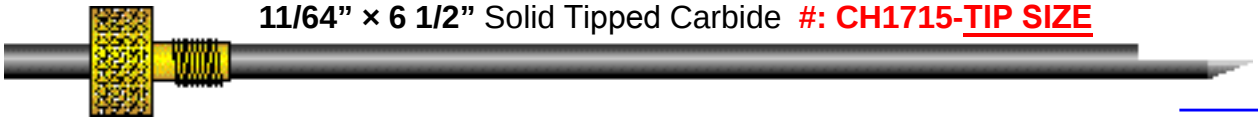
Understanding Material Classifications

Antares cutters are manufactured in a variety of shank diameters and lengths for all types of materials and applications. To meet your engraving needs, we manufacture and sharpen our cutters to exacting specifications. It is very important to use the proper cutter for the material being engraved. Cutters sharpened for soft materials such as plastic will dull quickly if used to engrave harder materials. Conversely, cutters sharpened for metals will not produce optimum results in softer materials. For ordering purposes, please specify which materials you will be engraving or reference the following Standard Material Classifications:

ACR: Acrylic (Plexiglass®, Lexan® - *Specify if reverse engraving*)
BAL: Brass, Aluminum, Soft Metals
FLX: Flexible Engraving Stock (Rowmark®, Gravoply®, etc.)
PHN: Phenolic (Formica®, Fiberglass®)
SSS: Stainless Steel, Steel, Hard Metals

Standard Cutter Specifications

11/64”



11/64” × 6 1/2” Solid Tipped Carbide **#: CH1715-TIP SIZE**

1/8”

1/8” × 4.5” Solid Tipped Carbide **#: CH1254 - TIP SIZE**

Selecting the Appropriate Tip Width

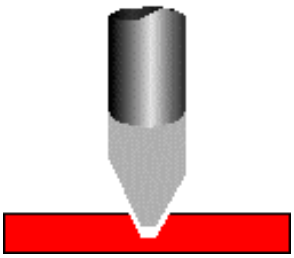
The chart below displays the most commonly used letter height/tip width combinations for single line fonts. When engraving single stroke characters, we recommend that the width of the cut be approximately 12% of the letter height to achieve proportional letters. For example: engraving a 1/2” (0.50”) letter, the stroke should be .060”; (0.50” × 12% = .060”). Cutters and burnishers are available in any required tip size, in .005” increments, ranging from a point (.005”) up to the full shank diameter. Maximum stroke width of a 1/8” cutter is .125”. Maximum stroke width of a 11/64” cutter is .171”. Maximum stroke width of a 1/4” cutter is .250”. *(Cuts wider than the shank diameter can only be made with the Wide-Cut tool. See page 6 for details.)* Please specify tip width when ordering.

Letter Height

1/16	3/32	1/8	3/16	7/32	1/4	5/16	3/8	7/16	1/2	5/8	3/4	1	1-1/4	1-3/8
.005	.010	.015	.020	.025	.030	.040	.045	.050	.060	.075	.090	.125	.150	.171

Recommended Stroke Width

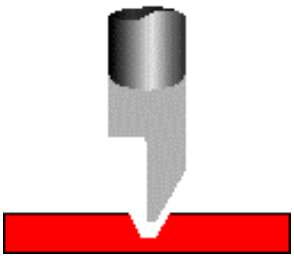
Standard Cutters



Our most frequently used tool for engraving plastics and metals. Antares cutters are made from Micrograin carbide with our exclusive MicroEdge® finish to produce cleaner cuts and stay sharper longer. Standard cutting tools produce a cut with a 30° side angle for plastics and a 40° side angle for metals. Standard cutters are available in a variety of tip widths ranging from a point (.005") to the full width of the shank, in .005" increments.

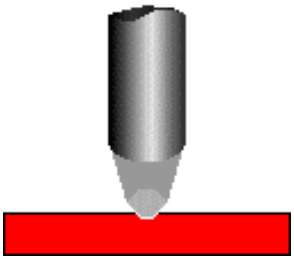
Part #: CH1715.xx or CH1254.xx xx= Solid or Carbide Tip with Tip Size **Price: Pg 1/Row A**

