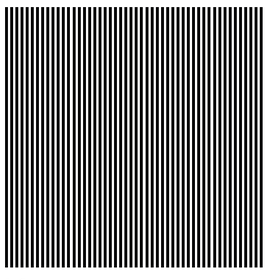
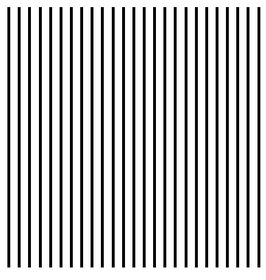


L.1



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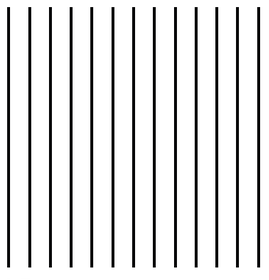

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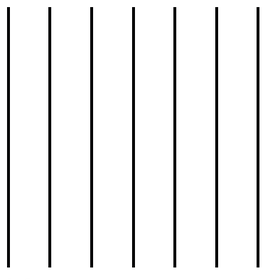


L.4

L.1 : by myself. 0,6 x 60 mm line. Marking, power : 10%, speed : 800 mm/s, .dxf.
L.2 : by myself. 0,6 x 60 mm line. Marking, power : 10%, speed : 800 mm/s, .dxf.
L.3 : by myself. 0,6 x 60 mm line. Marking, power : 20%, speed : 600 mm/s, .dxf.
L.4 : by myself. 0,6 x 60 mm line. Marking, power : 20%, speed : 600 mm/s, .dxf.

DM.1 : by Denzil Makes. Living Hinge Pattern. Marking, power : 10%, speed : 800 mm/s, .dxf.
DM.2 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.
DM.3 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.
DM.4 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.

DM.5 : by Denzil Makes. Living Hinge Pattern. Marking, power : 10%, speed : 800 mm/s, .dxf.
DM.6 : by Denzil Makes. Living Hinge Pattern. Marking, power : 10%, speed : 800 mm/s, .dxf.
DM.7 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.
DM.8 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.

DM.9 : by Denzil Makes. Living Hinge Pattern. Marking, power : 10%, speed : 800 mm/s, .dxf.
DM.10 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.
DM.11 : by Denzil Makes. Living Hinge Pattern. Marking, power : 20%, speed : 600 mm/s, .dxf.
DM.12 : by Denzil Makes. Living Hinge Pattern. Marking, power : 10%, speed : 800 mm/s, .dxf.

C.1 : by myself. 0,6 x 0,6 mm square. Marking, power : 10%, speed : 800 mm/s, .dxf.
C.2 : by myself. 0,6 x 0,6 mm square. Marking, power : 10%, speed : 800 mm/s, .dxf.
C.3 : by myself. 0,6 x 0,6 mm square. Marking, power : 20%, speed : 600 mm/s, .dxf.
C.4 : by myself. 0,6 x 0,6 mm square. Marking, power : 20%, speed : 600 mm/s, .dxf.

D.1 : by myself. 0,6 x 60 mm line at 45°. Marking, power : 10%, speed : 800 mm/s, .dxf.
D.2 : by myself. 0,6 x 60 mm line at 45°. Marking, power : 20%, speed : 600 mm/s, .dxf.
D.3 : by myself. 0,6 x 60 mm line at 45°. Marking, power : 20%, speed : 600 mm/s, .dxf.
D.4 : by myself. 0,6 x 60 mm line at 45°. Marking, power : 20%, speed : 600 mm/s, .dxf.

T1 : by myself. 0,6 x 1,2 mm triangle. Marking, power : 10%, speed : 800 mm/s, .dxf.
T2 : by myself. 0,6 x 1,2 mm triangle. Marking, power : 20%, speed : 600 mm/s, .dxf.
T3 : by myself. 0,6 x 1,2 mm triangle. Marking, power : 20%, speed : 600 mm/s, .dxf.
T4 : by myself. 0,6 x 1,2 mm triangle. Marking, power : 20%, speed : 600 mm/s, .dxf.

X.1 : by myself. 0,8 x 0,8 mm cross. Marking, power : 10%, speed : 800 mm/s, .dxf.
X.2 : by myself. 0,8 x 0,8 mm cross. Marking, power : 20%, speed : 600 mm/s, .dxf.
X.3 : by myself. 0,8 x 0,8 mm cross. Marking, power : 20%, speed : 600 mm/s, .dxf.
X.4 : by myself. 0,8 x 0,8 mm cross. Marking, power : 20%, speed : 600 mm/s, .dxf.

Tu.1 : by myself. Processing texturing noise. Marking, power : 10%, speed : 800 mm/s, .dxf.
Tu.2 : by myself. Processing texturing noise. Marking, power : 10%, speed : 800 mm/s, .dxf.
Tu.3 : by myself. Processing texturing noise. Marking, power : 10%, speed : 800 mm/s, .dxf.
Tu.4 : by myself. Processing texturing noise. Marking, power : 10%, speed : 800 mm/s, .dxf.

R.1 : by myself. Processing texturing regular. Marking, power : 10%, speed : 800 mm/s, .dxf.
R.2 : by myself. Processing texturing regular. Marking, power : 10%, speed : 800 mm/s, .dxf.
R.3 : by myself. Processing texturing regular. Marking, power : 10%, speed : 800 mm/s, .dxf.
R.4 : by myself. Processing texturing regular. Marking, power : 10%, speed : 800 mm/s, .dxf.

P.1 : by myself. 2,5 x 9,5 mm spike. Marking, power : 10%, speed : 600 mm/s, .dxf.
P.2 : by myself. 2,5 x 9,5 mm spike. Marking, power : 20%, speed : 600 mm/s, .dxf.
P.3 : by myself. 2,5 x 9,5 mm spike. Marking, power : 20%, speed : 600 mm/s, .dxf.
P.4 : by myself. 2,5 x 9,5 mm spike. Marking, power : 10%, speed : 600 mm/s, .dxf.

FONT TEXT : Rubik regular & bold. Engrave & marking, power : 20%, speed : 600 mm/s, .dxf.
FONT TITLE : ZCOOL QingKe HuangYou. Engrave & marking, power : 20%, speed : 600 mm/s, .dxf.

The « **A astuce** », user guides include all the tests and creations of « **GraphLab : outils graphiques** ».
They show and understand the spectrum of graphic possibilities of the laser engraver.

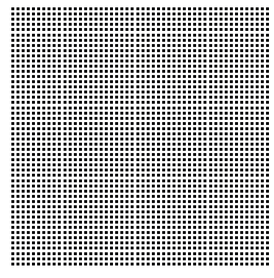
Power test

Speed : 600 mm/s

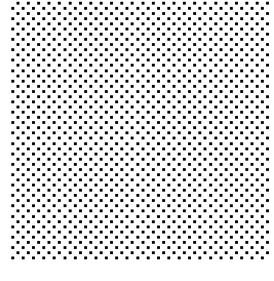
10% **20%** **30%** **40%** **50%** **60%** **70%** **80%** **90%** **100%**

30 Quai des Charbonnages, 1080 Brussels

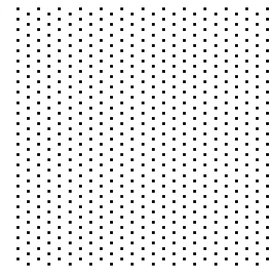
Fablab iMAL, Ingrave laser printing



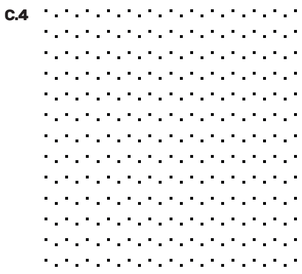
C.1



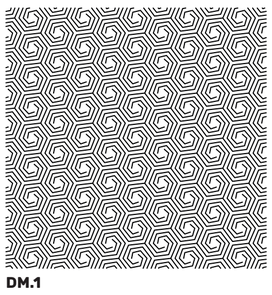
C.2



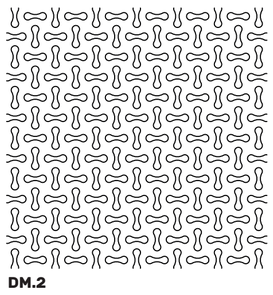
C.3



C.4



DM.1



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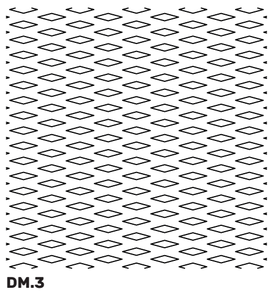

