

Diamond (PCD) Tooling

Diamond tools are often mis-applied. Some suppliers try to push diamond on customers because they are a big-ticket sale or because they aren't getting the business of the current carbide tools. It is a way to lock up the customer's business in one sale. Customers get excited when they hear claims of 100 times the life of carbide.

In reality, application of diamond is often a mistake. It needs to be carefully applied only in applications where the material is ALWAYS clean of metal debris or sand and stones within the material. Today's American particle board is often made of recycled materials. Suppliers try to remove debris, but it only takes one piece of metal or stone to destroy an expensive diamond tool.

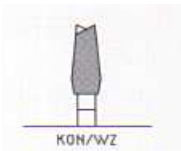
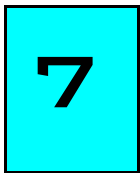
At **COGENT TOOLING** we will never push diamond onto a customer where it doesn't belong. We highly recommend diamond in uniform, highly abrasive materials like MDF, HDF, HPL. It can also be used, when applied correctly, in solid surface materials like Corian®. We also suggest diamond for scoring sawblades on panel saws and for trimming edgebanding.

That being said, because of great improvements in the equipment used to make diamond tools, the price of diamond tooling has come down dramatically over the past 5 years. We are at the point where the cost of some tools is low enough that the reward of increased tool life can outweigh the risk of damage. We offer tools for use in particle board and solid wood, but **the customer assumes the risk of poor payback in these applications.**



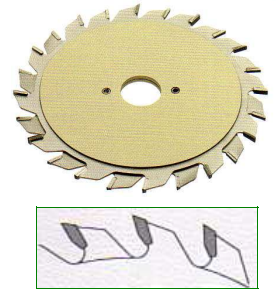
MARATHONER Scoring Blades, Conical —Scoring blades are among the least risky uses for diamond with the highest payback, because the blade normally only cuts the highly abrasive laminate layer. Common sizes are shown. Others available at similar prices. 4mm tip height sharpenable 2-3 times only. 6mm tip height fully sharpenable.

Dimensions	Z	Tip Height	Machine	Part #	List Price
125 x 4.4/5.2 x 45	24	4mm	Giben	7-020233	\$1,125.00
125 x 4.4/5.4 x 45	24	6mm	Giben	7-020253	\$1,420.00
150 x 4.4/5.2 x 1 1/4"	24	4mm	SCMI	7-150269	\$1,125.00
150 x 4.4/5.4 x 1 1/4"	24	6mm	SCMI	7-150289	\$1,420.00
150 x 4.4/5.2 x 30	24	4mm	Mayer, SCMI	7-150262	\$1,125.00
150 x 4.4/5.4 x 30	24	6mm	Mayer, SCMI	7-150282	\$1,420.00
150 x 4.4/5.2 x 45	24	4mm	Mayer	7-150263	\$1,125.00
150 x 4.4/5.4 x 45	24	6mm	Mayer	7-150283	\$1,420.00
160 x 4.4/5.2 x 55	24	4mm	Gabbiani, SCMI	7-160325	\$1,125.00
160 x 4.4/5.4 x 55	24	6mm	Gabbiani, SCMI	7-160345	\$1,420.00
200 x 4.4/5.2 x 20	24	4mm	Schelling	7-203721	\$1,195.00
200 x 4.4/5.4 x 20	24	6mm	Schelling	7-203761	\$1,475.00
200 x 4.4/5.2 x 20	36	4mm	Schelling	7-200381	\$1,680.00
200 x 4.4/5.4 x 20	36	6mm	Schelling	7-200401	\$2,100.00
200 x 4.8/5.6 x 20	24	4mm	Schelling	7-204021	\$1,195.00
200 x 4.8/5.6 x 20	24	6mm	Schelling	7-204061	\$1,475.00
200 x 4.8/5.6 x 20	36	4mm	Schelling	7-200411	\$1,750.00
200 x 4.8/5.6 x 45	36	4mm	Holzma	7-200413	\$1,750.00
200 x 4.8/5.6 x 65	36	4mm	Selco	7-200416	\$1,750.00
200 x 4.8/5.6 x 20	36	6mm	Schelling	7-200431	\$2,200.00
200 x 4.8/5.6 x 45	36	4mm	Holzma	7-200433	\$2,200.00
200 x 4.8/5.6 x 65	36	4mm	Selco	7-200436	\$2,200.00
215 x 4.4/5.4 x 50	36	4mm	Giben	7-215444	\$1,680.00
215 x 4.4/5.4 x 50	36	6mm	Giben	7-215464	\$2,100.00



