



ALU DESIGN

ENGRAVING AND CUTTING TIPS

Updated : 14/01/2001

CUTTING ALU DESIGN

We advise you to use a saw.

We recommend that you cut the material with the protection film still on, with the design **facing down**

(to avoid any risks of scratching the surface with the aluminium chips and flaking the upper layer on the side)

CAUTION : NEVER CUT THIS MATERIAL WITH SHEARS (OR CORNER SHEARS)



Circular saws
 VA 1 Ref. 68 000 000
 VA 10 Ref. 68 004 600
 VA 11 Ref. 68 001 000

MECHANICAL ENGRAVING ON ALU DESIGN

- **CLAMPING THE PRODUCT** : The material can be clamped, according to its shape and size, on a **clamping table** or with **aluminium or celoron jigs** (for small objects).
 (the vacuum table is not recommended when using lubricant).
 For batch production, we advise you to use the mechanical stop (jigs).

- **ENGRAVING WITH A CUTTER** : *without regulating nose*
Caution :
 - engraving with a pantograph : do not apply too much pressure on the tool holder (very delicate : possible scratches).
 - engraving with an electronic machine : *without regulating nose*.
 You can, if you wish, use a collet spindle.

TOOLS :

- **Cutter** : the tungsten carbide cutter is the most adapted tool.



Grinding	
Cutting angle	40°
Half-taper angle	18°
Tip angle	7°
Clearance angle	15°

Caution : the parameters are valid only with the standard Gravograph cutters.

Tool diameter	<u>Carbide</u>
Ø 3.17	05 410 xxx
Ø 4.36	58 101 xxx
TwinCut ® Insert	B7 300 xxx

For cutting : 2 lip insert B7 8xx 000

NOTE : The size of the tip depends on the engraving width you want to obtain.

MACHINE PARAMETERS :

	Speeds (mm/s)			Dwelling time	Engraving depth
	<u>Z</u>	<u>X-Y</u>	<u>Rotation</u> (revolution / mn)		
TWINCUT ENGRAVING CUTTER	5 / 20	1 st layer : 20 to 35 2 nd layer : 10 to 15	18 to 20 000		0.05 to 0.075mm 0.3mm* spindle pressure
CUTTING	3	3	20 000	0	1 to 1.5mm according to thickness, in 1 pass

* depth adapted to apply paint or wax.

INFORMATION : there is no need to lubricate, neither for engraving, nor for cutting.

On wood tones, it is impossible to obtain the white intermediary layer. For the other colours, an engraving depth between 0.05 and 0.075 allows to reach the white intermediary layer.

LASER ENGRAVING ON ALU DESIGN

You will find below the recommended parameters to use for the engraving of text :

POWER AND SPEED ON L-S 300 60 WATT

ALU DESIGN COLOUR	POWER	SPEED	DPI
MELEZE	55	60	800
WALNUT	55	60	800
TEAK	55	60	800
OCEANO	35	60	800
CARBON FIBER	35	60	800
MARMO AZZURO	40	60	800
MARMO ROSSO	35	60	800
GRANITO ROSSO	35	60	800

Important : the colour at the bottom of the engraving may vary according to the colours and engraving parameters.

VERY IMPORTANT :

In order to reduce smoke deposits after the engraving and to clean the bottom of the engraving correctly, we advise you to clean the engraving with our « industrial cleaner » spray.
Spray the cleaner on a soft cloth and wipe the engraved plate.



Industrial cleaner
spray
Réf. LO 411 000

COLOURING ALU DESIGN

For best results, it is possible to colour Alu design after mechanical engraving with a cutter.

Every time you apply colour with paint, we advise you to clean your plate carefully before colouring. To do so, we recommend the use of our industrial cleaner.



Caution : DO NOT USE cleaning diluant.

❖ **Paint :**

Engraving depth : 0.3mm.

Apply paint with a flat spatula that does not scratch (a piece of Gravoply or bristol paper) or apply the paint in the characters with a syringe (very practical to colour the bottom of the engraving when the engraving is deep)

Never apply 2 coats

Clear away the excess with the clean spatula

Leave to dry for 40mn, depending on the room temperature

Clean with application diluant *

Leave to dry for a few hours



Spray industrial cleaner
Ref. LO 411 000

Gravolaque
Ref. 87 400 0xx

Application diluant
Ref.87 413 000



* Wrap a piece of soft wool-free cloth that does not scratch round a wedge. Soak the cloth with application diluant. Rub the plate gently to clear away the excess paint.

We highly recommend the use of Gravograph paints in order to avoid possible incompatibility of your inks and paints with the top layer of our materials.



- ❖ **Aloxide :** (on a plate engraved with a cutter, on small characters mainly)
Apply on the engraving with the application pad delivered with the bottle.

Rince with water to clean any excess
Clean quickly with a soft cloth

Aloxide
Ref.58 477 000



- ❖ Cold wax : (on a plate engraved with a cutter)
Apply the wax on the engraving after having warmed up the tip of the wax stick to soften the wax.
Clean with absorbent paper.

Cold wax
Ref.06 710 00x