

CNC Bits Buying Guide

If you have any suggestions or need any assistance, please contact us via support@sainsmart.com.





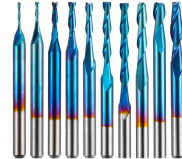


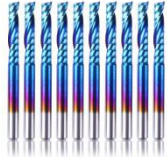
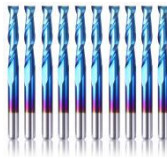
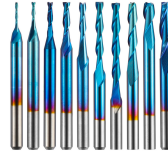
Picture						
Model		C08	C15	SS17	SF17	FN10A
Type		Spiral Bits				
		Fishtail End Mill/Corn-shaped End Mill		Square Nose End Mill		
		Flat Nose				
Specification	Shank	1/8" (3.175mm)				
	Flute	/		1 (Single Flute)	2	
	Degree	/				
	Material	Tungsten Carbide Steel Alloy				
	Coating	Nano Blue Coating				
	Cutting Diameter	0.8-3.0mm	1.5-3.175mm	3.175mm		0.8-3.175mm
	Cutting Length	12mm	12mm	17mm		6-22mm
	Overall Length	38mm				

Chart 1-1

Picture						
Model		C08	C15	SS17	SF17	FN10A
Application Materials	Wood (MDF,Hardwood, Plywood...)	★	★	★	★	★
	Plastic (ABS, Acrylic, PVC...)	★	★	★	★	★
	Soft Metal (Al,Fe,Cu,Steel...)	✓	✓	✓	✓	✓
	Circuit Board (PCB)	★	★	×	×	✓
	Others (Ceramic, Granite, Glass...)	×	×	×	×	×
Ideal for	Slot Milling	✓	✓	✓	✓	✓
	Side Milling	✓	✓	✓	✓	✓
	Face Milling	✓	✓	✓	✓	✓
	3D Milling	×	×	×	×	×
	Drilling	✓	✓	×	×	✓
	Engraving(Lettering...)	✓	✓	✓	✓	✓
	Polishing	×	×	×	×	×
	Grinding	×	×	×	×	×
	Deburring	×	×	×	×	×

Note ★: Recommended, ✓: Applicable, ×: Not Applicable

Chart 1-2

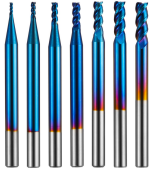
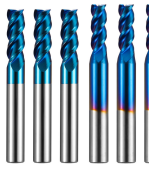
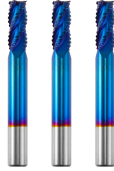

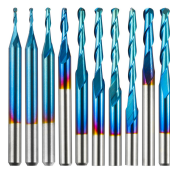

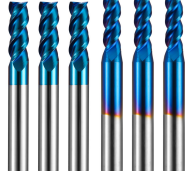

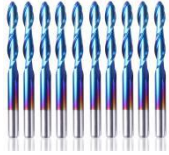
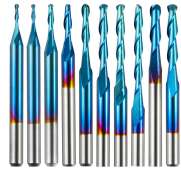
Picture							
Model		SN07A	SN06A	CT03A	SB17	BN10A	
Type		Spiral Bits					
		Square Nose End Mill			Ball Nose End Mill		
		Flat Nose		Coarse Tooth	Ball Nose		
Specification	Shank	4mm	1/4"(6.35mm)		1/8" (3.175mm)		
	Flute	3		4	2		
	Degree	/					
	Material	Tungsten Carbide Steel Alloy					
	Coating	Nano Blue Coating					
	Cutting Diameter	1, 1.5, 2, 2.5 3, 3.5, 4mm	5, 6mm	6mm	3.175mm	0.8-2.5mm	
	Cutting Length	3, 5, 7, 8, 11, 12, 13mm	15, 20mm	15mm	17mm	6-22mm	
	Overall Length	50mm	50, 55mm	50mm	38mm	38mm	

Chart 2-1

Picture						
Model		SN07A	SN06A	CT03A	SB17	BN10A
Application Materials	Wood (MDF,Hardwood, Plywood...)	☆	☆	☆	☆	☆
	Plastic (ABS, Acrylic, PVC...)	☆	☆	☆	☆	☆
	Soft Metal (Al,Fe,Cu,Steel...)	☆	☆	☆	✓	✓
	Circuit Board (PCB)	×	×	×	×	✓
	Others (Ceramic, Granite, Glass...)	✓	✓	✓	×	×
Ideal for	Slot Milling	☆	☆	☆	✓	✓
	Side Milling	☆	☆	☆	✓	✓
	Face Milling	✓	✓	✓	×	×
	3D Milling	×	×	×	✓	✓
	Drilling	×	×	×	×	✓
	Engraving(Lettering...)	×	×	×	✓	✓
	Polishing	×	×	×	×	×
	Grinding	×	×	×	×	×
Deburring	×	×	×	×	×	

