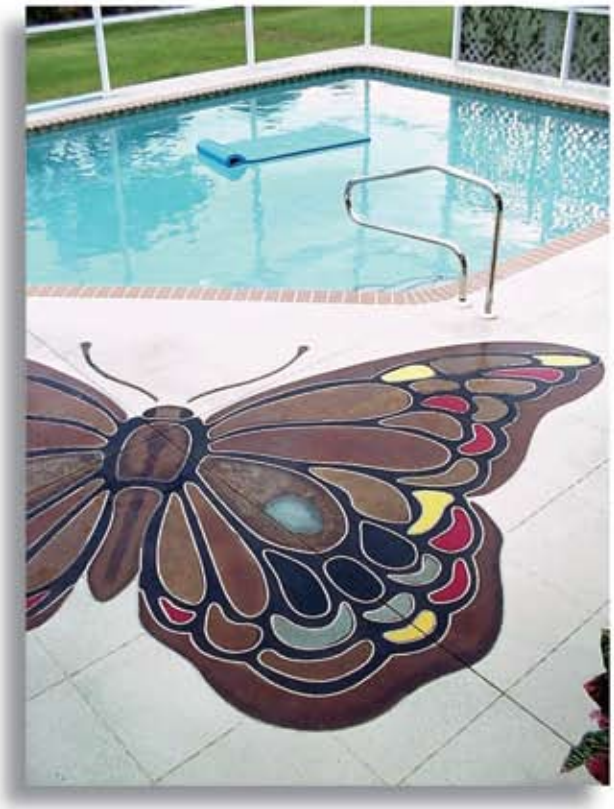
Engrave-A-Crete® Inc.

KaleidoCrete™

Operating Manual



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Engrave-A-Crete® Inc.

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Engraving Operations

Warnings and Precautions

Exposure to vibration may be harmful to hands and arms.

Safety Note:
A gas powered air-compressor should never be operated indoors. When operating the Shark Engraver indoors, place the gas powered compressor out-of-doors. [Note that it is possible for the compressor to pick up the engine exhaust fumes and pump them indoors.] Orient the compressor so the air pump (compressor) is upwind or cross wind from the engine exhaust AND ventilate the building/work area well. Carbon Monoxide is colorless, odorless and dangerous.

When working with tools, equipment, and chemicals, always use proper safety equipment!

