD/each
30°	30	55.98	1/2	
60°	30	25.98	1/2	
90°	30	15	1/2	



Solid Carbide Flush Trimming Bits - 1 Flute

Z41-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

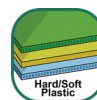
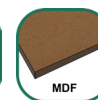
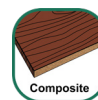
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	6	6	50	
6	10	6	50	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	1/4	1/4	1-1/2	
1/4	1/4	1/4	2"	
1/4	1/4	3/8	1-1/2	



Solid Carbide Flush Trimming Bits - 1 Flute

Z42-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	6	6	50	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	1/4	1/4	1-1/2	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Round Bottom Veining Bits - 1 Flute

Z43-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

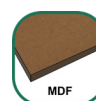
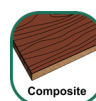


unit:mm

R	CED	CEL	SD	OAL	USD/each
1.5R	3	5	6	50	
2R	4	6	6	50	
3R	6	9	6	50	

unit: inch

R	CED	CEL	SD	OAL	USD/each
1/16	1/8	3/16	1/4	1-1/2	
3/32	3/16	1/4	1/4	1-1/2	
1/8	1/4	11/32	1/4	1-1/2	



Solid Carbide V - Groove and Scorer Bits - 1 Flute

Z43V-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

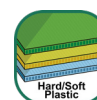
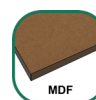
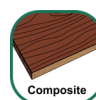


unit:mm

CED	CEL	B1	SD	OAL	USD/each
3	6	1.5	6	50	
6	10	3	6	50	

unit: inch

CED	CEL	B1	SD	OAL	USD/each
1/8	1/4	1/16	1/4	1-1/2	
1/4	3/8	1/8	1/4	1-1/2	



Solid Carbide Rip & Slotter Bits - 1 Flute

Z44-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

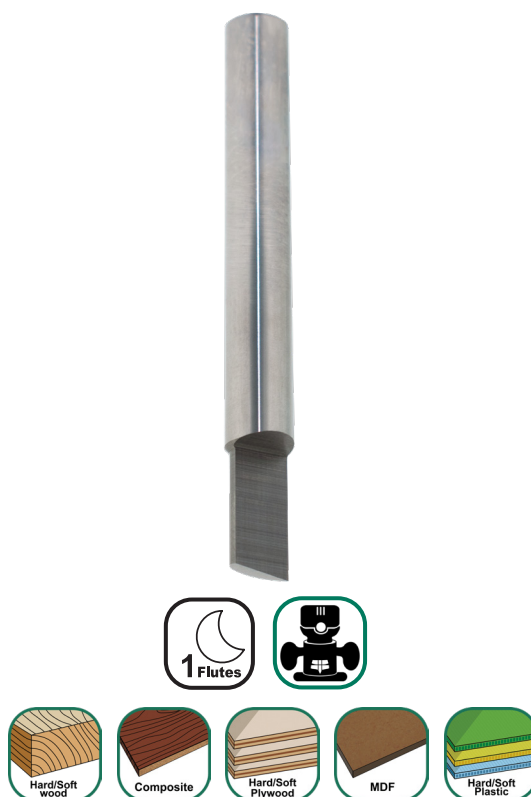
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	10	6	50	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	3/8	1/4	1-1/2	



Solid Carbide Flush Trimming Bits With Boring Point - 1 Flute

Z45-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	B1	SD	OAL	USD/each
6	6	4	6	50	
6	10	4	6	50	

unit: inch

CED	CEL	B1	SD	OAL	USD/each
1/4	1/4	3/16	1/4	1-1/2	
1/4	3/8	3/16	1/4	1-1/2	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Flute & Bevel Trimming Bits - 1 Flute

Z46-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	A	SD	OAL	USD/each
6	10	0°+7°	6	50	

unit: inch

R	CED	CEL	SD	OAL	USD/each
1/4	3/8	0°+7°	1/4	1-1/2	



Solid Carbide Bevel Trimming Bits - 1 Flute

Z47-1001

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	A	SD	OAL	USD/each
4	10	7°	6	50	
4	10	7°	6	60	

unit: inch

CED	CEL	B1	SD	OAL	USD/each
3/16	3/8	7°	1/4	1-1/2	
3/16	3/8	7°	1/4	2-1/2	



Solid Carbide Spiral Trimming Bits - 2 Flute - Down cut

Z48-1302

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	15	6	65	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	5/8	1/4	2-1/2	