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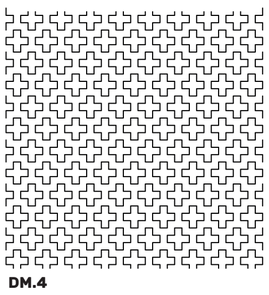
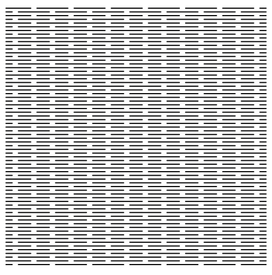
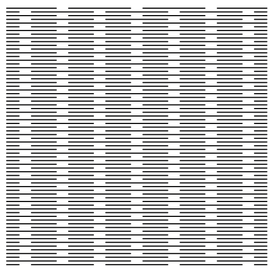


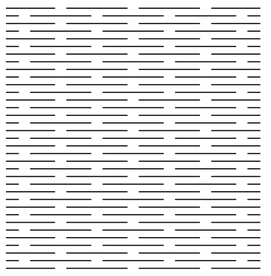
DM.4



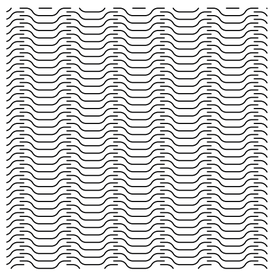
DM.5



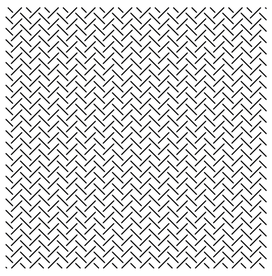
DM.6



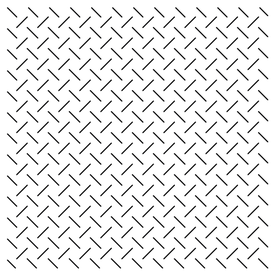
DM.7



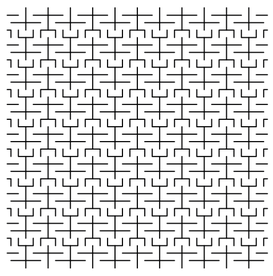
DM.8



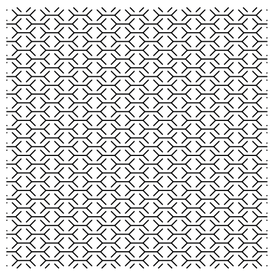
DM.9



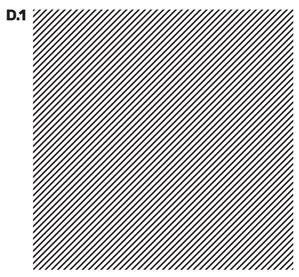
DM.10



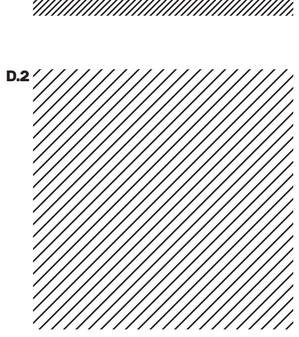
DM.11



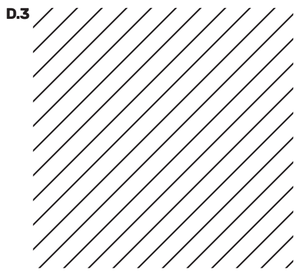
DM.12



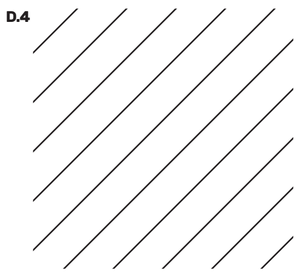
D.1



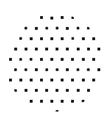
D.2



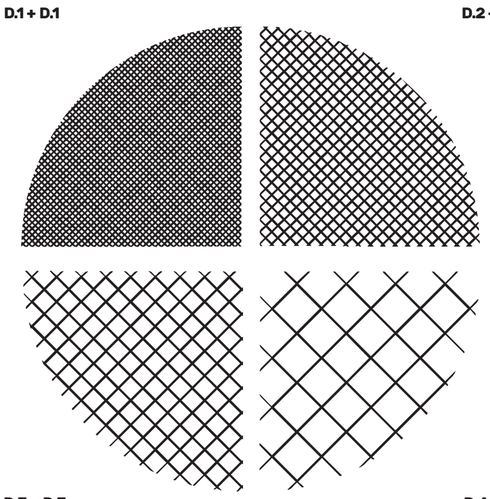
D.3



D.4



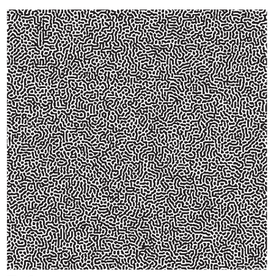
D.1 + D.1



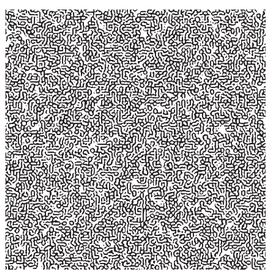
D.2 + D.2

D.3 + D.3

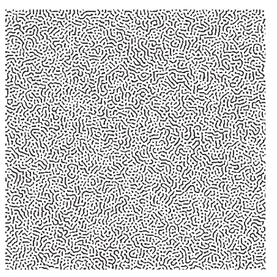
D.4+ D.4



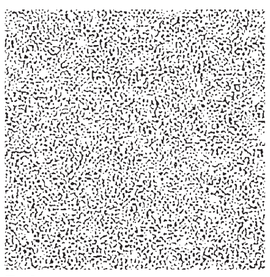
Tu.1



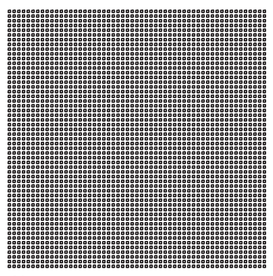
Tu.2



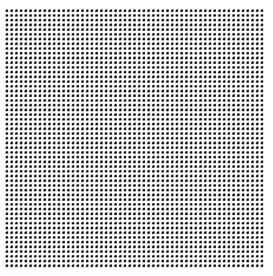
Tu.3



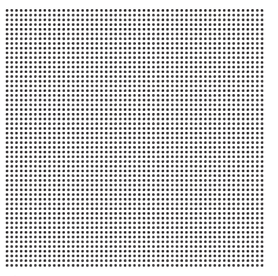
Tu.4



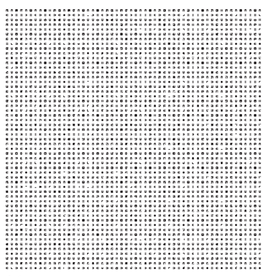
R.1



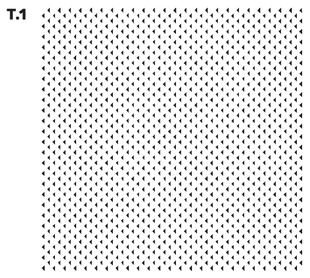
R.2



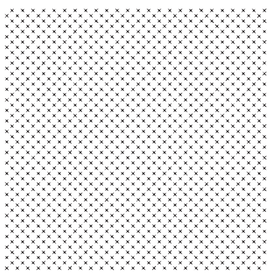
R.3



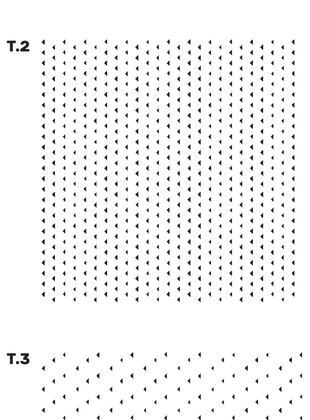
R.4



T.1



X.1



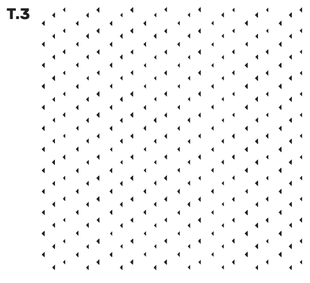
T.2

X.2

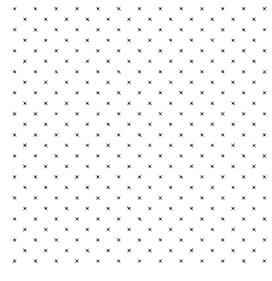