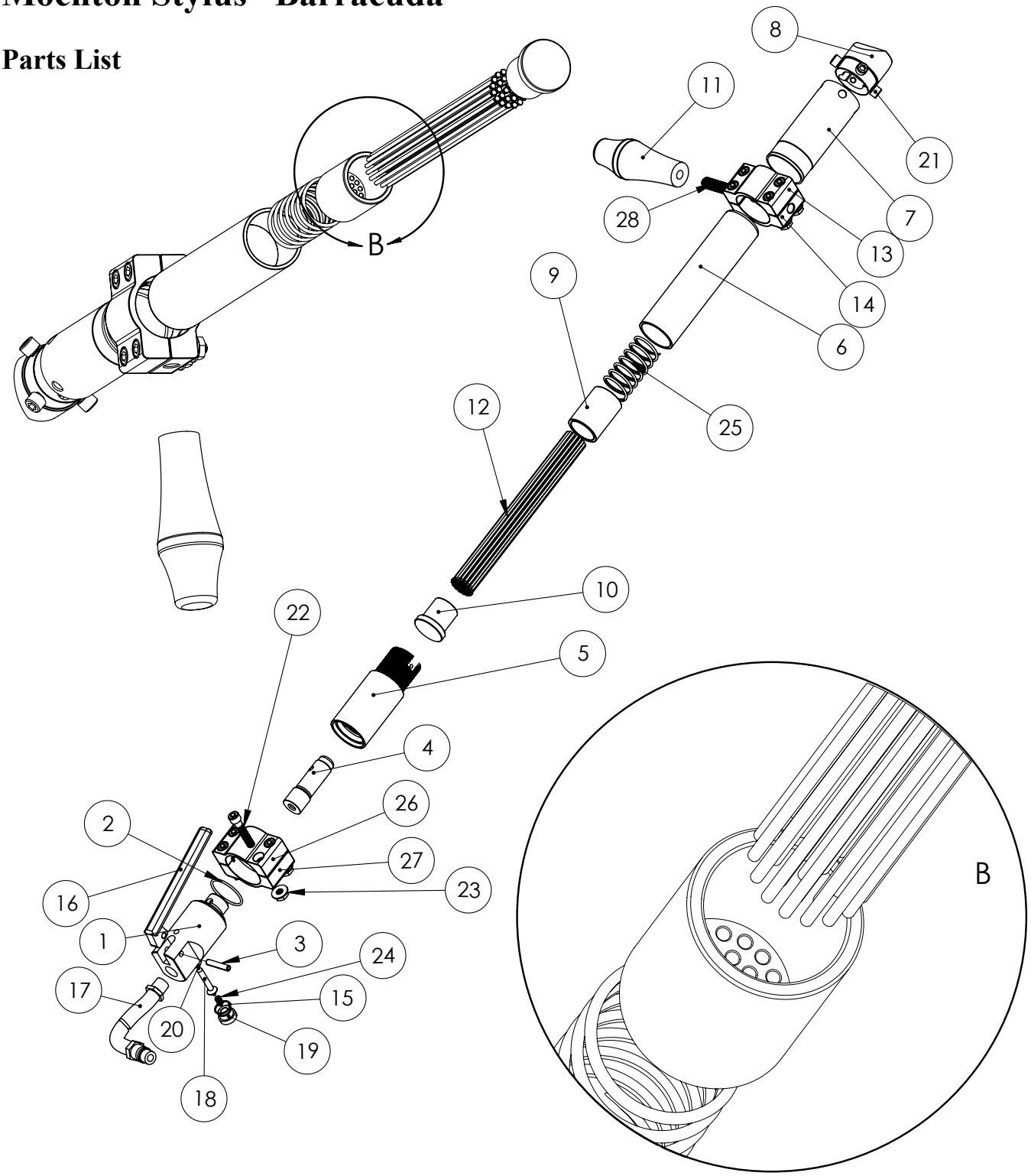
Before use

- Put a few drops of Shark oil through the air inlet.
- Always blow out the incoming airline to remove any dirt and debris.
- Maximum operating pressure is 90 p.s.i.
- For best results use a 3/8” diameter air hose. Keep air hoses short. If possible, do not use over 100 feet of hose behind the tool. For each additional 100 feet of hose, 1 cu. ft/min additional air should be allowed. As a rough guide, pressure drop is approximately 3 p.s.i. per 100 feet of hose.

Use Goggles, Face Shield, Shock Absorbing Gloves and Ear Protection

Mochton Stylus “Barracuda”™

Parts List



Barracuda Parts List

ITEM NO.	PART NUMBER	DESCRIPTION	QTY.
1	80145	Barracuda Valve Body	1
2	19035	O-Ring	1
3	10127	Roll Pin	1
4	80134	Barracuda Piston	1
5	80135	Barracuda Cylinder	1
6	80136	Barracuda Intermediate Tube	1
7	80137	Barracuda Front Tube	1
8	80138	Barracuda Front Tube Cap	1
9	80141	Barracuda Collet	1
10	80142	Barracuda Anvil	1
11	13027	Side Handle	1
12	90005	Impactor	29
13	80143	Front Tube Clamp Upper	1
14	80144	Front Tube Clamp Lower	1
15	19014	Valve Cap O-Ring	1
16	80130	Valve Trigger Handle	1
17	KC-256	6' Hose Assembly	1
18	80131	Valve Pin	1
19	80132	Valve Cap	1
20	19026	Valve O-Ring	1
21	10130	Cap Screw	4
22	11012	Cap Screw	8
23	11011	Nut	8
24	10132	Valve Spring	1
25	10131	Main Spring	1
26	80139	Cylinder Clamp Upper	1
27	80140	Cylinder Clamp Lower	1
28	10123	Set Screw	1

Barracuda Service and Operations

Impactors

Sometimes even a careful engraver will snag a template or run off a slab and bend an impactor. Careful placement of the impactors into the template opening helps minimize damage. To straighten a bent impactor use a pair of needle nose pliers to grip the impactor and reshape it. This process can be done while the impactors are in the tool.

Tip: If a template has small details or intricate patterns try removing some of the teeth from the tool.

As impactors wear, the front tube (7) can be moved back to expose additional length of impactors. Loosen the bolts on the front tube clamp (13), adjust the length by sliding the front tube forward or back then we tighten the bolts on the clamp. Generally the length of teeth protruding from the front tube cap should be 3/4 to 1 inch.

Changing Impactors

Disconnect the air supply before changing or replacing the impactors. Loosen the hex cap screws on the upper - barracuda head clamp (26). Unscrew the entire front tube and intermediate tube assembly from the pneumatic assembly.

Take care to note how all the parts within the intermediate and front tube assembly fit together as incorrect assembly will result in damage to the tool when used.

Remove the anvil (10), collet (9), impactor (12), and spring (25) assembly from the intermediate tube (6).

Remove the anvil (10) and spring (25) from the assembly; turn the collet (9) upside down to dump the impactors (12) out.