Note ☆: Recommended, ✓: Applicable, ×: Not Applicable

Chart 2-2



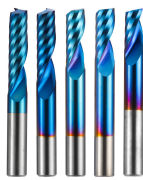



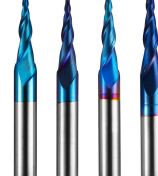
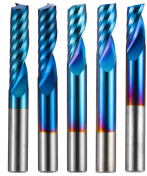
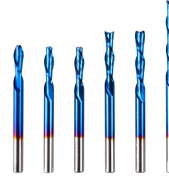

Picture						
Model		TB04A	TB04B	SU05A	SD06A	SD03A
Type		Spiral Bits				
		Ball Nose End Mill		Upcut Cutter	Downcut Cutter	
		Tapered Ball Nose				
Specification	Shank	1/8" (3.175mm)	1/4"(6.35mm)	1/4" (6.35mm)	1/8" (3.175mm)	1/4" (6.35mm)
	Flute	2	2	1 (Single Flute)	2	1 (Single Flute)
	Degree	/				
	Material	Tungsten Carbide Steel Alloy				
	Coating	Nano Blue Coating				
	Cutting Diameter	R0.25, 0.5,0.75 ,1.0	R0.25, 0.5, 0.75, 1.0	1/4" (6.35mm)	3.175mm	1/4" (6.35mm)
	Cutting Length	15mm	20mm	12, 15, 17, 22, 25mm	8, 10, 12, 15, 17, 22mm	12, 17, 22mm
	Overall Length	38mm	50mm	50mm	40, 40, 40, 45, 45, 55mm	50, 55mm

Chart 3-1

Picture						
Model		TB04A	TB04B	SU05A	SD06A	SD03A
Application Materials	Wood (MDF,Hardwood, Plywood...)	★	★	★	★	★
	Plastic (ABS, Acrylic, PVC...)	★	★	★	★	★
	Soft Metal (Al,Fe,Cu,Steel...)	✓	✓	✓	★	★
	Circuit Board (PCB)	×	×	×	✓	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×	×
Ideal for	Slot Milling	✓	✓	✓	✓	✓
	Side Milling	✓	✓	✓	✓	✓
	Face Milling	×	×	✓	✓	✓
	3D Milling	✓	✓	×	×	×
	Drilling	×	×	×	✓	×
	Engraving(Lettering...)	✓	✓	×	✓	×
	Polishing	×	×	×	×	×
	Grinding	×	×	×	×	×
	Deburring	×	×	×	×	×

Note ★: Recommended, ✓: Applicable, ×: Not Applicable

Chart 3-2









Picture					
Model		SC05A	PD30A	V15	V20
Type		Spiral Bits		Conical V-Bit	
		Compression Cutter (Up&Down)	PCB Drill Bit	V-shape Engraving Bit	
Specification	Shank	1/8" (3.175mm)			
	Flute	2	/		
	Degree	/		15°	20°
	Material	Tungsten Carbide Steel Alloy			
	Coating	Nano Blue Coating	/	Nano Blue Coating	
	Cutting Diameter	3.175mm	0.1-1.0mm 1.1-2.0mm 2.1-3.0mm	0.1mm	
	Cutting Length	12, 15, 25, 28, 32mm	/	/	
	Overall Length	40, 40, 55, 60, 65mm	38mm	30mm	

Chart 4-1

Picture					
Model		<u>SC05A</u>	<u>PD30A</u>	<u>V15</u>	<u>V20</u>
Application Materials	Wood (MDF,Hardwood, Plywood...)	☆	√	√	√
	Plastic (ABS, Acrylic, PVC...)	☆	√	☆	☆
	Soft Metal (Al,Fe,Cu,Steel...)	√	×	√	√
	Circuit Board (PCB)	√	☆	×	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×
Ideal for	Slot Milling	√	×	×	×
	Side Milling	√	×	×	×
	Face Milling	√	×	×	×
	3D Milling	×	×	×	×
	Drilling	√	☆	×	×
	Engraving(Lettering...)	√	☆	☆	☆
	Polishing	×	×	×	×
	Grinding	×	×	×	×
Deburring	×	×	×	×	