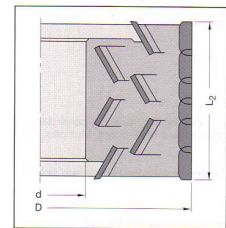
MARATHONER Scoring Blades, Split — Split Scoring blades are used on sliding table saws where the panel is not clamped and on postforming panel saws. Chance of damage is minimal because the blade only scores the abrasive laminate. Only blades for sliding table saws shown. Call for pricing on postform blades.

Dimensions	Z	Tip Height	Machine	Part #	List Price
100 x 2.8-3.6 x 20	12+12	6	SCMI, Schelling, Felder	7-100601	\$1175.00
100 x 2.8-3.6 x 3/4"	12+12	6	SCMI	7-100607	\$1175.00
100 x 2.8-3.6 x 22	12+12	6	Altendorf	7-100600	\$1175.00
120 x 2.8-3.6 x 20	12+12	6	SCMI, Felder	7-120601	\$1175.00
120 x 2.8-3.6 x 3/4"	12+12	6	SCMI	7-120607	\$1175.00
120 x 2.8-3.6 x 22	12+12	6	Altendorf, Martin	7-120600	\$1175.00
120 x 2.8-3.6 x 50	12+12	6	Altendorf Rapido	7-100604	\$1175.00

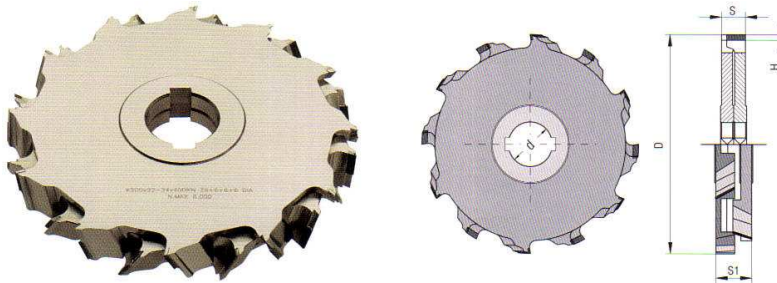


MARATHONER Jointing Head for Edgebanders — Highly durable body material, tips regrindable several times. High shear angle for plastic or paper laminated or veneered board.

Dimensions	Z	DKN	Machine	Rotation	Part #	List Price
85 x 45 x 30	3+3	8 x 3	Ott	RH	7-415501	\$1,785.00
				LH	7-415502	\$1,785.00
100 x 34 x 30	3+3	8 x 3	IMA/Brandt	RH	7-415503	\$1,265.00
				LH	7-415504	\$1,265.00
100 x 48 x 30	3+3	8 x 3	IMA/Brandt	RH	7-415505	\$1,765.00
				LH	7-415506	\$1,765.00
100 x 48 x 30	2+2	8 x 3	Holz-her	RH	7-415508	\$1,320.00
				LH	7-415509	\$1,320.00
125 x 34 x 30	3+3	8 x 3	Homag	RH/LH	7-415507	\$1,265.00
125 x 48 x 30	3+3	8 x 3	Homag	RH/LH	7-415510	\$1,765.00
125 x 63 x 30	3+3	8 x 3	Homag	RH/LH	7-415511	\$2,275.00



Also Available— Adjustable Edge Jointing Heads and Adjustable Groovers



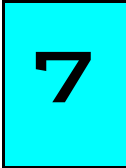
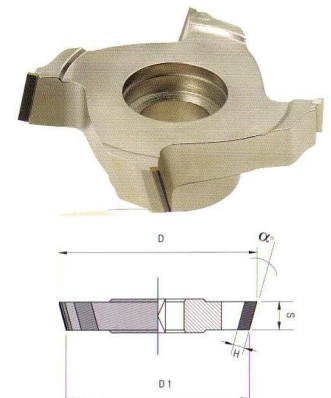
Please state machine make and required dimensions.