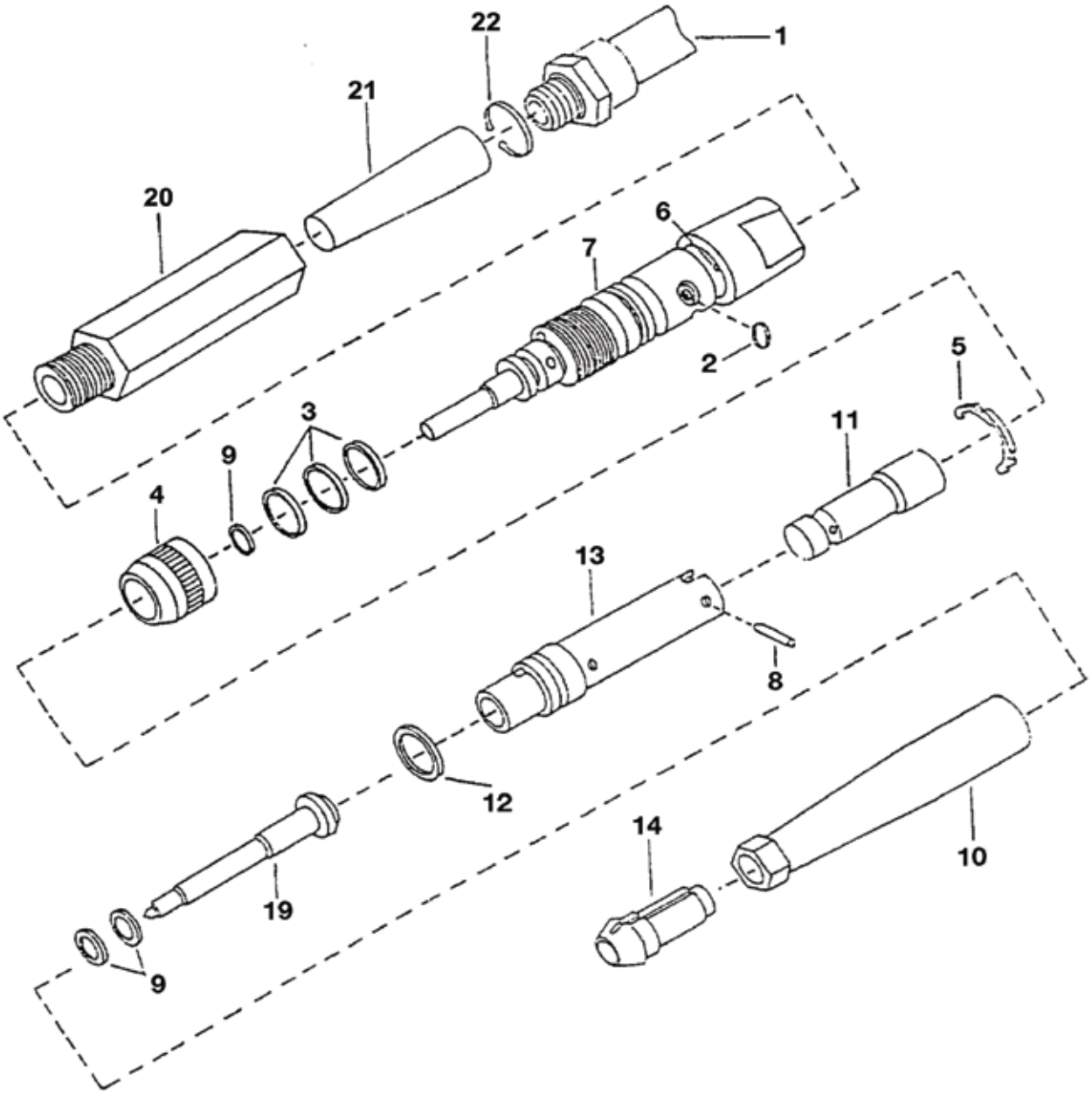
Drop a handful of impactors into the collet and gently shake to get the impactors into the holes. Once all holes are filled with impactors insert the anvil into the collet and slide the spring over the impactors. Insert this assembly back into the intermediate and front tube assembly. Reattach to the pneumatics and tighten clamp.

Barracuda Oil Lubrication

Oil the Barracuda daily, before start and occasionally during the job. Apply a few drops of Air Tool Oil through the air inlet.

The use of an in-line lubricator/filter to the Barracuda is strongly recommended. This will ensure trouble free running and prolong the life of the Barracuda.

Mochton Stylus “Wasp”™



Wasp Parts List

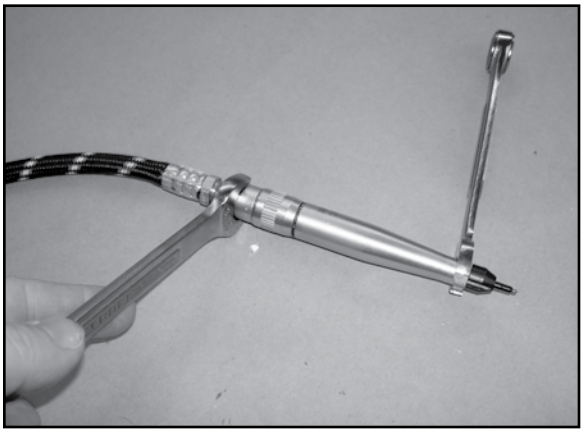
INDEX NO.	DESCRIPTION	QTY
1	Air Hose	1
2	O-Ring	1
3	O-Ring	3
4	Valve Sleeve	1
5	Retaining Ring	2 (Halves)
6	Roll Pin	1
7	Inlet	1
8	Roll Pin	1
9	O-Ring	3
10	Cylinder Sleeve	1
11	Piston	1
12	O-Ring	1
13	Cylinder	1
14	Bushing	1
19	Stinger	1
20	Air Filter Body	1
21	Filter Cartridge	1
22	Retaining Ring	1

Mochton Wasp Service and Operations

Air Supply

For efficient performance, use a regulated air supply of clean dry air at 90 p.s.i. If the air supply is dirty or wet, in addition to the air filter included with the Wasp, an air line filter should be mounted at the compressor to remove contaminants. This will prevent premature clogging of the air filter included with the Wasp. The air supply should be carried in a minimum 3/8" I.D. hose.