Solid Carbide Compression Spiral Trimming Bits - 2 Flute

Z49-1302

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

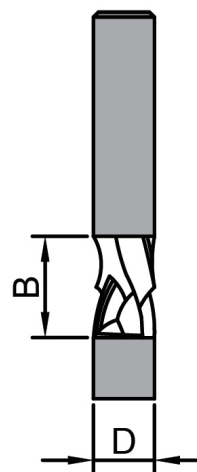
Remark : Custom sizes available per your specifications.

unit:mm

CED	CEL	SD	OAL	USD/each
6	15	6	65	

unit: inch

CED	CEL	SD	OAL	USD/each
1/4	5/8	1/4	2-1/2	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

Solid Carbide Burr Trimming Bits

Z50-1001-CR

Designed to trim counter tops. The pilot bears on the finished surface and acts as a guide to trim flush or with a bevel. Available with boring point if necessary to plunge and rout.

Tools with a pilot designed to give a satin smooth finish when trimming laminate counter tops.

Usage : Trimming laminate counter tops and trimming plastic parts.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
6	15	6	65	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/4	5/8	1/4	2-1/2	



ZDV100

Characteristic : The spiral design can help reduce the cutting force and increase the cutting speed and efficiency.

Usage : solid wood, plywood.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
13.5	15	10	60	
13.5	15	12	60	



Solid Carbide Dovetail Cutters - 2 Flute

ZDV200

Characteristic : The spiral design can help reduce the cutting force and increase the cutting speed and efficiency.

Usage : solid wood, plywood.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
13.5	15	10	60	
13.5	15	12	60	



Solid Carbide Dovetail Cutters With threads - 2 Flute

ZDV300

Characteristic : The spiral design can help reduce the cutting force and increase the cutting speed and efficiency.

Usage : solid wood, plywood.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
13.5	15	M9*1.25	49	
13.5	15	M9*1.25	49	





BURS

Engraving

**COMPOSITE
FIBERGLASS**

TCT

BEARING

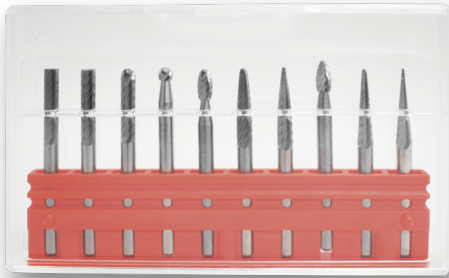
PLASTICS

PANELS

SOLID WOOD



BURS



10pcs Packing Case



50pcs Packing Case



24pcs & 93ps Packing Case



40pcs & 64ps
Packing Case



1,5,10,12,20 pcs Packing Case

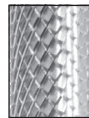
Shape and Codification

Type	A	B	O	C	D	E	F
Name	Cylinder	Cylinder +End Cut	Cylinder - Corner Radius	Ball Nosed Cylinder	Ball	Oval	Ball Nosed Tree
Product Picture							
Type	G	H	L	M	N	J	K
Name	Tree	Flame	Ball Nosed Cone	Cone	Inverted Cone	Countersink 60°	Countersink 90°
Product Picture							

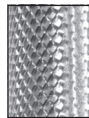
Shape and Type of Tooth



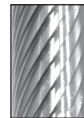
CR



CM



CF



SR



SM



SF

Series Number

A-211338-CRT

↓ ↓ ↓ ↓

Type Size Design Coating

Coating



TiAlN-NANO

Color

CR SR	B
CM SM	R
CF SF	Y



TN Coating (TiAlN)

The Major usage: Nano structure strengthens adhesion, hardness and reduces internal stress of tools. It is used for high hardness mold steel with high speed or the tools with heat resistance and corrosion resistance.

