

## ROUTER SELECTION GUIDE

This selection guide on pages 65-66 is a place to start making a bit selection or a place to check your current bit selection. You should try several tools and more than one tool geometry before you settle on the best tool for you specific router, set-up, fixturing and other environmental conditions.

**How To Order** – Onsrud Cutter products are sold solely through industrial distribution. You may place an order through the authorized distributor in you market area. Should you wish the name of that distributor, please call Onsrud Cutter.

**Guarantee** – Onsrud Cutter products are guaranteed against defects in material and quality of manufacture when used in the proper manner. Onsrud Cutter will repair or replace tools, which have been authorized for return, if upon inspection such tools are found to be defective due to material or manufacture.

**Router Laboratory** – Customers, as a routine, send us panels (2' x 4') with router and feed specifications several weeks prior to the start of a new run. (We are able to duplicate most production environments in the Router Laboratory.) Armed with material, router type, spindle speed, feed rate, set up and type of cut to be made, Onsrud Cutter can make a specific tool recommendation for test and evaluation in your operational environment. Should you have difficult-to-cut material or should you wish to verify your current tool selection, call the Onsrud Cutter Engineering Department and arrange for a Router Laboratory test.

### GENERAL GUIDELINES FOR TOOL MATERIAL AND GEOMETRY

#### TOOL MATERIALS

- Solid Carbide** Use for fibrous or abrasive plastics.
- Carbide Tipped** Use for general plastic cutting applications.
- High Speed Steel** Use for optimum surface finish.

#### TOOL GEOMETRY

- Straight Flute** Use for plastic hand feed applications.
- Spiral Flute** Use for plastic automatic feed applications.

#### FLUTE GEOMETRY

- Single Flute** Use for faster feed rates in softer materials.
- Double Flute** Use for better finish in harder materials.
- Upcut Spiral** Use for grooving or slotting, for upward chip evacuation and best finish on bottom side of piece part.
- Downcut Spiral** Use for downward chip flow, better hold down in fixture and best finish on top side of piece part.
- Up/Down Spiral** Use for double laminated material and best finish on top and bottom side of piece part.



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Tool Material	SOLID CARBIDE											
	Straight		Straight		Spiral		Spiral		Spiral/Straight		Shape, edge, bottom finish	
Tool Geometry	Single Edge		Double Edge		Single Edge		Double Edge		Multi Edge			
Flute Geometry	Single Edge		Double Edge		Single Edge		Double Edge		Multi Edge			
Material/Process												
<b>SW</b> <b>SOFTWOOD</b> <i>Cedar, Cottonwood, Pine, Redwood</i>	61-000	61-200	56-200		62-200	63-200	52-200	52-400	60-000	60-500	16-50	37-50
							52-900	57-200	60-500M	60-600	38-50	90-00
							57-400	57-900	60-700	60-900	52-200B	52-200BL
<b>HW</b> <b>HARDWOOD</b> <i>Ash, Beech, Birch, Cherry, Mahogany, Maple, Oak, Poplar, Teak, Walnut</i>	61-200		56-200		62-200	63-200	52-200	52-400	60-000	60-200	16-50	37-50
					60-100M		52-900	57-200	60-350	60-430	38-50	90-00
					60-100SE		57-400	57-900	60-450	60-470	52-200B	52-200BL
							60-300	60-400	60-500	60-600		
							60-100C	60-950	60-700	60-900		
							60-100DE		60-100TE	60-500M		
<b>CW</b> <b>COMPOSITE WOOD</b> <i>MDF, Particle Board, Plywood</i>	61-200		56-200		62-200	63-200	52-200	52-400	60-000	60-350	16-50	37-50
					60-100M		52-900	57-200	60-430	60-450	38-50	90-00
					60-100SE		57-400	57-900	60-470	60-500	52-200B	52-200BL
							60-100C	60-950	60-600	60-900		
							60-100DE		60-500M	60-700		
							60-300	60-400	60-100TE			
<b>SP</b> <b>SOFT PLASTIC</b> <i>ABS, Polycarbonate, Polyethylene, PVC, Polypropylene, HDPE, Polystyrene, UHMW, Extruded Acrylic</i>	61-000P	61-400	56-430	56-600	62-750	62-850	28-20	52-200S	28-20		16-50	37-50
					63-750	63-850	52-400	52-600			38-50	52-200B
							57-600				52-200BL	
											66-000	66-200
											66-250	66-300
											66-350	70-200
<b>HP</b> <b>HARD PLASTIC</b> <i>Cast Acrylic, Melamine, Nylon, PVC, Vinyl</i>	61-000P	61-400	56-000P	56-430	62-700	62-750	28-20	52-600	60-200	60-470	16-50	37-50
			56-450	56-600	62-800	62-850	57-600				38-50	52-200B
					63-700	63-750					52-200BL	
					63-800	63-850					66-000	66-200
											66-250	66-300
											66-350	70-200
<b>CP</b> <b>COMPOSITE PLASTIC</b> <i>Fiberglass, Phenolic, Reinforced Acetal</i>			56-000	56-400	62-000	63-000	52-000	57-000	53-000	54-000		
			56-000P		62-400	63-400			54-300	55-000		
			56-450						55-300	58-000		
									59-000	60-200		
									60-470	67-000		
									67-200			
<b>A</b> <b>ALUMINUM</b>					62-000	62-400	52-000	57-000			52-200B	
					62-600	62-900					52-200BL	
					63-000	63-400					66-300	66-350
					63-600	63-900						
<b>EM/DW</b> <b>CONSTRUCTION MATERIAL</b> <i>Drywall, RV/Mobile and Modular Housing</i>												
<b>D</b> <b>METAL DOORS</b>												
<b>SSP</b> <b>SOLID SURFACE</b>			56-000P	56-450	62-700	62-750	52-000	52-200	60-200	60-470	37-50	38-50
					62-800	62-850	52-400	52-600			52-200B	
					63-700	63-750	57-200	57-400			52-200BL	
					63-800	63-850	57-600				66-000	
<b>MT/DT</b> <b>MORTISING &amp; DOVETAILING</b>			60-100M		60-100M		60-100M		60-090			
									60-500M			
<b>FP</b> <b>FOAM</b>			56-000P		56-450							
<b>LW</b> <b>LAMINATED AND VENEERED</b>					60-100M		60-100C	60-100M	60-100M	60-500M	27-00	27-50
					60-100SE		60-100DE		60-100MW	60-500	37-50	38-50
							60-100MW		60-100TE	60-600		