T.3 + D.1

DM.10 + DM.10

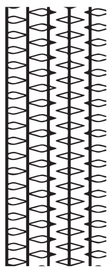
T.3 + C.3



T.3



X.3

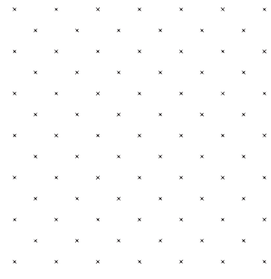


DM.3 + L.3

D.4 + T.4

Tu.4 + P.2

T.4



X.4

astuce GraphLab outils graphiques

6pt Machines are cool!
7pt Machines are cool!
8pt Machines are cool!
9pt Machines are cool!
10pt Machines are cool!
12pt Machines are cool!
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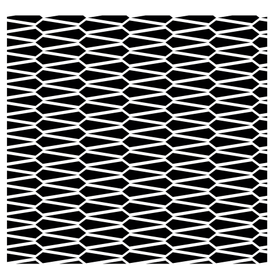
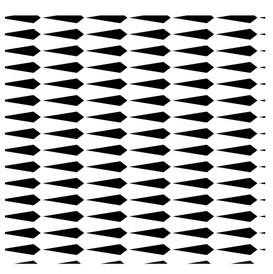
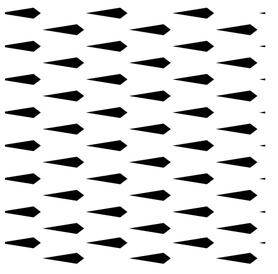
8pt Machines are cool!
7pt Machines are cool!
6pt Machines are cool!



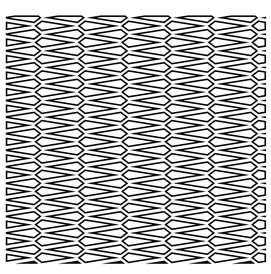
P.1



P.2



P.3



P.4

Laser engraver

A astuce

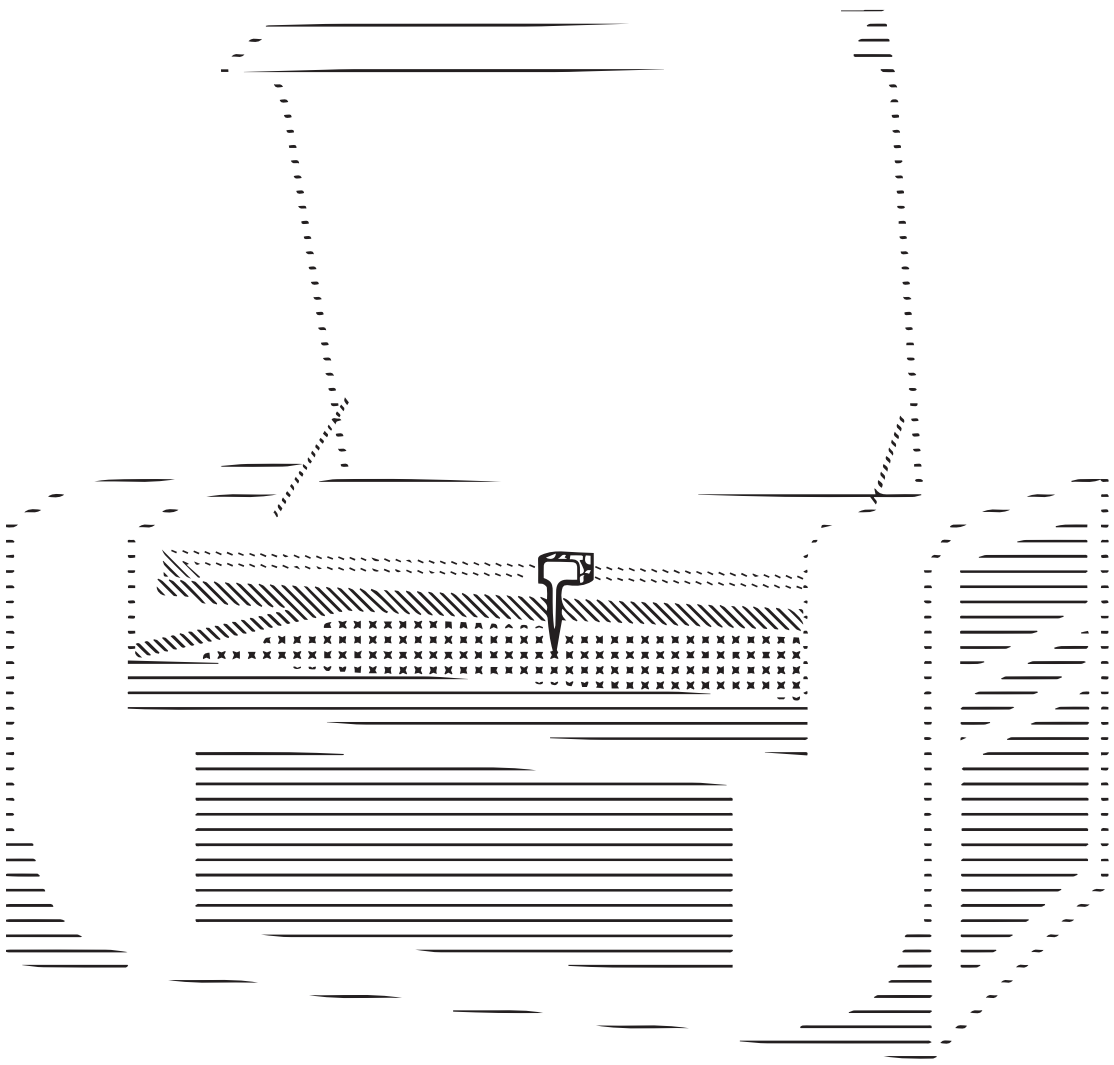
Marking

Cut

Engrave

Introduction : The laser engraver have two option, cut and engrave.
it does have two data on this option than you can decide,
the speed calculed between 10mm/sec to 500mm/sec.

And power calculed between 0% to 100%. With the option cut you can cut but also marking with a low power. So it is possible to make engraving with the option marking, engraving patern.

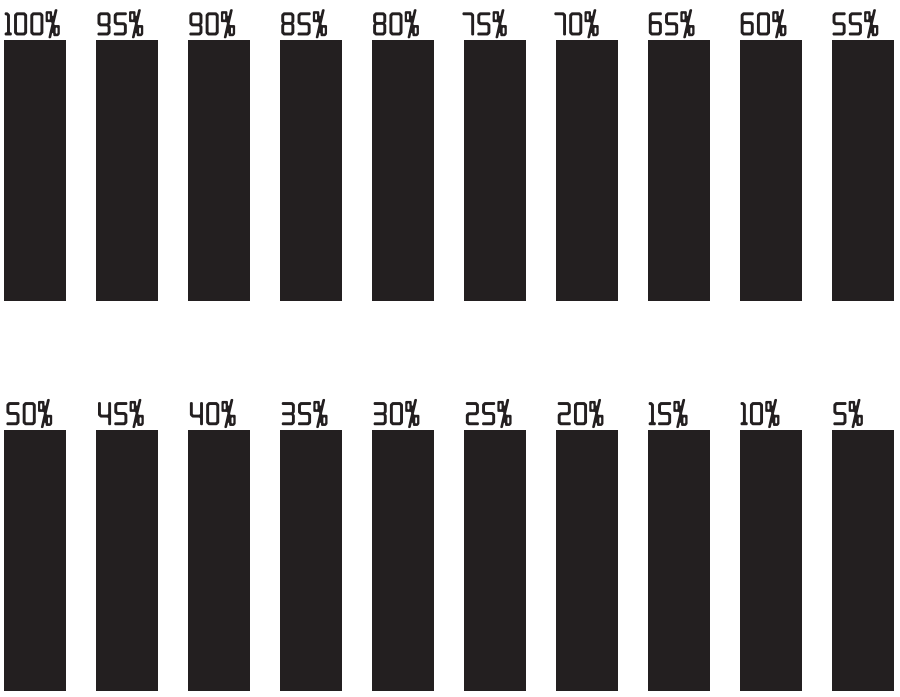


Poster data

Font :
- Text : 12pt marking
- Title : 24pt engrave

Marking : 500mm/sec, 15%
Cut : 10mm/sec, 50%
Engrave :500mm/sec, 35%

Symbol :
- Introction : engrave
- Astuce : engrave
- Machine : marking
- Marking patern : marking
- Controler : engrave
- Contouring : cut