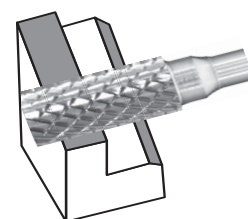
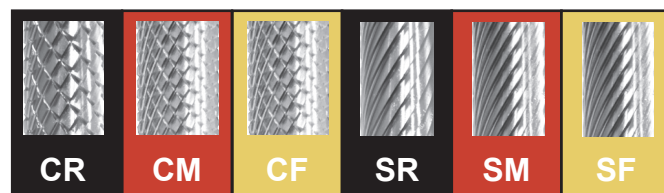
Type A - Cylinder

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



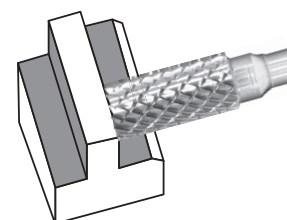
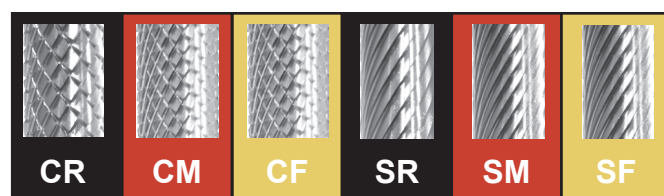
Type B - Cylinder + End Cut

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

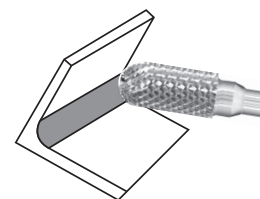
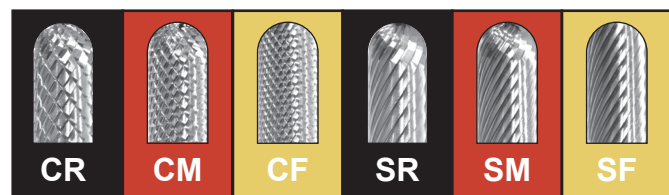
Type C - Ball Nosed Cylinder

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



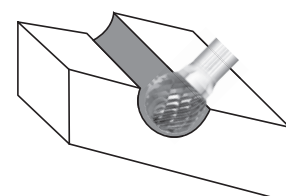
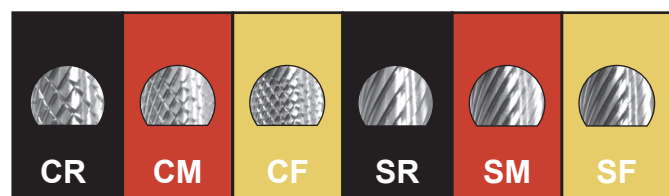
Type D - Ball

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	2.5	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	3/32	1/8	1-1/2	
1/4	3/16	1/4	2"	



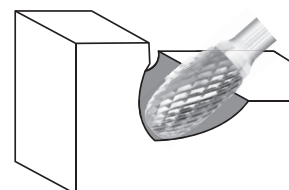
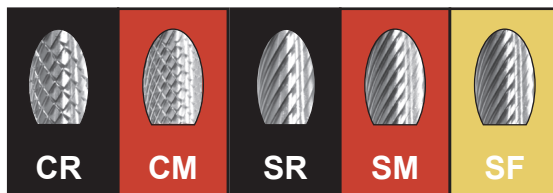
Type E - Oval

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	6	3	38	
6	10	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	1/4	1/8	1-1/2	
1/4	3/8	1/4	2"	



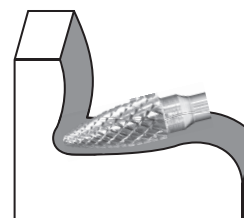
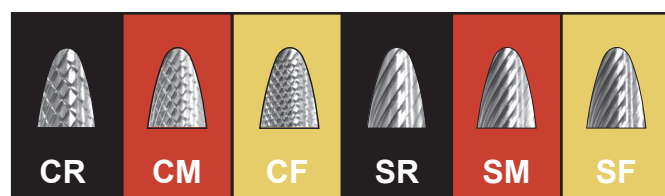
Type F - Ball Nosed Tree