MARATHONER Edge Trimming Cutters for Edgebanders, HSK25R — For edge rounding, jointing, or beveling solid wood, veneer, or plastic edgebanding on **Homag** or **IMA** edgebanders with **HSK 25R** interface. All cutting edges with shear and polished diamond face. Supplied complete with bolt, washer, and c-clip.

#43600 Edge Bevel

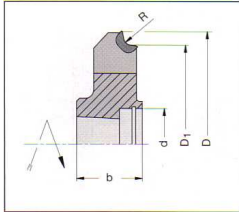
D	D ₁	L ₂	b	Z	Angle	Rotation	Part #	List Price
63	62	10	23.5	4	5°	RH	7-240010	\$410.00
						LH	7-240015	\$410.00
64	62	10	23.5	4	20°	RH	7-240020	\$425.00
						LH	7-240025	\$425.00
66	62	10	23.5	4	30°	RH	7-240030	\$445.00
						LH	7-240035	\$445.00
74	62	10	23.5	4	45°	RH	7-240040	\$480.00
						LH	7-240045	\$480.00

Z=6 versions also available



MARATHONER Edge Trimming Cutters for Edgebanders, HSK 25R—
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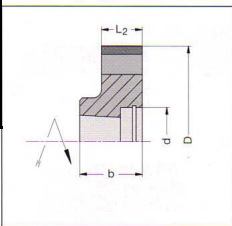
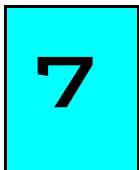
#44600 Edge Rounding



Dimensions	b	Z	R (mm)	Rotation	Part #	List Price
66	62	23.5	4	RH	7-230060	\$492.00
				LH	7-230065	\$492.00
70	62	23.5	4	RH	7-230070	\$528.50
				LH	7-230075	\$528.50
72	62	23.5	4	RH	7-230080	\$575.00
				LH	7-230085	\$575.00
74	62	23.5	4	RH	7-230090	\$624.50
				LH	7-230095	\$624.50
76	62	23.5	4	RH	7-230100	\$677.00
				LH	7-230105	\$677.00
74	70	23.5	4	RH	7-230110	\$492.00
				LH	7-230115	\$492.00
78	70	23.5	4	RH	7-230120	\$528.50
				LH	7-230125	\$528.50
80	70	23.5	4	RH	7-230130	\$575.00
				LH	7-230135	\$575.00
82	70	23.5	4	RH	7-230140	\$624.50
				LH	7-230145	\$624.50
84	70	23.5	4	RH	7-230150	\$677.00
				LH	7-230155	\$677.00
86	70	23.5	4	RH	7-230160	\$780.00
				LH	7-230165	\$780.00
89	70	23.5	4	RH	7-230170	\$860.00
				LH	7-230175	\$860.00
94	70	23.5	4	RH	7-230180	\$945.50
				LH	7-230185	\$945.50
98	70	23.5	4	RH	7-230190	\$1,028.00
				LH	7-230195	\$1,028.00

HSK32 versions also available

#41600 Edge Trimming



D	L ₂	b	Z	Rotation	Part #	List Price
70	8	23.5	4	RH	7-416000	\$669.00
				LH	7-416001	\$669.00
70	8	23.5	6	RH	7-416002	\$891.00
				LH	7-416003	\$891.00
70	10	23.5	4	RH	7-220070	\$413.50
				LH	7-220075	\$413.50
70	10	23.5	6	RH	7-220080	\$503.00
				LH	7-220085	\$503.00
70	15	23.5	4	RH	7-416004	\$903.00
				LH	7-416005	\$903.00
70	15	23.5	6	RH	7-416006	\$1,275.00
				LH	7-416007	\$1,275.00

