

P.L. Schmitt Carbide Tooling

Crown Cutters Standard Tooling Catalog
2016

We will quote special sizes as well
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COMPLETE METALWORKING SOLUTIONS

(800) 991-4225

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Solid Carbide Engraving Tools

Cutters and diamond gravers for all popular engraving machines.

Manufactured with state-of-the-art CNC grinding machines.

High precision gaging and inspection before any cutter leaves our factory.

Premium micro-grain carbide engineered for strength and wear-resistance.

Our solid carbide shanks won't rust, bend or twist.

Cutter knob set screws will not damage carbide shanks.

Crown cutters can be resharpened many times

Half Round "Collet Cutter" Engraving BLANKS

These BLANKS are for Pointing and Tipping by the User
Solid Micro-Grain Carbide



Size	Single End EDP#	Double End EDP#	Flat Length
1/8 X 1"	C1-1A	N/A	3/8"
1/8 X 1-1/2"	C1-2A	N/A	3/8"
1/8 X 2"	C1-3A	N/A	3/8"
5/32 X 2"	C1-4A	N/A	3/8"
3/16 X 1-1/2"	C1-5A	N/A	1/2"
3/16 X 2"	C1-6A	N/A	1/2"
1/4 X 2"	C1-7A	N/A	1/2"
1/4 X 3"	C1-8A	C1-8B	1/2"
5/16 X 2-1/2"	C1-9A	C1-9B	1/2"
3/8 X 2-1/2"	C1-10A	C1-10B	1/2"
1/2 X 3"	C1-11A	C1-11B	5/8"
3mm X 30 mm	C1-12A	C1-12B	10mm
4mm X 62mm	C1-13A	C1-13B	12mm
6mm X 62mm	C1-14A	C1-14B	12mm
Flat Tolerance is +.001"/-0	All tools can be quoted with wear-resistant coatings.		xx

Quarter Round “Collet Cutter” Engraving BLANKS

These BLANKS are for Pointing and Tipping by the User
Solid Micro-Grain Carbide



Size	Single End EDP#	Double End EDP#	Flat Length Large / Small
1/8 X 1”	C2-1A	N/A	3/8” / 1/4”
1/8 X 1-1/2”	C2-2A	N/A	3/8” / 1/4”
1/8 X 2”	C2-3A	N/A	3/8” / 1/4”
5/32 X 2”	C2-4A	N/A	3/8” / 1/4”
3/16 X 1-1/2”	C2-5A	N/A	1/2” / 3/8”
3/16 X 2”	C2-6A	N/A	1/2” / 3/8”
1/4 X 2”	C2-7A	N/A	1/2” / 3/8”
1/4 X 3”	C2-8A	C2-8B	1/2” / 3/8”
5/16 X 2-1/2”	C2-9A	C2-9B	1/2” / 3/8”
3/8 X 2-1/2”	C2-10A	C2-10B	1/2” / 3/8”
1/2 X 3”	C2-11A	C2-11B	5/8” / 1/2”
3mm X 30 mm	C2-12A	C2-12B	10mm / 6mm
4mm X 62mm	C2-13A	C2-13B	12mm / 8mm
6mm X 62mm	C2-14A	C2-14B	12mm / 8mm

Flat Tolerance is +.001”/-0 All tools can be quoted with wear-resistant coatings. XX

Quarter round engraving cutters are a superior alternative to half round cutters in most applications. This style cutter works well on a variety of materials, such as brass, aluminum, stainless, pewter, flexible plastics, acrylic and polycarbonate. Burr free cuts, less vibration, and single pass engraving make this a popular cutter.

NOTE: Collet Cutters are an excellent choice for most heavy-duty applications due to the short ‘stubby’ way the tool is loaded and held in a bottom loading spindle.