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

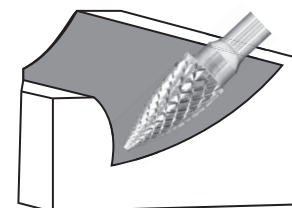
Type G - Tree

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



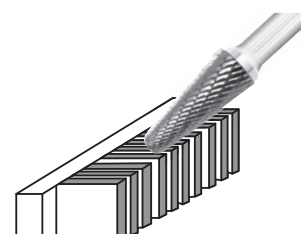
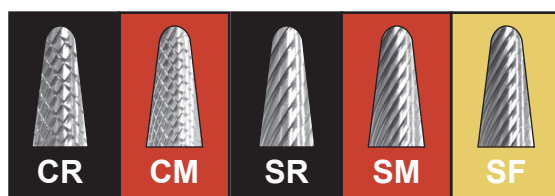
Type L - Ball Nosed Cone

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



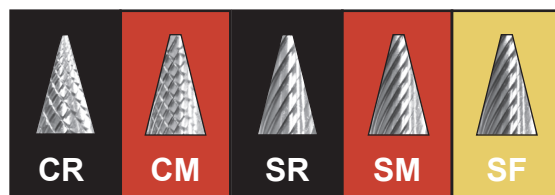
Type M - Cone

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	15	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



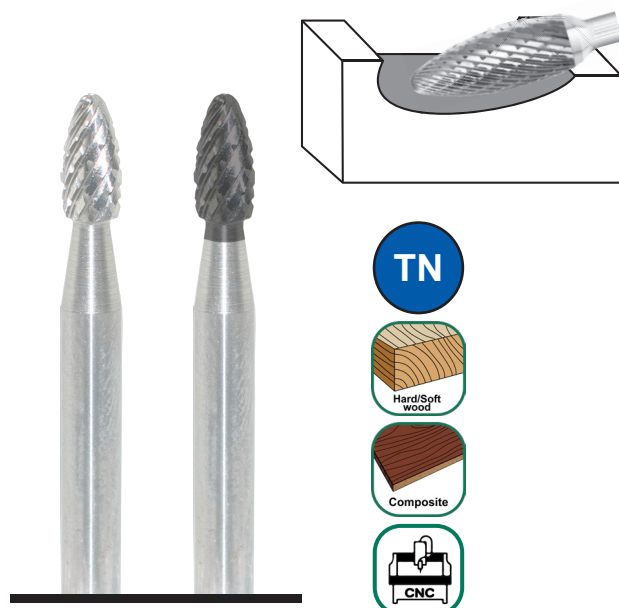
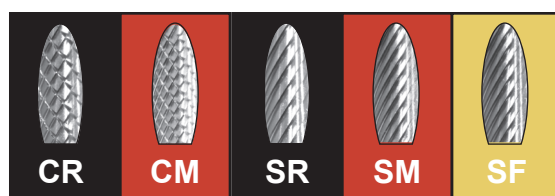
Type H - Flame

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	6	3	38	
6	14	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	1/4	1/8	1-1/2	
1/4	5/8	1/4	2"	





SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

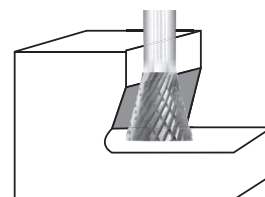
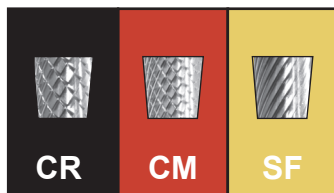
Type N - Inverted Cone

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	5	3	38	
6	8	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	3/16	1/8	1-1/2	
1/4	5/16	1/4	2"	



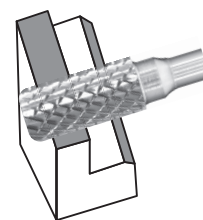
Type O - Cylinder - Corner Radius

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	14	3	38	
6	18	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	5/8	1/8	1-1/2	
1/4	3/4	1/4	2"	



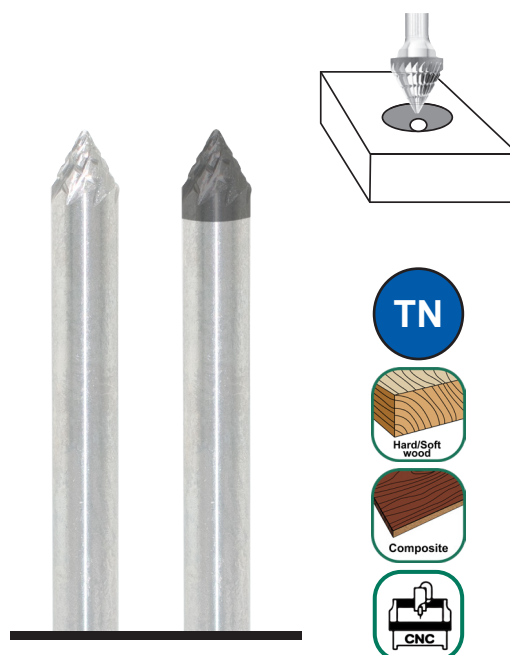
Type J - Countersink 60°

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	3	3	38	
6	6	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	1/8	1/8	1-1/2	
1/4	1/4	1/4	2"	



