

## ONSRUD Single Flute - High Speed Steel O Flute Straight

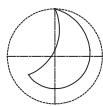
10-00



Combines an open flute design with single flute geometry to provide optimum chip removal at fast feed rates. Excellent for hand-fed operations.

**Usage** ABS, polycarbonate, polyethylene, PVC, polypropylene, polystyrene, extruded acrylic, HDPE, UHMW, and natural wood

**Material** SW SP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
10-00	1/16	3/16	1/4	2	\$9.84
10-01	3/32	3/8	1/4	2	\$9.32
10-02	1/8	3/8	1/4	2	\$9.84
10-20	1/8	1/2	1/4	2	\$10.76
10-22	3/16	3/4	1/4	2	\$10.48
10-06	1/4	3/4	1/4	2-1/8	\$7.96
10-07	1/4	1	1/4	2-3/8	\$8.12
10-78	1/4	1-1/4	1/4	2-5/8	\$9.16

## Single & Double Flute - High Speed Steel O Flute Straight

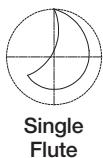
11-00



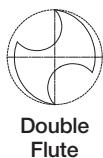
Designed for cutting softer more flexible plastics. Single flute for faster feed rates. Double flute for smoother finish. Excellent for hand-fed operations.

**Usage** ABS, polycarbonate, polyethylene, polystyrene, PVC, polypropylene extruded acrylic, HDPE, UHMW

**Material** SP HP



Single Flute



Double Flute

### SINGLE FLUTE

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
11-01	1/8	1/2	1/4	2	\$13.16
11-75*	1/8	5/8	1/4	3-1/4	\$15.36
11-03	3/16	5/8	1/4	3-1/4	\$10.48
11-77*	3/16	3/4	1/4	3-1/4	\$12.20
11-05	1/4	3/4	1/4	2-1/8	\$9.16
11-71*	1/4	3/4	1/4	3-1/4	\$12.04
11-07	1/4	1	1/4	2-3/8	\$10.32
11-09	3/8	1	3/8	2-1/2	\$14.24

### DOUBLE FLUTE

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
11-00	3/16	5/8	1/4	2	\$13.68
11-02	1/4	3/4	1/4	2-1/8	\$10.48
11-72*	1/4	3/4	1/4	3-1/4	\$13.16
11-76*	1/4	3/4	1/4	3-3/4	\$14.20
11-04	1/4	1	1/4	2-3/8	\$11.56
11-78*	1/4	2	1/4	3-1/4	\$19.04
11-06	3/8	1	3/8	2-1/2	\$16.68
11-74*	3/8	1	3/8	3-1/2	\$19.44

\*These tools are designed and toleranced for Air Routers with guide bushing.

## Double Flute - High Speed Steel V Flute Straight

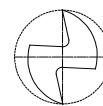
12-00



These V flutes are often selected when a balanced tool is critical for smooth finish. A universal tool used in many environments. Excellent for hand-fed applications.

**Usage** Foam and natural wood

**Material** HW FP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
12-00	1/4	3/4	1/4	2-1/8	\$8.24
12-79*	1/4	1	1/4	3-1/4	\$11.28
12-35	1/4	1	1/2	2-1/2	\$19.28
12-05	3/8	1	3/8	2-1/2	\$14.00
12-10	1/2	1-1/4	1/2	2-3/4	\$19.04

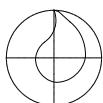
\* These tools are designed and toleranced for Air Routers with guide bushing.

**ONSRUD****15-50**

Designed to rout steel doors.

**Usage** Metal clad doors  
(15-50 and TIN15-50)  
Fiberglass doors (TIN15-50)

**Material**

**Single Flute - High Speed Steel Dor-Bits**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Door Machine	Price
15-52	1/2	2-1/4	1/2	5-1/4	RUVO	\$24.32
15-53	1/2	2-1/2	1/2	5-1/2	RUVO	\$26.00
15-54	1/2	2-1/2	1/2	5	ACE	\$26.00
15-55*	1/2	2-1/2	1/2	5-1/2	FALCON	\$26.00
15-57*	1/2	2-1/2	1/2	5-1/2	NORFIELD	\$26.00
15-60	1/2	2-1/2	1/2	5-1/2	RUVO	\$27.16
15-61*	1/2	2-1/2	1/2	5-1/2		\$27.16

HELIX ANGLE ≈ 18° - 32°

\*Have Flats

**TIN COATED**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Door Machine	Price
TIN15-52	1/2	2-1/4	1/2	5-1/4	RUVO	\$33.08
TIN15-53	1/2	2-1/2	1/2	5-1/2	RUVO	\$34.76
TIN15-54	1/2	2-1/2	1/2	5	ACE	\$34.76
TIN15-55*	1/2	2-1/2	1/2	5-1/2	FALCON	\$34.76
TIN15-57*	1/2	2-1/2	1/2	5-1/2	NORFIELD	\$34.76
TIN15-60	1/2	2-1/2	1/2	5-1/2	RUVO	\$36.36
TIN15-61*	1/2	2-1/2	1/2	5-1/2		\$36.36

\*HAVE FLATS

**15-75****Three Flute - High Speed Steel TIN Coated CNC Dor-Bits**

Downcut tools designed specifically for machining metal clad doors in a CNC environment. The tool geometry facilitates piercing steel and produces a superior cut for door lites and hardware openings.

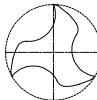
**Usage** Metal clad or fiberglass doors

**Material**

**TiN COATED**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Door Machine	Price
TIN15-75	1/2	3	1/2	6	KVAL	\$73.48

HELIX ANGLE ≈ 18°

**18-00****Single Flute - High Speed Steel Straight Pilot**

Straight flute tools with boring points and pilots are the workhorse of the mobile home, modular home and RV industries.

**Usage** Wood panels, vinyl coated panels, wall board and aluminum materials.

**Material**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
18-00	1/4	3/4	1/4	2-3/4	\$6.64
18-02	3/8	7/8	3/8	2-7/8	\$9.49
18-03	1/2	1	1/2	3-1/2	\$15.28

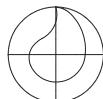
## ONSRUD Single Flute - High Speed Steel Downcut Spiral Pilot 20-00

Spiral tools designed to push chips away from the operator in mobile home and RV manufacturing plants.

**Usage** Aluminum and plywood sandwich panels, vinyl coated panels, wall board, drywall and layered material

**Material**

CM  
DW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
20-00	1/4	3/4	1/4	3	\$9.32
20-02	3/8	1	3/8	3-7/16	\$11.28
20-03	1/2	1-1/4	1/2	4	\$28.96

HELIX ANGLE ≈ 21° - 38°

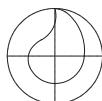


## Single Flute - High Speed Steel Drywall Bit 20-10

Spiral flute tools designed to make cut outs in drywall. Used in manufactured housing and on site construction.

**Usage** Drywall cut outs

CM  
DW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
20-10	3/16	1	1/4	3-1/4	\$7.76
20-11	1/8	3/4	1/8	2-1/2	\$1.24
20-15	1/8	1	1/8	2-1/2	\$1.24

HELIX ANGLE ≈ 30° - 41°



## Single Flute - Solid Carbide Laminate Trim 27-00

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.

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Style	Price
27-00	1/4	1/4	1/4	1-1/2	Flush	\$12.68
27-01	1/4	1/4	1/4	1-1/2	7° Bevel	\$12.68
27-03	1/4	3/8	1/4	2	Flush	\$14.08

**Usage** Trimming laminate counter tops and trimming plastic parts

**Material**

LW



## Double Flute - Solid Carbide Laminate Trim 27-50

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

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Style	Price
27-50	1/4	7/16	1/4	1-5/8	Flush	\$19.12

**Usage** Trimming laminate counter tops and trimming plastic parts

**Material**

LW

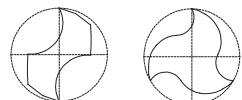


**ONSRUD****28-20**

Spirals designed to trim stacked sheets of plastic in hand-fed applications. They use a double bearing guide to ensure smooth cutting action around a template.

**Usage** Trimming stacked sheets plastic & laminates

**Material** SP HP



Double Flute    Three Flute

**Solid Carbide Double-Bearing Plastic Trim**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Flute	Price
28-20	1/4	3/4	1/4	3	2	\$39.28
28-25	1/2	1-1/8	1/2	4	2	\$109.12

HELIX ANGLE ≈ 11° - 30°

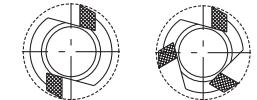
REPLACEMENT BEARING KITS FOR SERIES 28-20 Solid Carbide Double Bearing Plastic Trim Tool Kits		Price
28-89	KIT for 28-20 Tool	\$7.56
28-88	KIT for 28-25 Tool	\$15.32

**28-50****Carbide Tipped Flush Trim**

Designed to provide a smooth finished edge on dense, abrasive and laminated materials. A ball bearing guide assists free cutting action. Excellent for hand-fed applications.

**Usage** Natural wood, wood composites, laminated and veneered

**Material** SW HW CW  
LW SP



Double Flute    Three Flute

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Flute	Price
28-55	1/4	1	1/4	2-1/2	2	\$27.28
28-51	3/8	1/2	1/4	2-1/4	2	\$21.16
28-50	3/8	1	1/4	2-3/4	2	\$21.16
28-53	1/2	1/2	1/4	2	2	\$21.16
28-57	1/2	1	1/4	2-3/4	3	\$32.04
28-54	1/2	1	1/2	3-1/4	2	\$23.40
28-63	1/2	1-1/2	1/2	4-1/4	2	\$25.08
28-64	1/2	2	1/2	4-1/4	2	\$28.40

**29-50****Double Flute - Carbide Tipped Chamfer**

Provides a beveled or decorative edge on finished parts.

**Usage** Natural wood and wood composites

**Material** SW HW CW

Part Number	Bevel	Flute LGTH	SHK DIA	OAL	Price
29-51	45°	1/2	1/4	2	\$29.52
29-52	45°	1/2	1/2	2-1/2	\$31.04
29-53	25°	3/8	1/4	1-7/8	\$20.32

## ONSRUD

### Single Flute - Solid Carbide Engraving Tools

The half round engraving tools are offered with a wide range of tip sizes and angles to accommodate many engraving styles.

**Usage**

Wood, plastic, aluminum and solid surface

**Material**

**SW HW SP HP A SSF**

**37-00  
37-20**



Part Number	TIP	Angle	SHK DIA	OAL	Price
37-21	0.005	30	1/4	2	\$20.72
37-23	0.010	30	1/4	2	\$20.72
37-25	0.020	30	1/4	2	\$20.72
37-27	0.030	30	1/4	2	\$20.72
37-29	0.040	30	1/4	2	\$20.72
37-31	0.060	30	1/4	2	\$20.72
37-35	0.090	30	1/4	2	\$20.72
37-39	30 Degree Kit				\$145.04

Part Number	TIP	Angle	SHK DIA	OAL	Price
37-01	0.005	60	1/4	2	\$20.72
37-03	0.010	60	1/4	2	\$20.72
37-05	0.020	60	1/4	2	\$20.72
37-07	0.030	60	1/4	2	\$20.72
37-09	0.040	60	1/4	2	\$20.72
37-11	0.060	60	1/4	2	\$20.72
37-15	0.090	60	1/4	2	\$20.72
37-19	60 Degree Kit				\$145.04

**METRIC**

Part Number	TIP	Angle	SHK DIA	OAL	Price
37-25	0.5mm	30	6mm	50mm	\$20.72
37-27	0.76mm	30	6mm	50mm	\$20.72
37-29	1mm	30	6mm	50mm	\$20.72

**METRIC**

Part Number	TIP	Angle	SHK DIA	OAL	Price
37-05M	0.5mm	60	6mm	50mm	\$18.76
37-07M	0.76mm	60	6mm	50mm	\$18.76
37-09M	1mm	60	6mm	50mm	\$20.72

### Double Flute - V Bottom

Designed for V grooving or beveling 90°.

**Usage** Plastic and solid surface, composites, laminated and veneer

**Material** **SW HW CW SP HP SSP LW**

**37-50  
37-60**


**SOLID CARBIDE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
37-50	3/16	5/8	1/4	2	\$34.88
37-51	1/4	3/4	1/4	2	\$33.40
37-52	3/8	3/4	3/8	2-1/2	\$57.84

HELIX ANGLE ≈ 3° - 5° Shear

**CARBIDE TIPPED**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
37-61	1/2	13/32	1/4	1-25/32	\$15.36
37-62	3/4	1/2	1/2	2-1/8	\$35.40
37-63	1	27/32	1/2	2-27/32	\$42.84

**37-70****ONSRUD****Double Flute - Carbide Tipped Folding Tool for Dibond/Alucobond**

Designed for cutting aluminum/plastic sandwich materials with 90° angle and flat bottom.

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
37-71	1/2	3/8	1/4	2	\$51.92
37-72	1/2	3/8	1/2	2	\$55.68

**Usage** Aluminum/plastic sandwich materials

**Material** A

90° angle and .090 flat for folding material

**37-80****Double Flute - Carbide Tipped Lettering Bits**

Designed for V grooving or beveling edges of parts. The tools are designed to cut a wide variety of wood products and produce a clean edge.

**Usage** Wood

**Material** SW HW CW

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	ANGLE	Price
37-82	1	0.856	1/2	3-1/2	60°	\$26.36
37-87	1-1/2	0.750	1/2	3	90°	\$30.76
37-92	2	0.577	1/2	3	120°	\$30.76
37-97	2	0.363	1/2	2-5/8	140°	\$30.76

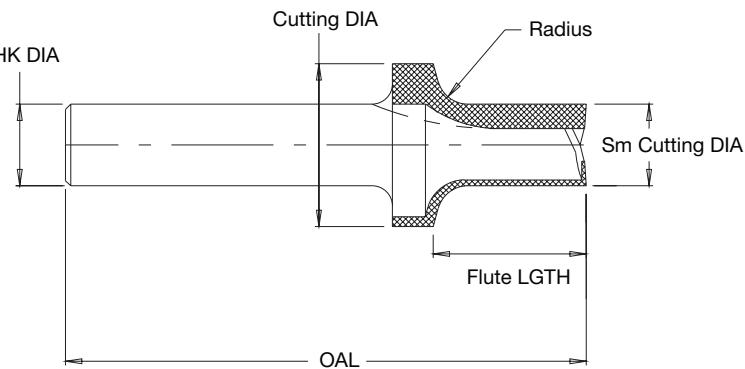
**40-50****Double Flute - Carbide Tipped Round & Rout**

Designed to put a radius on the edge and dress the stock. They will provide a smooth finish.

**Usage** Natural wood, wood composites, plastic and solid surface

**Material** SW HW CW  
SP HP SSP

Part Number	Cutting DIA	Sm Cutting DIA	Flute LGTH	SHK DIA	OAL	RAD	Material Thickness	Price
40-50	1	1/2	.938	1/2	3-3/16	3/16	3/4	\$63.00
40-52	1-1/8	1/2	.937	1/2	3-3/16	1/4	3/4	\$63.88
40-54	1-3/8	1/2	.938	1/2	3-3/16	3/8	3/4	\$66.56
40-55	1-3/8	1/2	1.437	1/2	3-11/16	3/8	1-3/8	\$66.56



## ONSRUD

### Double Flute - Carbide Tipped Corner Round

Quarter round profile tools feature up shear geometry for better finishes.

**Usage** Natural wood, wood composites and solid surface

**Material** SW HW CW SSP

Part Number	Radius	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
42-10	1/8	3/4	3/8	1/4	2-1/8	\$30.72
42-03	5/32	13/16	15/32	1/4	2-3/32	\$33.20
42-01	3/16	7/8	1/2	1/4	2	\$30.04
42-02	1/4	1	7/16	1/4	1-29/32	\$30.80
42-04	5/16	1-1/8	9/16	1/4	2-1/4	\$32.84
42-05	3/8	1-1/4	5/8	1/4	2-1/32	\$32.60
42-06	1/2	1-1/2	3/4	1/4	2-5/32	\$34.92
42-07	1/2	1-1/2	3/4	1/2	2-11/16	\$41.16
42-08	3/4	2	1-1/32	1/2	3	\$59.08

42-00



### Double Flute - Carbide Tipped MDF Panel Tools

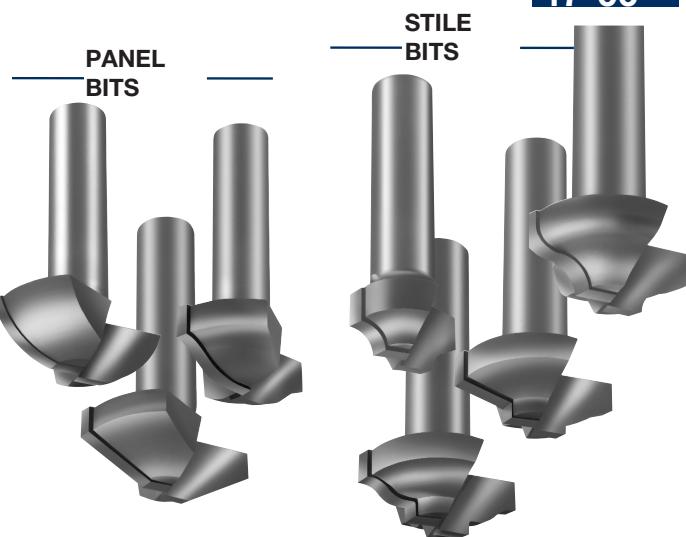
These cutters can create 12 cabinet combinations by combining different stile and panel cutters to get the desired shape in MDF material.

**Usage** MDF

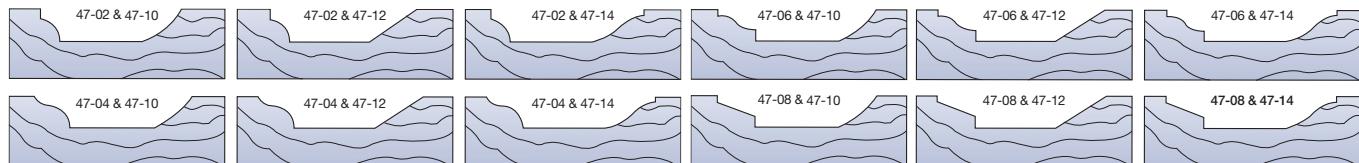
**Material** CW

Part Number	Cutting DIA	SHK DIA	OAL	Description	Price
47-02	7/8	1/2	2-1/2	Bead Profile - Stile Bits	\$47.80
47-04	1-1/4	1/2	2-1/2	Traditional Profile - Stile Bits	\$52.00
47-06	1-1/4	1/2	2-1/2	Ogee Profile - Stile Bits	\$52.00
47-08	1-1/4	1/2	2-1/2	Straight Profile - Stile Bits	\$52.00
47-10	1-1/2	1/2	2-1/2	Cove Profile - Panel Bits	\$74.88
47-12	1-1/2	1/2	2-1/2	Straight Profile - Panel Bits	\$74.88
47-14	1-1/2	1/2	2-1/2	Ogee Profile - Panel Bits	\$74.88

47-00



#### TOOL COMBINATIONS



### T Slot

Designed to bore a hole and rout a T shape slot for plaques and frames to provide for built in wall mounting capabilities.