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Solid Carbide Collet Cutters – Sharpened to a Point

Specify Tip Size and Material to be Engraved

Solid Micro-Grain Carbide



Size	Half Round Single End EDP#	Half Round Double End EDP#	Quarter Round Single End EDP#	Quarter Round Double End EDP#
1/8 X 1"	C3-1A	N/A	C3-1C	N/A
1/8 X 1-1/2"	C3-2A	N/A	C3-2C	N/A
1/8 X 2"	C3-3A	N/A	C3-3C	N/A
5/32 X 2"	C3-4A	N/A	C3-4C	N/A
3/16 X 1-1/2"	C3-5A	N/A	C3-5C	N/A
3/16 X 2"	C3-6A	N/A	C3-6C	N/A
1/4 X 2"	C3-7A	N/A	C3-7C	N/A
1/4 X 2-1/2"	C3-8A	C3-8B	C3-8C	C3-8D
5/16 X 2-1/2"	C3-9A	C3-9B	C3-9C	C3-9D
3/8 X 2-1/2"	C3-10A	C3-10B	C3-10C	C3-10D
1/2 X 3"	C3-11A	C3-11B	C3-11C	C3-11D
3mm X 30 mm	C3-12A	C3-12B	C3-12C	C3-12D
4mm X 62mm	C3-13A	C3-13B	C3-13C	C3-13D
6mm X 62mm	C3-14A	C3-14B	C3-14C	C3-14D
Flat Tolerance is +.001"/-0	All tools can be quoted with wear-resistant coatings.			XX

LOOK! Cutters can be finished to your specific tip size for no additional charge.

Just specify the required tip size and material to be engraved when placing your order.

Note the outstanding mirror-like surface finish on the flats of our tools? That finish is there for a reason! A very fine 'polished' surface on the flat of half round and quarter round cutters provides a slippery, obstruction free path for chip flow. This aids in chip removal, and creates a cleaner looking, burr free font.

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Solid Carbide Long Engraving Cutters



Size	Half Round Blank EDP#	Half Round Pointed EDP#	Qtr. Round Blank EDP#	Qtr. Round Pointed EDP#	HSS HR Pointed EDP#	Flat Length Large/Small	
1/8 X 4-1/2"	C4-1A	C4-1B	C4-1C	C4-1D	C4-1E	.450" / .300"	
11/64 X 4-1/2"	C4-2A	C4-2B	C4-2C	C4-2D	C4-2E	.700" / .550"	
11/64 X 6-1/2"	C4-3A	C4-3B	C4-3C	C4-3D	C4-3E	.700" / .550"	
11/64 X 7"	C4-4A	C4-4B	C4-4C	C4-4D	N/A	.700" / .550"	
1/4 X 4-1/2"	C4-5A	C4-5B	C4-5C	C4-5D	C4-5E	.750" / .600"	
1/4 X 6-1/2"	C4-6A	C4-6B	C4-6C	C4-6D	C4-6E	.750" / .600"	
1/4 X 7"	C4-7A	C4-7B	C4-7C	C4-7D	N/A	.750" / .600"	
4mm X 110mm	C4-8A	C4-8B	C4-8C	C4-8D	C4-8E	8mm/14mm	
6mm X 160mm	C4-9A	C4-9B	C4-9C	C4-9D	C4-9E	19mm/15mm	
Flat Tolerance is +.001"/-0		All tools can be quoted with wear-resistant coatings.				xx	

NOTE: Specify material to be engraved when ordering pointed tools.
Reason: Point and relief angles are engineered differently for specific material groups.

These unique designs improve both the tool life and quality of cut.

When ordering, the following abbreviations can be used:

HR – Half Round, HRB – Half Round Blank, QR – Quarter Round, QRB – Quarter Round Blank

ACR: Acrylic, Plexiglass®

FLX: Flexible Engraving Stock

STN: Stencil

RUB: Rubber Stamp

BAL: Brass, Aluminum

SSS: Stainless Steel, Hard Metal

PHN: Phenolic, Formica®

SEAL: Corporate Seals

NOTE: Cutters can be finished to your specific tip size for no additional charge!
 Just specify the required tip size when placing your order:

.005, .010, .015, .020, .025, .030, .040, .050, .060, .075, .090, .125, .171, .187, .250

Examples: 11/64 x 4-1/2 QR FLX .020 or 1/4 x 6-1/2 HRB

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Solid Carbide Specialty Tools

Size	Burnisher EDP#	Braille Cutter EDP#	Cutter Beveller EDP#	Parallel Cutter EDP#
1/8 X 1"	C5-1A	N/A	C5-1C	C5-1D
1/8 X 4-1/2"	C5-2A	C5-2B	C5-2C	C5-2D
1/8 X 6"	N/A	N/A	N/A	N/A
11/64 X 4-1/2"	C5-4A	NA	C5-4C	C5-4D
11/64 X 6-1/2"	C5-5A	C5-5B	C5-5C	C5-5D
11/64 X 7"	C5-6A	C5-6B	C5-6C	C5-6D
1/4 X 4-1/2"	C5-7A	N/A	C5-7C	C5-7D
1/4 X 6-1/2"	C5-8A	C5-8B	C5-8C	C5-8D
1/4 X 7"	C5-9A	C5-9B	C5-9C	C5-9D
3mm X 30 mm	C5-10A	N/A	N/A	N/A
4mm X 110mm	C5-11A	N/A	C5-11C	C5-11D
6mm X 160mm	C5-12A	N/A	C5-12C	C5-12D
Flat Tolerance is +.001"/-0		All tools can be quoted with wear-resistant coatings.		XX

Burnishers: When ordering, please specify required tip/flat diameter.

.005, .010, .015, .020, .025, .030, .040, .050, .060, .075, .090, etc.

Cutter/Bevellers: When ordering, please specify the material thickness.

Bevellers come standard with geometries designed to cut out and bevel 1/8" **OR** 1/16" material.

Parallel Cutters: When ordering, please specify the required cutting diameter:

(.060" minimum diameter) .060, .075, .090, .100, .125, .171, .250

GOLD STANDARD TOOL COATING (TiN)

Crown's "Gold Standard" line features the latest technology in Titanium Nitride coating, with numerous applications where difficult and abrasive materials such as stainless steel are routinely machined. Crown solid carbide 'Gold Standard' cutting means more and better engraving, fewer cutter changes, reduced heat build-up, higher speeds and 3-5 times normal edge life. Coated cutters can be resharpened and still outlast uncoated cutters by 2-3 times. Any Crown cutter can be coated with Titanium Nitride. Contact your distributor for pricing. Specify TiN when placing your order.

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Solid Carbide Specialty Tools

Beveller		Half Round		3 Flute		
Machine Name	Tool Size	30 Degree EDP#	45 Degree EDP#	30 Degree EDP#	45 Degree EDP#	
Kantograph	1/8" X 1"	C6-1A	C6-1B	C6-1C	C6-1D	
New Hermes #B-4	1/8" X 4-1/2"	C6-2A	C6-2B	C6-2C	C6-2D	
New Hermes #B-5	1/8" X 6"	C6-3A	C6-3B	C6-3C	C6-3D	
New Hermes #B-6	1/4" X 6-1/2"	C6-4A	C6-4B	C6-4C	C6-4D	
Scripta Beveller	4mm X 110mm	C6-5A	C6-5B	C6-5C	C6-5D	
Special Beveller	11/64" X 4-1/2"	C6-6A	C6-6B	C6-6C	C6-6D	
Special Beveller	11/64" X 6-1/2"	C6-7A	C6-7B	C6-7C	C6-7D	
Flat Tolerance is +.001"/-0		All tools can be quoted with wear-resistant coatings.				xx

Beveller Notes: When ordering Bevellers, specify cutting angle.
(30 Degree, 45 Degree or Border Cutter)

Taper Shank Cutters



For Use with:	Half Round EDP#	Quarter Round EDP#	Parallel Cutter EDP#	Blank EDP#
Gorton	C6-8A	C6-8B	C6-8C	C6-8D
Preis	C6-9A	C6-9B	C6-9C	C6-9D
Solid Micro-Grain Carbide.				
Excellent for Cast-Iron, Alloy Steels, Plastics and Abrasive Materials. 30% stronger than C-2 grade carbide. Specify material to be cut and tip size when ordering. xx				