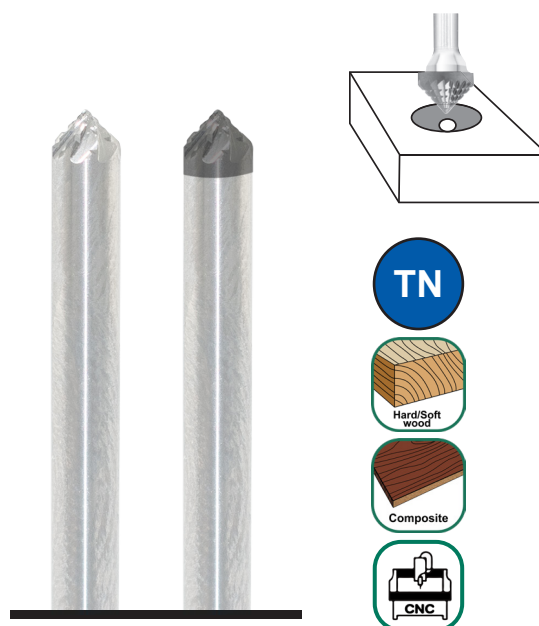
Type K - Countersink 90°

Usage : Natural wood and wood composites.

Remark : Custom sizes available per your specifications.

unit:mm				
CED	CEL	SD	OAL	USD/each
3	1.5	3	38	
6	3	6	50	

unit: inch				
CED	CEL	SD	OAL	USD/each
1/8	1/16	1/8	1-1/2	
1/4	1/8	1/4	2"	





BURS

Engraving

**COMPOSITE
FIBERGLASS**

TCT

BEARING

PLASTICS

PANELS

SOLID WOOD

Tooling System

ER Balanced Tool Holder



Model No.	Clamping Ranger(d)	D	L	Collet Type	Wrench	Weight (kg)
ISO20 ER16M-030	1~10	22	30	ER16	WM16	0.20
ISO25 ER20M-030	1~13	28	30	ER20	WM20	0.20
ISO25 DER20M-030	1~13	28	30	ER20	WM20	0.20
ISO30 ER16-055	1~10	28	55	ER16	WM16	0.60
ISO30 ER20-060	1~13	34	60	ER20	WM20	0.60
ISO30 ER25-060	2~16	42	60	ER25	WM25	0.70
ISO30 ER32-060	2~20	50	60	ER32	WM32	0.70

ASK Balanced Tool Holder



Model No.	Clamping Ranger(d)	D	L	Collet Type	Wrench	Weight (kg)
ISO20 ASK10-040	2~10	27	40	ASK10	WSK10	0.30
ISO25 ASK10-040	2~10	27	40	ASK10	WSK10	0.30
ISO25 DER20M-030	2~10	27	30	ASK10	WSK10	0.30
ISO30 ER16-055	3~13	33	55	ASK13	WSK13	0.50
ISO30 ER20-060	3~13	33	60	ASK13	WSK13	0.50
ISO30 ER25-060	2~10	27	60	ASK10	WSK10	0.70
ISO30 ER32-060	3~16	40	60	ASK16	WSK16	0.80



SOLID WOOD

PANELS

PLASTICS

BEARING

TCT

COMPOSITE
FIBERGLASS

Engraving

BURS

ADS Balanced Tool Holder



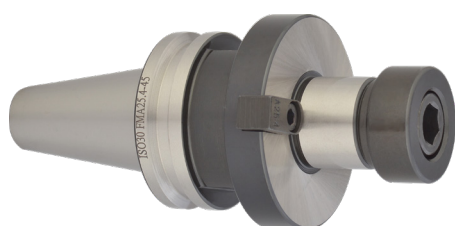
Model No.	FIG	Clamping Ranger(d)	D	D1	L1	L	Weight (kg)
ISO30 ADS08-080	1	3~8	16	22	45	80	0.60
ISO30 ADS12-080	2	3~12	23	32	55	80	0.70