**Usage** Natural wood, wood composites

**Material** SW HW CW

#### SOLID CARBIDE

Part Number	Cutting DIA	Flute LGTH	Neck	SHK DIA	OAL	Flutes	Price
90-06	3/8	3/8	3/16	1/4	1-5/8	2	\$35.36

90-00



## ONSRUD

**29-000**


### HSS Hollow Core Cutters

This specialized cutter is designed to vertically cut the honeycomb cells producing a clean, flag free edge. The core material will remain attached at the bottom and can be removed using one of our valve style honeycomb cutters. This product along with our 31-100 or 30-000 series tools is an effective combination to create pockets in honeycomb core and get a perfectly clean edge.

**Usage** Honeycomb

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
29-003	1/4	1-1/2	1/4	3-3/4	\$73.28
29-006	3/8	1-7/8	3/8	3-3/4	\$75.92
29-009	1/2	2-7/8	1/2	5	\$93.88
29-012	5/8	2-7/8	5/8	5	\$156.64
29-015	3/4	2-7/8	3/4	5	\$132.56

**29-050**


### Diamond Grit Hogger

Diamond grit hoggers are used on abrasive cores (graphite, phenolic, or fiberglass) in order to achieve long tool life. The tools are available in a ball nose version and as a traditional hogger capable of holding existing honeycomb blades. A 35% weight reduction has been designed into the larger diameter tools resulting in better performance on 3 or 5 axis machines.

**Usage** Honeycomb

**BALL NOSE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
29-053	1/4 (6.35mm)	1 1/4	1/4	4	\$230.72
29-058	3/8 (9.52mm)	2 1/2	1/2	4	\$259.40
29-063	1/2 (12.7mm)	3	1/2	5	\$321.68
29-068	3/4 (19.05mm)	3	1/2	5	\$412.00
29-074	1 (25.4mm)	2	3/4	4	\$507.60

HONEYCOMB HOGGER					CUTTING BLADE OPTIONS							SPARE PARTS	
Part #	Cutting Diameter	Hogger Depth	Shank DIA	OAL	Blade Diameter	HSS	HSS w/Teeth	Solid Carbide	Solid Carbide w/Teeth	Diamond Plated	HSS Saw	Adapter Ring	Screw
29-052	1/4 (6.35mm)	1 1/4	1/4	4	-	-	-	-	-	-	-	-	-
29-057	.345 (8.76mm)	2 1/2	1/2	4	3/8 (9.52mm)	30-016	30-316	-	-	-	-	-	HRD51646
29-062	.470 (11.94mm)	3	1/2	5	1/2 (12.7mm)	30-017	30-317	-	-	-	-	-	HRD51646
29-067	.720 (18.28mm)	3	1/2	5	3/4 (19.05mm)	-	-	30-015	30-318	-	-	-	30-011-2
29-072	.970 (24.63mm)	1	1/2	3	1 (25.4mm)	-	-	30-012	30-313	30-113	30-213	-	30-011-2
29-073 <sup>1</sup>	.970 (24.63mm)	2	3/4	5	1 (25.4mm)	-	-	30-012	30-313	30-113	30-213	-	30-011-2
29-078	1.470 (37.33mm)	1	1/2	3	1 1/2 (38.10mm)	-	-	30-014	30-314	30-114	30-214	30-020-3	30-020-4
29-079 <sup>1</sup>	1.470 (37.33mm)	2	3/4	5	1 1/2 (38.10mm)	-	-	30-014	30-314	30-114	30-214	30-020-3	30-020-4
29-083	1.742 (44.24mm)	1	1/2	3	1.772 (45mm)	-	-	30-026	30-326	30-126 <sup>2</sup>	30-226 <sup>2</sup>	30-020-3	30-020-4
29-084 <sup>1</sup>	1.742 (44.24mm)	2	3/4	5	1.772 (45mm)	-	-	30-026	30-326	30-126 <sup>2</sup>	30-226 <sup>2</sup>	30-020-3	30-020-4
29-088	1.970 (50.03mm)	1	5/8	3	2 (50.8mm)	-	-	30-022	30-322	30-122	30-222	30-020-3	30-020-4
29-089 <sup>1</sup>	1.970 (50.03mm)	2	3/4	5	2 (50.8mm)	-	-	30-022	30-322	30-122	30-222	30-020-3	30-020-4
29-093	2.450 (62.23mm)	1	5/8	3	2.480 (63mm)	-	-	30-036	30-336	30-136	30-236	30-030-3	30-030-4
29-095	2.970 (75.43mm)	1	3/4	3	3 (76.20mm)	-	-	30-032	30-332	30-132	30-232	30-030-3	30-030-4
29-096 <sup>1</sup>	2.970 (75.43mm)	1	3/4	4	3 (76.20mm)	-	-	30-032	30-332	30-132	30-232	30-030-3	30-030-4
29-098	3.970 (100.83mm)	1	3/4	3	4 (101.6mm)	-	-	30-042	30-342	30-142	30-242	30-040-3	30-040-4
29-099 <sup>1</sup>	3.970 (100.83mm)	1	3/4	4	4 (101.6mm)	-	-	30-042	30-342	30-142	30-242	30-040-3	30-040-4

<sup>1</sup> = non-stock standard. 4 week lead time  
<sup>2</sup> = 50mm diameter honecomb blade

**Call for pricing.**

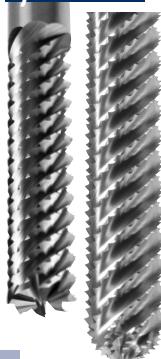
**ONSRUD****Solid Carbide Honeycomb Hogger (Coated)**

Designed to be a versatile tool and cut most honeycomb core materials. The solid carbide body offers long tool life while the proven hogger geometry shreds the core and evacuates chips. The long flute length allows for deep pocket applications and can also be used to surface large areas. Hoggers are coated with ZRN.

**Usage** Honeycomb

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
29-110	1/4 (6.35mm)	1-1/4	1/4	4	\$99.00
29-115	3/8 (9.52mm)	2	3/8	4	\$125.32
29-125	1/2 (12.7mm)	3	1/2	6	\$138.88
29-130	1/2 (12.7mm)	4-1/2	1/2	6-1/2	\$152.32
29-140	3/4 (19.05mm)	3	3/4	6	\$241.04
29-145	3/4 (19.05mm)	4-1/2	3/4	6-1/2	\$301.80

**29-100  
29-100B**

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
29-120	12 (.472")	60	12	150	\$137.08
29-135	16 (.629")	80	16	150	\$196.68

**BALL NOSE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
29-130B	1/2 (12.7mm)	4-1/2	1/2	6-1/2	\$179.20
29-140B	3/4 (19.05mm)	3	3/4	6	\$326.40
29-145B	3/4 (19.05mm)	4-1/2	3/4	6-1/2	\$331.52

**Replaceable Ring Type Honeycomb Cutter**

**30-000**

These tools are for contouring, carving and chamfering cuts of .25" or less. The unique patented holding system prevents the solid carbide blades from coming out of the holder if it is fractured.

The HSS saw blades and the diamond plated blades dish on the bottom so they clear the cut core finish like the hollow ground solid carbide style rings. The solid carbide rings may be reground several times at the factory making them very economical to use.

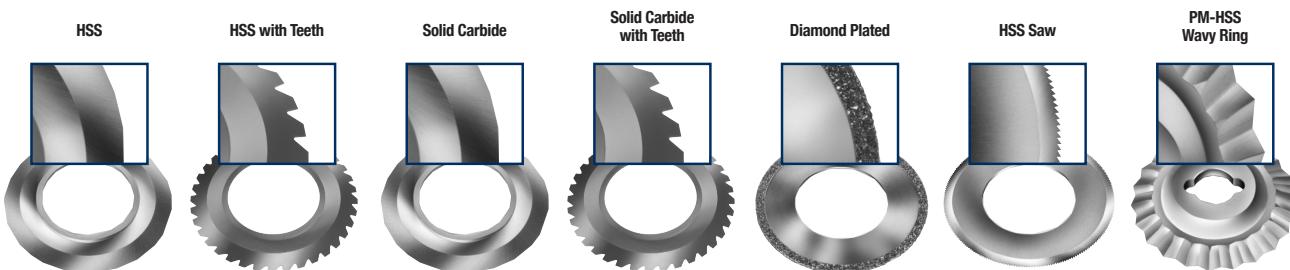
**Usage** For contouring, carving and chamfering cuts

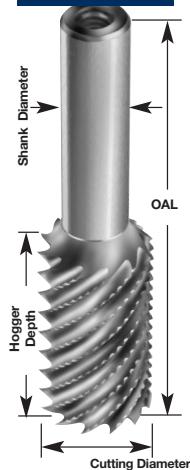
The HSS saw and diamond plated blades are disposable, offering the convenience of a constant diameter.

**Call for pricing.**

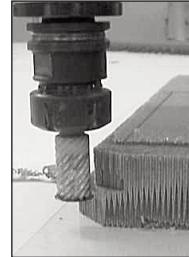


SHANK ASSEMBLY			CUTTING BLADE OPTIONS				SPARE PARTS	
Part #	Blade Diameter	Shank DIA	Solid Carbide	Solid Carbide with Teeth	Diamond Plated	HSS Saw	Adapter Ring	Screw
30-011	1" (25.4mm)	1/2	30-012	30-313	30-112	30-213	-	30-011-2
30-021	2" (50.8mm)	1/2	30-022	30-322	30-122	30-222	30-020-3	30-020-4
30-031	3" (76.2mm)	1/2	30-032	30-332	30-132	30-232	30-030-3	30-030-4
30-041	4" (101.6mm)	1/2	30-042	30-342	30-142	30-242	30-040-3	30-040-4

**Cutting Blades for Cutters and Hoggers**

**ONSRUD****30-300****Usage**

CNC machining of honeycomb core

**Call for pricing.****HSS Integral Shank Honeycomb Hogger Cutter****High Speed Steel Hoggers • High Speed Replaceable Saw Blade****Solid Carbide Replaceable Blade • Diamond Plated Replaceable Blade**

The spiral hogger geometry ground integral to the shank allows for faster feed rates and deeper cuts than any previous cutter. The availability of several different blades makes this cutter suitable for most core types. The hogger design also imparts less force as it evacuates and shreds scrap.

HONEYCOMB HOGGER					CUTTING BLADE OPTIONS						SPARE PARTS	
Part #	Cutting Diameter	Hogger Depth	Shank DIA	OAL	Blade Diameter	Solid Carbide	Solid Carbide w/Teeth	Diamond Plated	HSS Saw	Adapter Ring	Screw	
30-310	7/8 (22.22mm)	1 1/2	1/2	3 1/2	1 (25.4mm)	30-012	30-313	30-113	30-213	-	30-011-2	
30-315	1 1/4 (31.75mm)	1 1/2	1/2	3 1/2	1 1/2 (38.1mm)	30-014	30-314	30-114	30-214	30-020-3	30-020-4	
30-321	1 3/4 (44.45mm)	1 1/2	1/2	3 1/2	2 (50.8mm)	30-022	30-322	30-122	30-222	30-020-3	30-020-4	
30-331	2 3/4 (69.85mm)	1	1/2	3 1/2	3 (76.2mm)	30-032	30-332	30-132	30-232	30-030-3	30-030-4	
30-341	3 3/4 (95.25mm)	1	3/4	3 1/2	4 (101.6mm)	30-042	30-342	30-142	30-242	30-040-3	30-040-4	

**30-700****Reduced Weight Honeycomb Cutter**

35% weight reduction has been designed into the larger diameter tools resulting in better performance on 3 or 5 axis machines. Part lifting and flagging have also been reduced due to the new tooth and flute design. Existing honeycomb blades will mount on these hoggers.

**Usage**

CNC Machining of Honeycomb Core

**Call for pricing.**

HONEYCOMB HOGGER					CUTTING BLADE OPTIONS							SPARE PARTS	
Part #	Cutting Diameter	Hogger Depth	Shank DIA	OAL	Blade Diameter	HSS	HSS w/Teeth	Solid Carbide	Solid Carbide w/Teeth	Diamond Plated	HSS Saw	Adapter Ring	Screw
30-703	.345 (8.76mm)	1	1/2	3	3/8 (9.52mm)	30-016	30-316	-	-	-	-	-	HRD51646
30-705	.470 (11.93mm)	1	1/2	3	1/2 (12.7mm)	30-017	30-317	-	-	-	-	-	HRD51646
30-707	.720 (18.28mm)	1	1/2	3	3/4 (19.05mm)	-	-	30-015	30-318	-	-	-	30-011-2
30-710	.970 (24.63mm)	1	1/2	3	1 (25.4mm)	-	-	30-012	30-313	30-113	30-213	-	30-011-2
30-715	1.470 (37.33mm)	1	1/2	3	1 1/2 (38.10mm)	-	-	30-014	30-314	30-114	30-214	30-020-3	30-020-4
30-720	1.742 (44.24mm)	1	1/2	3	1.772 (45mm)	-	-	30-026	30-326	30-126	30-226	30-020-3	30-020-4
30-725	1.970 (50.03mm)	1	5/8	3	2 (50.8mm)	-	-	30-022	30-322	30-122	30-222	30-020-3	30-020-4
30-730	2.450 (62.23mm)	1	5/8	3	2.480 (63mm)	-	-	30-036	30-336	30-136	30-236	30-030-3	30-030-4
30-735	2.970 (75.43mm)	1	3/4	3	3 (76.20mm)	-	-	30-032	30-332	30-132	30-232	30-030-3	30-030-4
30-740	3.970 (100.83mm)	1	3/4	3	4 (101.6mm)	-	-	30-042	30-342	30-142	30-242	30-040-3	30-040-4

1 = 50mm diameter honecomb blade

## ONSRUD

### High Speed Steel Cutter

Designed primarily for use on aluminum core, offering the versatility of smaller sizes for use on hand-held machines in field or maintenance type repairs. This cutter offers the strength of an integral shank and blade that has an edge sharpness unattainable with any other material. This sharpness and the relieved bottom yield part surfaces that require a minimum of preparation before bonding operation.

Part Number	Cutting DIA	SHK DIA	OAL	Price
31-010	1/2	1/4	2-1/16	\$42.36
31-015	3/4	1/4	2-3/32	\$53.04
31-020	1	1/4	2-1/8	\$58.24
31-025	1-1/2	1/2	2-1/4	\$95.36
31-030	2	1/2	2-3/4	\$159.04
31-040	3	1/2	2-15/16	\$265.00

**Usage** Aluminum Core

**31-000**



Core Type	Rating
Aluminum, Lo Density (Less than 5#/cuft)	1
Aluminum, Hi Density (More than 5#/cuft)	2
Paper	2
Paper, Reinforced	N
Fiberglass	N
Phenolic	N
Polycarbonate	N
Aramid	N

1 - Excellent, 2 - Good, N - Not Recommended

### High Speed Steel Honeycomb Cutter With Teeth

**31-100**

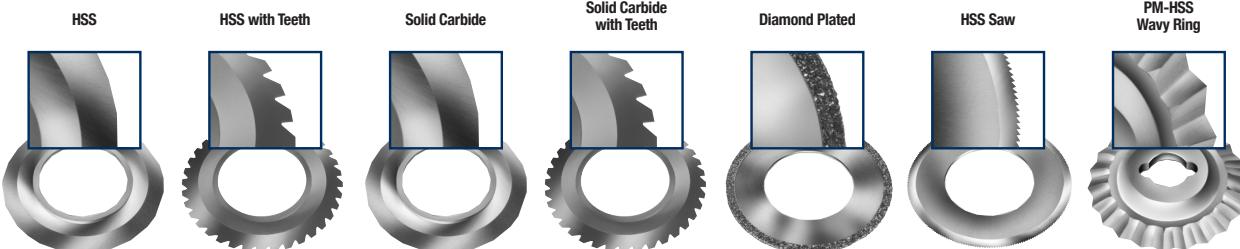


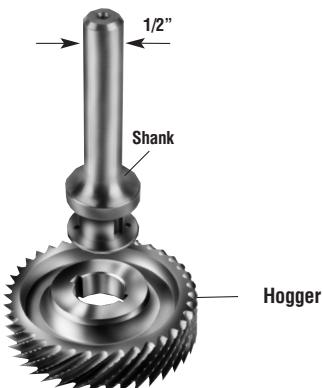
Small diameter honeycomb cutters were designed to offer the flexibility of cutting small slots or pockets in honeycomb core. The tools are versatile and can be used on CNC machines or hand held machines for field or maintenance type repairs.

Part Number	Cutting DIA	SHK DIA	OAL	Price
31-102TCN	3/8	1/4	3	\$46.72
31-104TCN	1/2	1/4	3	\$52.80
31-106TCN	5/8	1/4	3	\$59.48
31-108TCN	3/4	1/4	3	\$66.24

**Usage** For contouring, carving, pocketing, and chamfer cuts

### Cutting Blades for Cutters and Hoggers



**32-000****ONSRUD****High Speed Steel Hogger**

These cutters are specifically designed for fast (low force) removal of excess core followed by a final finish pass to obtain excellent finishes with one tool. These cutters enable cuts of up to .60" depths in a single pass. The availability of several different blades makes this cutter suitable for most core types.

All assemblies require a shank, hogger and blade.

**Usage** Fast removal of excess core



**Call for pricing.**

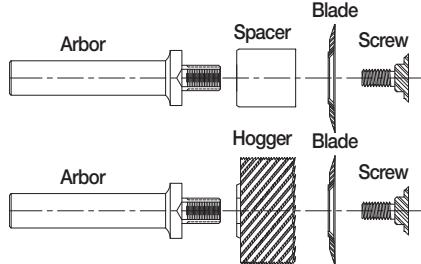
HONEYCOMB HOGGER			SHANK		CUTTING BLADE OPTIONS					SPARE PARTS	
Part #	Cutting Diameter	Hogger Depth	Part #	Shank DIA	Blade Diameter	Solid Carbide	Diamond Plated	HSS Wavy Ring	HSS Saw	Adapter Ring	Screw
32-022	1.732 (44mm)	.629 (16mm)	32-021	1/2	1.771 (45mm)	32-026	-	32-023	-	-	-
					1.968 (50mm)	-	32-029*	-	32-027*	32-028	-
32-032	2.421 (61.5mm)	.629 (16mm)	32-031	1/2	2.480 (63mm)	32-036	-	32-033	-	-	-
					2.952 (75mm)	-	32-039*	-	32-037*	32-038	-

32-100 - Wrench for 32-000 Tools

\* Requires Adapter Ring

**HSS Three Piece Honeycomb Hogger (Coated)**

Designed with more aggressive hogger geometry than the 32-000 series. Both the hogger and blade with teeth have a fine tooth grind pattern resulting in increased feed rates and improved part finish. All hoggers and blades are coated with a ZRN coating for increase in tool life. All hogger assemblies require a shank, a hogger and a blade. This design also allows the tool to be used without the hogger by replacing the hogger with a spacer. Torque Spec = 18 in-lb.