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Diamonds

Crown Diamond Gravers – Non-Rotating Style

Machine Name	Tool Size	EDP#
New Hermes RV-11 Ring Engraver	1/8" X 1/2"	C7-1A
New Hermes GTX Universal, GTX Super, GM, GK, Dahlgren and Domiteaux	1/8" X 1-1/8"	C7-2A
New Hermes I-LII, I-M, I-KII Dahlgren (1/8" Spindle)	1/8" X 5"	C7-3A
New Hermes ITX, ITF-II, ITF-KII H-Square and Dahlgren (11/64" Spindle)	11/64" X 7"	C7-4A
New Hermes IRX-IV, IRX-KIV, Dahlgren (1/4" Spindle)	1/4" X 7"	C7-5A
Scripta "S" Models	4mm X 110mm	C7-6A
Scripta "G" Models	6mm X 160mm	C7-7A xx

Crown 90 Degree – 4 Facet Diamond Gravers Rotating Style

Tool Size	EDP#
1/8" X 5"	C7-8A
11/64" X 7"	C7-9A
1/4" X 7"	C7-10A xx

For fine engraving in glass or burnishing metals. Extra length allows for use with a burnishing adapter.

Sizes Available:
Point, .005, .010, .015, .020, .025, .030"

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

Accessories and Service

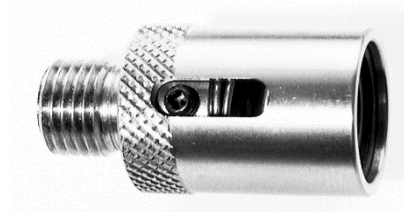
Cutter Head Wrench	C8-1A
Metric Cutter Head Wrench	C8-2A
Brass Cutter Head Knob	C8-3A
Metric Brass Cutter Head Knob	C8-4A
Cutter Head Knob Set Screw	C8-5A
Vinyl Cutter Tip Protector	C8-6A
Loupe Magnifier	C8-7A
Diamond Drag Adaptor	C8-8A

xx



“Crown Cutters”

EZ Rider® Burnish Adapter



Size	EDP#
1/8" Spindles	C8-1B
11/64" Spindles	C8-2B
1/4" Spindles	C8-3B

Instructions Included

Resharp Information:

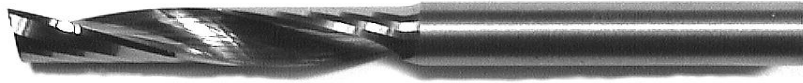
A properly resharpened and reground cutter will perform as good as new, and should last as long as a new tool, when given the same usage. Some of our distributors have the necessary inspection and grinding equipment on site and are able to resharpen cutters or burnishers to the original CROWN™ specifications and tolerances. Otherwise, cutters may be sent directly to us for resharpening.

Tools Accepted for Standard Resharping Services:

Tool Type

Engraving Cutters
Cutter/Beveller
Parallel Cutter
3 Flute Beveller
Dove Tail Cutter
Braille Dot Cutter
Endmills

One Flute End Mills



WOW! This uniquely designed one flute tool is engineered for machining many diverse materials, such as aluminum, acrylic, plastic, wood, sign foam and MDF. The special end tooth configuration allows very aggressive drill-type penetration when a new hole or cut is started. Helical flute geometry gives much smoother “cuts” and surface finishes, while allowing for a much higher chip evacuation when milling a groove. These tools are manufactured using high-grade micro grained tungsten carbide with a transverse rupture strength in excess of 500,000 psi! This material and special end design gives superb strength and life to the corner and cutting edges.