Quarter Round Cutters



A cutter with a second split, perpendicular to that of a standard half round tool, to provide greater chip clearance. Effective for many applications such as engraving stainless steel, acrylic, and soft materials that require greater clearance. Also work well for cutting out characters and shapes in soft material. Quarter Round cutters are available in a variety of tip widths ranging from a point (.005") to the full width of the shank, in .005" increments. **Part #: CQ1715.xx or CQ1254.xx, xx= Solid or Carbide Tip & Size** **Price: Pg 1/Row B**

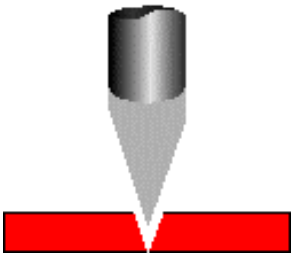
Burnishers



Burnishing is a surface marking technique used to expose the bare metal on coated materials, such as lacquered brass or aluminum. These tools are used in a rotating spindle without a depth nose. Burnishers are not meant to cut deeply into material. Best results are obtained by using very light spindle pressure and a burnishing attachment. Available in a variety of tip widths ranging from a point (.005") to the full width of the shank, in .005" increments. *Also available with a diamond tip. See page 4.*

Part #: CB1715.xx or CB1254.xx xx= Tip Size **Price: Pg 1/Row C**

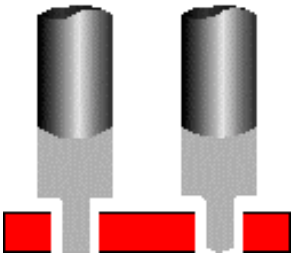
Profilers



A Profiling tool has a narrow cutting angle and is effective for fine detail engraving and cutting out shapes where a slight bevel is acceptable. The standard angle on a Profiler is 15°. Recommended for applications where smallest parallel tip available is too wide or too fragile. Standard tip widths range from .005" to .060". Larger tip sizes are available.

Part #: CF1715.xx or CF1254.xx xx= Tip Size **Price: Pg 1/Row D**

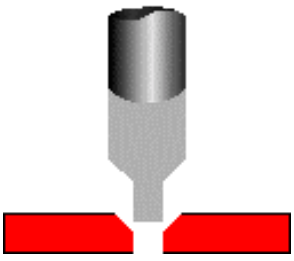
Parallel Cutters



A parallel tool will produce a cut with straight edges and a flat bottom, as opposed to the angled or "V" cut from a standard tool. The smallest recommended tip size is .060". We recommend that the depth of the cutter not exceed 150% of the width. Maximum depth is double the width. When ordering, be sure to specify the depth of the cut required, or material thickness if cutting completely through. Antares also offers Parallel cutters with a point for drilling holes. *Add $1.00 to regular parallel tool pricing for drill point.*

Part #: CP1715.xx or CP1254.xx xx= Tip Size **Price: Pg 1/Row E**

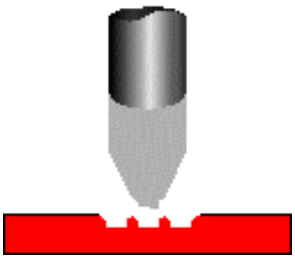
Cutter-Bevelers



Cuts out and bevels in one smooth operation. A Cutter-Beveler has a parallel cutting edge which profiles or cuts through the material. The angled edge produces a 45° bevel for a depth of 1/3 to 1/2 of the material thickness. This can be beneficial for applications such as cutting out badges (on an engraving machine) or producing discs or odd shaped items which are difficult or impossible to do with a beveling machine.

Part #: CV1715 or CV1254.xx **Price: Pg 1/Row F**

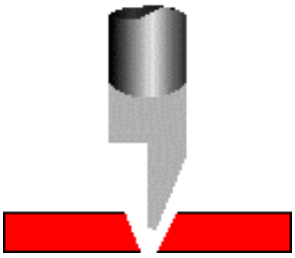
ADA Braille Dot Cutters



The Americans with Disabilities Act has placed strict regulatory standards on the sign industry. We offer tools for cutting Braille dots and for making Cut-Out Letters.*(See below)* The Braille Dot cutter is a tool that routs away the background material and leaves Braille dots with rounded tops. *An Antares Fact Sheet is available on our web page: www.jorlink.com*

Pricing: Page 1/Row H

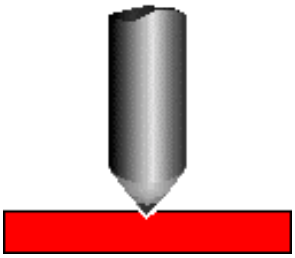
ADA Cut-Out Letter Cutter



The Cut-Out Letter tool is a quarter round tool with a 22° cutting angle used to create raised letters and numbers using plastic overlay materials in accordance with the Americans with Disabilities Act. *An Antares Fact Sheet is available on our web page: www.jorlin.com*