**Usage** Fast removal of excess core

**Call for pricing.**

HONEYCOMB HOGGER			SHANK			CUTTING BLADE OPTIONS				SPARE PARTS	
Part #	Cutting Diameter	Hogger Depth	Part #	Shank DIA	OAL	Blade Diameter	Solid Carbide	Solid Carbide w/Teeth	Spacer	Retaining Screw	
32-210	0.94" (23.88mm)	1" (25.4mm)	32-221	3/8"	4"	1" (25.4mm)	32-412	32-512	32-221-3	32-221-4	
32-225	1.94" (49.28mm)	1" (25.4mm)	32-231	1/2"	4"	2" (50.8mm)	32-422	32-522	32-231-3	32-231-4	
			32-241	5/8"	4"						
32-235	2.94" (74.68mm)	1" (25.4mm)	32-231	1/2"	4"	3" (76.2mm)	32-432	32-532	32-231-3	32-231-4	
			32-241	5/8"	4"						
32-220	1.72" (43.69mm)	1" (25.4mm)	32-231	1/2"	4"	1.77" (45mm)	32-426	32-526	32-231-3	32-231-4	
			32-241	5/8"	4"						
32-230	2.42" (61.47mm)	1" (25.4mm)	32-231	1/2"	4"	2.48" (63mm)	32-436	32-536	32-231-3	32-231-4	
			32-241	5/8"	4"						

32-201 - Wrench for 32-200 Tools (for Shank Diameters 1/2" & 5/8")

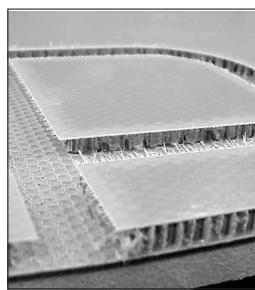
32-202 - Wrench for 32-200 Tools (for Shank Diameters 3/8")

## ONSRUD

### Aircraft Panel Tools

This modular tool is designed to produce slots in composite panels so potting compound can be applied to strengthen the edge. This tool consists of a PCD arbor which accepts a diamond grit or HSS under cutting tool to be screwed into it.

**Usage** HCC Panels



**34-000**



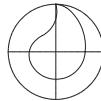
Part Number	Cutting DIA	Flute LGTH	SHK DIA	Price
34-008	1/2	-	1/2	Arbor (non-cutting) \$156.56
34-010	1/2	1/4	1/2	PCD Arbor Diamond \$230.72
34-022	7/8	0.130	n/a	Grit Cutter Diamond \$292.44
34-024	7/8	0.250	n/a	Grit Cutter Diamond \$292.52
34-026	7/8	0.380	n/a	Grit Cutter Diamond \$292.64
34-028	7/8	0.500	n/a	Grit Cutter Diamond \$292.72
34-030	7/8	0.630	n/a	Grit Cutter \$292.80
34-042	7/8	0.130	n/a	HSS Cutter \$95.48
34-044	7/8	0.250	n/a	HSS Cutter \$108.60
34-046	7/8	0.380	n/a	HSS Cutter \$121.68
34-048	7/8	0.500	n/a	HSS Cutter \$134.76
34-050	7/8	0.630	n/a	HSS Cutter \$148.60

### Single Flute - High Speed Steel Upcut Spiral

Designed for routing applications where speed and chip removal are primary considerations. They are also recommended when grooving, slotting or blind routing.

**Usage** Natural wood, sheet and stacked aluminum

**Material** SW HW A



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-001	1/8	3/8	1/4	2-5/8	\$11.56
40-003	3/16	5/8	1/4	2-7/8	\$10.32
40-005	1/4	5/8	1/4	2-3/4	\$8.48
40-009	1/4	3/4	1/2	3-1/4	\$15.64
40-021	5/16	3/4	1/2	3-1/4	\$16.24
40-023	5/16	1	1/2	3-1/2	\$17.72
40-025	21/64	3/4	1/2	3-1/4	\$17.08
40-033	3/8	1	1/2	3-1/2	\$19.20

**40-000**



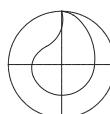
HELIX ANGLE ≈ 19° - 32° Shear

### Single Flute - High Speed Steel Downcut Spiral

Designed for through cut routing operations where speed is the primary concern and fixturing is such that both chips and material are better off forced down.

**Usage** Sheet aluminum

**Material** A



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-008	1/4	3/4	1/4	2 3/4	\$9.25
40-012	1/4	1	1/4	3	\$10.56

**40-000**



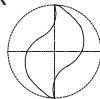
HELIX ANGLE ≈ 19° - 32° Shear

**40-100****ONSRUD****Double Flute - High Speed Steel Upcut Spiral**

Provides a smoother finish when grooving, slotting or blind routing than do single flute tools. Recommended when fixturing requires upward chip removal.

**Usage** Natural wood sheet, block & plate aluminum

**Material** SW HW A



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-101	1/8	3/8	1/4	2-5/8	\$8.40
40-103	3/16	5/8	1/4	2-7/8	\$9.08
40-153	7/32	7/8	1/4	3	\$11.24
40-105	1/4	5/8	1/4	2-3/4	\$7.92
40-107	1/4	3/4	1/4	2-3/4	\$6.80

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-107	1/4	3/4	1/4	2-3/4	\$6.80
40-109	1/4	3/4	1/2	3-1/4	\$16.24
40-111*	1/4	1	1/4	3	\$8.48
40-121	5/16	3/4	1/2	3-1/4	\$14.40
40-117	5/16	3/4	3/8	3	\$14.60
40-115	5/16	1	5/16	3	\$14.36
40-123	5/16	1	1/2	3-1/2	\$20.68
40-131*	3/8	1	3/8	3	\$12.88
40-133	3/8	1	1/2	3-1/2	\$15.36
40-135	3/8	1-1/4	1/2	3-3/4	\$20.40
40-137	1/2	1-1/4	1/2	3-1/4	\$17.48
40-139	1/2	1-1/2	1/2	3-1/2	\$20.44
40-141	3/4	1-1/4	1/2	3-1/4	\$45.32

HELIX ANGLE ≈ 19° - 32° Shear

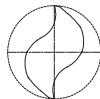
\* These tools are designed and toleranced for air routers with guide bushings.

**40-100****Double Flute - High Speed Steel Downcut Spiral**

Provides a smoother finish than single flute in trimming and sizing. Recommended when chip flow should be directed down to protect the finish on the top of the material being cut.

**Usage** Natural wood sheet & aluminum extrusions

**Material** SW HW A



HELIX ANGLE ≈ 19° - 32° Shear

\* These tools are designed and toleranced for air routers with guide bushings.

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-102	1/8	5/16	1/4	2-5/8	\$8.40
40-104	3/16	5/8	1/4	2-7/8	\$9.08
40-106	1/4	5/8	1/4	2-3/4	\$7.88
40-108	1/4	3/4	1/4	2-3/4	\$7.40
40-110	1/4	3/4	1/2	3-1/4	\$15.32
40-112*	1/4	1	1/4	3	\$8.48
40-158*	1/4	1	1/4	3-1/4	\$10.36
40-122	5/16	3/4	1/2	3-1/4	\$16.40
40-116	5/16	1	5/16	3	\$10.16
40-124	5/16	1	1/2	3-1/2	\$17.48
40-134	3/8	1	1/2	3-1/2	\$17.48
40-138	1/2	1-1/4	1/2	3-1/4	\$17.96
40-140	1/2	1-1/2	1/2	3-1/2	\$19.48
40-142	3/4	1-1/4	1/2	3-1/4	\$45.32

**40-550****Four Flute - High Speed Steel Upcut Spiral Foam Cutters**

Designed to cut thick foam with upward chipflow.

**Usage** Foam

**Material** FP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
40-562	1/2	3-5/8	1/2	6	\$47.28
40-564	1/2	4-1/8	1/2	6-1/2	\$53.44

HELIX ANGLE ≈ 25°

## ONSRUD

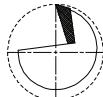
### Single Flute - Carbide Tipped Straight

48-000

Designed for general usage where faster feed rates, free cutting action and long tool life are essential.

**Usage** Natural wood, wood composites, composite plastic and foam

**Material** HW CW CP FP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
48-005	1/4	7/8	1/4	2-3/8	\$10.64
48-007	1/4	1	1/4	2-3/8	\$12.40
48-079*	1/4	1	1/4	3-1/4	\$13.44
48-056	3/8	1-1/4	1/2	2-3/4	\$17.12
48-069	1/2	1-1/2	1/2	3	\$16.68

\* These tools are designed and toleranced for Air Routers with guide bushings.

48-000



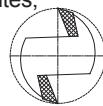
### Double Flute - Carbide Tipped Straight

48-000

Designed for general usage where superior balance and vibration free cutting provides a smoother finish along with long tool life.

**Usage** Natural wood, wood composites, composite plastic and foam

**Material** HW CW CP FP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
48-008+	1/8	5/16	1/4	2	\$16.72
48-004	1/4	5/8	1/4	2-1/8	\$15.20
48-006	1/4	7/8	1/4	2-3/8	\$14.24
48-018	1/4	7/8	1/2	2-1/2	\$18.52
48-106	1/4	1	1/4	2-3/8	\$14.40
48-179*	1/4	1	1/4	3-1/4	\$15.44
48-017	5/16	3/4	1/2	2-1/4	\$19.28
48-010	5/16	1	1/4	2-1/2	\$15.96
48-012	3/8	3/4	1/4	2-1/4	\$19.96
48-036*	3/8	1	3/8	2-1/2	\$16.00
48-057	3/8	1	1/2	2-1/2	\$18.44
48-058*	3/8	1-1/4	3/8	3	\$18.36
48-158	3/8	1-1/4	1/2	2-3/4	\$20.36
48-014	1/2	3/4	1/4	2-1/8	\$17.00
48-072	1/2	1	1/2	2-1/2	\$19.72
48-076	1/2	1-1/4	1/2	2-3/4	\$19.64
48-080	1/2	1-1/2	1/2	3	\$21.56
48-081	1/2	2	1/2	4	\$26.72
48-183	1/2	2-1/2	1/2	4-1/2	\$33.44
48-015	5/8	1	1/4	2-1/4	\$18.08
48-086	5/8	1-1/4	1/2	2-3/4	\$22.40
48-016	3/4	1	1/4	2-1/4	\$20.20
48-088	3/4	1-1/4	1/2	3	\$22.68
48-215	3/4	2	3/4	4	\$39.72
48-096	7/8	1-1/4	1/2	2-3/4	\$30.12
48-100	1	1-1/4	1/2	2-3/4	\$31.88



+ Solid Carbide

\*These tools are designed and toleranced for Air Routers with guide bushings.

**49-000****ONSRUD****Double Flute - High Speed Steel Downcut**

These double flute downcuts with a drill type point were developed initially as "Aircraft Throwaway" tools. They have many uses in trimming and routing primarily with hand held routers.

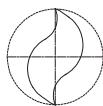
**Usage** Aluminum**Material** A

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
49-005	1/4	9/16	1/4	2 1/2	\$6.52
49-001	1/4	9/16	1/4	2 3/4	\$6.52
49-007	1/4	9/16	1/4	3 1/4	\$6.92
49-003	3/8	3/4	3/8	2 1/2	\$12.00

THESE TOOLS ARE DESIGNED AND TOLERANCED FOR AIR ROUTERS WITH GUIDE BUSHINGS, + .000 - .006  
HELIX ANGLE ≈ 24°

**52-000****Double Flute - Solid Carbide Upcut Spiral**

Designed as a general purpose spiral with several times the life of their high speed steel counterparts. They are used when upward chip flow is preferred.

**Usage** Fiberglass, phenolic, acetal, solid surface and aluminum slab**Material** CP A SSP

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-040	1/8	1/2	1/4	2	\$22.52
52-050	5/32	9/16	1/4	2	\$22.52
52-060	3/16	5/8	1/4	2	\$22.52
52-080	1/4	3/4	1/4	2-1/2	\$22.52
52-100	5/16	13/16	3/8	2-1/2	\$38.28
52-120	3/8	7/8	3/8	2-1/2	\$38.28
52-160	1/2	1	1/2	3	\$63.88

HELIX ANGLE ≈ 30°

**52-200****Double Flute - Solid Carbide Upcut Spiral Wood Rout**

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

**Usage** Natural wood, wood composites solid surface, and some plastic**Material** SW HW CW SP

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-244	1/8	1/2	1/8	2	\$20.96
52-240	1/8	1/2	1/4	2	\$19.40
52-250	5/32	5/8	1/4	2	\$19.40
52-260	3/16	3/4	1/4	2	\$19.40
52-261	3/16	3/4	1/4	2-1/2	\$21.32
52-280	1/4	7/8	1/4	2-1/2	\$21.88
52-285	1/4	1	1/4	2-1/2	\$22.68
52-287	1/4	1-1/8	1/4	3	\$25.20
52-300	5/16	1-1/8	5/16	3	\$37.52
52-310	5/16	1-1/8	1/2	3	\$62.64
52-310L	5/16	1-1/8	1/2	3	\$68.92
52-318*	3/8	1	3/8	3	\$31.32

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	BdUW
52-320	3/8	1-1/8	3/8	3	"37.52
52-325	3/8	1-1/4	3/8	3	"40.08
52-330	3/8	1-1/4	1/2	3	"62.64
52-340	7/16	1	1/2	3	"60.12
52-360	1/2	1-1/8	1/2	3	"60.12
52-362	1/2	1-1/4	1/2	3-1/2	"62.64
52-365	1/2	1-5/8	1/2	3-1/2	"62.64
52-365L	1/2	1-5/8	1/2	3-1/2	"68.88
52-367	1/2	2-1/8	1/2	4	"68.88
52-385	5/8	2-1/8	5/8	4	\$162.84
52-395	3/4	2-1/8	3/4	4	\$194.12

HELIX ANGLE ≈ 30°

\* Special Point (Improved Bottom Finish)

L = Left Hand Rotation

## ONSRUD

### Double Flute - Solid Carbide Upcut Spiral Ball Nose

52-200B/BL

Designed for carving and modeling operations. Their improved tip geometry gives a superior cut compared to most ballnose endmills.

**Usage** Plastic, solid surface, block & plate aluminum natural wood and wood composite

**Material** SW HW CW SP HP A

#### EXTENDED LENGTH

Part Number	Cutting DIA	Flute LGTH	ERL	SHK DIA	OAL	Price
52-235BL	1/16	1/4	-	1/8	3	\$43.44
52-244BL	1/8	1/2	1-5/8	1/8	3	\$45.48
52-240BL	1/8	1/2	1-5/8	1/4	3	\$45.48
52-260BL	3/16	3/4	1-5/8	1/4	3	\$45.48
52-280BL	1/4	1	2-5/8	1/4	4	\$51.36
52-320BL	3/8	1-1/4	2-5/8	3/8	4	\$81.88
52-360BL	1/2	1-1/2	3-5/8	1/2	5	\$105.60
52-386BL	5/8	2-1/2	3-5/8	5/8	5	\$202.60
52-397BL	3/4	3	4-5/8	3/4	6	\$202.60



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-235B	1/16	1/4	1/8	2	\$31.28
52-244B	1/8	1/2	1/8	2	\$33.60
52-240B	1/8	1/2	1/4	2	\$33.60
52-260B	3/16	3/4	1/4	2	\$33.60
52-280B	1/4	7/8	1/4	2-1/2	\$33.60
52-320B	3/8	1-1/8	3/8	3	\$53.24
52-360B	1/2	1-1/8	1/2	3	\$81.88
52-386B	5/8	2-1/4	5/8	4	\$185.16
52-397B	3/4	2-1/2	3/4	5	\$202.60

#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-240BM	3mm	12mm	6mm	50mm	\$29.36
52-280BM	6mm	22mm	6mm	64mm	\$29.68
52-320BM	10mm	29mm	10mm	76mm	\$53.88
52-360BM	12mm	29mm	12mm	76mm	\$77.36

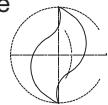
### Double Flute - Solid Carbide Upcut Spiral Wood Rout

52-400

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

**Usage** Natural wood, wood composites, plastic and solid surface

**Material** SW HW CW SP



#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-410	4mm	16mm	6mm	64mm	\$19.44
52-411	5mm	20mm	6mm	64mm	\$19.44
52-412	6mm	25mm	6mm	64mm	\$21.84
52-414	8mm	25mm	8mm	64mm	\$40.68
52-416	10mm	35mm	10mm	76mm	\$46.92
52-418	12mm	35mm	12mm	76mm	\$62.64



HELIX ANGLE ≈ 30°

### Double Flute - Solid Carbide Upcut Foam Cutters

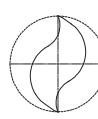
52-550

Foam cutters for thick material with upward chip flow.

**Usage** Foam

**Material** FP

HELIX ANGLE ≈ 25°



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-554	1/8	1-1/8	1/4	2-1/2	\$40.56
52-558	3/16	1-1/8	3/16	3	\$40.56
52-560	3/16	1-5/8	3/16	4	\$43.92
52-564	1/4	2-1/4	1/4	4	\$46.28
52-570	5/16	3-1/8	5/16	6	\$52.04
52-574	3/8	3-1/2	3/8	6	\$57.88



## ONSRUD

### 52-600

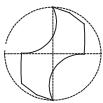


#### Double Flute - Solid Carbide Upcut Spiral O Flute

Low helix geometry designed to cut soft and hard plastic with a smooth finish and upward chip flow.

**Usage** Soft and hard plastic, acrylic, nylon, ABS, PE, acetal, PET, HDPE, UHMW, polycarbonate and solid surface

**Material** SP HP SSP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-622	1/4	3/8	1/4	2-1/2	\$20.32
52-624	1/4	3/4	1/4	2-1/2	\$21.72
52-638	3/8	1	3/8	3	\$42.12
52-650	1/2	1-1/8	1/2	3-1/2	\$73.16
52-652	1/2	1-5/8	1/2	3-1/2	\$86.80
52-655	1/2	2-1/8	1/2	4-1/2	\$109.92
52-660	5/8	2-1/8	5/8	5	\$156.16
52-664	3/4	3-1/8	3/4	6	\$223.32

HELIX ANGLE ≈ 11°

### 52-700

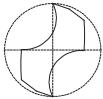


#### Double Flute - Solid Carbide Upcut Spiral O Flute

High helix geometry designed to cut soft plastic with a smooth finish and upward chip flow. Special point geometry for improved bottom finish.

**Usage** Soft plastic, extruded acrylic, nylon, ABS, PE, acetal, PET, HDPE, UHMW, polycarbonate, solid surface and foam.

**Material** SP SSF FP



#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-742	12mm	35mm	12mm	100mm	\$94.96
52-744	12mm	45mm	12mm	100mm	\$100.40
52-746	12mm	55mm	12mm	100mm	\$107.24
52-752	16mm	45mm	16 mm	120mm	\$139.60
52-754	16mm	55mm	16mm	120mm	\$142.64
52-764	20mm	65mm	20mm	125mm	\$190.48

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-703	1/8	1/2	1/4	2	\$34.96
52-707	1/4	7/8	1/4	3	\$40.92
52-708	3/16	3/8	3/16	2-1/2	\$37.40
52-700	1/4	1-1/4	1/4	3	\$42.84
52-709	3/8	1	3/8	3	\$64.40
52-710	3/16	5/8	1/4	2-1/2	\$38.52
52-701	3/8	1-1/2	3/8	4	\$73.72
52-702	1/2	1-1/4	1/2	4	\$79.36
52-704	1/2	1-3/4	1/2	4	\$87.36
52-706	1/2	2-1/8	1/2	4	\$103.28
52-712	5/8	1-3/4	5/8	5	\$153.12
52-714	5/8	2-1/4	5/8	5	\$158.84
52-726	3/4	1-3/4	3/4	5	\$169.92
52-724	3/4	2-1/2	3/4	5	\$184.84
52-728	3/4	4	3/4	6-1/2	\$285.40
52-734	1	4	1	6-1/2	\$509.32

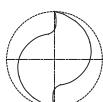
HELIX ANGLE ≈ 22°

#### Double Flute - Solid Carbide Upcut Extreme Heavy Duty Standard

Developed for demanding applications where upward chip removal, tool rigidity and long life are essential to success.

