GRAVOPLY 3C

ENGRAVING TIPS

Updated :

17/05/2001

Gravoply 3C results from the combination of the Gravoply 1 and the film used for the Gravoply 2 manufacturing.

CUTTING GRAVOPLY 3C

Use **Table shears** (plastic type) or a **Saw.**
Gravoply 3C can be cut with a stanley knife, too.

Table Shears	Circular saw
Ref. 06 351 000	VA 1 : Ref. 68 000 000

ENGRAVING GRAVOPLY 3C

Always work on a clean surface.

- **CLAMPING GRAVOPLY 3C :** The material can be clamped according to its shape and its dimension on a **Clamping Table** or on a **Vacuum table**, but can also be positioned in a vice with **celoron or aluminium jigs** (for little pieces).
  ⇐ **Clamp the piece with moderation : enough so that that it is not be ejected, but not too much so that it does not bend.**
  For a mass production work, use the stop which is on the jigs.

- **ENGRAVING WITH A CUTTER** : use preferably a **regulator nose.**
  The choice of the regulator nose can be made according to the engraving width, the tool and the letter to engrave.
  The swarf extractor is recommended to engrave the Gravoply 3C.
  We use a standard spindle.
  - Engraving with a pantograph: Do not apply any pressure on the cutter-holder in order not to scratch the plate with the regulator nose.
  - Engraving with an electronic machine : Make sure that the spindle spring is loose to give some flexibility to the spindle (too high a pressuire would mark the plate with prints of the regulator nose).

TOOLS :

Cutter :

- In steel
- In tungsten carbide (more resistant)

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

Type of tools	Steel	Carbide
∅ 3.17	05 576 xxx	05 410 xx›
∅ 4.36	58 106 xxx	58 101 xx›
TwinCut® Insert		BZ 300 xx›

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.

MACHINE PARAMETERS :

	Speed (mm/s)			Dwelling time	Engraving depth
	Z	X-Y	Rotation (Revolution / mn)		
CUTTER	35	35	18 to 20 000	0	0.1mm and 0.3mm

Number of passes : 1

THE MATRIX :

The Matrix, which is intended for the engraving and the cutting of large plates (ex :labels), is a GravoStyle'98 function (option of the DISCOVERY level and integrated to the superior levels).

Specific case :
For the **total cutting =** engraving – break – cutting : you need 2 tools and 2 different cutter presets.

∂ you adjust the cutter for the engraving (see the table dedicated to the references)

- you adjust the cutter for the cutting (idem , for the steel cutters, use the 15° cutter: #58 106 015)

The method consists in :

➢ Presetting the tool : screw the cutter knob (caution : the thread of the screw is on the left) and place the tool in the spindle so that it is in contact with the material (see through the little opening of the regulator nose if the cutter has gone down). Memorise the spindle position (a little of pressure with the Gravoply 3C). Validate the Z.

➢ Chosing the engraving depth by turning the graduated index knowing that :
4 graduations = 0,1 mm so **1 turn = 0,62mm**

➢ **At the break** : choose the cutting width in the same way.
It is necessary to add a little pressure during the cutting at the start.

The Professional Tip

To obtain a bevelled edge during the Matrix application, you just have to program a cutting depth (phase ∝) according to the desired value of the bevelled edges and to finish the cutting by "breaking" manually each part.
We advise you to take 2/3 of the plate thickness in bevelled edges.

Cutting width / Plate Thickness	1.6	2.4
In mm	1	1.6
Divisions at the index	40	64

Cutter recommended :
- Steel : 58 106 045
- Carbide : 58 101 045
- TwinCut® : B7 315 345 (delivered by 3)

➢ With the Matrix, you just have to « break » manually each label.

FINISH

❖ **BEVELLING** : use the B4 and B6 machines to enhance the aesthetic aspect of the plate. You can obtain several types of bevelled edges.

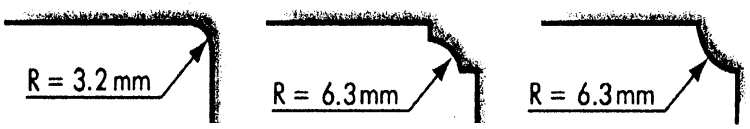
Examples :

For a better finish, we advise you to bevel on 2/3 of the plate thickness.

❖ **CUTTING ANGLES** : In order to realise easily some original angles, we advise you to use the corner shears (CSC).

Some examples of blades available :

Shears CSC
Ref. D4 000 000



Blade N°1 ***Blade N°5*** ***Blade N°8***

Various radius and widths are available.