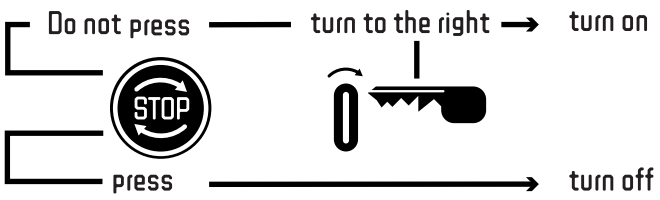


Machine : Laser engraver
Test : power scale of engrave

Support : Wood
Speed : 500mm/sec

WARNING : Over 80% of power damages the laser

Controler



Laser : Test the laser(!)

Test : Show the limit of the projet

Menu : Open the menu(!)

Darum : mount the tray to its highest point(!)

: Lead the menu

Stop : Stop the projet

Start : Start the projet

: Lead the laser head

Machine are cool ! 12pt

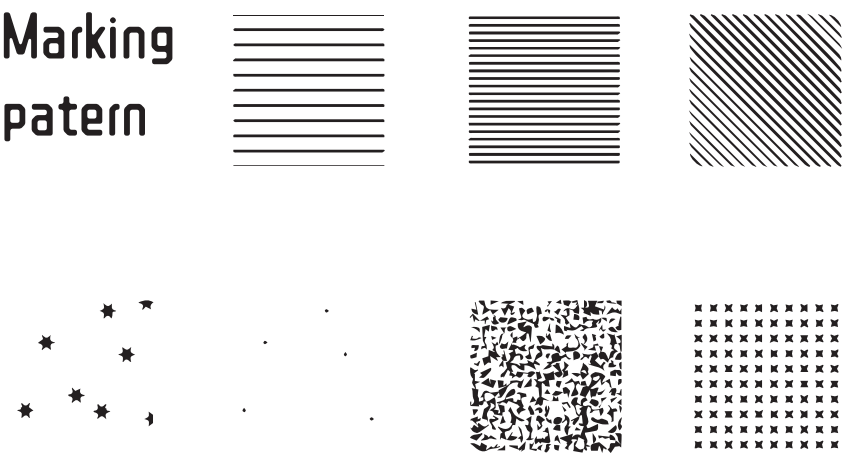
Machine are cool !18pt

Machine are cool !24pt

Machine are cool !36pt

Machine are cool !48pt

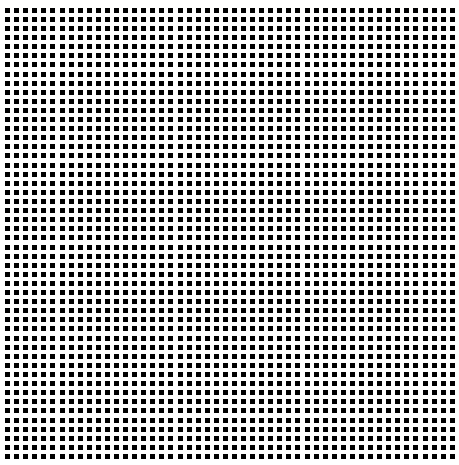
Marking patern



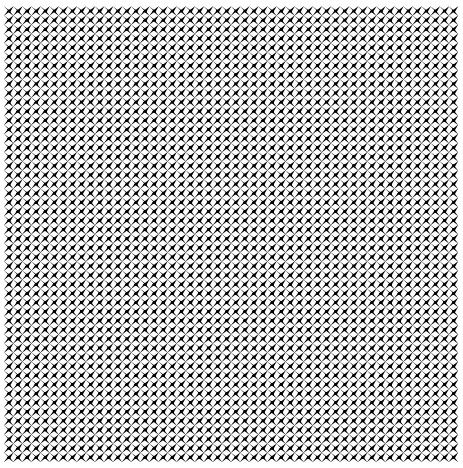
Pattern test

A lot of machine used which is the basic one can often prosess in one color, or matter. The way to creat variation in color and degraded is to use pattern. This patterns are creat into illustrator.

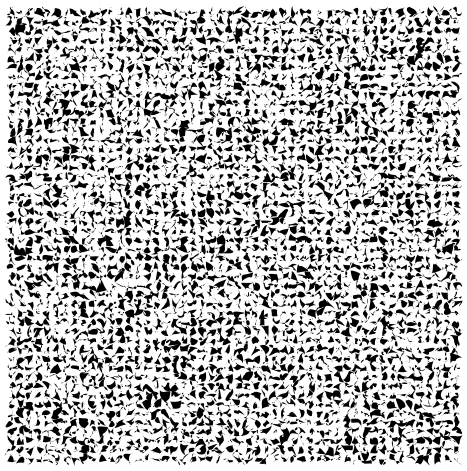
Some of them (embroisy and 3d printer) can use more than one color is often a machine which is often industrial so less accessible for citizens. In case of CNC and laser engraver, pattern is the only way to creat mass and volume.



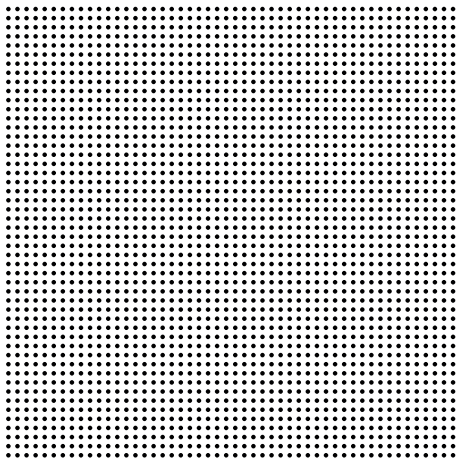
origine pattern (o.p.) :
square, 0,6 mm,
espacing, 0,6 mm,
forming a square, 60 mm.



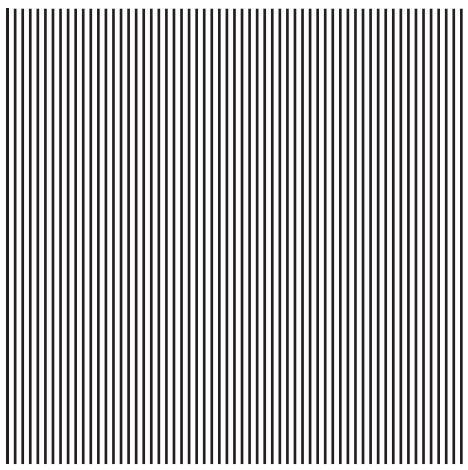
o.p. with zigzag effect :
size, 0,5 mm, absolut,
ridges per segment, 0,5mm, corner.



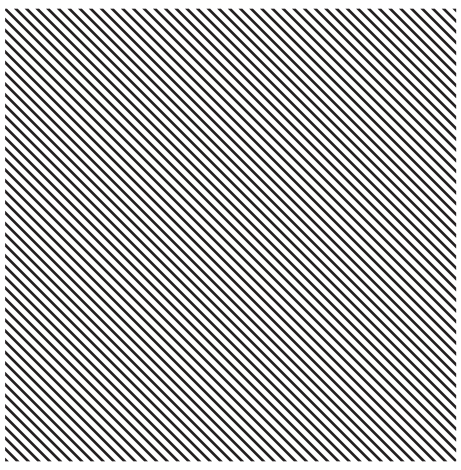
o.p. with tweak effect :
horizontal, 0,5 mm,
vertical, 0,5mm, absolute,
points, anchor, in, out control.