OZ Balanced Tool Holder



Model No.	d	D	L	Collet Type	Wrench	Weight (kg)
ISO30 OZ25-065	3~25	60	65	OZ25	WOZ25	1.00

FMA Balanced Tool Holder



Model No.	D	D1	L	G	Weight (kg)
ISO30 FMA25.4-050	25.4	60	50	M12	1.00

Technical Data

COLLETING COLLET LIFE SPAN

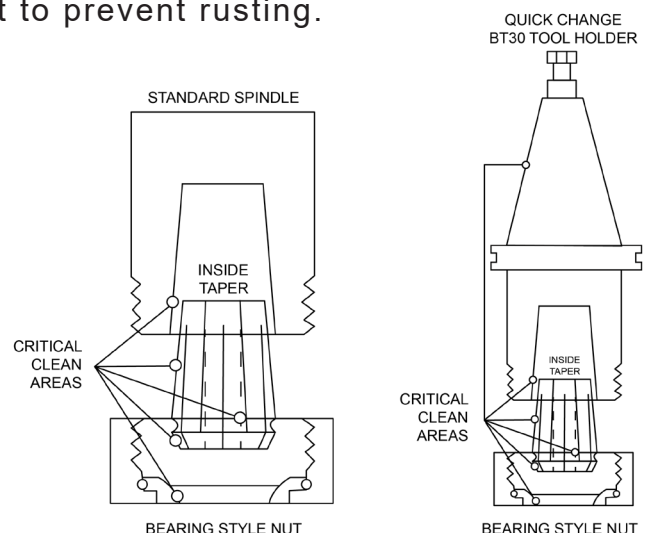
Collets have a life span of 3 months if used 8 hours a day. Replacing the collets will ensure your operation runs consistently and prevents tool Breakage. When inserting a tool into the collet make sure, the flute fadeout does not enter the collet. This will cause run out and potentially lead to tool breakage. To ensure proper clamping, the tool shank should fill, at the minimum, 80% of the depth of the collet. If this cannot be achieved, use a collet life plug to ensure a proper clamping effect.

COLLET MAINTENANCE

Cleaning is an essential part of collet maintenance. As material is cut, it causes the collet, tool holder, collet nut and spindle to become dirty. This causes your tool to cut in an elliptical fashion, which will decrease tool life and cause inconsistency in your operation. Collets, tool holder, and Collet nut should be cleaned daily using the Rust Free solvent and a brass brush. Refer to the critical areas diagram to see which surfaces must be clean.

CLEANING INSTRUCTIONS

- 1.Spray the cleaner on the surface and allow it to soak for a minute.
- 2.Use a brass brush to clean the surface thoroughly.
- 3.Rinse off using distilled alcohol. Feel the surface using your fingers to make sure the surface is clean.
- 4.Apply a small amount of Lubricant to prevent rusting.