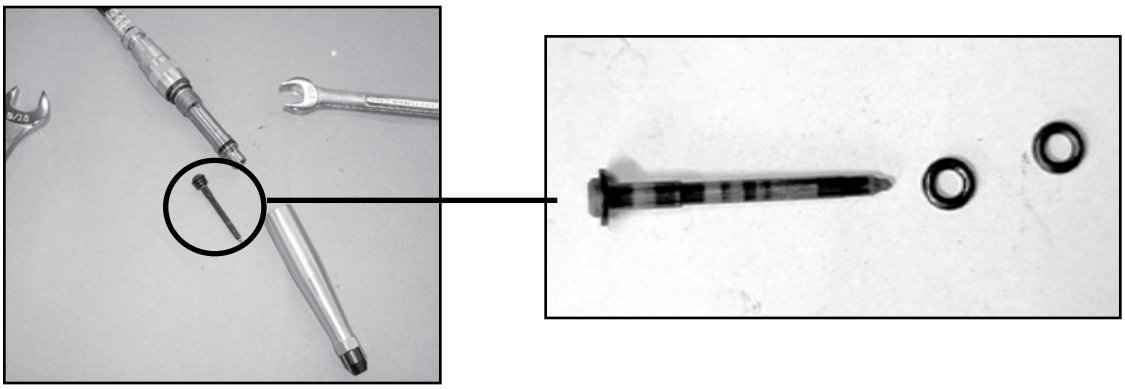
Lubrication



Lubricate the Wasp daily by adding several drops of pneumatic air tool oil into the air inlet. Decrease lubrication volume but add frequency if excess oil blows out of tool. Do not allow oil to blow all over your concrete art work. For continuous lubrication, the use of a in-line lubricator is recommended.

To replace the stylus, disconnect air supply, unscrew the cylinder and inlet assemblies from the cylinder sleeve. Shake the cylinder sleeve to remove the old stylus. Drop the new stylus in, point first. Finally, screw the sleeve and the assemblies back together until the sleeve touches the retaining ring.

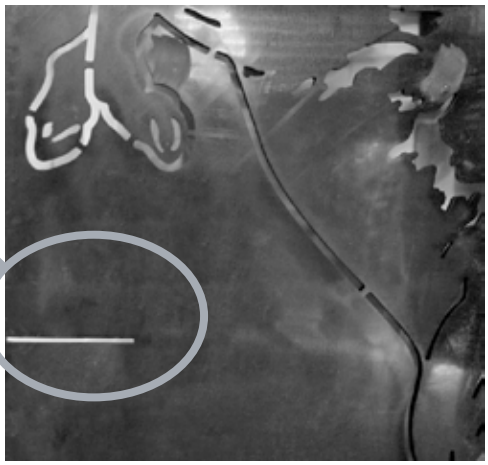
Approved safety glasses should be worn at all times when operating this or any other percussion tool.

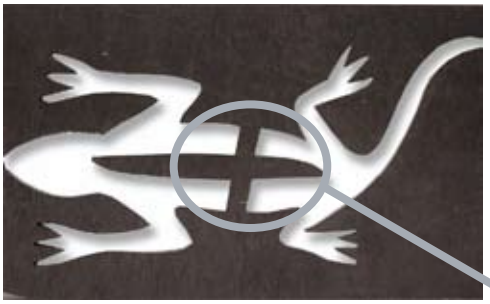


Methods of Cutting

Definition of Template Parts

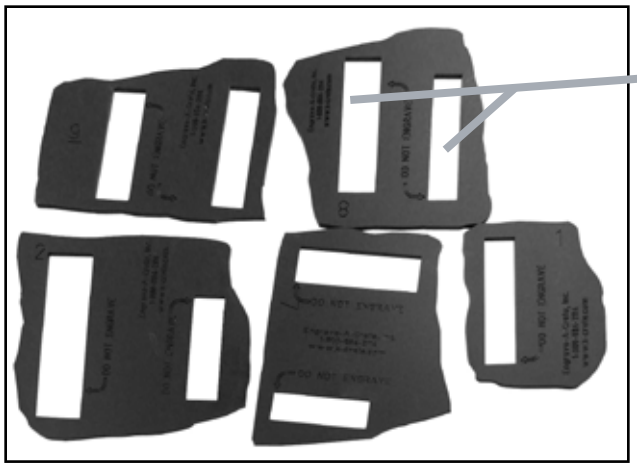
Alignment Slots





Bridge- (def.) Thing joining or connecting.

Aperture- (def.) An opening such as a hole or gap in templates or patterns.



Lightening holes- (def.) Used to help keep shipping weight to a minimum

Cutting Integral Bridges

Some integral bridges will leave a bridge shadow. The shadows could be removed to complete the pattern.

Or some templates have pictorial bridge shadows. Removal is optional.

Some patterns have two templates. The first template will leave integral bridge shadows. The second template will be used to cut out the shadows.

Some templates leave several bridge shadows that are a necessary part of the design and therefore the shadows do not need to be removed. Only one template is used to complete for this type of pattern.