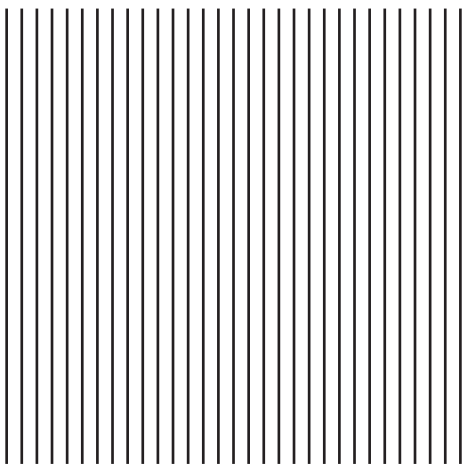
o.p. with stylize round corners effect :
radius, 5 mm.



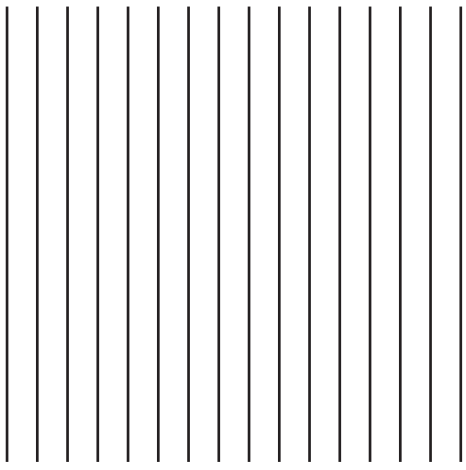
origine pattern (o.p.) :
line, 90°, 1 pt, 0,353 mm,
espacing, 0,6 mm,
forming a square, 60 mm.



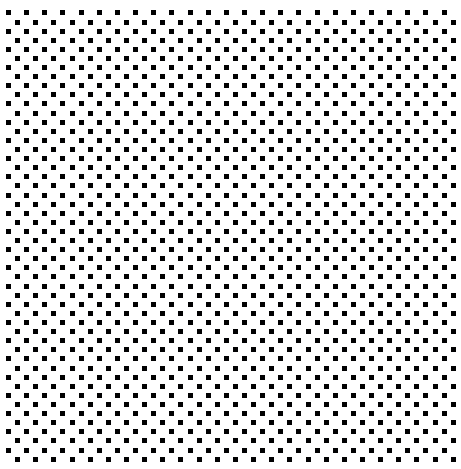
origine pattern turn to a 45° angle.



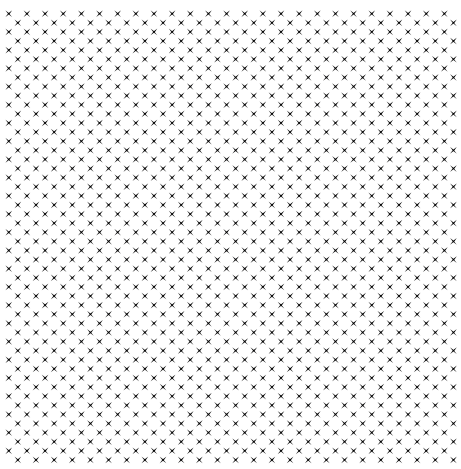
origine pattern with :
espacing, 1,553 mm,



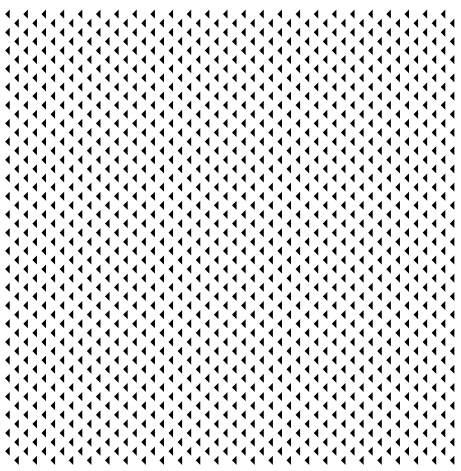
origine pattern with :
espacing, 3,721 mm,



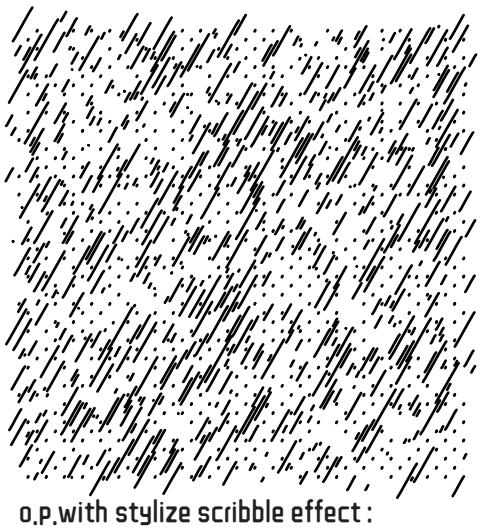
origine pattern (o.p.) :
square, 0,6 mm,
espacing, 1,8 mm,
forming a square, 60 mm.



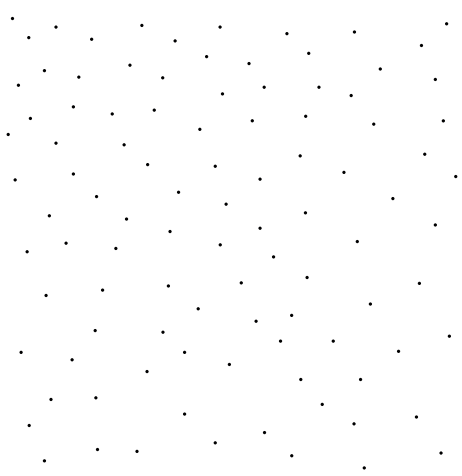
o.p. with zigzag effect :
size, 0,5 mm, absolut,
ridges per segment, 0,5mm, corner.



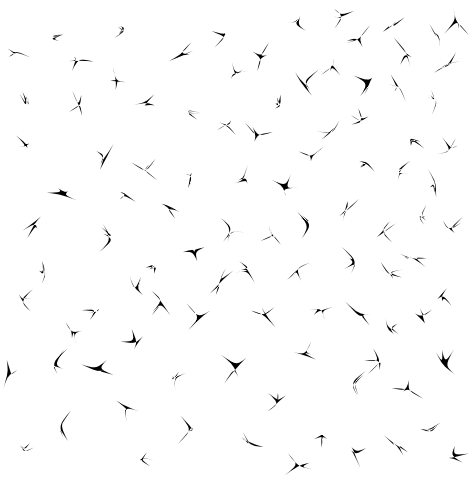
o.p. with warp option :
style, wave, horizontal,
inflexion, -100%,
horizontal, 100%, vertical 0%.



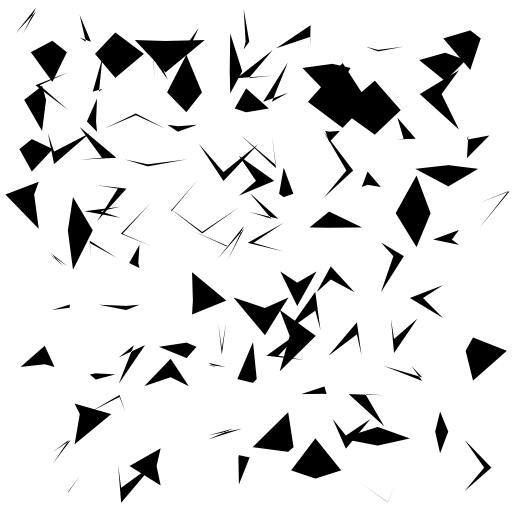
o.p.with stylize scribble effect :
option, loop,
angle, 60°.



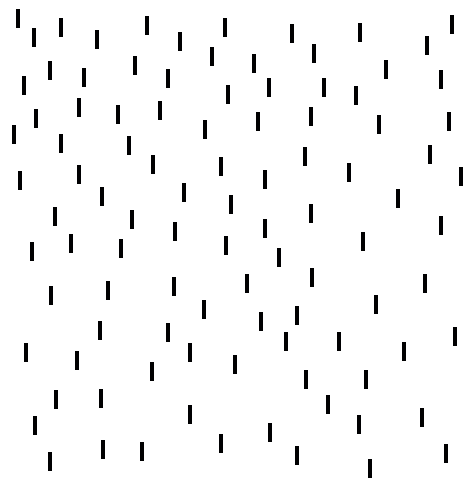
origine pattern (o.p.) :
round, 0,433 mm,
disposition, random,
forming a square, 60 mm.



o.p. with tweak effect :
horizontal, 2 mm,
vertical, 2 mm, absolute,
points, anchor.



o.p. with roughen effect :
size, 10 mm, absolute,
detail, 10/in
points, corner.



o.p. convert shape rectangle effect :
size, absolute,
with, 0,5 mm,
height, 2 mm.