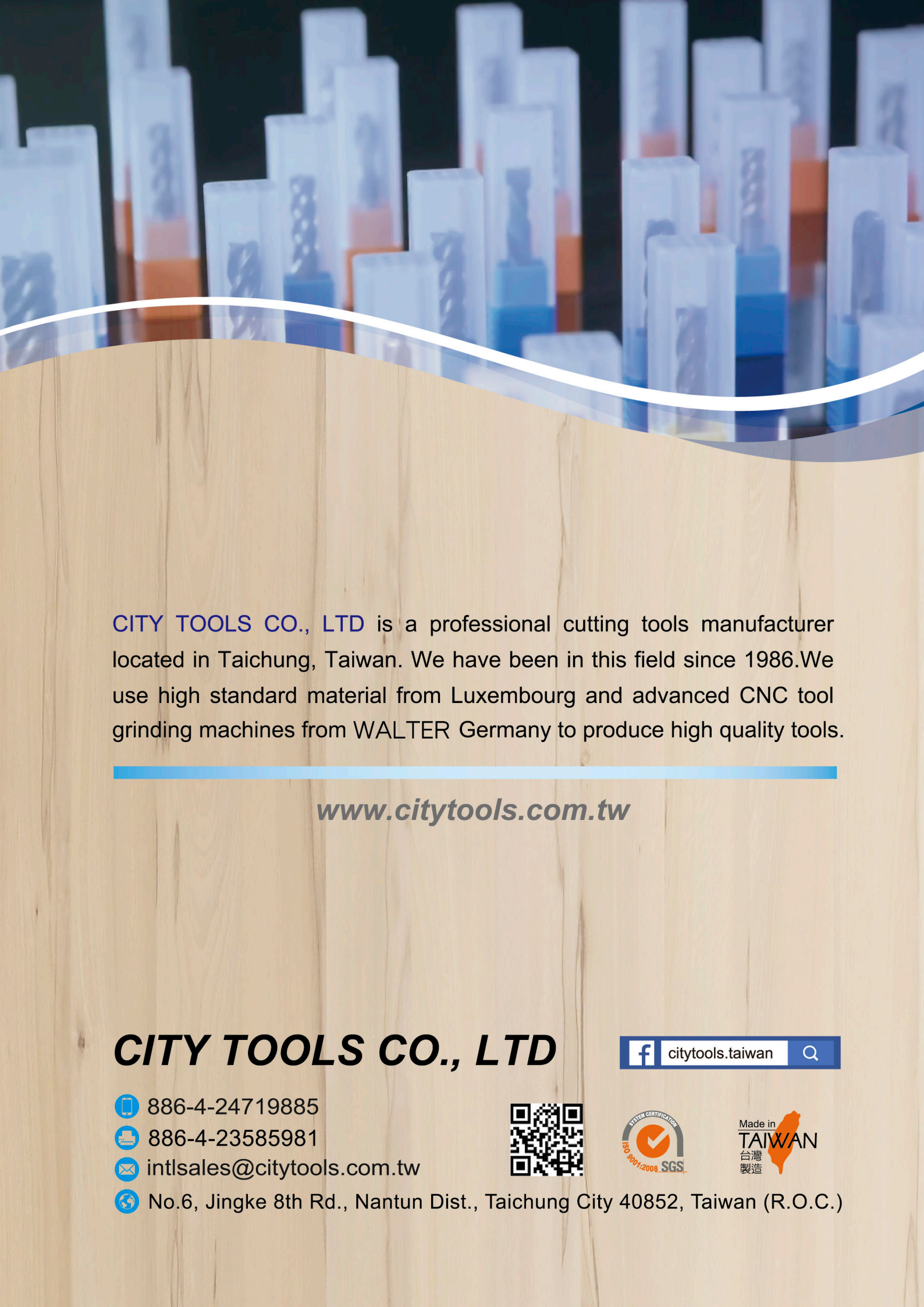
TOOL BREAKAGE

If a condition arises where multiple tools should break, follow these steps to solve your problem:

1. Are you using the proper tool for the job?
2. Make sure your collets and tool holders are clean and the tool is colleted properly.
3. Check your speed and feed (is your tool hot?)
4. Is your depth of cut too excessive for the material you are cutting?
5. Do you have any part movement?
6. Do you have ample part hold down?
7. Stop running parts and check with STAY SHARP AUSTRALIA PTY. LTD. Technical Support.

If you have to contact STAY SHARP AUSTRALIA PTY. LTD. or Technical Support, have the following information:

1. Machine being used.
2. Material being cut.
3. Part number of tool along with the batch number which is below the part number etched on shank of tool.
4. Speed / Feed / Depth of cut.
5. Where did the tool break (flute, shank, or in the collet)?
6. How long did the tool work before it broke?
7. Have you done this operation in the past using this tool?



CITY TOOLS CO., LTD is a professional cutting tools manufacturer located in Taichung, Taiwan. We have been in this field since 1986. We use high standard material from Luxembourg and advanced CNC tool grinding machines from WALTER Germany to produce high quality tools.

www.citytools.com.tw

CITY TOOLS CO., LTD

☎ 886-4-24719885
☎ 886-4-23585981
✉ intlsales@citytools.com.tw

🌐 No.6, Jingke 8th Rd., Nantun Dist., Taichung City 40852, Taiwan (R.O.C.)