Note- use chalk lines to help align and keep the templates straight.
Use orange chalk.

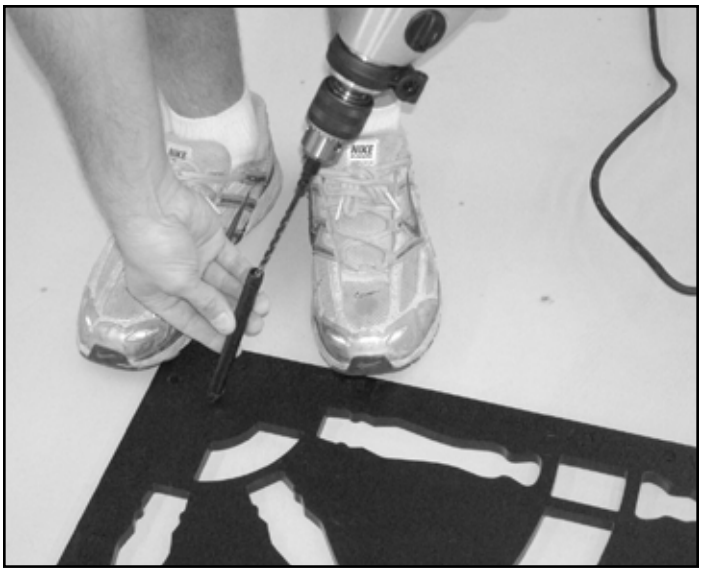
Do Not Use RED Chalk
Red is PERMANENT!!

Cutting a Rotating Template Design

Determine the center of the pattern.

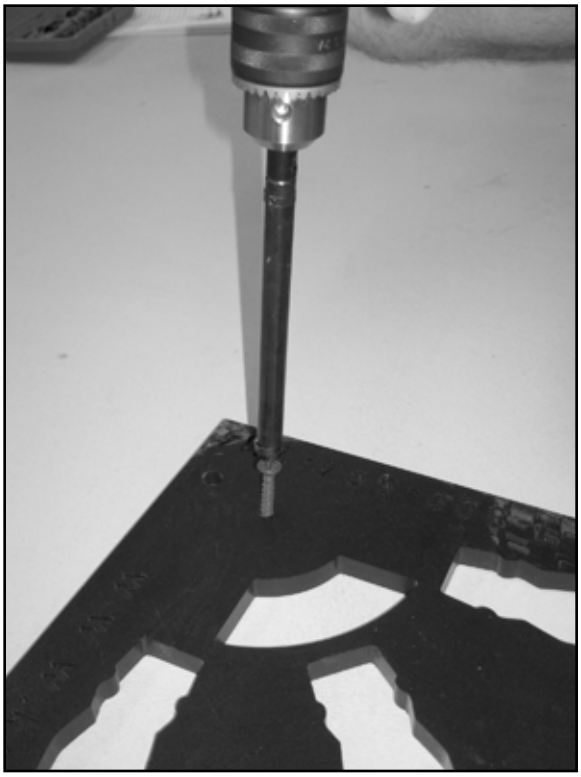
Using the hammer drill and the screws from the concrete anchoring kit, attach the template to the slab. Drill the hole more than deep enough for the screw. Then remove the dust from the hole by running the drill bit in and out of the hole several times.

Slide the sleeve over the drill bit.



Install pivot screw

Leave screw slightly loose to allow template to pivot.

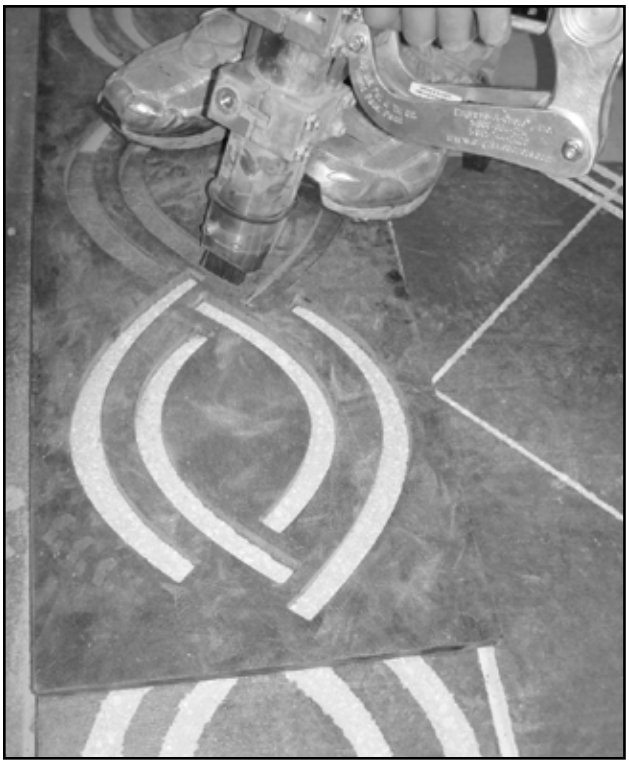


Concrete anchoring kit includes drill, driver and screws.

Determine the direction of the design.
Begin Cutting

Cutting Repeating Patterns

When cutting, the edges will stay crisp and sharp if a light touch and/or less air pressure is used. Many times too much downward pressure will cause the cut edges of the concrete to ravel, spall, chip and look ragged.