**Usage** Natural wood and wood composites

**Material** SW HW CW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
52-910	1/4	7/8	1/4	2-1/2	\$18.48
52-914	1/4	1-1/4	1/4	3	\$33.60
52-923	3/8	1-1/8	3/8	3	\$35.88
52-936	1/2	1-1/4	1/2	3	\$46.28

HELIX ANGLE ≈ 30°

### 52-900



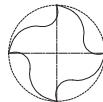
**ONSRUD****Three Flute - Solid Carbide Straight****53-000**

Designed for routing extremely hard materials or when spindle RPM is lower than normal for routing.

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
53-080	1/4	3/4	1/4	2-1/2	\$26.32

**Usage** Composites**Material** CP**Three & Four Flute - Solid Carbide Spiral for Glass-Reinforced Plastic (Coated)****54-20**

Updated line of three and four flute tools for machining glass-reinforced plastic. Geometry has been optimized to shear the glass fibers while creating a chip which removes heat from the cut to avoid melting of the material. Tools are coated to withstand the abrasive characteristics inherent to glass-reinforced plastic (GRP).

**Usage** Fiberglass and Composites**Material** CP**NEW****UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	FLUTES	Price
54-205	1/8	1/2	1/4	2-1/2	3	\$56.96
54-210	3/16	5/8	1/4	2-1/2	3	\$58.80
54-220	1/4	3/4	1/4	2-1/2	4	\$64.28
54-230	3/8	1-1/8	3/8	3	4	\$91.84
54-240	1/2	1-1/8	1/2	3-1/2	4	\$119.40

**METRIC UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	FLUTES	Price
54-260	6mm	19mm	6mm	76mm	4	\$64.28
54-266	8mm	22mm	8mm	76mm	4	\$88.56
54-270	10mm	25mm	10mm	76mm	4	\$98.40
54-276	12mm	25mm	12mm	76mm	4	\$119.40

**DOWNCUT**

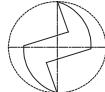
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	FLUTES	Price
54-206	1/8	1/2	1/4	2-1/2	3	\$56.96
54-211	3/16	5/8	1/4	2-1/2	3	\$58.80
54-221	1/4	3/4	1/4	2-1/2	4	\$64.28
54-231	3/8	1-1/8	3/8	3	4	\$91.84
54-241	1/2	1-1/8	1/2	3-1/2	4	\$119.40

**METRIC DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	FLUTES	Price
54-261	6mm	19mm	6mm	76mm	4	\$64.28
54-267	8mm	22mm	8mm	76mm	4	\$88.56
54-271	10mm	25mm	10mm	76mm	4	\$98.40
54-277	12mm	25mm	12mm	76mm	4	\$119.40

**56-000****Double Flute - Solid Carbide Straight**

Designed to rout composite plastic.

**Usage** Composite plastic**Material** HP CP SSP FP

\* These tools are designed and toleranced for air routers with guide bushings.

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-040	1/8	1/2	1/4	2	\$22.52
56-060	3/16	5/8	1/4	2	\$22.52
56-080	1/4	3/4	1/4	2-1/2	\$22.52
56-084*	1/4	3/4	1/4	3-1/4	\$26.32
56-100	5/16	13/16	3/8	2-1/2	\$38.28
56-160	1/2	1	1/2	3	\$63.88

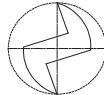
**ONSRUD****Double Flute - Solid Carbide Straight****56-000P**

Designed specifically to rout harder, more rigid plastics.

**Usage** Foam, fiberglass, phenolic, acrylic, nylon, PVC, ABS, acetal and solid surface

**Material**

HP CP SSP FP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-041	1/8	1/4	1/4	2	\$21.52
56-061	3/16	3/8	1/4	2	\$21.52
56-062	3/16	5/8	1/4	2	\$22.52
56-062L	3/16	5/8	1/4	2	\$24.80
56-063*	3/16	5/8	1/4	4	\$42.04
56-081	1/4	3/8	1/4	2-1/2	\$22.64
56-082	1/4	3/4	1/4	2-1/2	\$23.68
56-082L	1/4	3/4	1/4	2-1/2	\$26.28
56-086*	1/4	1-1/4	1/4	4	\$44.32
56-121	3/8	5/8	3/8	2-1/2	\$43.16
56-122	3/8	7/8	3/8	2-1/2	\$44.64
56-122L	3/8	7/8	3/8	2-1/2	\$49.28
56-124*	3/8	1-5/8	3/8	6	\$68.64
56-162	1/2	1	1/2	3	\$70.28
56-162L	1/2	1	1/2	3	\$77.32
56-164*	1/2	2-1/8	1/2	6	\$95.92

\* These tools are designed and toleranced for air routers with guide bushings.

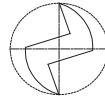
L = Left Hand Rotation

**56-200****Double Flute - Solid Carbide Straight Wood Rout**

Provides a superior finish in a variety of wood materials and optimum cutter life.

**Usage** Natural wood and wood composites

**Material** SW HW CW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-240	1/8	1/2	1/4	2	\$19.80
56-250	5/32	5/8	1/4	2	\$19.80
56-260	3/16	3/4	1/4	2	\$19.80
56-270	7/32	3/4	1/4	2-1/2	\$20.00
56-280	1/4	7/8	1/4	2-1/2	\$22.52
56-285	1/4	1	1/4	2-1/2	\$23.08
56-287	1/4	1-1/8	1/4	3	\$25.72
56-300	5/16	1-1/8	5/16	3	\$38.28
56-310	5/16	1-1/8	1/2	3	\$63.88
56-320	3/8	1-1/8	3/8	3	\$38.28
56-330	3/8	1-1/4	1/2	3	\$63.88
56-360	1/2	1-1/8	1/2	3	\$61.28
56-365	1/2	1-5/8	1/2	3-1/2	\$63.88
56-390	3/4	1-5/8	3/4	4	\$191.60

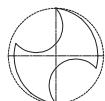
## ONSRUD

### Double Flute - Solid Carbide Straight O Flute

Designed with free cutting O flute geometry along with a double flute design for smooth finish.

**Usage** Polycarbonate, ABS, HIPS, HDPE, PET, acrylic, polystyrene, polypropylene, PE, PVC, acetal, UHMW

**Material**



#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-430	4 mm	16 mm	6 mm	64 mm	\$19.40
56-431	5 mm	20 mm	6 mm	64 mm	\$19.40
56-432	6 mm	25 mm	6 mm	64 mm	\$21.76
56-434	8 mm	25 mm	8 mm	76 mm	\$40.60
56-436	10 mm	35 mm	10 mm	88 mm	\$46.68
56-438	12 mm	35 mm	12 mm	88 mm	\$62.32

56-430

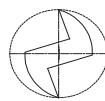


### Double Flute - Solid Carbide Straight

Designed specifically to rout harder, more rigid plastics

**Usage** Phenolic, acrylic, nylon, PVC, ABS, acetal and solid surface

**Material**



#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-450	4 mm	16 mm	6 mm	64 mm	\$30.40
56-451	5 mm	20 mm	6 mm	64 mm	\$30.40
56-452	6 mm	25 mm	6 mm	64 mm	\$32.52
56-454	8 mm	25 mm	8 mm	76 mm	\$36.60
56-456	10 mm	35 mm	10 mm	88 mm	\$76.80
56-458	12 mm	35 mm	12 mm	88 mm	\$83.48

56-450

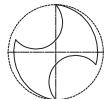


### Double Flute - Solid Carbide O Flute Straight

Designed with free cutting O flute geometry along with a double flute design for smooth finish.

**Usage** Polycarbonate, ABS, HIPS, HDPE, PET, acrylic, polystyrene, polypropylene, PE, PVC, acetal, UHMW

**Material**



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
56-610	1/8	5/16	1/4	2	\$20.84
56-612	1/8	1/2	1/4	2	\$21.72
56-614	1/8	5/8	1/4	4	\$31.04
56-616	3/16	3/8	1/4	2	\$20.84
56-618	3/16	5/8	1/4	2	\$21.72
56-620	3/16	1	1/4	4	\$31.04
56-624	1/4	3/8	1/4	2-1/2	\$21.72
56-625	1/4	1	1/4	2-1/2	\$23.84
56-625L	1/4	1	1/4	2-1/2	\$26.28
56-626	1/4	1	1/4	3-1/4	\$26.28
56-628	1/4	1-1/4	1/4	4	\$43.36
56-638	3/8	7/8	3/8	2-1/2	\$43.96
56-639	3/8	1	3/8	4	\$53.56
56-650	1/2	1	1/2	3	\$68.36
56-652	1/2	1	1/2	4	\$72.44
56-654	1/2	1-3/4	1/2	4	\$84.60
56-655	1/2	2-1/8	1/2	6	\$95.56

56-600



L = Left Hand Rotation

## ONSURUD

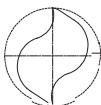
### 57-000 Double Flute - Solid Carbide Downcut Spiral



Designed as a general purpose spiral with several times the life of their high speed counterparts. They are used when a downward chipflow action is preferred.

**Usage** Aluminum and composite plastic

**Material**



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-040	1/8	1/2	1/4	2	\$22.52
57-060	3/16	5/8	1/4	2	\$22.52
57-080	1/4	3/4	1/4	2-1/2	\$22.52
57-120	3/8	7/8	3/8	2-1/2	\$38.28
57-160	1/2	1	1/2	3	\$63.88

HELIX ANGLE ≈ 30°

### 57-200 Double Flute - Solid Carbide Downcut Spiral Wood Rout



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

**Usage** Natural wood and wood composites

**Material** SW HW CW

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price	Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-244	1/8	1/2	1/8	2	\$20.96	57-320	3/8	1-1/8	3/8	3	\$37.52
57-240	1/8	1/2	1/4	2	\$19.40	57-325	3/8	1-1/4	3/8	3	\$40.08
57-240L	1/8	1/2	1/4	2	\$21.40	57-330	3/8	1-1/4	1/2	3	\$62.64
57-251	5/32	1/2	1/4	2-1/2	\$21.32	57-340	7/16	1	1/2	3	\$60.12
57-250	5/32	5/8	1/4	2	\$19.40	57-360	1/2	1-1/8	1/2	3	\$60.12
57-260	3/16	3/4	1/4	2	\$19.40	57-362	1/2	1-1/4	1/2	3-1/2	\$62.64
57-261	3/16	3/4	1/4	2-1/2	\$21.32	57-365	1/2	1-5/8	1/2	3-1/2	\$62.64
57-270	7/32	3/4	1/4	2-1/2	\$19.64	57-365L	1/2	1-5/8	1/2	3-1/2	\$68.88
57-280	1/4	7/8	1/4	2-1/2	\$21.88	57-367	1/2	2-1/8	1/2	4	\$68.88
57-285	1/4	1	1/4	2-1/2	\$22.68	57-370	17/32	1-1/8	1/2	3	\$150.32
57-285L	1/4	1	1/4	2-1/2	\$24.92	57-380	5/8	1-5/8	5/8	3-1/2	\$150.32
57-287	1/4	1-1/8	1/4	3	\$25.20	57-385	5/8	2-1/8	5/8	4	\$162.84
57-290	9/32	1	5/16	2-1/2	\$37.52	57-390	3/4	1-5/8	3/4	4	\$187.76
57-300	5/16	1-1/8	5/16	3	\$37.52	57-395	3/4	2-1/8	3/4	4	\$194.12
57-310	5/16	1-1/8	1/2	3	\$62.64	57-395L	3/4	2-1/8	3/4	4	\$213.60
57-310L	5/16	1-1/8	1/2	3	\$68.88	HELIX ANGLE ≈ 30°					
57-318*	3/8	1	3/8	3	\$31.32	* Special Point (Improved Bottom Finish)					

L = Left Hand Rotation

### 57-200M Double Flute - Marathon Wood Rout Downcut (Coated)

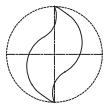


The longest running downcut in the industry due to advancements in geometry and the addition of a unique Onsrud coating.

**Usage** Wood composites

**Material** CW

**NEW**



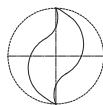
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-278MD	1/4	3/8	1/4	2-1/2	\$34.44
57-279MD	1/4	5/8	1/4	2-1/2	\$44.68
57-317MD	3/8	7/8	3/8	3	\$54.92
57-359MD	1/2	7/8	1/2	3	\$78.72

**ONSRUD****57-400****Double Flute - Solid Carbide Downcut  
Spiral Wood Rout**

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

**Usage** Natural wood and wood composites

**Material** SW HW CW

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-410	4 mm	16 mm	6 mm	64 mm	\$19.44
57-411	5 mm	20 mm	6 mm	64 mm	\$19.44
57-412	6 mm	25 mm	6 mm	64 mm	\$21.84
57-414	8 mm	25 mm	8 mm	64 mm	\$40.68
57-416	10 mm	35 mm	10 mm	76 mm	\$46.92

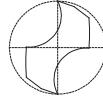
HELIX ANGLE ≈ 30°

**Double Flute - Solid Carbide Downcut Spiral O Flute****57-600**

Designed to cut plastic with a smooth finish and downward chip flow.

**Usage** Acrylic, nylon, ABS, PE, acetal, PET, HDPE, UHMW, polycarbonate and solid surface

**Material** SP HP SSP

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-623	1/4	3/8	1/4	2-1/2	\$20.76
57-625	1/4	3/4	1/4	2-1/2	\$22.20
57-637	3/8	1	3/8	3	\$42.96
57-651	1/2	1-1/8	1/2	3-1/2	\$74.60

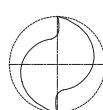
HELIX ANGLE ≈ 10-11°

**Double Flute - Solid Carbide Downcut Extreme Heavy Duty Standard****57-900**

Designed for routing where extreme loads are placed upon the cutting tools and when extra part hold down is required.

**Usage** Natural wood and wood composites

**Material** SW HW CW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
57-910	1/4	7/8	1/4	2-1/2	\$18.48
57-921	3/8	7/8	3/8	3	\$34.08
57-923	3/8	1-1/8	3/8	3	\$35.88
57-924	3/8	1-1/4	3/8	3	\$37.04
57-936	1/2	1-1/4	1/2	3	\$46.28
57-940	1/2	1-5/8	1/2	3-1/2	\$62.52

HELIX ANGLE ≈ 30°



## ONSRUD

### Three Flute - Solid Carbide High Helix Hogger

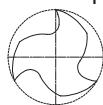
**60-000**



Designed with unique scalloped cutting edge design for extremely fast machining and roughing. Faster chip removal with upcuts. Better hold down with downcuts.

**Usage** Natural wood & wood composites, hard & soft plastic and plastic composites

**Material** SW HW CW



#### UPCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-001	3/8	1-1/8	3/8	3-1/2	\$74.36
60-005	1/2	1-1/8	1/2	3-1/2	\$101.84
60-007	1/2	1-5/8	1/2	4	\$104.12
60-009	5/8	1-5/8	5/8	4	\$207.76
60-011	5/8	2-1/8	5/8	5	\$219.96
60-017	3/4	1-5/8	3/4	4	\$250.52
60-019	3/4	2-1/8	3/4	5	\$268.76

HELIX ANGLE ≈ 30°

#### DOWNCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-002	3/8	1-1/8	3/8	3-1/2	\$74.36
60-006	1/2	1-1/8	1/2	3-1/2	\$101.84
60-008	1/2	1-5/8	1/2	4	\$104.12
60-012	5/8	2-1/8	5/8	5	\$219.96
60-018	3/4	1-5/8	3/4	4	\$250.52
60-020	3/4	2-1/8	3/4	5	\$268.76

**60-000**

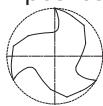


### Three Flute - Solid Carbide Low Helix Hogger

Designed with unique scalloped cutting geometry which provides extremely fast roughing, lower horsepower requirements, longer tool life, and reduced chipping in solid wood materials.

**Usage** Natural wood & wood composites, hard & soft plastic and plastic composites

**Material** SW HW CW



#### UPCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-037	3/8	1-1/8	3/8	3-1/2	\$77.08
60-053	1/2	1-1/8	1/2	3-1/2	\$104.92
60-051	1/2	1-5/8	1/2	4	\$107.56
60-061	5/8	2-1/8	5/8	5	\$225.44
60-073	3/4	1-5/8	3/4	4	\$256.12
60-071	3/4	2-1/8	3/4	5	\$275.52

HELIX ANGLE ≈ 10°

#### DOWNCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-038	3/8	1-1/8	3/8	3-1/2	\$77.08
60-054	1/2	1-1/8	1/2	3-1/2	\$104.92
60-052	1/2	1-5/8	1/2	4	\$107.56
60-074	3/4	1-5/8	3/4	5	\$256.76
60-072	3/4	2-1/8	3/4	5	\$275.52

## ONSRUD

### Three Flute - Solid Carbide Upcut Lock Mortise

The scalloped upcut cutting edge design and extra spinback provide fast material removal in deep cuts for horizontal and vertical lock mortise routing.

**Usage** Natural wood and wood composites

**Material** SW HW CW MT

Part Number	Cutting DIA	Flute LGTH	Max DOC	SHK DIA	OAL	Price
60-090	5/8	2	4-1/2	5/8	6-1/2	\$359.48

HELIX ANGLE  $\approx 30^\circ$

#### METRIC

Part Number	Cutting DIA	Flute LGTH	Max DOC	SHK DIA	OAL	Price
60-091	16 mm	50 mm	114 mm	16 mm	170 mm	\$516.00

HELIX ANGLE  $\approx 30^\circ$

**60-090**



### Double & Three Flute - Marathon Compression Spiral (Coated)

**60-100MC**

The LMT Onsrud Marathon is the longest running compression tool due to advancements in cutting geometry and the addition of a unique Onsrud coating. The coating is formulated to protect the cutting edge from the high temperatures generated when routing laminated and composite wood products.

**Usage** Double-sided laminated and Veneerd Wood Composite

**Material** CW

#### TWO FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-123MC*	3/8	7/8	.200	3/8	3	\$4.00
60-124MC	3/8	1-1/8	.406	3/8	3	\$8.72
60-163MC*	1/2	7/8	.200	1/2	3	\$91.88
60-169MC	1/2	1-1/8	.562	1/2	3	\$93.44
60-171MC	1/2	1-3/8	.625	1/2	3-1/2	\$99.64
60-173MC*	1/2	1-3/8	.200	1/2	3-1/2	\$102.68
60-172MC	1/2	1-5/8	.750	1/2	4	\$109.88

\* MORTISE COMPRESSION

**NEW**



#### THREE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-126MC*	3/8	7/8	.200	3/8	3	\$103.76
60-177MC*	1/2	1-3/8	.200	1/2	3-1/2	\$122.12

\* MORTISE COMPRESSION

### Double Flute - Solid Carbide Chipbreaker/Finisher Compression Spiral

**60-100C**

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-123C	3/8	7/8	.188	3/8	3	\$89.24
60-124C	3/8	1-1/8	.406	3/8	3	\$87.52
60-163C*	1/2	7/8	.200	1/2	3	\$103.56
60-169C	1/2	1-1/8	.562	1/2	3	\$103.40
60-171C	1/2	1-3/8	.625	1/2	3-1/2	\$110.32
60-172C	1/2	1-5/8	.750	1/2	4	\$117.36

HELIX ANGLE  $\approx 30^\circ$

MORTISE COMPRESSION\*

Designed to give the optimum edge finish of the compression spiral bits along with the increased feed rates of the chipbreaker/finisher design.