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Tool Material	CARBIDE TIPPED						HIGH SPEED STEEL				
	Straight	Straight	Shape, Edge				Straight	Straight	Spiral	Spiral	Spiral/Straight
Tool Geometry											
Flute Geometry	Single Edge	Double Edge	Bottom Finish and Saw				Single Edge	Double Edge	Single Edge	Double Edge	Multi Edge, Shape & Drill
<b>Material/Process</b>											
<b>SW</b> <b>SOFTWOOD</b> <i>Cedar, Cottonwood, Pine, Redwood</i>	48-000	48-000	28-50 30-00 39-00 42-00 43-50 45-75	28-60 31-00 40-50 42-50 43-60 46-60	29-00 37-60 41-00 42-75 43-75 90-00	29-50 38-60 41-50 43-00 44-00	10-00		14-00 15-00 40-000	41-00 43-00	38-00 90-00
<b>HW</b> <b>HARDWOOD</b> <i>Ash, Beech, Birch, Cherry, Mahogany, Maple, Oak, Poplar, Teak, Walnut</i>	48-000	48-000 48-500	28-50 30-00 39-00 42-00 43-50 45-75	28-60 31-00 40-50 42-50 43-60 46-60	29-00 37-60 41-00 42-75 43-75 90-00	29-50 38-60 41-50 43-00 44-00		12-00 12-80	40-000	41-00 43-00	38-00 90-00
<b>CW</b> <b>COMPOSITE WOOD</b> <i>MDF, Particle Board, Plywood</i>	13-50 48-000	28-50 48-000 48-500 48-700	28-50 30-00 39-00 42-00 43-50 45-75	28-60 31-00 40-50 42-50 43-60 46-60	29-00 37-60 41-00 42-75 43-75 90-00	29-50 38-60 41-50 43-00					
<b>SP</b> <b>SOFT PLASTIC</b> <i>ABS, Polycarbonate, Polyethylene, PVC, Polypropylene, HDPE, Polystyrene, UHMW, Extruded Acrylic</i>			37-60 70-100	38-60	39-00 70-300	40-50	10-00 11-00	11-00			70-500
<b>HP</b> <b>HARD PLASTIC</b> <i>Cast Acrylic, Melamine, Nylon, PVC, Vinyl</i>	48-600	48-600	37-60 70-100	38-60	39-00 70-300	40-50	11-00				70-500
<b>CP</b> <b>COMPOSITE PLASTIC</b> <i>Fiberglass, Phenolic, Reinforced Acetal</i>	48-000 48-600	48-000 48-600									
<b>A</b> <b>ALUMINUM</b>									40-000 14-00 15-00	40-100 40-300	
<b>CM/DW</b> <b>CONSTRUCTION MATERIAL</b> <i>Drywall, RV/Mobile and Modular Housing</i>							18-00		20-00 20-10		
<b>D</b> <b>METAL DOORS</b>									15-50		15-75
<b>SSP</b> <b>SOLID SURFACE</b>			37-60 41-50 43-00 44-00	38-60 42-00 43-50 44-75	40-50 42-50 43-60 46-60	41-00 42-75 43-75 90-100					
<b>MT/ST</b> <b>MORTISING &amp; DOVETAILING</b>		36-00 36-50					18-000	35-00 35-50 24-000	20-00 20-10	24-400	24-300
<b>FP</b> <b>FOAM</b>	48-000 13-50	48-000						12-00			40-550
<b>LW</b> <b>LAMINATED AND VENEERED</b>	113-50		28-50								

**ACCESSORIES & SPECIALTY TOOLS**

COLLET & COLLET MAINTENANCE						BEARING KITS		SPOILBOARD SURFACING		
33-00	33-10	33-21	33-30	33-40	33-50	33-60	34-00	34-50	28-75	90-000