Tilt the Shark each way to cut along the edges of the template.

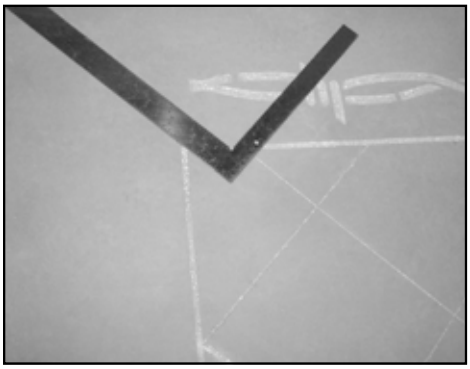
Sight into the template apertures to check alignment with the cut.

Use the alignment slots when appropriate.

- Allow the Shark to do the work - there is little need for the operator to apply any additional load to the tool while working. Maintain contact with the concrete surface with sufficient pressure only to keep the tool from bouncing off the concrete.
- When running off the edge of the concrete, use care and a light touch as this can damage and bend the Sharks Teeth (Impactors).
- When cutting areas large enough to sight any misalignment of a pattern, snap a chalk line and use alignment slots.

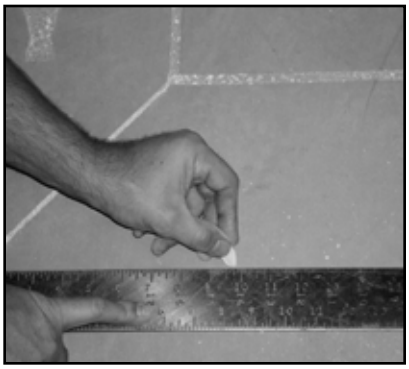
Cutting Border Patterns

Layout Corner

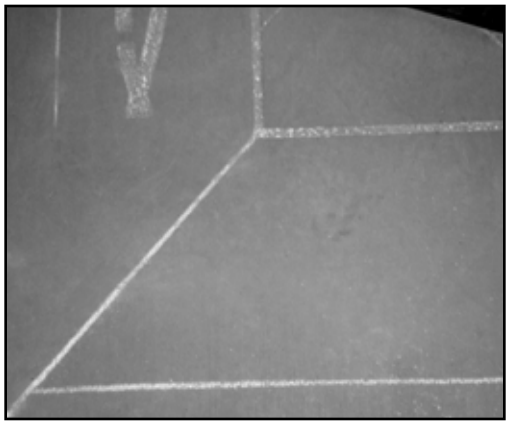


Mitre Corner

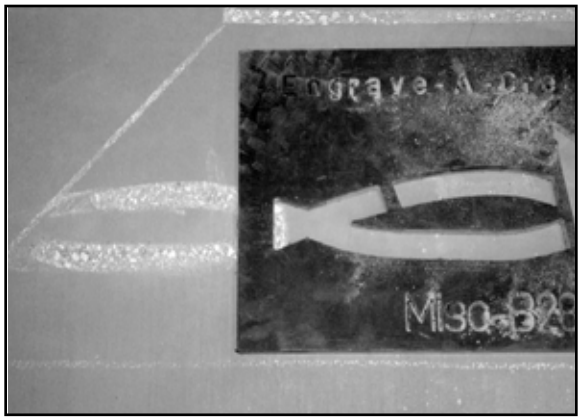
Lay out chalk line for first tile cut



Snap chalk line



Align template slot marks with snapped chalk lines.



Cut Pattern

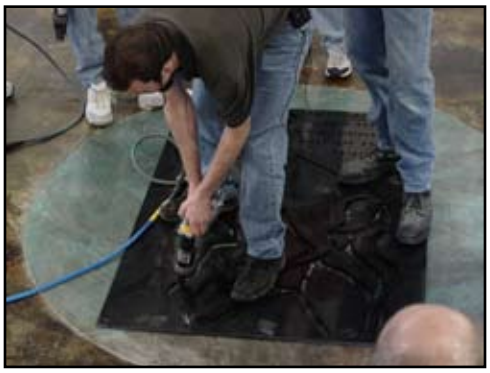
Move and Re-align Template

Hold template in place by either standing on it, or by anchoring it with concrete screws.

Cutting a Single Template

Place template on slab and align.

When cutting using the shark you should first place the impactors inside of the template openings and then squeeze the trigger. If you start the shark prior to placing the impactors inside the opening you are going to damage the template thus shortening its life.



When cutting next to the template edges, slightly angle the impactors toward the side of the template. This gives crisp edges on the design.

Cutting a Multi-Piece Pattern

When using a four piece template set it is helpful to start by marking a cross hair in the center of the slab.

When working with a symmetrical slab, measure the overall length of the entire plastic template. Subtract the length of the plastic from the length of the slab and divide that number by 2. This number is the length of concrete that will be exposed on either side of the template.

Remember measure twice, cut once.
Engraving is permanent!