HSK32 versions also available

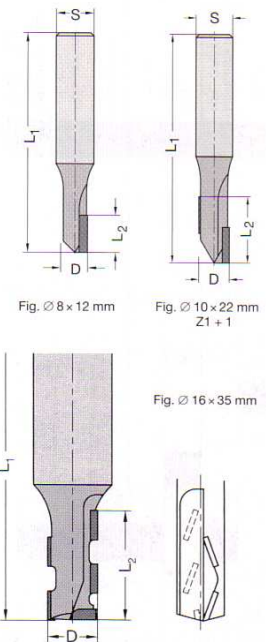
COGENT MARATHONER PCD Router Bits

We offer PCD router tools in a wide variety of configurations for various applications. Please pay close attention to application descriptions when choosing a tool for your needs. In all cases, suggested feed rates are based on 18,000 rpms and are reliant on a good, accurate clamping system. We highly suggest TRIBOS colletless chucks for all diamond tools.

MARATHONER ECGOUNO #12500 — For parting cuts in particle board and especially MDF, with or without laminate. Diameters 12mm and up have compressive shear for optimum finish quality on laminated materials. Feed rates from 150 to 300 in./min. (reduce feed rate for 6mm and 10mm dia.). Sharpenable 2 to 3 times. With carbide plunge tip. **Do not use** in solid wood or in difficult materials like HPL or Corain[®].

Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
6 x 12 x 70	12 x 40	1	RH	7-125019	\$277.20
8 x 12 x 70	12 x 40	1	RH	7-125001	\$201.95
10 x 22 x 75	12 x 40	1+1	RH	7-125002	\$273.25
10 x 22 x 75	12 x 40	2	RH	7-125003	\$377.20
12 x 25 x 75	12 x 40	1+1	RH	7-125101	\$302.95
16 x 25 x 95	25 x 55	1+1	RH*	7-125103	\$317.80
18 x 25 x 95	25 x 55	1+1	RH*	7-125105	\$374.20
18 x 35 x 105	25 x 55	1+1	RH*	7-125107	\$374.20
18 x 43 x 110	20 x 55	1+1	RH*	7-125108	\$442.55
20 x 25 x 95	25 x 55	1+1	RH	7-125109	\$302.95
20 x 35 x 105	25 x 55	1+1	RH	7-125110	\$374.20
20 x 52 x 120	25 x 55	1+1	RH	7-125111	\$531.65
1/2" x 1" x 3"	1/2" x 40	1+1	RH*	7-270300	\$176.60
1/2" x 1" x 3" Mortise ⁽¹⁾	1/2" x 40	1+1	RH	7-400001	\$288.75
1/2" x 1 3/8" x 3 3/8"	1/2" x 40	1+1	RH*	7-270310	\$233.75
3/4" x 1" x 3 3/8"	3/4" x 50	1+1	RH*	7-270350	\$223.15
3/4" x 1 3/8" x 3 3/4"	3/4" x 50	1+1	RH*	7-270360	\$279.85
3/4" x 1 5/8" x 4"	3/4" x 50	1+1	RH*	7-270370	\$327.10
3/4" x 2 1/16" x 4 7/16"	3/4" x 50	1+1	RH*	7-270380	\$384.50

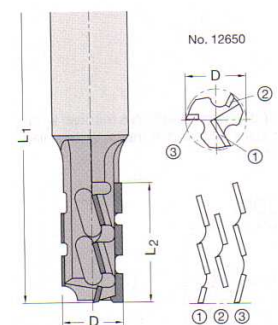
* Also available with quick delivery in LH rotation
(1) Mortise version has only 5.9mm (.232") upcut portion



MARATHONER ECGOTWIN #12650 — Z=2 version of #12500. For parting cuts in particle board and especially MDF, with or without laminate. Compressive shear for optimum finish quality on laminated materials. Feed rates from 300 to 750 in./min. Limited regrinding area. With PCD plunge tip. **Do not use** in solid wood or in difficult materials like HPL or Corain[®].

Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
18 x 33 x 100	25 x 55	2	RH	7-126601	\$515.95
			LH	7-126602	\$515.95
18 x 43 x 110	25 x 55	2	RH	7-126603	\$635.60
			LH	7-126604	\$635.60
18 x 53 x 120	25 x 55	2	RH	7-126605	\$754.40
			LH	7-126606	\$754.40

Note: the upper 5mm of cutting length is Z=1



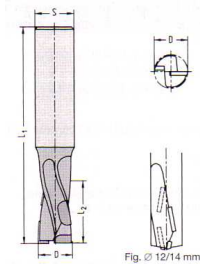


Fig. 12/14 mm

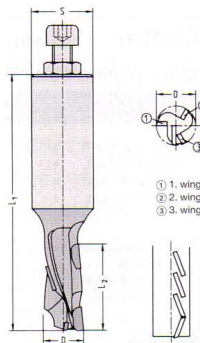


Fig. 16-20 mm

MARATHONER “THE GENERAL” #13500 — General use compression router bit similar to 12500 except with large regrinding area for long tool life. Made with a truer spiral design for improved performance. For parting cuts in particle board and especially MDF, with or without laminate. Compressive shear for optimum finish quality on laminated materials. Feed rates from 150 to 300 in./min. With carbide plunge tip. Most desirable version for use in plaster board.

Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
12 x 26 x 80	12 x 40	1+1	RH	7-135001	\$418.80
14 x 26 x 95	25 x 55	1+1	RH	7-135002	\$424.70
16 x 26 x 95	25 x 55	1+1	RH*	7-135003	\$424.70
16 x 35 x 105	25 x 55	1+1	RH*	7-135004	\$516.80
18 x 26 x 95	25 x 55	1+1	RH	7-135005	\$424.70
18 x 35 x 105	25 x 55	1+1	RH*	7-135006	\$516.80
18 x 43 x 110	25 x 55	1+1	RH*	7-135007	\$608.85
20 x 35 x 105	25 x 55	1+1	RH	7-135008	\$516.80
20 x 43 x 110	25 x 55	1+1	RH	7-135009	\$608.85
20 x 52 x 120	25 x 55	1+1	RH*	7-135010	\$718.75
1/2" x 1" x 2 3/4"	1/2" x 40	1+1	RH	7-135011	\$346.20
1/2" x 1 3/8" x 3 1/2"	1/2" x 40	1+1	RH	7-135012	\$446.65
5/8" x 1" x 2 7/8"	1/2" x 40	1+1	RH	7-135013	\$351.75

* Also available with quick delivery in LH rotation

Note: Many are available in other shank sizes with quick delivery

MARATHONER “CHIPPER” AND “WOODWORKER”

#13700/13701 — This bit comes in two distinct varieties. The 13700 is designed with special geometry for use in raw particle board and MDF at feed rates of 200 to 500 in./min. Can also be used successfully in laminated board materials. The 13701 is designed with special geometry for use in solid hardwoods, plywood, OSB, and HPL at feed rates of 120 to 300 in./min. Note: #13701 is our best diamond bit for use in solid wood, still, application of diamond in solid wood is done at the customer's risk.

#13700

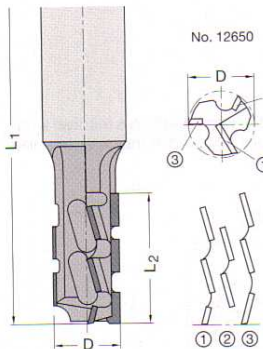
Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
20 x 39 x 105	25 x 55	2	RH	7-137001	\$914.75
			LH	7-137002	\$914.75
20 x 54 x 120	25 x 55	2	RH	7-137003	\$1,110.80
			LH	7-137004	\$1,110.80

#13701

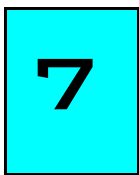
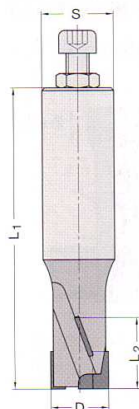
Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
20 x 39 x 105	25 x 55	2	RH	7-137011	\$914.75
			LH	7-137012	\$914.75
20 x 54 x 120	25 x 55	2	RH	7-137013	\$1,110.80
			LH	7-137014	\$1,110.80

MARATHONER “MDF” #14300 — Especially designed with large tips and large gullets for high feed rates in raw MDF. Can also be used successfully in laminated particle board or MDF. Compressive shear for high finish quality. Feed rates from 200 to 600 in./min. Carbide plunge tip.