Note ☆: Recommended, √: Applicable, ×: Not Applicable

Chart 4-2



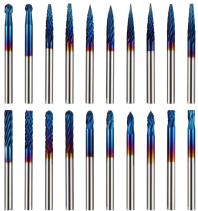




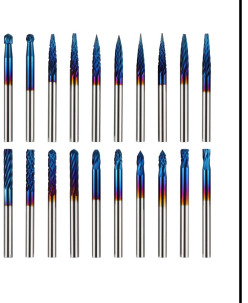


Picture						
Model		V30	VG05A	RR20A	RR10B	RR10A
Type		Conical V-Bit		Rotary Burrs		
		V-shape Engraving Bit	V-groove Bit	Rotary Boring: Single Groove Rotary Boring: Double Groove Grinding Head	Grinding Head: Double Groove 10 Shapes	Grinding Head: Single Groove 10 Shapes
Specification	Shank	1/8" (3.175mm)	6mm	3.0mm	3.0mm	1/8" (3.175mm)
	Flute	/	/	/	/	/
	Degree	30°	60° , 90° , 120° , 150°	/	/	/
	Material	Tungsten Carbide Steel Alloy				HSS
	Coating	Nano Blue Coating	/	Nano Blue Coating		Titanium Coating
	Cutting Diameter	0.1mm	16,22,22,32,32mm	3.0mm	6.0mm	2-8mm
	Cutting Length	/	11,11,15,17,31.5mm	17mm	6-13mm	3-10mm
	Overall Length	30mm	40,42,46,49,63mm	38mm	43-50mm	40mm

Chart 5-1

Picture						
Model		V30	VG05A	RR20A	RR10B	RR10A
Application Materials	Wood (MDF,Hardwood, Plywood...)	✓	★	★	★	✓
	Plastic (ABS, Acrylic, PVC...)	★	×	★	★	✓
	Soft Metal (Al,Fe,Cu,Steel...)	✓	×	★	★	✓
	Circuit Board (PCB)	×	×	×	×	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×	×
Ideal for	Slot Milling	×	★	×	×	×
	Side Milling	×	✓	×	×	×
	Face Milling	×	×	✓	✓	✓
	3D Milling	×	×	✓	✓	✓
	Drilling	×	×	✓	✓	✓
	Engraving(Lettering...)	★	×	★	★	★
	Polishing	×	×	★	★	★
	Grinding	×	×	★	★	★
Deburring	×	×	★	★	★	

Note ★: Recommended, ✓: Applicable, ×: Not Applicable



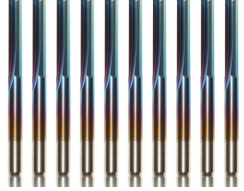
Chart 5-2

Picture					
Model		RB10A	RB03A	SR05A	SR10A
Type		Router Bit			
		Straight, Core Box, V-Groove, Round Over, Keyhole, Rabbet, Corner Rounding, Piloted Beading	T-Shape Spoilboard Surfacing	Straight Router Bit	
Specification	Shank	1/8" (3.175mm)	1/4" (6.35mm)	1/4" (6.35mm)	1/8" (3.175mm)
	Flute	/	3	2	2
	Degree	/	/	/	/
	Material	HSS	Tungsten Carbide Steel Alloy	Tungsten Carbide Steel Alloy	Tungsten Carbide Steel Alloy
	Coating	Titanium Coating	/	Nano Blue Coating	Nano Blue Coating

Chart 6-1

Picture					
Model		RB10A	RB03A	SR05A	SR10A
Specification	Cutting Diameter	Corner Rounding Bit (CD: 9.5mm, CL: 12mm) Core Box Bit (CD: 6.5mm, CL: 11mm) Piloted Beading Bit (CD: 9.5mm, CL: 13mm)	24mm	1/4" (6.35mm)	3.175mm
	Cutting Length	Keyhole Bit (CD: 8mm, CL: 9.5mm) Rabbet Bit (CD: 9.5mm, CL: 12mm) V-Groove Bit (CD: 6.5mm, CL: 11mm) Round Over Bit (CD: 6.5mm, CL: 11mm) Straight Bit (CD: 6.5mm, CL: 11mm) Straight Bit (CD 3mm, CL: 13mm) Straight Bit (CD: 5mm, CL: 11mm)	7mm	25mm	17mm
	Overall Length	40mm	40mm	55mm	38mm

Chart 6-2

Picture					
Model		RB10A	RB03A	SR05A	SR10A
Application Materials	Wood (MDF,Hardwood, Plywood...)	★	★	★	★
	Plastic (ABS, Acrylic, PVC...)	×	×	★	★
	Soft Metal (Al,Fe,Cu,Steel...)	×	×	×	×
	Circuit Board (PCB)	×	×	×	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×
Ideal for	Slot Milling	★	★	★	★
	Side Milling	√	★	★	★
	Face Milling	×	√	√	√
	3D Milling	√	×	×	×
	Drilling	×	×	√	√
	Engraving(Lettering...)	×	×	×	×
	Polishing	×	×	×	×
	Grinding	×	×	×	×
	Deburring	×	×	×	×