Font test

ZCool QingKe HuangYou was designed and produced by Zheng Qingke, and donated to the ZCOOL font project for public use. It features innovative character shapes and rounded lines, with right angles adjusted to a rounded 4pt corner radius.

The lower right corner of the radicals are notched at a 45 degree angle. Mainly the engraver needs less details and less angle in the typography. So the point to take this font is than it keeps its identity (point cited above) after its prossessing in a machine.

Each machine can be a graphic tool. 6pt

Each machine can be a graphic tool. 12pt

Each machine can be a graphic tool. 18pt

Each machine can be a graphic tool. 24pt

Each machine can be a graphic tool. 36pt

Each machine can be a graphic tool. 48pt

Each machine can be a graphic 60pt

Each machine can be a 72pt

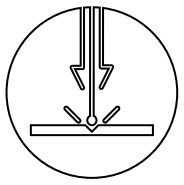
Each machine can 108pt

Each machine 132pt

Each machine 156pt

astuce

Pictogram test



Test of the limit on the pattern. A set of pictogram to show the limit for the laser engraver. We see this limit between marking and engrave option. My prossess to achieve these pictograme. First, i creat the form, second i fill it with pattern.

The first and second steps are vectorized. Finally, i pixelate the pictogram (with pattern inside) and revectorise the picture, and delete the white. By this way, vector points does not covers each other and the engraver will work. If it covers, engrave will not work.