**Usage** Double sided laminated, veneered, natural wood and wood composites

**Material** HW CW LW



## ONSRUD

### 60-100MW



### Single, Double & Three Flute - Solid Carbide Max Life Compression Spiral

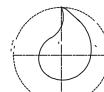
Designed for maximum life when cutting in high-wear applications. Unique geometries and carbides improve the wear characteristics of the tool under abrasive applications with superior part finish. Mortise compressions are designed with short upcut to allow mortise cut with downcut action.

**Usage**

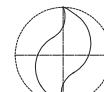
Double sided laminated and veneered materials

**Material**

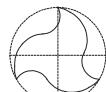
CW



Single Flute



Double Flute



Three Flute

#### DOUBLE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-113MW*	1/4	7/8	.188	1/4	2-1/2	\$51.40
60-123MW*	3/8	7/8	.188	3/8	3	\$60.12
60-124MW	3/8	1-1/8	.406	3/8	3	\$67.44
60-127MW*	3/8	1-1/8	.188	3/8	3	\$67.44
60-163MW*	1/2	7/8	.200	1/2	3	\$75.28
60-169MW	1/2	1-1/8	.562	1/2	3	\$75.84
60-171MW	1/2	1-3/8	.625	1/2	3-1/2	\$80.88
60-172MW	1/2	1-5/8	.750	1/2	4	\$86.56
60-173MW*	1/2	1-3/8	.200	1/2	3-1/2	\$83.36
60-181MW	1/2	2-1/8	1	1/2	5	\$128.32
60-186MW	5/8	2-1/4	1	5/8	5	\$218.56
60-196MW	3/4	1-7/8	.750	3/4	4	\$196.68
60-194MW	3/4	2-1/4	1	3/4	5	\$224.68

HELIX ANGLE ≈ 30°

\*MORTISE COMPRESSION

#### SINGLE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-102MW	1/8	3/8	.205	1/4	2-1/2	\$44.42
60-106MW	3/16	5/8	.300	1/4	2-1/2	\$45.00
60-111MW*	1/4	7/8	.175	1/4	2-1/2	\$49.60
60-120MW*	3/8	1-1/8	.200	3/8	3	\$55.12
60-167MW*	1/2	1-1/8	.200	1/2	3	\$70.76

HELIX ANGLE ≈ 30°

\*MORTISE COMPRESSION

#### THREE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upper Cut LGTH	SHK DIA	OAL	Price
60-125MW	3/8	1-1/8	.500	3/8	3	\$69.80
60-126MW*	3/8	7/8	.200	3/8	3	\$84.24
60-176MW*	1/2	7/8	.200	1/2	3	\$82.64
60-177MW*	1/2	1-3/8	.200	1/2	3-1/2	\$91.84

\*MORTISE COMPRESSION

### 60-100DC

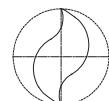


### Double Flute - Solid Carbide Compression Spiral

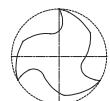
The Tuff Core is an innovative line of solid carbide compression spirals that utilize unique dual grade carbide. The harder outer shell is reinforced by a tough inner core which makes the tool stronger and reduces tool breakage.

**Usage** Double sided laminated, and veneered materials

**Material** CW



Double Flute



Three Flute

#### DOUBLE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-123DC*	3/8	7/8	.188	3/8	3	\$78.16
60-124DC	3/8	1-1/8	.406	3/8	3	\$87.80

#### THREE FLUTE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-126DC*	3/8	7/8	.200	3/8	3	\$109.52

\* MORTISE COMPRESSION

## ONSRUD

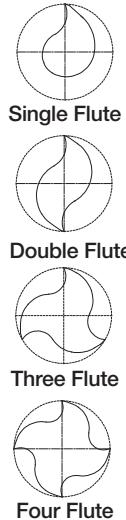
### Single, Double, Three & Four Flute - Solid Carbide Compression Spiral

Compression design for optimum edge finish on both sides of laminated materials. Designed for low speed applications.

**Usage** Double sided laminated, veneered, natural wood and wood composites

**Material** LW HW CW SW MT

**60-100**



#### SINGLE FLUTE - SE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-110	1/4	7/8	.531	1/4	2-1/2	\$56.28
60-111*	1/4	7/8	.175	1/4	2-1/2	\$58.44
60-120	3/8	1-1/8	.500	3/8	3	\$68.88
60-160	1/2	1	.406	1/2	3	\$93.88
60-165	1/2	1-5/8	.781	1/2	3-1/2	\$100.20

HELIX ANGLE ≈ 30°

\*MORTISE COMPRESSION

#### DOUBLE FLUTE - DE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-112	1/4	7/8	.531	1/4	2-1/2	\$64.36
60-113*	1/4	7/8	.188	1/4	2-1/2	\$62.88
60-123*	3/8	7/8	.188	3/8	3	\$82.40
60-124	3/8	1-1/8	.406	3/8	3	\$79.60
60-169	1/2	1-1/8	.562	1/2	3	\$93.88
60-172	1/2	1-5/8	.750	1/2	4	\$106.44
60-173*	1/2	1-3/8	.200	1/2	3-1/2	\$104.72
60-186	5/8	2-1/4	1	5/8	5	\$227.32

HELIX ANGLE ≈ 30°

\* MORTISE COMPRESSION

#### THREE FLUTE - TE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-125	3/8	1-1/8	.500	3/8	3	\$95.32
60-126*	3/8	7/8	.200	3/8	3	\$95.32
60-174	1/2	1-1/8	.500	1/2	3	\$112.76
60-175	1/2	1-5/8	.750	1/2	3-1/2	\$125.40
60-176*	1/2	7/8	.200	1/2	3	\$112.76
60-177*	1/2	1-3/8	.200	1/2	3-1/2	\$125.40

HELIX ANGLE ≈ 30°

\* MORTISE COMPRESSION

#### FOUR FLUTE - FE

Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-563*	1/2	7/8	.200	1/2	3	\$138.04
60-569	1/2	1-1/8	.500	1/2	3	\$142.80
60-573*	1/2	1-3/8	.200	1/2	3-1/2	\$156.36
60-572	1/2	1-5/8	.750	1/2	4	\$163.88

HELIX ANGLE ≈ 30°

\* MORTISE COMPRESSION

**ONSRUD****60-200****Three Flute - Solid Carbide Low Helix Finisher**

Designed for perfect balance and ultra smooth finish over a wide speed range.

**Usage** Natural wood, plastic, composite plastic and solid surface

**Material** SW HW CW HP SSP

**UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-239	1/4	3/8	1/4	3	\$32.60
60-241	1/4	7/8	1/4	3	\$35.64
60-243	3/8	5/8	3/8	3	\$67.12
60-245	3/8	1-1/8	3/8	3	\$69.56
60-249	1/2	1-1/8	1/2	3-1/2	\$77.40
60-253	1/2	1-5/8	1/2	4	\$85.56
60-251	1/2	2-1/8	1/2	4-1/2	\$81.52
60-269	3/4	1-5/8	3/4	4	\$188.44
60-271	3/4	2-1/8	3/4	5	\$198.60
60-277	3/4	3-1/8	3/4	6	\$224.12

HELIX ANGLE ≈ 10°

**DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-240	1/4	3/8	1/4	3	\$32.60
60-242	1/4	7/8	1/4	3	\$35.64
60-244	3/8	5/8	3/8	3	\$67.12
60-246	3/8	1-1/8	3/8	3	\$69.56
60-250	1/2	1-1/8	1/2	3-1/2	\$77.40
60-254	1/2	1-5/8	1/2	4	\$85.56
60-252	1/2	2-1/8	1/2	4-1/2	\$81.52
60-270	3/4	1-5/8	3/4	5	\$188.44
60-272	3/4	2-1/8	3/4	5	\$198.60
60-278	3/4	3-1/8	3/4	6	\$224.12

HELIX ANGLE ≈ 10°

**Double Flute - Solid Carbide Chipbreaker Finisher****60-300**

For faster feed rates than a conventional two flute with a smooth finish.

**Usage** Natural wood and wood composites

**Material** HW CW

**UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-307	3/8	1-1/8	3/8	3	\$70.92
60-311	1/2	1-1/8	1/2	3	\$96.72
60-313	1/2	1-5/8	1/2	3-1/2	\$103.24
60-317	1/2	1-7/8	1/2	3-1/2	\$109.72
60-315	1/2	2-1/8	1/2	4	\$116.20
60-321	5/8	2-1/8	5/8	4	\$225.44
60-325	3/4	2-1/8	3/4	4	\$256.76

HELIX ANGLE ≈ 30°

**DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-308	3/8	1-1/8	3/8	3	\$70.92
60-312	1/2	1-1/8	1/2	3	\$96.72
60-314	1/2	1-5/8	1/2	3-1/2	\$103.24
60-318	1/2	1-7/8	1/2	3-1/2	\$109.72
60-316	1/2	2-1/8	1/2	4	\$116.20
60-322	5/8	2-1/8	5/8	4	\$225.44
60-326	3/4	2-1/8	3/4	4	\$256.76

## ONSRUD

### Three Flute - Solid Carbide Chipbreaker Finisher

60-350

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

**Usage Material**

Natural wood and wood composites

**SW HW CW**

#### UPCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-337	3/8	1-1/8	3/8	3	\$77.24
60-351	1/2	1-1/8	1/2	3	\$104.56
60-353	1/2	1-5/8	1/2	3-1/2	\$109.68
60-361	5/8	1-5/8	5/8	4	\$225.44
60-371	3/4	1-5/8	3/4	4	\$269.32
60-375	3/4	3-1/8	3/4	6	\$425.52

HELIX ANGLE  $\approx 30^\circ$



#### DOWNCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-338	3/8	1-1/8	3/8	3	\$77.24
60-350	1/2	1-1/8	1/2	3	\$104.56
60-354	1/2	1-3/8	1/2	3-1/2	\$107.00
60-352	1/2	1-5/8	1/2	3-1/2	\$109.68
60-360	5/8	1-5/8	5/8	4	\$225.44
60-370	3/4	1-5/8	3/4	4	\$269.32
60-372	3/4	2-1/4	3/4	5	\$290.20
60-374	3/4	3-1/8	3/4	6	\$425.52

### Four Flute - Solid Carbide High Velocity Compression Spiral

60-600

Combine a roughing and finishing cut in one tool for rapid feed rates with a good finish.

**Usage** High velocity routing of double sided laminated and veneered, natural wood and wood composites

**Material** SW HW CW LW



Part Number	Cutting DIA	Flute LGTH	Upcut Flute LGTH	SHK DIA	OAL	Price
60-669	1/2	1-1/8	.500	1/2	3	\$157.40
60-671	1/2	1-3/8	.500	1/2	3-1/2	\$171.52

HELIX ANGLE  $\approx 30^\circ$

### Four Flute - Solid Carbide High Velocity Upcut Spiral

60-700

Combine a roughing and finishing cut with upcut cutting action in one tool for rapid feed rates with a good finish.

**Usage** High velocity routing of double sided laminated and veneered, natural wood and wood composites

**Material** SW HW CW



#### UPCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-711	1/2	1-1/8	1/2	3-1/2	\$163.32
60-715	1/2	1-5/8	1/2	4	\$175.48
60-719	1/2	2-1/8	1/2	4-1/2	\$211.72
60-731	3/4	2-1/8	3/4	5	\$381.16

HELIX ANGLE  $\approx 30^\circ$

#### DOWNCUT

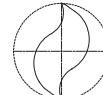
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-710	1/2	1-1/8	1/2	3-1/2	\$163.32
60-714	1/2	1-5/8	1/2	4	\$175.48
60-718	1/2	2-1/8	1/2	4-1/2	\$211.72
60-720	5/8	2-1/8	5/8	5	\$272.32

HELIX ANGLE  $\approx 30^\circ$

**60-800****ONSRUD****Double Flute - Solid Carbide Rougher**

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

**Usage** Natural wood and wood composites  
**Material** SW HW CW

**UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-815	3/8	1-3/8	3/8	3-1/2	\$81.04
60-825	1/2	1-3/8	1/2	3-1/2	\$95.56
60-829	1/2	1-7/8	1/2	4	\$104.60
60-841	5/8	2-5/8	5/8	5	\$157.88
60-847	3/4	2-7/8	3/4	6	\$266.88

HELIX ANGLE ≈ 20°

**DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-816	3/8	1-3/8	3/8	3-1/2	\$81.04
60-826	1/2	1-3/8	1/2	3-1/2	\$95.56
60-830	1/2	1-7/8	1/2	4	\$104.60
60-842	5/8	2-5/8	5/8	5	\$157.88
60-848	3/4	2-7/8	3/4	6	\$266.88

**60-900****Three Flute - Solid Carbide Extreme Heavy Duty Hogger**

Designed for heavy material removal operations where the cutter is subject to excessive cutting forces and finish is not a primary concern.

**Usage** Natural wood and wood composites, plastic composites  
**Material** SW HW CW

**UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-901	3/8	1-1/8	3/8	3	\$69.48
60-905	1/2	1-1/8	1/2	3	\$81.00
60-907	1/2	1-5/8	1/2	3-1/2	\$104.12
60-909	1/2	2-1/8	1/2	4	\$127.40
60-915	3/4	2-1/8	3/4	5	\$196.72

HELIX ANGLE ≈ 30°

**DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-902	3/8	1-1/8	3/8	3	\$69.48
60-906	1/2	1-1/8	1/2	3	\$81.00
60-908	1/2	1-5/8	1/2	3-1/2	\$104.12
60-910	1/2	2-1/8	1/2	4	\$127.40
60-916	3/4	2-1/8	3/4	5	\$196.72

**60-950****Double Flute - Solid Carbide Extreme Heavy Duty Chipbreaker/Finisher**

Designed to be fed very fast while withstanding excessive cutting forces and at the same time leaving a smooth finish.

**Usage** Natural wood and wood composites  
**Material** SW HW CW

**UPCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-951	3/8	1-1/8	3/8	3	\$43.92
60-955	1/2	1-1/8	1/2	3	\$51.00
60-957	1/2	1-5/8	1/2	3-1/2	\$64.76
60-959	1/2	2-1/8	1/2	4	\$76.40
60-965	3/4	2-1/8	3/4	5	\$162.00

HELIX ANGLE ≈ 30°

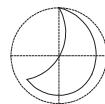
**DOWNCUT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
60-950	3/8	1-1/8	3/8	3	\$43.92
60-954	1/2	1-1/8	1/2	3	\$51.00
60-956	1/2	1-5/8	1/2	3-1/2	\$64.76
60-958	1/2	2-1/8	1/2	4	\$76.40

61-000

**ONSRUD****Single Flute - Solid Carbide Straight**

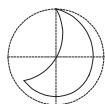
Designed to combine the fast free cutting of O flute geometry with the tool life available from solid carbide particularly in small diameters.

**Usage** Natural wood and aluminum**Material** SW A

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
61-040	1/8	1/2	1/4	2	\$27.60
61-050	5/32	9/16	1/4	2	\$27.60
61-060	3/16	5/8	1/4	2	\$27.60
61-070	7/32	5/8	1/4	2-1/2	\$27.60
61-080	1/4	3/4	1/4	2-1/2	\$27.60
61-090	9/32	3/4	3/8	2-1/2	\$47.36
61-100	5/16	13/16	3/8	2-1/2	\$47.36
61-120	3/8	7/8	3/8	2-1/2	\$47.36
61-140	7/16	1	1/2	3	\$72.32
61-160	1/2	1	1/2	3	\$72.32

**Single Flute - Solid Carbide Straight**

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

**Usage** Polycarbonate, polyethylene, polypropylene, polystyrene, PVC, extruded acrylic, HDPE, UHMW and hard plastic**Material** SP HP

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
61-041	1/8	5/16	1/4	2	\$23.48
61-044	1/8	1/2	1/8	2	\$21.56
61-042	1/8	1/2	1/4	2	\$25.16
61-042L	1/8	1/2	1/4	2	\$27.72
61-045	1/8	5/8	1/8	3	\$22.72
61-043	1/8	5/8	1/4	4	\$33.00
61-052	5/32	9/16	1/4	2	\$26.04
61-061	3/16	3/8	1/4	2	\$23.48
61-064	3/16	5/8	3/16	2-1/2	\$22.72
61-062	3/16	5/8	1/4	2	\$25.16
61-062L	3/16	5/8	1/4	2	\$27.72
61-063*	3/16	1	1/4	4	\$33.00
61-072	7/32	5/8	1/4	2-1/2	\$26.44
61-081	1/4	3/8	1/4	2-1/2	\$25.20
61-082	1/4	3/4	1/4	2-1/2	\$26.28
61-082L	1/4	3/4	1/4	2-1/2	\$28.88
61-083*	1/4	3/4	1/4	3-1/4	\$29.76
61-083L*	1/4	3/4	1/4	3-1/4	\$32.84
61-085*	1/4	1	1/4	3-1/4	\$31.12
61-084*	1/4	1-1/4	1/4	4	\$33.68
61-121	3/8	5/8	3/8	2-1/2	\$43.56
61-122	3/8	7/8	3/8	2-1/2	\$45.40
61-123*	3/8	1-5/8	3/8	6	\$66.84
61-162	1/2	1	1/2	3	\$65.56
61-164	1/2	1-5/8	1/2	4	\$75.04
61-166	1/2	2-1/8	1/2	6	\$89.52



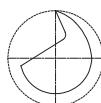
\*These tools are designed and toleranced for air routers with guide bushings.

L= left hand rotation

**ONSRUD****Single Flute - Solid Carbide Straight Wood Rout****61-200**

Designed to enhance operations where the benefits of spiral action are not needed. The single flute provides fast, free cutting with optimum cutter life.

**Usage** Natural wood and wood composites  
**Material** SW HW CW



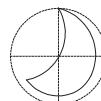
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
61-240	1/8	1/2	1/4	2	\$27.60
61-280	1/4	7/8	1/4	2-1/2	\$27.60
61-285	1/4	1	1/4	2-1/2	\$28.96
61-320	3/8	1-1/8	3/8	3	\$47.36

**61-400****Single Flute - Solid Carbide Straight**

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

**Usage** Polycarbonate, polyethylene, polypropylene, polystyrene, PVC, extruded acrylic, HDPE, UHMW and hard plastic

**Material** SP HP

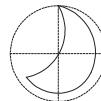
**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
61-410	4 mm	16 mm	6 mm	64 mm	\$27.32
61-411	5 mm	20 mm	6 mm	64 mm	\$27.32
61-412	6 mm	25 mm	6 mm	64 mm	\$27.32
61-414	8 mm	25 mm	8 mm	64 mm	\$38.00
61-418	12 mm	35 mm	12 mm	88 mm	\$74.16

**62-600****Single Flute - Solid Carbide Downcut Spiral O Flute**

High speed cutters for machining aluminum sheet material. These tools are optimized for use on high-speed CNC mills, high speed machining centers and CNC routers.

**Usage** Aluminum, plate, single & multi sheet  
**Material** A



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
62-602	1/16	1/4	1/8	1-1/2	\$23.60
62-604	1/8	1/4	1/8	1-1/2	\$24.80
62-606	1/8	1/4	1/4	2	\$29.24
62-610	1/8	1/2	1/4	2	\$31.04
62-614	3/16	3/8	1/4	2	\$31.04
62-620	1/4	3/8	1/4	2	\$30.96
62-622	1/4	3/4	1/4	2-1/2	\$33.56
62-624	1/4	1-1/4	1/4	3	\$48.28
62-630	5/16	3/4	1/2	3	\$81.68
62-625	3/8	3/4	3/8	3	\$57.36
62-631	1/2	1-1/8	1/2	3-1/2	\$88.52

HELIX ANGLE ≈ 22°

## ONSRUD

### Single Flute - Solid Carbide Downcut Spiral O Flute

(HP) Designed to provide a smooth finish in hard plastics with downward chip removal.