Doing Touch Up Work with the Wasp

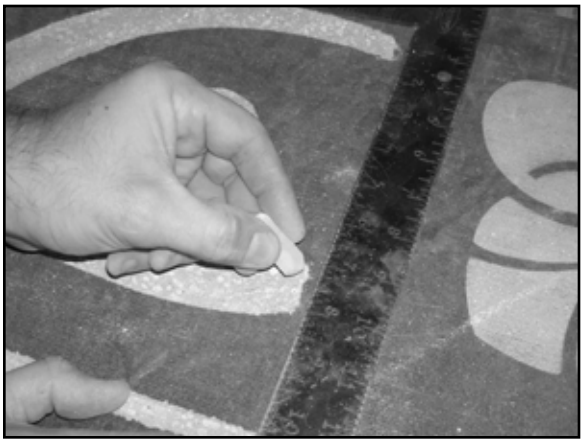
To start the tool, turn the sleeve valve indicator to the middle of the operating range. If the wasp is hissing, tap the tip of the stinger lightly against the concrete to engage the piston. (It is best to do this inside a cut area.) Once started, adjust the sleeve valve to provide the proper speed and depth of cut.

The amount of pressure the operator uses on the tool affects the stinger. Using lighter force when starting or stopping a cut gives the best control of the tool.

When cutting, **DO NOT** bear down on the tool and cause the stinger to dig into the surface. The Wasp is not a jack hammer. A Wasp will remove material faster with less downward pressure and therefore, less chance of breaking the stinger.

For best results, let the stinger do the work and guide the tool gently. The tool should also be held at a slight angle perpendicular to the work surface.

Note: Always angle the tip towards existing cuts to avoid chipping the stained area away.



Layout the areas with a pencil or chalk and use the wasp to remove the concrete.

CAUTION:
Flying concrete chips.
Approved safety goggles and /or a face shield should be worn at all times when operating this or any other percussion tool.

A Bridge Shadow is an uncut area that was covered by a template bridge.

Cutting a 2-Piece Template Set

Double template sets are for quick bridge removal using either the shark or the barracuda.

First cut the main design.

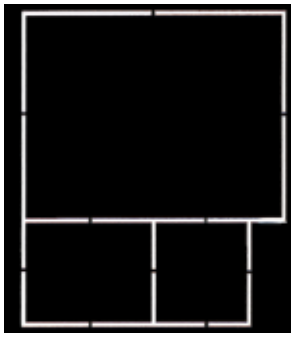
Then lay the second template over the cut area and align with the design to remove the bridges.

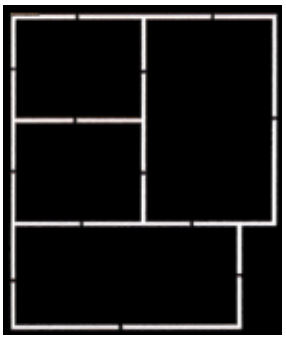
Cutting a Half Template Pattern

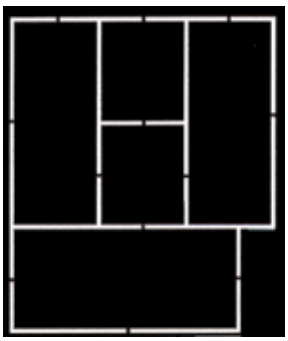
Align the first cut.

Rotate template 180 degrees, align and engrave second half

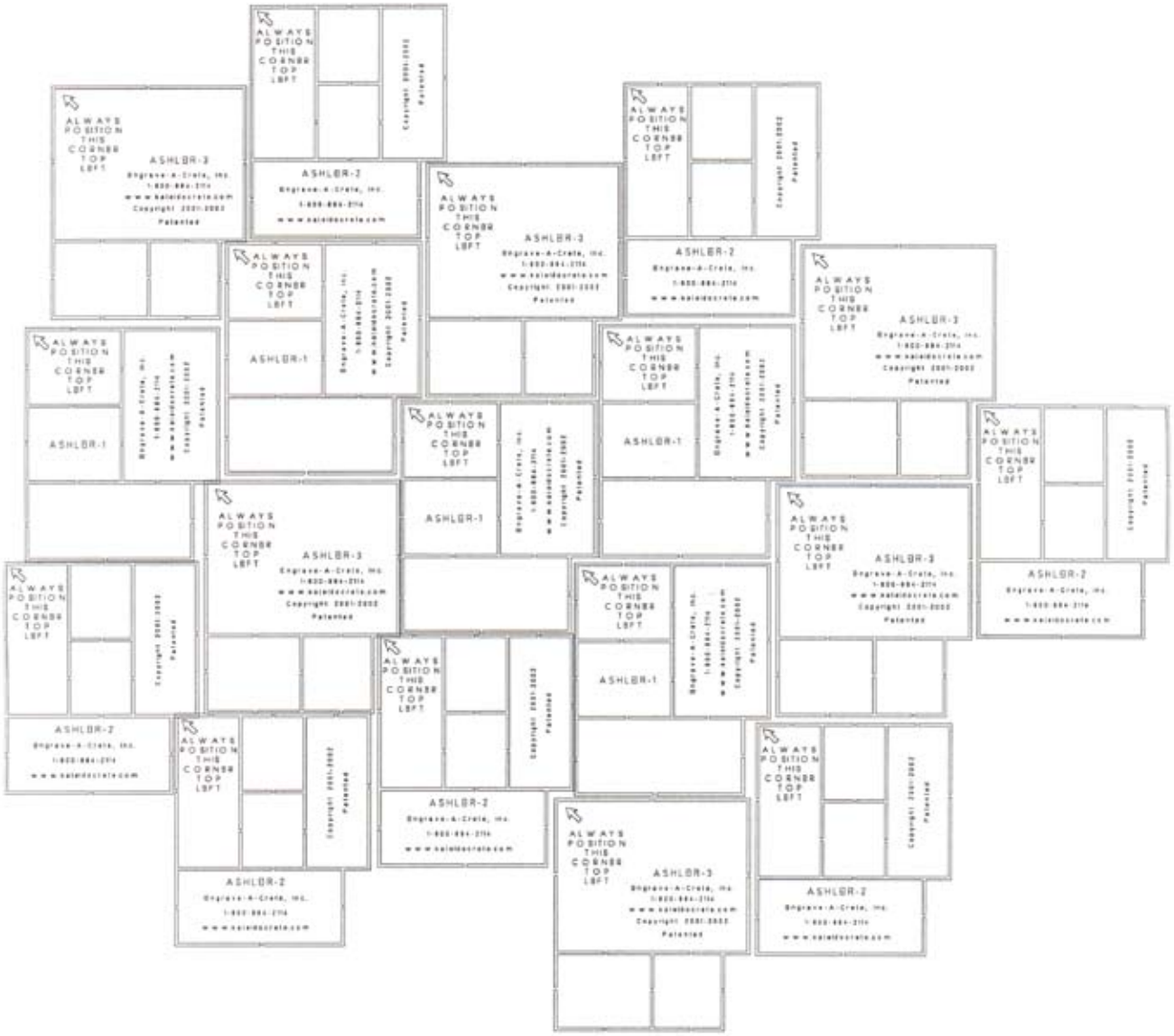
Cutting an Ashlar Slate Template Pattern