Cutting Diameter	Shank Diameter	LOC	Overall Length	EDP Number
0.0625	0.125	0.312	2.0	S1-4
0.0937	0.125	0.437	2.0	S1-6
0.1250	0.125	0.560	2.0	S1-8
0.0625	0.250	0.312	2.0	S1-4/16
0.0937	0.250	0.437	2.0	S1-6/16
0.1250	0.250	0.560	2.0	S1-8/16
0.1250	0.250	1.060	2.5	S1-8/16-L
0.1875	0.250	0.560	2.0	S1-12/16
0.1875	0.250	0.810	2.0	S1-12/16-M
0.1875	0.250	1.060	2.5	S1-12/16-L
0.2500	0.250	0.625	2.0	S1-16
0.2500	0.250	0.810	2.0	S1-16-M
0.2500	0.250	1.060	2.0	S1-16-L
0.2500	0.250	1.560	3.0	S1-16-EL
0.375	0.375	1.060	3.0	S1-24
0.375	0.375	2.060	4.0	S1-24-EL

TOLERANCES: Cutting Diameter $-.002''$ / $-.004''$ (.05/.10mm) Shank Diameter $+.0/- .0005''$ (.013mm)

All tools can be quoted with wear-resistant coatings. (XXV)

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **

One Flute Engraver Mills



Flute Design – Appearance

1/8" Shank x 4-1/2" Long		
Cutting Diameter	LOC	EDP#
0.0625	3/16"	GS1-4/8
0.0781	3/16"	GS1-5/8
0.0937	1/4"	GS1-6/8
0.1250	3/8"	GS1-8/8
11/64" Shank x 6-1/2" Long		
0.0625	3/16"	GS1-4/11
0.0781	3/16"	GS1-5/11
0.0937	1/4"	GS1-6/11
0.1250	3/8"	GS1-8/11
0.1718	1/2"	GS1-11/11
1/4" Shank x 6-1/2" Long		
0.0625	3/16"	GS1-4/16
0.0781	3/16"	GS1-5/16
0.0937	1/4"	GS1-6/16
0.1250	3/8"	GS1-8/16
0.1718	1/2"	GS1-11/16
0.1875	1/2"	GS1-12/16
0.2500	5/8"	GS1-16/16
TOLERANCES: Cutting Diameter +.0/-.004" (.10mm) Shank Diameter + .0/- .0005" (.013mm) xxv		

** Cutter Head Knobs Not Included-May Be Ordered Separately (see pg.8) **

All tools can be quoted with wear-resistant coatings.

Two and Four Flute Engraver Mills



1/8" Shank x 4-1/2" Long			
Cutting Diameter	LOC	Two Flute EDP#	Four Flute EDP#
0.0625	3/16"	GS2-4/8	GS4-4/8
0.0781	3/16"	GS2-5/8	GS4-5/8
0.0937	1/4 "	GS2-6/8	GS4-6/8
0.1250	3/8"	GS2-8/8	GS4-8/8
11/64" Shank x 6-1/2" Long			
0.0625	3/16"	GS2-4/11	GS4-4/11
0.0781	3/16"	GS2-5/11	GS4-5/11
0.0937	1/4 "	GS2-6/11	GS4-6/11
0.1250	3/8"	GS2-8/11	GS4-8/11
0.1718	1/2 "	GS2-11/11	GS4-11/11
1/4" Shank x 6-1/2" Long			
0.0625	3/16"	GS2-4/16	GS4-4/16
0.0781	3/16"	GS2-5/16	GS4-5/16
0.0937	1/4"	GS2-6/16	GS4-6/16
0.1250	3/8"	GS2-8/16	GS4-8/16
0.1718	1/2"	GS2-11/16	GS4-11/16
0.1875	1/2"	GS2-12/16	GS4-12/16
0.2500	5/8"	GS2-16/16	GS4-16/16

TOLERANCES: Cutting Diameter +.0/-.004" (.10mm) Shank Diameter + .0/- .0005" (.013mm) XXV

All tools can be quoted with wear-resistant coatings.

** Cutter Knobs Not Included-May Be Ordered Separately (see pg. 8) **