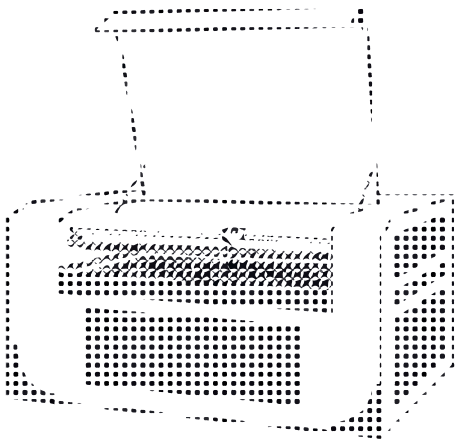


figure 1 - marking

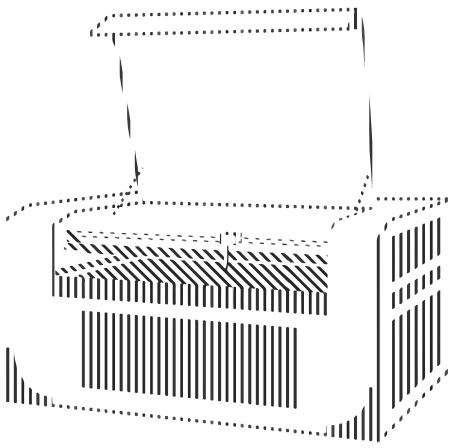


figure 2 - marking

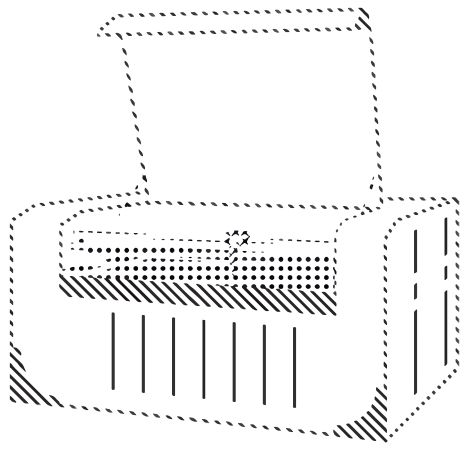


figure 3- marking

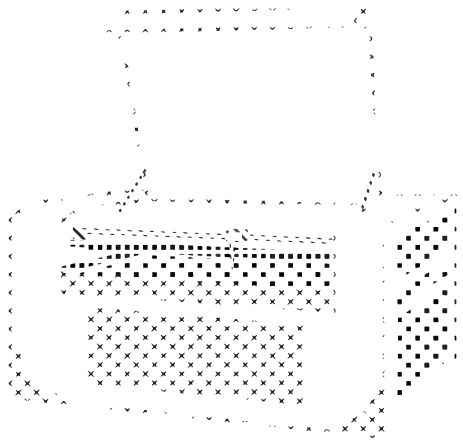


figure 4 - marking

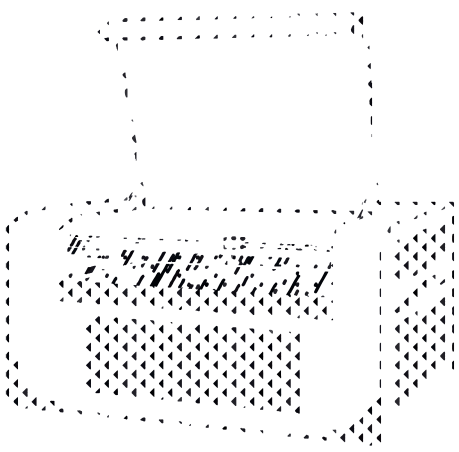


figure 5 - marking

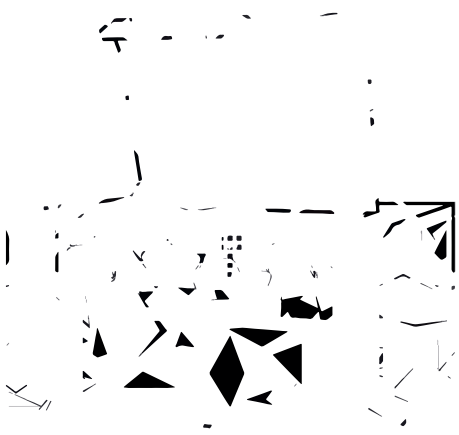


figure 6 - marking

figure 7 - marking

figure 8 - marking

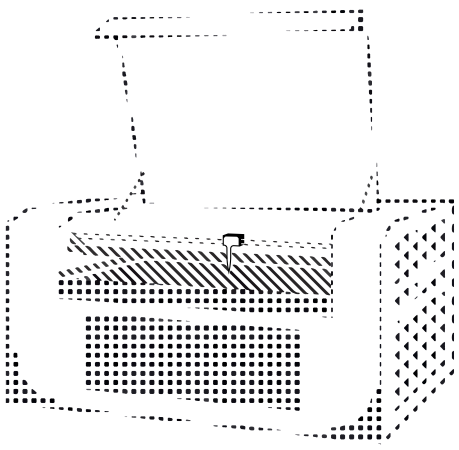


figure 9 - marking / engrave

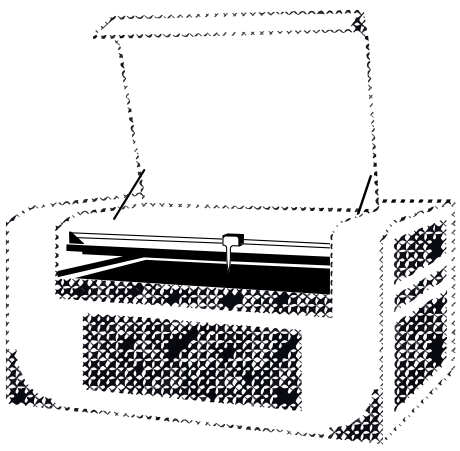


figure 10 - marking / engrave

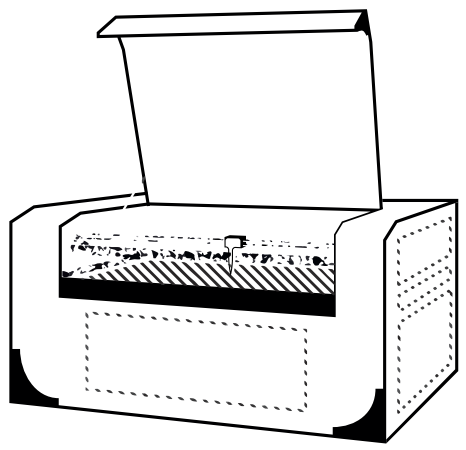


figure 11 - marking / engrave

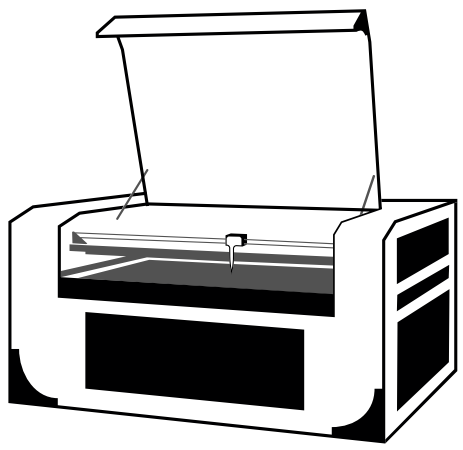


figure 12 - marking / engrave

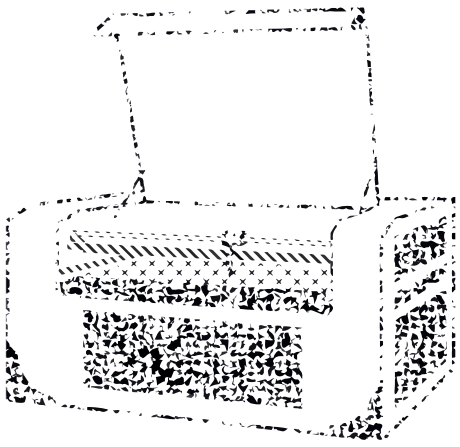


figure 13 - engrave

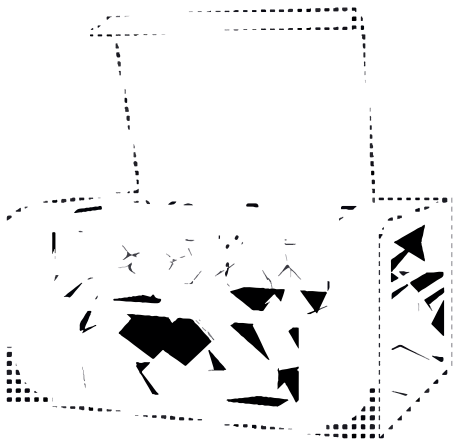


figure 14 - engrave

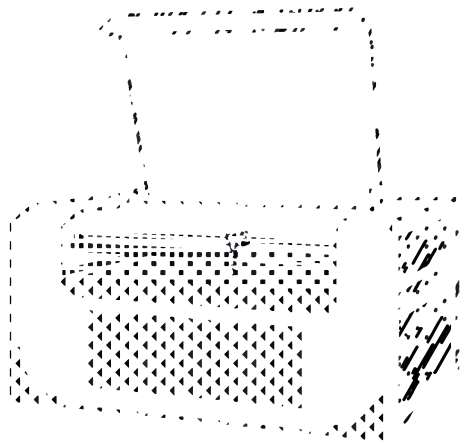


figure 15 - engrave

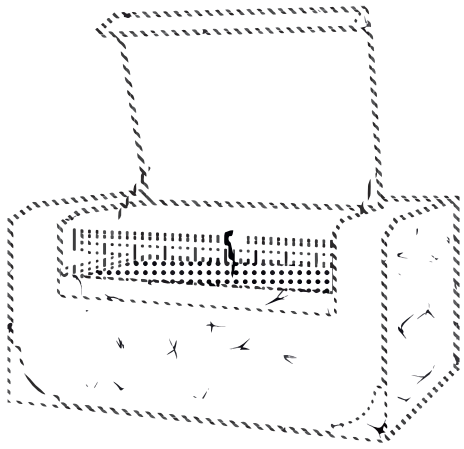
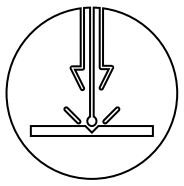


figure 16 - engrave

astuce

Pictogram test



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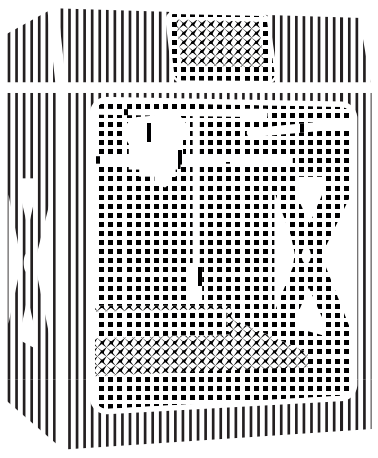
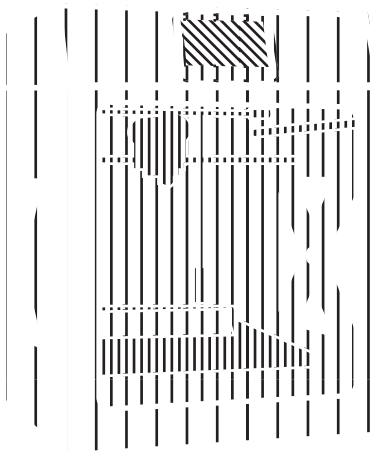
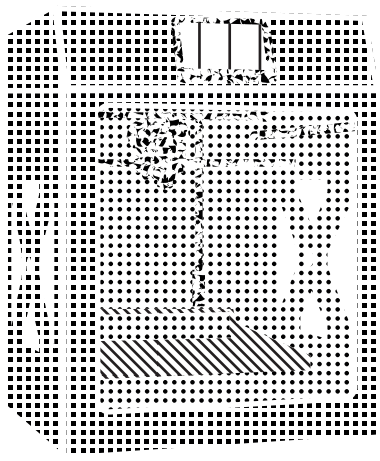


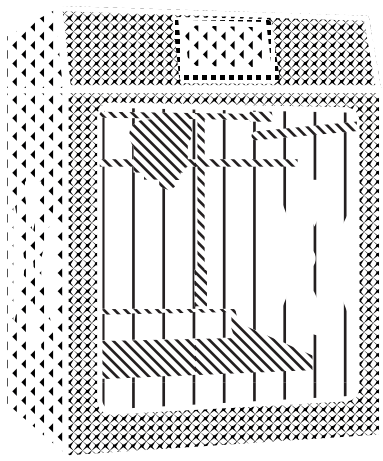
o.p. with zigzag effect :
size, 0,5 mm, absolut,
ridges per segment, 0,5mm, corner.



o.p. with zigzag effect :
size, 0,5 mm, absolut,
ridges per segment, 0,5mm, corner.

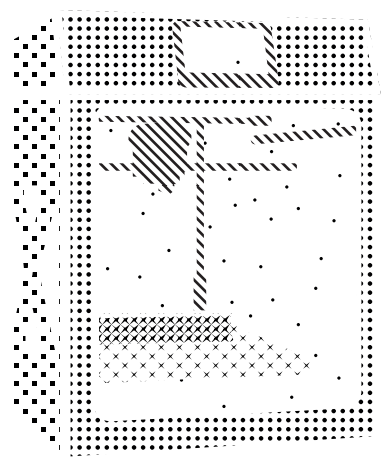


o.p. with tweak effect :
horizontal, 0,5 mm,
vertical, 0,5mm, absolute,
points, anchor, in, out control.

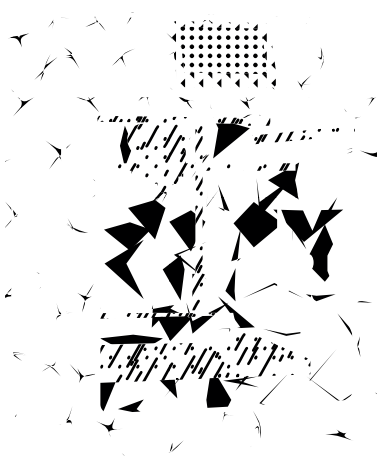


o.p. with stylize round corners effect :
radius, 5 mm.