(SP) Designed to provide a smooth finish in soft plastic with downward chip removal.

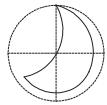
**Usage**    **(HP)**: Acrylic, nylon, PVC, polycarbonate and solid surface

**(SP)**: HDPE, HIPS, UHMW, ABS, polycarbonate, PE, polystyrene, polypropylene, acetal, acrylic, PET and solid surface

**Material** 62-700 62-750

62-800 62-850

**62-700**  
**62-750**  
**62-800**  
**62-850**



HARD PLASTIC	SOFT PLASTIC						
Part Number	Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price	
62-713*	62-763*	1/8	1/2	1/8	2	\$21.36	
62-712*	62-762*	1/8	1/2	1/4	2	\$23.76	
62-715*		5/32	9/16	1/4	2	\$23.20	
62-719*	62-769*	3/16	5/8	3/16	2	\$22.08	
62-718	62-768	3/16	5/8	1/4	2	\$23.76	
62-725	62-775	1/4	3/4	1/4	2-1/2	\$23.76	
62-726	62-776	1/4	1-1/4	1/4	3	\$28.16	
62-727*		1/4	1-1/2	1/4	3	\$28.36	
62-733	62-783	3/8	1-1/8	3/8	3	\$41.04	
62-740	62-790	1/2	1-5/8	1/2	3-1/2	\$104.48	

\* Tool balanced by design to run at spindle speeds up to 60,000 RPM

HARD PLASTIC	SOFT PLASTIC	METRIC				
Part Number	Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	HP Price
62-816*	62-866*	3mm	12mm	6mm	64mm	\$27.52
62-824*	62-874*	4mm	20mm	6mm	64mm	\$27.52
62-830	62-880	5mm	16mm	6mm	64mm	\$27.52
62-840		6mm	30mm	6mm	76mm	\$32.76
62-842*		6mm	38mm	6mm	76mm	\$35.16
62-844		8mm	25mm	8mm	64mm	\$35.16
62-846	62-896	8mm	38mm	8mm	76mm	\$35.92

HELIX ANGLE ≈ 21°

\* Tool balanced by design to run at spindle speeds up to 60,000 RPM

**63-000**

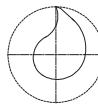


### Single Flute - Solid Carbide Upcut Spiral

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

**Usage** Fiberglass, phenolic and aluminum

**Material**



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-040	1/8	1/2	1/4	2	\$24.96
63-050	5/32	9/16	1/4	2	\$24.96
63-060	3/16	5/8	1/4	2	\$24.96
63-080	1/4	3/4	1/4	2-1/2	\$24.96
63-100	5/16	13/16	3/8	2-1/2	\$47.36
63-160	1/2	1	1/2	3	\$72.32

HELIX ANGLE ≈ 30°

63-200

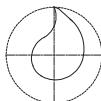
ONSRUD

**Single Flute - Solid Carbide Upcut Spiral Wood Rout**

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

**Usage** Natural wood and wood composites

**Material** SW HW CW



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-240	1/8	1/2	1/4	2	\$24.96
63-280	1/4	7/8	1/4	2-1/2	\$24.96

HELIX ANGLE = 30°

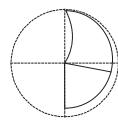
DIA LGTH DIA Number

63-400

**Single Flute - Solid Carbide Upcut for Soft Aluminum (Coated)**

These tools are specially designed to cut soft grades of aluminum and create a good edge finish. The improved cutting geometry properly forms and evacuates the chips preventing chip rewelding.

**Usage** Soft aluminum sheet, 3003 grade aluminum



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	COATING	Price
63-420	3/16	1/4	1/4	2	ZRN	\$55.84
63-430	1/4	1/4	1/4	2	ZRN	\$44.00

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	COATING	Price
63-450	5mm	6mm	6mm	64mm	ZRN	\$68.12
63-460	6mm	6mm	6mm	64mm	ZRN	\$50.16

**NEW****CUTTING PARAMETERS**

Part Number	RPM	Feed Rate
63-420	10,000	80 IPM
63-430	13,250	100 IPM
63-450	10,000	80 IPM
63-460	13,250	100 IPM

63-500

**Single Flute - Solid Carbide Upcut Spiral O Flute for Acrylic**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-505*	1/16	1/4	1/4	2	\$26.15
63-510	1/8	1/4	1/4	2	\$27.16
63-515*	1/8	1/2	1/4	2	\$27.16
63-520*	3/16	5/8	1/4	2	\$29.08
63-525	1/4	3/8	1/4	2-1/2	\$31.32
63-530	1/4	3/4	1/4	2-1/2	\$32.48
63-535	3/8	1-1/8	3/8	3	\$64.36

These tools are designed to cut acrylics and achieve long tool life. Our unique cutting geometry produces a smooth edge finish regardless if it is cast or extruded acrylic.



Acrylic Usage  
SP HP Material

Tool balanced by design to run at \*  
spindle speeds up to 60,000 RPM

## ONSRUD

### Single Flute - Solid Carbide Upcut Spiral O Flute

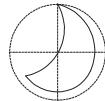
High speed cutters for machining aluminum sheet and block material. These tools are optimized for use on high-speed CNC mills, high speed machining centers and CNC routers.

**63-600**



**Usage** Aluminum plate and single/multi sheet aluminum

**Material** A



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-622	1/4	3/4	1/4	2-1/2	\$33.56
63-624	1/4	11/4	1/4	3	\$48.28
63-629	5/16	9/16	5/16	2-1/2	\$53.24
63-630	5/16	3/4	1/2	3	\$81.68
63-634	21/64	3/4	1/2	3	\$57.88
63-625	3/8	3/4	3/8	3	\$57.36
63-626	3/8	1-1/8	3/8	3	\$69.48
63-627	3/8	1-3/8	3/8	3-1/2	\$74.36
63-631	1/2	1-1/8	1/2	3-1/2	\$88.52
63-632	1/2	1-3/8	1/2	3-1/2	\$94.52

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-602	1/16	1/4	1/8	1-1/2	\$23.60
63-603	3/32	1/4	1/8	2	\$24.28
63-604	1/8	1/4	1/8	1-1/2	\$24.80
63-606	1/8	1/4	1/4	2	\$29.24
63-610	1/8	1/2	1/4	2	\$31.04
63-611	5/32	5/16	3/16	2	\$29.52
63-612	3/16	3/8	3/16	1-1/2	\$28.44
63-614	3/16	3/8	1/4	2	\$31.04
63-618	3/16	5/8	1/4	2	\$32.84
63-620	1/4	3/8	1/4	2	\$30.96

HELIX ANGLE ≈ 22°

## ONSRUD

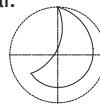
**63-700**  
**63-750**  
**63-800**  
**63-850**

**Single Flute - Solid Carbide Upcut Spiral O Flute**

(HP) Designed to provide a smooth finish in hard plastics with upward chip removal.

(SP) Designed to provide a smooth finish in soft plastic with upward chip removal.

**Usage** **(HP)**: Acrylic, nylon, PVC, polycarbonate and solid surface  
**(SP)**: HDPE, HIPS, UHMW, ABS, polycarbonate, PE, polystyrene, polypropylene, acetal, acrylic, PET and solid surface



**Material** 63-700 **HP SSP** 63-750 **SP HP SSP**  
 63-800 **HP SSP** 63-850 **SP HP SSP**

HARD PLASTIC	SOFT PLASTIC	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
Part Number	Part Number					
63-701*	63-751*	1/16	1/4	1/8	2	\$21.36
63-700*	63-750*	1/16	1/4	1/4	2	<b>\$23.76</b>
63-706*		1/8	5/8	1/4	2-1/2	\$26.88
63-707*		1/8	3/4	1/4	2-1/2	<b>\$28.52</b>
63-711*	63-761*	1/8	1/4	1/8	2	\$22.08
63-710*	63-760*	1/8	1/4	1/4	2	<b>\$23.76</b>
63-713*	63-763*	1/8	1/2	1/8	2	\$21.36
63-712*	63-762*	1/8	1/2	1/4	2	<b>\$23.76</b>
63-743**	63-793**	1/8	1/2	1/4	2	\$27.12
63-715*		5/32	9/16	1/4	2	<b>\$21.36</b>
63-716*	63-766*	3/16	3/8	3/16	2	\$21.36
63-717*	63-767*	3/16	3/8	1/4	2	<b>\$23.76</b>
63-719*	63-769*	3/16	5/8	3/16	2	\$22.08
63-718*	63-768*	3/16	5/8	1/4	2	<b>\$23.76</b>
63-720		7/32	3/4	1/4	2-1/2	\$23.20
63-724	63-774	1/4	3/8	1/4	2	<b>\$22.68</b>
63-744**	63-794**	1/4	3/4	1/4	2-1/2	\$27.12
63-725	63-775	1/4	3/4	1/4	2-1/2	<b>\$23.76</b>
63-726	63-776	1/4	1-1/4	1/4	3	\$28.16
63-727*	63-777	1/4	1-1/2	1/4	3	<b>\$28.36</b>
63-730	63-780	3/8	5/8	3/8	2-1/2	\$38.32
63-731	63-781	3/8	3/4	3/8	3	<b>\$38.76</b>
63-733	63-783	3/8	1-1/8	3/8	3	\$41.04
63-735	63-785	3/8	1-5/8	3/8	3-1/2	\$47.16
63-745**	63-795**	3/8	1-5/8	3/8	3-1/2	\$50.84
63-740	63-790	1/2	1-5/8	1/2	3-1/2	<b>\$94.52</b>
63-746**	63-796**	1/2	1-5/8	1/2	3-1/2	\$97.96

HELIX ANGLE ≈ 21°

\*\*Special Point for Improved Bottom Finish

HARD PLASTIC	SOFT PLASTIC	METRIC				
		Part Number	Part Number	Cutting DIA	Flute LGTH	SHK DIA
63-802				2mm	8mm	2mm
63-804*	63-854			2mm	8mm	6mm
63-806				2.5 mm	8mm	2.5mm
63-808*				2.5 mm	8mm	6mm
63-810*	63-860*			3mm	8mm	3mm
63-812*	63-862*			3mm	8mm	6mm
63-814*	63-864*			3mm	12mm	3mm
63-816*	63-866*			3mm	12mm	6mm
63-818*				4mm	8mm	4mm
63-820*	63-870*			4mm	12mm	4mm
63-822*				4mm	20mm	4mm
63-824*	63-874*			4mm	20mm	6mm
63-826*				4mm	30mm	4mm
63-828	63-878*			5mm	16mm	5mm
63-830	63-880			5mm	16mm	6mm
63-832				5mm	30mm	5mm
63-834				6mm	8mm	6mm
63-836	63-886			6mm	12mm	6mm
63-838	63-888			6mm	20mm	6mm
63-840				6mm	30mm	6mm
63-842*	63-892*			6mm	38mm	6mm
63-844	63-894*			8mm	25mm	8mm
63-846	63-896			8mm	38mm	8mm
63-848	63-898			10mm	30mm	10mm
63-849				10mm	35mm	10mm
63-847	63-897			12mm	38mm	12mm

HELIX ANGLE ≈ 21°

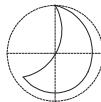
\* Tool balanced by design to run at spindle speeds up to 60,000 RPM

**ONSRUD****63-900****Single Flute - Solid Carbide Upcut Spiral O Flute**

High speed cutters for machining aluminum sheet and block material. These tools are optimized for use on high-speed CNC mills, high speed machining centers and CNC routers.

**Usage** Aluminum plate and single/multi sheet aluminum

**Material** 

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
63-904	2mm	6mm	6mm	64mm	\$40.56
63-908	2.5mm	6mm	6mm	64mm	\$40.56
63-912	3mm	8mm	6mm	64mm	\$41.48
63-916	3mm	12mm	6mm	64mm	\$41.48
63-918	4mm	8mm	4mm	64mm	\$32.76
63-924	4mm	20mm	6mm	64mm	\$44.28
63-930	5mm	16mm	6mm	64mm	\$41.48
63-934	6mm	8mm	6mm	64mm	\$43.00
63-938	6mm	20mm	6mm	64mm	\$46.28
63-944	8mm	25mm	8mm	64mm	\$53.36
63-946	8mm	38mm	8mm	76mm	\$61.24
63-948	10mm	30mm	10mm	76mm	\$74.28

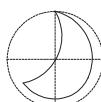
HELIX ANGLE ≈ 22°

**64-000****Single Flute - Solid Carbide Downcut Spiral O Flute**

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

**Usage** Plastic, wood, aluminum and solid surface

**Material**

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Print
64-012M	3mm	12mm	6mm	50mm	\$26.72
64-026M	6mm	32mm	6mm	76mm	\$40.88

HELIX ANGLE ≈ 21°

HELIX ANGLE ≈ 21°

\*Tool balanced by design to run at spindle speeds up to 60,000 RPM



**65-000**

## ONSRUD Single Flute - Solid Carbide Upcut Spiral O Flute

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

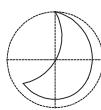
**Usage** Plastic, wood, aluminum and solid surface

**Material** SW HW CW SP HP SSP A

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
65-000*	1/16	1/4	1/8	2	\$27.92
65-010*	1/8	1/4	1/4	2	\$30.08
65-013*	1/8	1/2	1/8	2	\$28.60
65-012*	1/8	1/2	1/4	2	\$30.08
65-019*	3/16	5/8	3/16	2	\$33.32
65-018*	3/16	5/8	1/4	2	\$41.60
65-020*	3/16	1-1/4	1/4	3	\$48.08
65-021*	3/16	7/8	1/4	2-1/2	\$45.00
65-023	1/4	5/8	1/4	2	\$38.20

HELIX ANGLE ≈ 21°

\* Tool balanced by design to run at spindle speeds up to 60,000 RPM



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
65-025	1/4	7/8	1/4	2-1/2	\$44.28
65-026	1/4	1-1/4	1/4	3	\$54.12
65-027*	1/4	1-1/2	1/4	3	\$57.88
65-033	3/8	1-1/8	3/8	3	\$75.76

\* Tool balanced by design to run at spindle speeds up to 60,000 RPM

### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
65-000M	2mm	6mm	3mm	50mm	\$40.88
65-018M	5mm	16mm	6mm	64mm	\$34.68
65-023M	6mm	16mm	6mm	64mm	\$31.88
65-033M	10mm	29mm	10mm	76mm	\$62.20

HELIX ANGLE ≈ 22°

## Two & Four Flute - High Finish Ballnose for Plastics

The tool's unique geometry, specially designed point, and highly polished primary clearance and flute give the tool the ability to attain a surface finish of 28 Ra in mechanical plastic.

**Usage** Plastic

**Material** SP

**65-200B/  
65-300B**



**NEW**

### TWO FLUTE

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Flutes	Price
65-205B	1/16	1/4	1/8	2	2	\$60.40
65-210B	1/8	1/2	1/8	2-1/2	2	\$53.04
65-215B	3/16	1/2	1/4	2-1/2	2	\$68.20
65-220B	1/4	1/2	1/4	2-1/2	2	\$68.12
65-225B	1/4	1-1/8	1/4	3	2	\$71.20
65-235B	5/16	1/2	5/16	3	2	\$82.28
65-240B	5/16	1-1/8	5/16	3	2	\$85.32
65-250B	3/8	1-1/8	3/8	3	2	\$85.32
65-260B	1/2	1-1/8	1/2	3	2	\$103.40

### TWO FLUTE METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Flutes	Price
65-280B	3mm	12mm	3mm	64mm	2	\$55.56
65-285B	6mm	20mm	6mm	76mm	2	\$74.32
65-290B	8mm	25mm	8mm	76mm	2	\$81.16
65-295B	10mm	30mm	10mm	76mm	2	\$105.60

### FOUR FLUTE

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Flutes	Price
65-310B	1/4	1/2	1/4	3	4	\$71.24
65-315B	5/16	1/2	5/16	3	4	\$85.40
65-320B	3/8	5/8	3/8	3	4	\$91.84
65-325B	1/2	3/4	1/2	3	4	\$123.08

**ONSRUD****66-000****Solid Carbide Edge Rounding**

Designed for rounding the edge of sheets or parts.

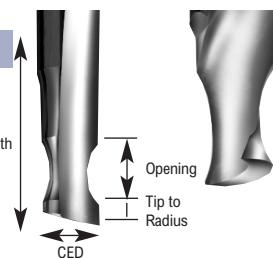
They come in both single flute and double flute.

**Usage** Edge rounding of parts**Material** SP HP SSP**SINGLE FLUTE STRAIGHT O-FLUTE**

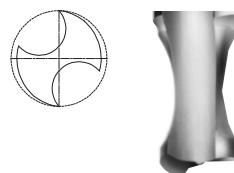
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Opening	Radius	Small Flute LGTH	Tip To RAD	Plastic Size	Price
66-082	1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	1/8	\$40.32
66-083	1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	3/16	\$40.32
66-084	1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	1/4	\$40.32

**SINGLE FLUTE SPIRAL O-FLUTE**

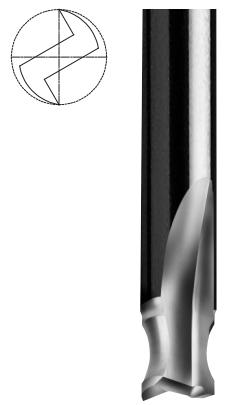
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Opening	Radius	Small Flute LGTH	Tip To RAD	Plastic Size	Price
66-085	1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	1/8	\$41.32
66-086	1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	3/16	\$41.32
66-087	1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	1/4	\$41.32

HELIX ANGLE  $\approx 22^\circ$ **DOUBLE FLUTE STRAIGHT O-FLUTE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Opening	Radius	Small Flute LGTH	Tip To RAD	Plastic Size	Price
66-092	1/4	3/8	1/4	2-1/2	5/32	1/8	.195	1/16	1/8	\$44.32
66-093	1/4	3/8	1/4	2-1/2	7/32	3/16	.180	1/16	3/16	\$44.32
66-094	1/4	3/8	1/4	2-1/2	9/32	1/4	.163	1/16	1/4	\$44.32

**DOUBLE FLUTE STRAIGHT V-FLUTE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Opening	Radius	Small Flute LGTH	Tip To RAD	Plastic Size	Price
66-120	3/8	3/8	3/8	2-1/2	5/32	1/8	.320	1/16	1/8	\$65.04
66-121	3/8	3/8	3/8	2-1/2	7/32	3/16	.305	1/16	3/16	\$65.04
66-122	3/8	3/8	3/8	2-1/2	9/32	1/4	.288	1/16	1/4	\$65.04
66-123	3/8	1/2	3/8	2-1/2	13/32	3/8	.255	1/16	3/8	\$65.04
66-160	1/2	3/8	1/2	3	5/32	1/8	.445	1/16	1/8	\$92.64
66-161	1/2	3/8	1/2	3	7/32	3/16	.430	1/16	3/16	\$92.64
66-162	1/2	3/8	1/2	3	9/32	1/4	.413	1/16	1/4	\$92.64
66-163	1/2	5/8	1/2	3	17/32	1/2	.347	1/16	1/2	\$92.64



**66-200****ONSRUD****Double Flute - Solid Carbide Rout and Chamfer**

Designed to provide up to a 1/16" top face chamfer and a finished side edge on plastic sheets or parts.