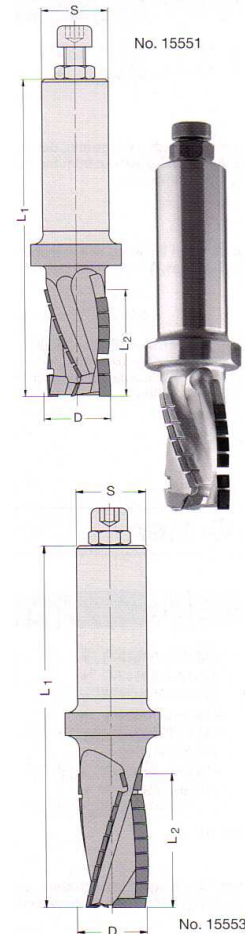
Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
18 x 25 x 105	25 x 60	2+2	RH	7-143001	\$795.95
			LH	7-143002	\$795.95
18 x 35 x 115	25 x 60	2+2	RH	7-143003	\$968.20
			LH	7-143004	\$968.20
20 x 25 x 105	25 x 60	2+2	RH	7-143005	\$795.95
			LH	7-143006	\$795.95
20 x 35 x 115	25 x 60	2+2	RH	7-143007	\$968.20
			LH	7-143008	\$968.20



No. 12650



MARATHONER "IM-PRESS-OR" #15551/15553 — The answer to rising costs of solid carbide compression spirals. This is the most ideal tool for high-performance routing of laminated, veneered, or paper coated MDF or particle board. Regrindable several times. Helical design for ideal chip flow. Feed rates 450 to 1,100 in./min. PCD Plunge tip. #15551 with primarily down shear for improved hold-down. #15553 with primarily up shear for improved chip evacuation.



#15551 for primarily downward chip flow

Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
1/2" x 1 1/8" X 3"	1/2" X 40	3	RH	7-155520	\$877.80
			LH	7-155521	\$877.80
20 x 38 x 120	25 x 60*	3	RH	7-155511	\$1,138.50
			LH	7-155512	\$1,138.50
20 x 48 x 130	25 x 60*	3	RH	7-155513	\$1,405.80
			LH	7-155514	\$1,405.80
25 x 28 x 110	25 x 60	3	RH	7-155515	\$ 933.90
			LH	7-155516	\$ 933.90
25 x 38 x 120	25 x 60	3	RH	7-155517	\$1,138.50
			LH	7-155518	\$1,138.50
25 x 48 x 130	25 x 60	3	RH	7-155519	\$1,405.80
			LH	7-155510	\$1,405.80

#15553 for primarily upward chip flow

Dimensions (D x L ₂ x L ₁)	Shank	Z	Rotation	Part #	List Price
1/2" x 1 1/8" x 3"	1/2" x 40		RH	7-155537	\$920.70
			LH	7-155538	\$920.70
20 x 28 x 110	25 x 60	3	RH	7-155531	\$960.30
			LH	7-155532	\$960.30
20 x 38 x 120	25 x 60	3	RH	7-155539	\$1,171.50
			LH	7-155540	\$1,171.50
25 x 38 x 120	25 x 60	3	RH	7-155533	\$1,171.50
			LH	7-155534	\$1,171.50
25 x 48 x 130	25 x 60	3	RH	7-155535	\$1,445.40
			LH	7-155536	\$1,445.40

*20mm shank version also available in RH rotation

CUSTOM PCD PROFILE TOOLS #16000 — We can provide a vast array of custom tools for various applications and for various types of machines based on material and application. Custom tool lead time is generally 5-6 weeks, but can be less based on current workload. Below are some examples of custom PCD tools. Please call to discuss your application.