Note ★: Recommended, √: Applicable, ×: Not Applicable

Chart 6-3









Picture					
Model		VE10A	VE10B	VE10C	VR06A
Type		Router Bit			
		V-Groove Engraving Bit			V-Groove & Round Nose Router Bit
Specification	Shank	1/8" (3.175mm)			1/4" (6.35mm)
	Flute	/			
	Degree	30°	60°	90°	90°
	Material	Tungsten Carbide Steel Alloy			
	Coating	/			Yellow
	Cutting Diameter	0.1mm			1/4", 3/8", 1/2"
	Cutting Length	/			V-Groove: 1/4", 3/8", 1/2" Round Nose: 1/2", 25/32", 25/32"
	Overall Length	38mm			V-Groove: 44mm, 42mm, 44mm Round Nose: 50mm, 52mm, 52mm

Chart 7-1

Picture					
Model		VE10A	VE10B	VE10C	VR06A
Application Materials	Wood (MDF,Hardwood, Plywood...)	★	★	★	★
	Plastic (ABS, Acrylic, PVC...)	★	★	★	×
	Soft Metal (Al,Fe,Cu,Steel...)	✓	✓	✓	×
	Circuit Board (PCB)	✓	✓	✓	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×
Ideal for	Slot Milling	×	×	×	★
	Side Milling	×	×	×	✓
	Face Milling	×	×	×	×
	3D Milling	×	×	×	×
	Drilling	×	×	×	×
	Engraving(Lettering...)	★	★	★	×
	Polishing	×	×	×	×
	Grinding	×	×	×	×
Deburring	×	×	×	×	

Note ★: Recommended, ✓: Applicable, ×: Not Applicable

Chart 7-2



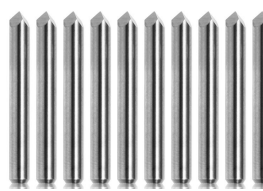




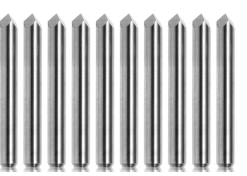
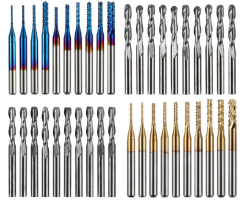



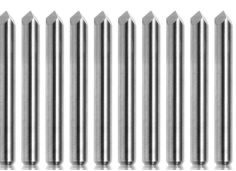


Picture						
Model		TR10A	TR10B	TR10C	MC40A	EM10A
Type		Router Bit			2-Flute Spiral Flat Nose 2-Flute Spiral Ball Nose Fishtail End Mill (Nano Blue Coating) Fishtail End Mill (Titanium Coating)	V-shape Engraving Bit Single Flute Flat Nose 2-Flute Tapered Ball Nose
		Triangular Router Bit				
Specification	Shank	1/8" (3.175mm)			1/8" (3.175mm)	1/8" (3.175mm)
	Flute	/			2	1, 2
	Degree	30°	60°	90°	/	30°
	Material	Tungsten Carbide Steel Alloy				
	Coating	/			Nano Blue Coating Titanium Coating	Nano Blue Coating

Chart 8-1

Picture						
Model		TR10A	TR10B	TR10C	MC40A	EM10A
Specification	Cutting Diameter	0.1mm			3.175 mm	0.1mm,0.2mm
	Cutting Length	/			3.175 mm 0.8-3.0 mm 0.8-3.0 mm	2, 2, 3.175, 3.175mm R0.25, 0.5, 0.75, 1.0
	Overall Length	38mm			17mm	/ 8, 8, 12, 22mm 15mm
	Wood(MDF,Hardwood, Plywood...)	★	★	★	★	★
	Plastic (ABS, Acrylic, PVC...)	★	★	★	★	★
	Soft Metal (Al,Fe,Cu,Steel...)	✓	✓	✓	✓	✓
	Circuit Board (PCB)	✓	✓	✓	✓	×
	Others (Ceramic, Granite, Glass...)	×	×	×	×	×

Note ★: Recommended, ✓: Applicable, ×: Not Applicable

Chart 8-2

Picture						
Model		TR10A	TR10B	TR10C	MC40A	EM10A
Ideal for	Slot Milling	×	×	×	✓	✓
	Side Milling	×	×	×	✓	✓
	Face Milling	×	×	×	✓	✓
	3D Milling	✓	✓	✓	✓	✓
	Drilling	×	×	×	✓	×
	Engraving(Lettering...)	☆	☆	☆	✓	✓
	Polishing	×	×	×	×	×
	Grinding	×	×	×	×	×
	Deburring	×	×	×	×	×

Note ☆: Recommended, ✓: Applicable, ×: Not Applicable

Chart 8-3