



GRAVOMETALL

ENGRAVING and COLORATION TIPS



Updated : 17/11/00

Gravometall is a brass protected by a varnish layer. It has all the advantages of brass: glossy and high quality. It is more resistant and is available in several colours.

When engraving, always take care not to SCRATCH the plate.

CUTTING GRAVOMETALL

Use a saw.
The table shear can be used on 0,6 mm thickness plate.

"metal" type table shear # 06 352 000	Circular saw VA 1: #68 000 000 VA 11: #68 001 000
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ENGRAVING GRAVOMETALL

➤ **CLAMPING GRAVOMETALL** : It can be clamped according to its shape and dimensions on a **clamping table** or **vacuum table** or else **on a vice with celoron or aluminium jigs** (for a small piece of material). **For batch production, use the mechanical stop located on the jigs.**

Caution : when you engrave **several lines on a 0,6 mm thick little piece of material**, the regulating nose can hit the sides of the jigs. Thus the top part of the letters would not be engraved. **You must remember to turn the jigs on the side where the shoulder is the lowest.**

➤ **ENGRAVING WITH A CUTTER** :

Caution :

- **engraving with a pantograph** : you must **not press too much** on the spindle
- **engraving with an electronic machine** : **tighten the spindle spring** in order to have a constant engraving depth.



- **without a regulating nose** : **tightening the spindle spring as much as possible** to achieve a regular engraving depth.
- **with a regulating nose** : **loosening the spindle spring so that the spindle remains supple** and does not scratch the plate, or stick protective adhesive in order not to scratch the varnish.

Protective adhesive
08 013 000

➤ **ENGRAVING WITH DIAMOND** : (**in this case painting is not possible due to the engraving depth**).
The pressure of the spindle spring defines the width of engraving.

- **engraving with a pantograph** : **constant average pressure**
- **engraving with an electronic machine** : we advise you to **tighten the spindle spring**.

Caution : Do not use a regulating nose when using diamond



TOOLS :

- **Cutter** : In steel or in carbide

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

Type of tools	Steel	Carbide
Ø 3,17	05 576 xxx	05 410 xxx
Ø 4,36	58 106 xxx	58 101 xxx
TwinCut® Insert	-	B7 300 xxx

Warning : these parameters are only valid with Gravograph standard cutters.

NB : The size of the tip depends on the engraving width you wish to obtain.

- **Diamond** : tracing diamond

Type of tools	Diamond
Ø 3,17	05 412 317
Ø 4,36	58 102 436
TwinCut® Insert	B7 600 xxx

MACHINE PARAMETERS:

CUTTER DIAMOND	Speed (mm/s)			Dwelling time	Engraving depth
	Z	X-Y	Rotation (Revolution / mn) 18 to 20 000 Motorless		
	10 to 25 35	10 to 25 35		0 0	0.3 mm* Spindle pressure

*depth adapted for painting or to apply wax

If you decide not to apply anything after the engraving : 0,05 mm is adequate.

We advise you to make **one pass at the whole depth**, whatever tool you use.

COLOURING GRAVOMETALL

In order to achieve a lasting and aesthetic result, colouring with paint is recommended on plates engraved with a cutter :



- ❖ **Paint** : Apply with a flat spatula that will not scratch (a piece of Gravoply or bristol) or fill the engraved characters using a syringe (very practical to colour the bottom of the characters when the engraving is deep)



Never apply 2 coats

Clear away the excess with a clean spatula

Ensure that the paint in the engraving does not contain any air bubbles

Leave to dry for 40 mn

Clean with application diluant *

Leave to dry for a few hours.

* Wrap a piece of soft cloth round a wedge. Soak it with application diluant. Lightly rub down your plate to clear away the excess paint.

Gravolaque
87 400 0xx

Application
diluant
87 413 000

Professional
tip

GRAVOMETALL 2

We recommend the use of Gravograph's paint to avoid an ink or paint incompatibility with the protection varnish.

Other techniques can also be used :

- ❖ **Gravoxide** : (on plates engraved with a cutter or a diamond, mainly for small characters)
Apply with a cotton bud or a piece of cone-shaped paper (pointed end) on the engraving.
Rinse with water in order to clear away the product.
Quickly clean with a soft cloth (make sure you follow the grain).
- ❖ **Cold wax** : (on plates engraved with a cutter)
First lightly heat the tip of the wax to soften it and apply on the characters
Clean with absorbent paper (such as kitchen paper)

Or wrap a piece of soft cloth that will not scratch round a wedge.

Gravoxide
58 476 000

Cold wax
06 710

Professional
tip

FINISH

- ❖ **BEVELLING** : Use the B4 and B6 machines to enhance the finish of the plate, to obtain different types of bevelling according to your requirement.
Example :

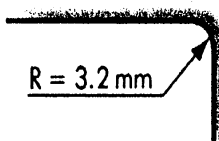
B4 : # 00 014 001
B6 : # 00 014 101



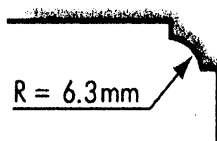
- ❖ **CORNER CUTTING** : if you want to cut special corners, we advise you to use the CSC table shears for 0.6mm thick Gravometall.

See examples bellow :

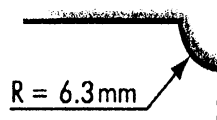
Blade N°1



Blade N°5



Blade N°8



CSC Table shear
D4 000 000

Different measures exist for various radius and width.