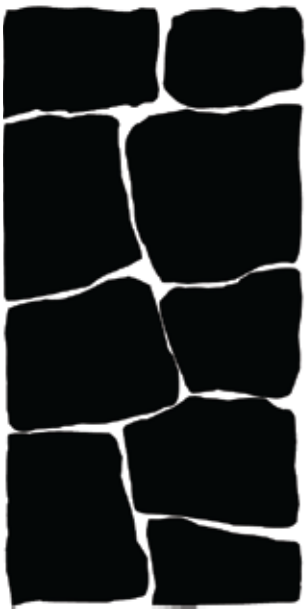




Always overlap your cut lines, nest templates with top left corner in same direction
(If a template is turned the pattern will no longer nest) alternate using templates 1, 2, & 3 to make the stones look random this is a sample nesting. Note these lines do not overlap only to make this paper visually clear.



Cutting a Flagstone Template Pattern



It is a good idea to lay out a few stones using soapstone to check for aesthetics of the design.

Align the stone templates.

Engrave around the perimeter of the template. Nest another stone template next to the cut just made and engrave around it.

Note: The further away you nest one template from your previous cut, the wider the resulting grout line.

Example: Corners of stones generally do not fit perfectly together. An edge of a template can be used to cut a large stone into two smaller stones.

To give realism to the design it is necessary to reshape stones. To do this use the edge of a template to alter edges. (Square off corners, create dimples in stone edges, widen some grout lines, etc.) This process can also be done using the wasp. When choosing stones to reshape, look to see if the shape is what you might see in real flagstone.

Stones will not always nest together perfectly. This leaves areas that will form a stone shape that does not resemble any of the templates. These are what give the design its unique randomness.

Cutting a Grout-line Template Pattern

Step #1: With a chalk line layout a grid pattern.

Tips: For 48” block running bond your grid squares need to be spaced at 24” intervals. Alternate the templates to achieve a random grout line (using the same template will produce a noticeable repeat).

Step #2: Use open-end template to complete the grout line up to the obstruction

Step #3: Remove the concrete where the template bridges were located. The templates can be used to remove the bridges or a wasp can be used freehand.

Now you should see a nice running bond pattern

Additional Patterns: Any of the template designs may be used to cut nearly any pattern that can be laid out with a chalk line. Example: Tile, Diagonal Tile, Random Sized Squares etc.

Cutting a Fan Cobblestone Template Pattern

Step #1: Mark Center Line of Slab with a Chalk Line

Step #2: Run first Column of Fans Vertically up the Center Line – Continue Adding Fans on Either Side (the cut lines overlap to assure proper placement).

Step #3: Remove the concrete where the template bridges were located. The bridges can be removed freehand with a wasp.

When Completed Your Project Should Look Like This!

Cutting a River Rock Template Pattern

Step 1: Layout a few stones using soapstone to check for aesthetics of the design.

Step 2: Engrave around the perimeter of the template. Nestle another stone template next to the cut just made and engrave around it.

Note: The Further Away You Nest One Template From Your Previous Cut, the Wider the Resulting Grout

*Edges of templates may be used to create different shaped stones and to finish small areas left over where a template did not nest closely.

Odd shaped areas can be cut into a series of small stones with a Wasp

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