**Usage** Rout and chamfer in plastic

**Material** SP HP



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Material Thickness	Price
66-200	1/4	3/16	3/8	2-1/4	1/8	\$52.68
66-204	1/4	1/4	3/8	2-1/4	3/16	\$52.68
66-210	3/8	5/16	1/2	3	1/4	\$64.72

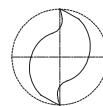
HELIX ANGLE ≈ 0°

**66-300****Double Flute - Solid Carbide Upcut Bottom Surfacing**

Designed for pocketing applications where the bottom of the pocket must be smooth.

**Usage** Bottom surfacing for plastic and aluminum

**Material** SP HP



Part Number	Cutting DIA	Corner Radius	Flute LGTH	SHK DIA	OAL	Price
66-308	1/8	.020	1/4	1/4	2	\$29.76
66-309	1/8	.002	1/4	1/4	2	\$29.76
66-314	1/4	.030	3/8	1/4	2	\$31.32
66-315	1/4	.002	3/8	1/4	2	\$31.32
66-320	3/8	.030	5/8	3/8	2-1/2	\$46.80
66-321	3/8	.002	5/8	3/8	2-1/2	\$46.80
66-326	1/2	.030	7/8	1/2	3	\$73.48
66-327	1/2	.002	7/8	1/2	3	\$73.48
66-328	3/4	.040	1-1/8	3/4	4	\$109.92

HELIX ANGLE ≈ 30°

**66-800****DFC Compression for Composites (Coated)**

The diamond film coated (CVD) solid carbide compression routers unique geometry prevents delamination on top and the bottom edges of the composites. The open flute geometry dissipates heat to prevent resin flow.

**Usage** Composite

**Material** CP



**NEW**

Part Number	Cutting DIA	Flute LGTH	Upcut LGTH	SHK DIA	OAL	Flutes	Price
66-802DFC	1/4	3/4	.325	1/4	3-1/2	4	\$164.20
66-811DFC*	3/8	1	.100	3/8	4	4	\$249.80
66-814DFC	3/8	1	.340	3/8	4	6	\$256.92
66-817DFC*	1/2	1-1/8	.100	1/2	4	6	\$298.08
66-823DFC	1/2	1-1/8	.350	1/2	4	6	\$823.00

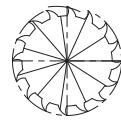
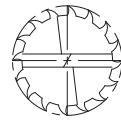
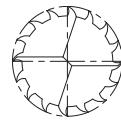
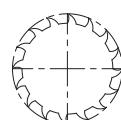
\*DOWNCUT EDGE TO WITHIN .050" OF TOOL END

**METRIC**

Part Number	Cutting DIA	Flute LGTH	Upcut LGTH	SHK DIA	OAL	Flutes	Price
66-852DFC	6mm	20mm	7.75mm	6mm	90mm	4	\$173.36
66-858DFC	8mm	25mm	8mm	8mm	100mm	4	\$252.16
66-864DFC	10mm	25mm	8.5mm	10mm	100mm	6	\$293.72
66-870DFC	12mm	25mm	9mm	12mm	100mm	6	\$330.44

**ONSRUD****66-900****High Performance Composite Router (Coated)**

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

**Usage** Composites and fiberglass**Material** CP**NEW****Burr Point****Drill Point****End Mill Point****No Point**

Part Number	Point Style	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
66-901ALTIN	No	1/8	1/2	1/8	1-1/2	\$30.64
66-902ALTIN	BURR	1/8	1/2	1/8	1-1/2	\$44.40
66-903ALTIN	Endmill	1/8	1/2	1/8	1-1/2	\$35.20
66-904ALTIN	Drill	1/8	1/2	1/8	1-1/2	\$41.40
66-905ALTIN	No	3/16	5/8	1/4	2	\$48.52
66-906ALTIN	BURR	3/16	5/8	1/4	2	\$62.28
66-907ALTIN	Endmill	3/16	5/8	1/4	2	\$53.08
66-908ALTIN	Drill	3/16	5/8	1/4	2	\$59.52
66-909ALTIN	No	1/4	1	1/4	3	\$47.04
66-910ALTIN	BURR	1/4	1	1/4	3	\$60.80
66-911ALTIN	Endmill	1/4	1	1/4	3	\$51.60
66-912ALTIN	Drill	1/4	1	1/4	3	\$58.04
66-913ALTIN	No	1/4	1-1/2	1/4	3-1/2	\$50.00
66-914ALTIN	BURR	1/4	1-1/2	1/4	3-1/2	\$63.80
66-915ALTIN	Endmill	1/4	1-1/2	1/4	3-1/2	\$54.60
66-916ALTIN	Drill	1/4	1-1/2	1/4	3-1/2	\$61.04
66-917ALTIN	No	1/4	2-1/8	1/4	4	\$56.16
66-918ALTIN	BURR	1/4	2-1/8	1/4	4	\$69.96
66-919ALTIN	Endmill	1/4	2-1/8	1/4	4	\$60.76
66-920ALTIN	Drill	1/4	2-1/8	1/4	4	\$67.20
66-921ALTIN	No	3/8	1	3/8	3	\$66.92
66-922ALTIN	BURR	3/8	1	3/8	3	\$80.68
66-923ALTIN	Endmill	3/8	1	3/8	3	\$71.52
66-924ALTIN	Drill	3/8	1	3/8	3	\$77.96
66-925ALTIN	No	3/8	1-5/8	3/8	3-1/2	\$80.00
66-926ALTIN	BURR	3/8	1-5/8	3/8	3-1/2	\$93.76
66-927ALTIN	Endmill	3/8	1-5/8	3/8	3-1/2	\$80.00
66-928ALTIN	Drill	3/8	1-5/8	3/8	3-1/2	\$91.00
66-929ALTIN	No	3/8	2-1/8	3/8	4	\$81.56
66-930ALTIN	BURR	3/8	2-1/8	3/8	4	\$95.32
66-931ALTIN	Endmill	3/8	2-1/8	3/8	4	\$86.16
66-932ALTIN	Drill	3/8	2-1/8	3/8	4	\$92.56
66-933ALTIN	No	1/2	1-1/8	1/2	3	\$88.76
66-934ALTIN	BURR	1/2	1-1/8	1/2	3	\$102.56
66-935ALTIN	Endmill	1/2	1-1/8	1/2	3	\$93.36
66-936ALTIN	Drill	1/2	1-1/8	1/2	3	\$99.76
66-937ALTIN	No	1/2	1-5/8	1/2	4	\$103.24
66-938ALTIN	BURR	1/2	1-5/8	1/2	4	\$117.00

Part Number	Point Style	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
66-939ALTIN	Endmill	1/2	1-5/8	1/2	4	\$107.84
66-940ALTIN	Drill	1/2	1-5/8	1/2	4	\$114.28
66-941ALTIN	No	1/2	2-1/8	1/2	4	\$104.56
66-942ALTIN	BURR	1/2	2-1/8	1/2	4	\$118.32
66-943ALTIN	Endmill	1/2	2-1/8	1/2	4	\$109.16
66-944ALTIN	Drill	1/2	2-1/8	1/2	4	\$115.56
66-945ALTIN	No	1/2	3-1/8	1/2	5	\$120.28
66-946ALTIN	BURR	1/2	3-1/8	1/2	5	\$134.08
66-947ALTIN	Endmill	1/2	3-1/8	1/2	5	\$127.48
66-948ALTIN	Drill	1/2	3-1/8	1/2	5	\$131.32
66-949ALTIN	No	1/2	4-1/8	1/2	6	\$136.24
66-950ALTIN	BURR	1/2	4-1/8	1/2	6	\$150.00
66-951ALTIN	Endmill	1/2	4-1/8	1/2	6	\$140.84
66-952ALTIN	Drill	1/2	4-1/8	1/2	6	\$147.28
66-971ALTIN	No	4mm	16mm	6mm	50mm	\$58.40
66-972ALTIN	BURR	4mm	16mm	6mm	50mm	\$72.16
66-973ALTIN	Endmill	4mm	16mm	6mm	50mm	\$62.96
66-974ALTIN	Drill	4mm	16mm	6mm	50mm	\$69.40
66-975ALTIN	No	6mm	19mm	6mm	75mm	\$54.28
66-976ALTIN	BURR	6mm	19mm	6mm	75mm	\$68.04
66-977ALTIN	Endmill	6mm	19mm	6mm	75mm	\$58.88
66-978ALTIN	Drill	6mm	19mm	6mm	75mm	\$65.32
66-979ALTIN	No	6mm	25mm	6mm	75mm	\$59.64
66-980ALTIN	BURR	6mm	25mm	6mm	75mm	\$73.44
66-981ALTIN	Endmill	6mm	25mm	6mm	75mm	\$64.24
66-982ALTIN	Drill	6mm	25mm	6mm	75mm	\$70.68
66-983ALTIN	No	8mm	25mm	8mm	63mm	\$72.64
66-984ALTIN	BURR	8mm	25mm	8mm	63mm	\$86.44
66-985ALTIN	Endmill	8mm	25mm	8mm	63mm	\$77.24
66-986ALTIN	Drill	8mm	25mm	8mm	63mm	\$83.68
66-987ALTIN	No	10mm	25mm	10mm	75mm	\$91.68
66-988ALTIN	BURR	10mm	25mm	10mm	75mm	\$105.44
66-989ALTIN	Endmill	10mm	25mm	10mm	75mm	\$96.28
66-990ALTIN	Drill	10mm	25mm	10mm	75mm	\$102.68
66-991ALTIN	No	12mm	25mm	12mm	75mm	\$123.52
66-992ALTIN	BURR	12mm	25mm	12mm	75mm	\$137.32
66-993ALTIN	Endmill	12mm	25mm	12mm	75mm	\$128.12
66-994ALTIN	Drill	12mm	25mm	12mm	75mm	\$134.56

**67-000**  
**67-250**

## ONSRUD

### Solid Carbide Fiberglass Router



Designed as fiberglass routers. Their upcut/downcut diamond design effectively shears fibrous materials. Certain tools in the line have been further developed to cut aramid fiber composites.

**Usage** Fiberglass and composites

**Material** CP

#### MEDIUM BURR W/END MILL POINT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-003	1/8	1	1/8	2	\$23.44
67-010	1/4	3/4	1/4	2-1/2	\$39.88
67-011	1/4	1-1/8	1/4	3	\$42.04
67-012	1/4	1-1/4	1/4	3	\$40.72
67-014	1/4	1-1/2	1/4	3	\$49.80
67-017	1/4	2-1/8	1/4	4	\$55.52
67-030	3/8	7/8	3/8	2-1/2	\$59.64

#### MEDIUM BURR W/END MILL POINT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-023	3/8	1-5/8	3/8	3	\$66.32
67-027	3/8	2-1/8	3/8	4	\$78.60
67-031	1/2	1-1/8	1/2	3	\$75.24
67-033	1/2	1-5/8	1/2	4	\$89.16
67-037	1/2	2-1/8	1/2	4	\$97.20
67-039	1/2	3-1/8	1/2	5	\$131.92
67-065	3/4	4-1/8	3/4	6	\$209.44

#### MEDIUM BURR W/DRILL POINT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-080	1/4	3/4	1/4	2-1/2	\$27.12
67-120	3/8	7/8	3/8	2-1/2	\$61.08
67-160	1/2	1	1/2	3	\$81.12

#### 3 FLUTE DOWNCUT DIAMOND GRIT TOOL

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-254	1/4	1-1/8	1/4	3	\$134.04

#### 3 FLUTE DOWNCUT DIAMOND GRIT TOOL

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-256	1/4	1-3/8	1/4	3	\$134.04
67-258	3/8	1-3/8	3/8	3	\$174.68

**67-200**

### Three Flute - Solid Carbide Phenolic Cutter

Equally adaptable to low or high spindle speed applications in any CNC machining environment. The free cutting action of the tools provides for better finishes and significantly lower noise levels.

**Usage** Phenolic

**Material** CP

#### UPCUT

 HELIX ANGLE  $\approx 10^\circ$ 

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-205	3/8	7/8	3/8	3	\$76.80
67-211	1/2	1-1/8	1/2	3	\$94.52
67-215	1/2	2-1/8	1/2	4	\$112.12

#### DOWNCUT

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-206	3/8	7/8	3/8	3	\$76.80
67-212	1/2	1-1/8	1/2	3-1/2	\$94.52
67-216	1/2	2-1/8	1/2	4-1/2	\$112.12

#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-207	10mm	22mm	10mm	75mm	\$70.48
67-209	12mm	28mm	12mm	75mm	\$78.20

#### METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-208	10mm	22mm	10mm	75mm	\$71.48
67-210	12mm	28mm	12mm	75mm	\$79.84

**ONSRUD**

**Usage** Composites and phenolic  
**Material** CP

67-220

**Three Flute - PCD Progressive Chipbreaker for Composites**

Provides superior chip control and increased tool life when cutting dense and abrasive materials. The new chipbreaker incorporates a unique geometry with a PCD cutting edge to support a wide range of feed rates and depth of cut combinations while extending the life of the tool. This is accomplished by utilizing a distinct Hi-Low asymmetrical chipbreaker profile which reduces vibration and chatter, caused by harmonic imbalance, resulting in improved surface finishes, while reducing noise levels and wear on the tool.



NEW

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-221	3/8	3/8	3/8	3	\$312.80
67-225	1/2	5/8	1/2	3	\$480.66
67-227	1/2	1-1/8	1/2	3	\$688.06

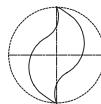
**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-230	10mm	12mm	10mm	76mm	\$429.72
67-233	12mm	20mm	12mm	100mm	\$613.72

**Double Flute - Solid Carbide Compression Spiral**

Compression design for fast feed and excellent finish on both sides of the material.

**Usage** Composite panels and honeycomb core



**Material** CP

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Diamond Coated Part Number	Price
67-305	1/4	7/8	1/4	2-1/2	-	\$64.92
67-314	3/8	1-1/8	3/8	3	67-314DFC	\$79.76
67-320*	1/2	7/8	1/2	3	-	\$94.44
67-322	1/2	1-1/8	1/2	3	67-322DFC	\$94.96

\* = Mortise Compression

HELIX ANGLE ~ 30°

67-300

67-400

67-500

**Solid Carbide Un-Ruffer™ PATENTED**

The unique design allows for the cutting performance of a burr while achieving a good surface finish.

**Usage** Composite panels

**Material** CP **METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-426M	6mm	25mm	6mm	64mm	\$61.88
67-435M	10mm	25mm	10mm	76mm	\$89.56
67-445M	12mm	25mm	12mm	76mm	\$124.44

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-423	1/4	3/4	1/4	2	\$70.44
67-426	1/4	1	1/4	2-1/2	\$74.96
67-428	1/4	1	1/4	3	\$75.76
67-435	3/8	1	3/8	3	\$103.04
67-445	1/2	1	1/2	3	\$145.88

**Solid Carbide CG Tool (Carbon Graphite)**

The geometry of these tools increases the amount of effective cutting flutes resulting in superior performance over a standard burr.

**Usage** Carbon graphite and carbon fiber panels

**Material** CP

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
67-505	1/8	1/2	1/8	2	\$81.60
67-508	3/16	5/8	3/16	2	\$84.52
67-511	1/4	3/4	1/4	3	\$85.04
67-514	1/4	1-1/2	1/4	3	\$86.84
67-520	3/8	1-1/8	3/8	3-1/2	\$91.84
67-523	1/2	1-1/8	1/2	3-1/2	\$99.48
67-526	1/2	2-1/8	1/2	4	\$106.88



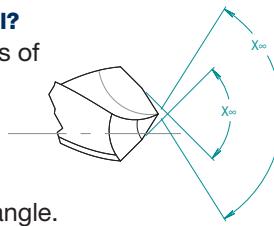
**67-800****ONSRUD****Solid Carbide 8 Facet Drill**

Designed to reduce cutting forces and eliminating delamination when exiting the material.

**Usage** Composites, Carbon fiber, mechanical plastics, and fiber reinforced plastics

**Call for Pricing.****What is an 8 Facet Drill?**

An 8 facet drill consists of 4 cutting edges with 2 facets per cutting edge. These facets consist of the lip relief and the lip clearance angle.

**FRACTIONAL DRILLS**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL
67-807	1/8 (0.1250)	1-1/4	0.125	2-1/4
67-808	9/64 (0.1406)	1-3/8	0.140	2-1/2
67-809	5/32 (0.1563)	1-3/8	0.156	2-1/2
67-810	11/64 (0.1719)	1-5/8	0.172	2-3/4
67-811	3/16 (0.1875)	1-5/8	0.188	2-3/4
67-812	13/64 (0.2013)	1-3/4	0.203	3
67-813	7/32 (0.2188)	1-3/4	0.219	3
67-814	15/64 (0.2344)	2	0.234	3-1/4
67-815	1/4 (0.2500)	2	0.250	3-1/4
67-816	17/64 (0.2656)	2-1/8	0.266	3-1/2
67-817	9/32 (0.2813)	2-1/8	0.281	3-1/2
67-818	19/64 (0.2969)	2-3/8	0.297	3-3/4
67-819	5/16 (0.3125)	2-3/8	0.313	3-3/4
67-820	21/64 (0.3281)	2-1/2	0.328	4
67-821	11/32 (0.3438)	2-1/2	0.344	4
67-822	23/64 (0.3594)	2-1/2	0.359	4
67-823	3/8 (0.3750)	2-3/4	0.375	4-1/4
67-824	25/64 (0.3906)	2-7/8	0.391	4-1/2
67-825	13/32 (0.4063)	2-7/8	0.406	4-1/2
67-826	27/64 (0.4219)	2-7/8	0.422	4-1/2
67-827	7/16 (0.4375)	2-7/8	0.438	4-1/2
67-828	29/64 (0.4531)	3	0.453	4-3/4
67-829	15/32 (0.4688)	3	0.469	4-3/4
67-830	31/64 (0.4844)	3	0.484	4-3/4
67-831	1/2 (0.5000)	3	0.500	4-3/4

**LETTER DRILLS (CONT.)**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL
67-850	A (0.2340)	2	0.234	3-1/4
67-851	B (0.2380)	2	0.238	3-1/4
67-852	C (0.2420)	2	0.242	3-1/4
67-853	D (0.2460)	2	0.246	3-1/4
67-854	E (0.2500)	2	0.250	3-1/4
67-855	F (0.2570)	2	0.257	3-1/4
67-856	G (0.2610)	2-1/8	0.261	3-1/2
67-857	H (0.2660)	2-1/8	0.266	3-1/2
67-858	I (0.2720)	2-1/8	0.272	3-1/2

**LETTER DRILLS (CONT.)**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL
67-859	J (0.2770)	2-1/8	0.277	3-1/2
67-860	K (0.2810)	2-1/8	0.281	3-1/2
67-861	L (0.2910)	2-1/8	0.291	3-1/2
67-862	M (0.2950)	2-3/8	0.295	3-3/4
67-863	N (0.3020)	2-3/8	0.302	3-3/4
67-864	O (0.3160)	2-3/8	0.316	3-3/4
67-865	P (0.3230)	2-3/8	0.323	3-3/4
67-866	Q (0.3320)	2-1/2	0.332	4
67-867	R (0.3390)	2-1/2	0.339	4
67-868	S (0.3480)	2-1/2	0.348	4
67-869	T (0.3580)	2-1/2	0.358	4
67-870	U (0.3680)	2-3/4	0.368	4-1/4
67-871	V (0.3770)	2-3/4	0.377	4-1/4
67-872	W (0.3860)	2-7/8	0.386	4-1/2
67-873	X (0.3970)	2-7/8	0.397	4-1/2
67-874	Y (0.4040)	2-7/8	0.404	4-1/2
67-875	Z (0.4130)	2-7/8	0.413	4-1/2

**NUMBER DRILLS (CONT.)**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL
67-893	18 (0.1695)	1-5/8	0.170	2-3/4
67-894	19 (0.1660)	1-5/8	0.166	2-3/4
67-895	20 (0.1610)	1-3/8	0.161	2-1/2
67-896	21 (0.1590)	1-3/8	0.159	2-1/2
67-897	22 (0.1570)	1-3/8	0.157	2-1/2
67-898	23 (0.1540)	1-3/8	0.154	2-1/2
67-899	24 (0.1520)	1-3/8	0.152	2-1/2
67-900	25 (0.1495)	1-3/8	0.150	2-1/2
67-901	26 (0.1470)	1-3/8	0.147	2-1/2
67-902	27 (0.1440)	1-3/8	0.144	2-1/2
67-903	28 (0.1405)	1-3/8	0.141	2-1/2
67-904	29 (0.1360)	1-3/8	0.136	2-1/2
67-905	30 (0.1285)	1-1/4	0.129	2-1/4
67-906	31 (0.1200)	1-1/4	0.120	2-1/4

**METRIC DRILLS**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL
67-961	3.00 (0.1181)	32	3.00	57
67-962	3.50 (0.1378)	35	3.50	64
67-963	4.00 (0.1575)	35	4.00	64
67-964	4.50 (0.1772)	41	4.50	70
67-965	5.00 (0.1969)	44	5.00	76
67-966	5.50 (0.2165)	44	5.50	76
67-967	6.00 (0.2362)	51	6.00	83
67-968	6.50 (0.2559)	51	6.50	83
67-969	7.00 (0.2756)	57	7.00	89
67-970	7.50 (0.2953)	60	7.50	95
67-971	8.00 (0.3150)	60	8.00	95
67-972	8.50 (0.3346)	64	8.50	102
67-973	9.00 (0.3543)	64	9.00	102
67-974	9.50 (0.3740)	70	9.50	108
67-975	10.00 (0.3937)	73	10.00	114
67-976	10.50 (0.4134)	73	10.50	114
67-977	11.00 (0.4331)	73	11.00	114
67-978	11.50 (0.4528)	76	11.50	121
67-979	12.00 (0.4724)	76	12.00	121

68-000

**ONSRUD****Double Flute - PCD Tipped Tooling**

Designed for use in abrasive materials where cut quality and tool life are important.