Pricing: Page 1/Row I

Diamond Gravers



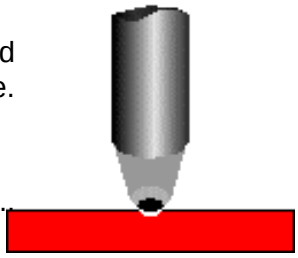
Non-rotating tools with a diamond tip intended for scratch engraving on trophy brass and aluminum. Standard diamond has a 120° tip, other angles are available.

Special 90° diamonds for marking epoxy coated pens are also available.

Relapping service is available.

Part #: CD1717A.xx or CD1254. xx **xx= Degree .120 or .090 Tips** **Price: Pg 2/Row A**

Rotating Diamonds

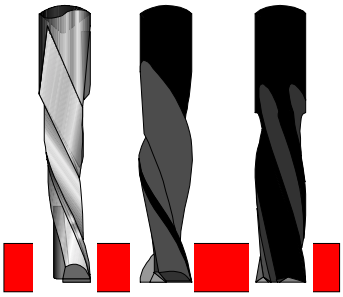


For glass engraving and burnishing. Particularly effective on colored aluminum. Standard tip sizes range from .005” to .030” in .005” increments. Larger tip sizes are available. *Call for a quote.*

Special rotating diamond for use on epoxy coated pens is also available. Creates a wider, cleaner cut than a diamond graver for an enhanced appearance . Relap available.

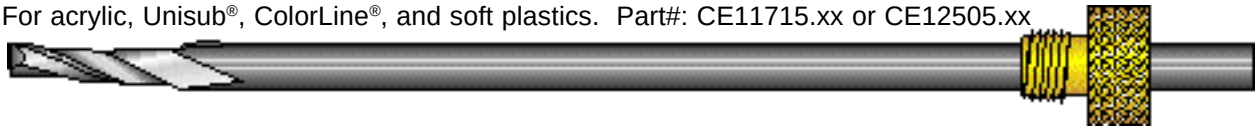
Part#: CDB1717A.xx or CDB1254.xx **xx= Tip size** **Price: Pg 2/Row B**

RouterMills®

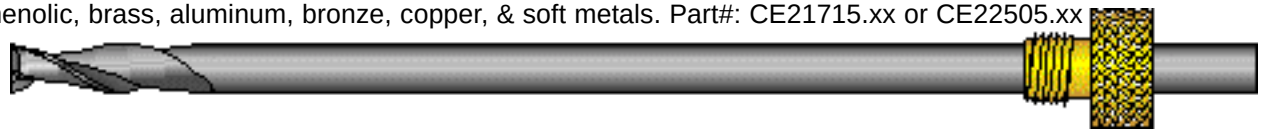


Antares RouterMills® have been designed using end mill and router bit technology to produce a tool that offers cleaner, faster cuts in a variety of materials at the high spindle speeds typically associated with engraving machines and routers. These tools are available with one, two, three or four flutes depending on the material being cut and the size of the tool. These tools will produce a straight walled cut with a flat bottom and work exceptionally well for cutting out shapes. Most tools are available in several tip sizes ranging from .060" to the full width of the shank.

Single Flute: For acrylic, Unisub®, ColorLine®, and soft plastics. Part#: CE11715.xx or CE12505.xx



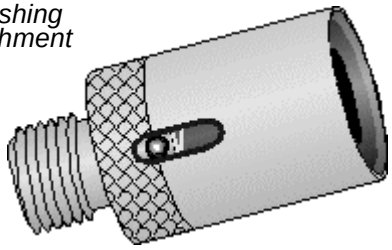
Two Flute: Phenolic, brass, aluminum, bronze, copper, & soft metals. Part#: CE21715.xx or CE22505.xx



Four Flute: For steel, stainless steel and harder metals. Part#: CE41715.xx or CE42505.xx

Accessories:

Burnishing Attachment



Cutter Wrenches - Standard Wrench Part#: CX12000.15

Burnishing Attachment - Spring-loaded burnishing attachment.

Light, constant downward pressure while burnishing compensates for irregularities in material. A Fact Sheet on Burnishing is available.