**Usage** Composite panels and fiberglass

**Material** CP



PCD Tipped



PCD Full Face with Plunge Point

**PCD FULL FACE**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-005	1/4	3/4	1/4	3	\$254.88
68-010	3/8	3/4	3/8	3	\$327.52
68-020	1/2	3/4	1/2	4	\$359.20
68-030	3/4	1	3/4	4	\$432.92

HELIX ANGLE ≈ 0-3°

**PCD FULL FACE with PLUNGE POINT**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-050	1/4	3/4	1/4	3	\$339.84
68-055	3/8	7/8	3/8	3	\$421.64
68-062	1/2	1-1/4	1/2	4	\$612.04
68-070	3/4	1-1/4	3/4	4	\$619.24
68-072	3/4	1-1/4	3/4	4	\$609.00

Down Shear

**Single Flute - PCD Compression Tool**

This economical PCD compression tool will provide long tool life in abrasive wood products. Mortise tip allowing for through cuts and dado's to be produced using one tool. The compression design ensures chip free edges on the top and bottom.

68-100

**Usage** CW Composite wood

**Material** CW



Part Number	Cutting DIA	Flute LGTH	Upcut LGTH	Flute SHK DIA	OAL	Flutes	Price
68-101	3/8	1	0.188	3/8	3	1	\$165.28
68-101L	3/8	1	0.188	3/8	3	1	\$181.80
68-100	3/8	1	0.188	1/2	3	1	\$165.28
68-100L	3/8	1	0.188	1/2	3	1	\$181.80
68-102	1/2	1	0.200	1/2	3	1	\$174.00
68-102L	1/2	1	0.200	1/2	3	1	\$191.36
68-103	1/2	1-1/4	0.200	1/2	3	1	\$191.36
68-104	5/8	1	0.200	5/8	3-1/2	1	\$182.68

Part Number	Cutting DIA	Flute LGTH	Upcut LGTH	Flute SHK DIA	OAL	Flutes	Price
68-104L*	5/8	1	0.200	5/8	3-1/2	1	\$200.92
68-110	5/8	1-5/8	0.200	5/8	4	1	\$374.04
68-110L*	5/8	1-5/8	0.200	5/8	4	1	\$300.96
68-106	3/4	1	0.200	3/4	4	1	\$182.68
68-106L*	3/4	1	0.200	3/4	4	1	\$200.92
68-112	3/4	1-5/8	0.200	3/4	4	1	\$274.04
68-112L*	3/4	1-5/8	0.200	3/4	4	1	\$300.96

L = Left Hand Rotation

\*= Tools are not stocked and must be special ordered.  
Approx. 4 week lead time.

**68-200****ONSRUD****Double Flute - PCD SERFT™ Cutter**

This tool is designed to act like a rougher and finishing tool in one. The unique geometry reduces the cutting forces resulting in longer tool life, higher feed rates and reduced noise.

**Usage** Composites**Material** CP METRIC

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-213M	6mm	20mm	6mm	76mm	\$308.24
68-226M	10mm	25mm	10mm	88mm	\$428.92
68-236M	12mm	32mm	12mm	100mm	\$502.80

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-210	1/4	3/8	1/4	3	\$279.04
68-213	1/4	3/4	1/4	3	\$354.72
68-216	1/4	1	1/4	3-1/2	\$406.72
68-220	3/8	3/8	3/8	3	\$416.20
68-223	3/8	3/4	3/8	3	\$472.96
68-226	3/8	1	3/8	3-1/2	\$496.60
68-230	1/2	3/4	1/2	4	\$520.28
68-233	1/2	1	1/2	4	\$539.16
68-236	1/2	1-1/4	1/2	4	\$577.04

**Three Flute - PCD SERFIN™ Cutter****68-300**

Three-Flute tool with two roughing edges that have geometry to reduce cutting forces and shear fibers in high-strength composite and other fiber reinforced plastic materials. The finishing edge cleans up after roughing cuts to create a smooth edge on material.

**Usage** Composites**Material** CP**NEW**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-315	3/8	1/2	3/8	4	\$513.40
68-320	3/8	7/8	3/8	4	\$636.60
68-340	1/2	5/8	1/2	4	\$642.60
68-345	1/2	1	1/2	4	\$875.32
68-350	1/2	1-1/4	1/2	4	\$1018.44
68-360	3/4	1-3/8	3/4	5	\$1399.40

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-310	8mm	10mm	8mm	76mm	\$424.76
68-325	10mm	14mm	10mm	100mm	\$543.32
68-330	12mm	14mm	12mm	100mm	\$586.40
68-335	12mm	26mm	12mm	100mm	\$865.92
68-355	16mm	26mm	16mm	100mm	\$1031.80

**68-400****Double Flute - PCD Ballnose**

Designed for use in abrasive materials where cut quality and tool life are important.

**Usage** Composites

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-405	1/4	3/8	1/4	2-1/2	\$267.68
68-410	3/8	1/2	3/8	3	\$354.08
68-420	1/2	5/8	1/2	4	\$458.72
68-425	5/8	7/8	5/8	4	\$622.00
68-430	3/4	1	3/4	4	\$786.28

**METRIC**

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-440	6mm	10mm	6mm	76mm	\$276.72
68-445	8mm	10mm	8mm	76mm	\$307.92
68-450	10mm	12mm	10mm	76mm	\$379.88
68-455	12mm	20mm	12mm	100mm	\$506.24

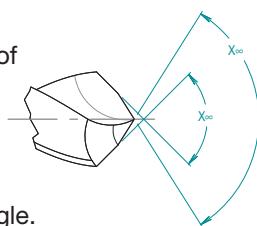
**NEW**

**ONSRUD****68-900****PCD 8 Facet Drills**

The PCD 8 facet drill works well in composite material where long tool life and a delamination free hole is required. The drill diameters are oversize allowing for aircraft fasteners to extend through the holes.

**Usage** Composites    **Material** CP
**What is an 8 Facet Drill?**

An 8 facet drill consists of 4 cutting edges with 2 facets per cutting edge. These facets consist of the lip relief and the lip clearance angle.



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
68-902	0.100	1	1/4	3	\$1038.64
68-904	0.129	1	1/4	3	\$559.12
68-908	0.147	1	1/4	3	\$582.48
68-910	0.192	1	1/4	3	\$595.92
68-914	0.251	1	1/4	3	\$613.76
68-918	0.313	1	5/16	3	\$718.44
68-922	0.376	1	3/8	3	\$799.72
68-926	0.502	1	1/2	3	\$918.04

**Carbide Tipped Trim Blade and Arbor**

Designed to trim and groove both hard and soft plastics. These blades run in conjunction with the blade arbors. Blades are reversible for right or left hand rotation cutting.

**SOFT PLASTIC - SLOW FEED**

Part Number	Cutting DIA	Teeth	Rake	Kerf	Grind	Price
70-100	2	10	0°	.095	TCG	\$94.48
70-102	2-1/2	10	0°	.095	TCG	\$94.48
70-104	3	10	0°	.095	TCG	\$94.48
70-108	4	10	0°	.095	TCG	\$94.48

**Usage** Hard and soft plastic

**Material** SP HP
**70-100****HARD PLASTIC - FAST FEED**

Part Number	Cutting DIA	Teeth	Rake	Kerf	Grind	Price
70-160	2	16	-5°	.095	TCG	\$103.92
70-162	2-1/2	20	-5°	.095	TCG	\$103.92
70-164	3	20	-5°	.095	TCG	\$103.92
70-166	3-1/2	20	-5°	.095	TCG	\$103.92
70-168	4	20	-5°	.095	TCG	\$103.92

TCG = Triple Chip Grind

**SOFT PLASTIC - FAST FEED**

Part Number	Cutting DIA	Teeth	Rake	Kerf	Grind	Price
70-120	2	16	0°	.095	TCG	\$103.92
70-122	2-1/2	20	0°	.095	TCG	\$103.92
70-124	3	20	0°	.095	TCG	\$103.92
70-126	3-1/2	20	0°	.095	TCG	\$103.92
70-128	4	20	0°	.095	TCG	\$103.92

**Feeds & Speeds for Blades****INCHES PER MINUTE**

Tool Series	Cutting DIA	Max RPM	Soft Plastic	Hard Plastic	Fibrous Reinfrc
70-100	2"	18,000	150	150	150
70-100	2-1/2"	16,000	150	150	150
70-100	3"	14,000	150	150	150
70-100	3-1/2"	12,000	150	150	150
70-100	4"	10,000	150	150	150
70-200	1-1/2" & Smaller	14,000	150	150	150
70-300	2"	16,000	150	150	150

**SAW ARBOR** - These saw arbors are designed to hold the carbide tipped saws.

Part Number	Cutting DIA	OAL	Price
70-180	1/2	3-1/4	\$96.16
70-181	1/2	4-1/2	\$106.04

**70-200****ONSRUD**

These small diameter solid carbide arbor mounted blades are designed for trimming and slotting plastics. Blades are permanently attached to arbors and are not reversible.

Part Number	Cutting DIA	Collar DIA	SHK DIA	Kerf	OAL	Rotation	Price
70-204	1	9/16	1/2	.062	4	Right	\$95.28
70-224	1-1/4	5/8	1/2	.062	4	Right	\$118.20

**Usage** Hard and soft plastic    **Material** **SP** **HP** \*

**70-300**

### Carbide Tipped Trim Blade Flush Mount



Designed for flush trimming and slotting of both hard and soft plastics. Blades are permanently attached to arbors and are not reversible.

**Usage** Hard and soft plastic

**Material** **SP** **HP**

Part Number	Cutting DIA	Teeth	Rake	SHK DIA	Kerf	OAL	Grind	Rotation	Plastic	Feed	Price
70-300	2	10	0°	1/2	.095	4	TCG	RH	Soft	Slow	\$133.16
70-302	2	10	0°	1/2	.095	4	TCG	LH	Soft	Slow	\$133.16
70-320	2	16	0°	1/2	.095	4	TCG	RH	Soft	Fast	\$133.16
70-322	2	16	0°	1/2	.095	4	TCG	LH	Soft	Fast	\$133.16
70-340	2	10	-5°	1/2	.095	4	TCG	RH	Hard	Slow	\$133.16
70-342	2	10	-5°	1/2	.095	4	TCG	LH	Hard	Slow	\$133.16
70-360	2	16	-5°	1/2	.095	4	TCG	RH	Hard	Fast	\$133.16
70-362	2	16	-5°	1/2	.095	4	TCG	LH	Hard	Fast	\$133.16

\*SEE FEED & SPEED CHART BELOW

TCG = Triple Chip Grind

**91-000  
91-100**

### Spoilboard Surfacing Cutters



Designed for surfacing MDF, particleboard and balsa core where "flow through" or "high flow" fixturing is employed using large capacity vacuum pumps. This method of surfacing spoilboards allows for much faster table planing.

**Usage** Aluminum, plastics and composite wood

**Material** **SP** **HP** **A** **CW**

#### STRAIGHT

Part Number	Cutting DIA	SHK DIA	SHK LGTH	# of Wings	Price
91-000*	1-1/4	1/2	1-1/2	2	\$37.12
91-102	2-1/2	1/2	2	2	\$315.84
91-106	4	3/4	2-1/4	3	\$349.32

\* = Carbide Tipped

Note: 90-002, 90-004, 90-006 & 90-008 use 91-125 insert and 91-130 screw  
90-014 use 91-127 insert and 91-130 screw

#### UP-SHEAR

Part Number	Cutting DIA	SHK DIA	SHK LGTH	# of Wings	Price
91-104	2-1/2	1/2	2	2	\$367.48
91-108	4	3/4	2-1/4	3	\$411.80
91-112*	2-1/2	1/2	2	3	\$381.52
91-114*	4	3/4	2-1/4	3	\$425.92

\* Radius edges excellent for plastic and aluminum surfacing.

Insert Style



Carbide Tipped

*These tools are dynamically balanced and approved for use on CNC routers. Max RPM 18,000 1/8" Depth of cut MAX.*

*\* DOC = Maximum Depth of Cut Proper running speed for*

*Spoilboard Surfaces: 2-1/2" diameter tools should be fed at 200-600 IPM at 12,000-16,000 RPM. 4" diameter tools should be fed at 200-600 IPM at 12,000-14,000 RPM.*

*\* Do Not Exceed 1/8" Depth Per Pass*

Part Number	Description	Price
91-125	Insert 10/pk	\$45.08
91-127	Radius Insert 10/pk	\$101.48
91-130	Screw M4 (Old Version)	\$2.76
91-133	Screw M5	\$2.76
91-136	Wrench	\$10.52

**ONSRUD****77-100****Double or Three Flute Solid Carbide Taper Tools**

The taper tools are 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

**Material** SW HW  
SP HP A

Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Angle Per Side	Radius	Flutes	Price
77-102	1/8	1-1/2	1/4	3	1°	1/16	3	\$61.12
77-104		1	1/4	3	3°	1/16	3	\$52.96
77-106	1/8 <sup>1/8</sup>	3/4	1/4	3	5°	1/16	3	\$50.96
77-108	1/8	1/2	1/4	3	7°	1/16	3	\$48.88
77-112	1/4	2	1/2	4	3°	1/8	2	\$116.20
77-114	1/4	1-3/8	1/2	4	5°	1/8	2	\$114.12
77-116	1/4	1	1/2	4	7°	1/8	2	\$112.00

**METRIC**

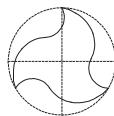
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Angle Per Side	Radius	Flutes	Price
77-102M	3mm	39mm	6mm	76mm	1°	1.5mm	3	\$54.48
77-104M	3mm	25mm	6mm	76mm	3°	1.5mm	3	\$47.76
77-106M	3mm	19mm	6mm	76mm	5°	1.5mm	3	\$46.12
77-108M	3mm	12mm	6mm	76mm	7°	1.5mm	3	\$44.44
77-112M	6mm	50mm	12mm	100mm	3°	3mm	2	\$72.16
77-114M	6mm	35mm	12mm	100mm	5°	3mm	2	\$70.48
77-116M	6mm	25mm	12mm	100mm	7°	3mm	2	\$68.80

**80-000****Three Flute - High Speed Steel Taper Pin Router**

These three flute upcuts with a tapered flute are used for profiling and trimming primarily in aircraft assembly operations.

**Usage** Aluminum

**Material** A



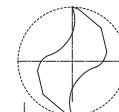
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
80-001	.098	3/4	.098	2	\$4.08
80-002	.110	7/8	.128	2 1/4	\$4.08
80-003	.165	1 1/16	.1875	2 1/2	\$7.36

HELIX ANGLE ≈ 24°

**81-000****Double Flute - High Speed Steel Lo Helix**

These lo helix upcut spirals were developed for CNC routers used primarily in the aircraft industry. They are designed with maximum strength of configuration to cut T, O or combined stacks of aluminum-using coolant.

**Usage** Aluminum **Material** A



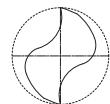
Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Helix	ALUM Condition	Price
81-001	1/4	3/4	1/2	3 1/16	5°	T	\$23.04
81-003	5/16	3/4	1/2	3 1/16	10°	C	\$23.72
81-004	5/16	3/4	1/2	3 1/16	10°	O	\$25.68



**81-100****ONSRUD****Double Flute - Solid Carbide Spiral Extrusion Cutters**

Designed for reduced vibration producing smoother finish cuts. Extended reach during side thinning and gage reduction. Longer tool life to reduce tool changes.

**Usage** Extrusion and sheet aluminum.  
Optimized for use on multi-head extrusion mills CNC mills and routers



**Material** 

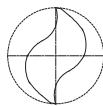
Part Number	Cutting DIA	Flute LGTH	ERL	SHK DIA	OAL	Helix & DIR	Flutes	CNR RAD Chamfer	Aluminum Condition	Machining Environment	Price
Tolerance	+.002	±.03		+.0000 -.0005	±.03						
81-103	5/16	13/16	-	1/2	3	10°RH	2	.02 x 45°	C	Wet	\$93.48
81-104	3/8	13/16	-	1/2	3	10°RH	2	.02 x 45°	O	Wet	\$100.48

**83-300****Double Flute - Solid Carbide AlTiN Coated Upcut Spiral for Stainless Steel**

Special cutting geometry is required to cut stainless steel and achieve decent tool life. Onsrud has developed a line of cutters which are capable of cutting stainless steel.

**Usage** Stainless Steel

**Material** 



Part Number	Cutting DIA	Flute LGTH	SHK DIA	OAL	Price
83-305AlTiN	1/8	1/4	1/8	2	\$25.52
83-310AlTiN	3/16	3/8	3/16	2-1/2	\$35.36
83-315AlTiN	1/4	3/8	1/4	2-1/2	\$36.80
83-320AlTiN	3/8	1/2	3/8	3	\$52.00

**CUTTING PARAMETERS**

Part Number	RPM	Feedrate	Depth of Cut
83-305AlTiN	18,000	18 IPM	.012
83-310AlTiN	12,000	20 IPM	.020
83-315AlTiN	9,000	25 IPM	.030
83-320AlTiN	6,010	27 IPM	.045