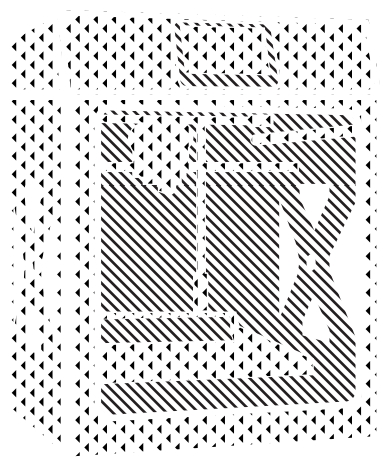
origine pattern (o.p.) :
line, 90°, 1 pt, 0,353 mm,
espacing, 0,6 mm,
forming a square, 60 mm.



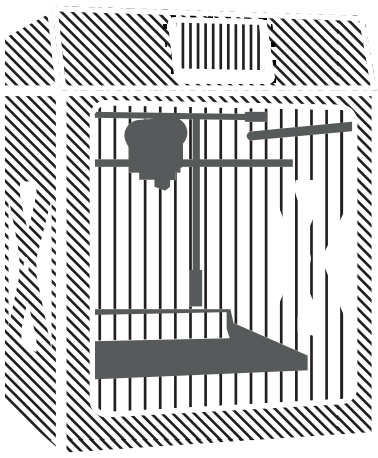
origine pattern turn to a 45° angle.



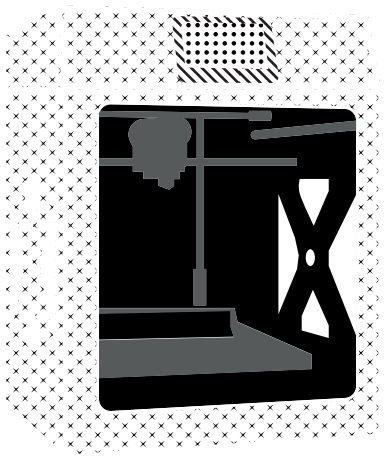
origine pattern with :
espacing, 1,553 mm,



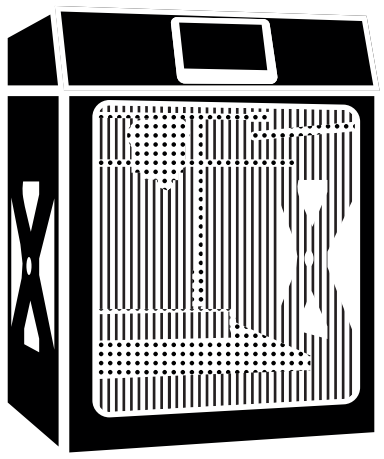
origine pattern with :
espacing, 3,721 mm,



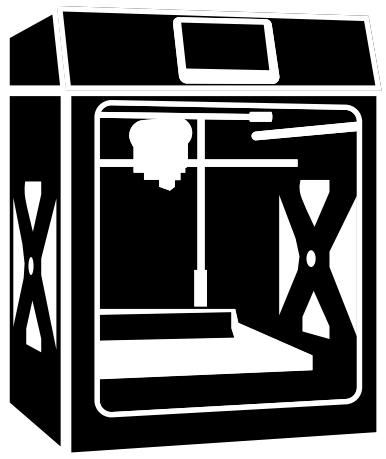
origine pattern (o.p.) :
square, 0,6 mm,
espacing, 1,8 mm,
forming a square, 60 mm.



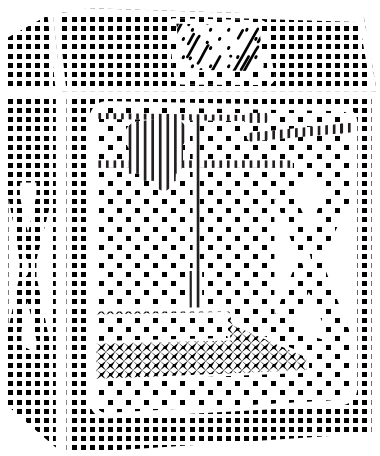
o.p. with zigzag effect :
size, 0,5 mm, absolut,
ridges per segment, 0,5mm, corner.



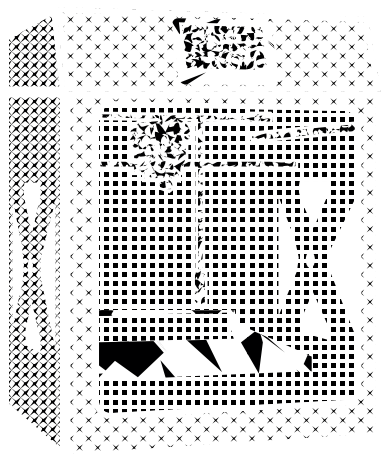
o.p. with warp option :
style, wave, horizontal,
inflexion, -100%,
horizontal, 100%, vertical 0%.



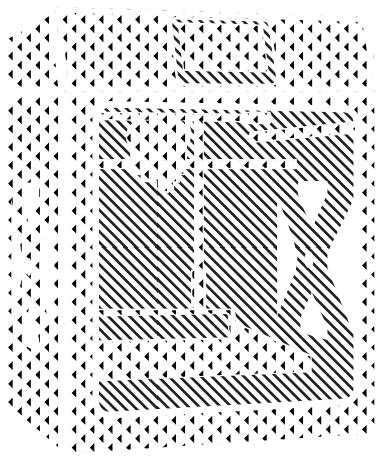
o.p.with stylize scribble effect :
option, loop,
angle, 60°.



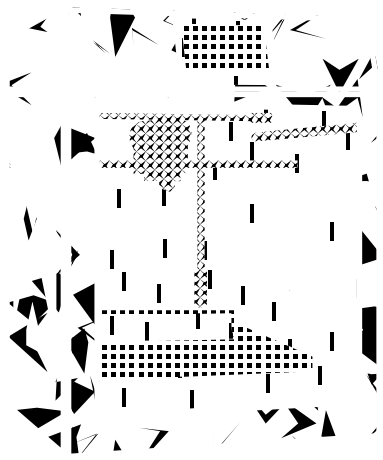
origine pattern (o.p.) :
round, 0,433 mm,
disposition, random,
forming a square, 60 mm.



o.p. with tweak effect :
horizontal, 2 mm,
vertical, 2 mm, absolute,
points, anchor.



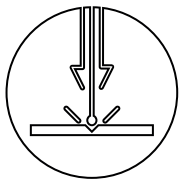
o.p. with roughen effect :
size, 10 mm, absolute,
detail, 10/in
points, corner.



o.p. convert shape rectangle effect :
size, absolute,
with, 0,5 mm,
height, 2 mm.

astuce

Pictogram test



Test of the limit on the pattern. A set of pictogram to show the limit for the laser engraver. We see this limit between marking and engrave option. My prossess to achieve these pictograme. First, i creat the form, second i fill it with pattern.

The first and second steps are vectorized. Finally, i pixelate the pictogram (with pattern inside) and revectorise the picture, and delete the white. By this way, vector points does not covers each other and the engraver will work. If it covers, engrave will not work.

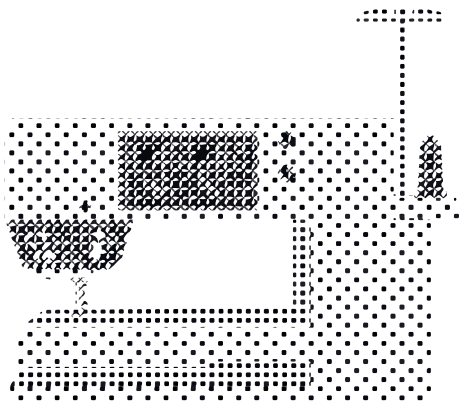


figure 1 - marking

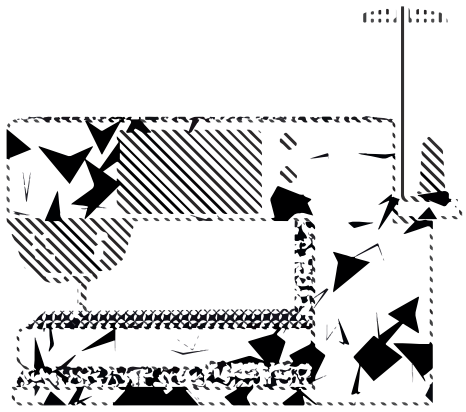


figure 2 - marking

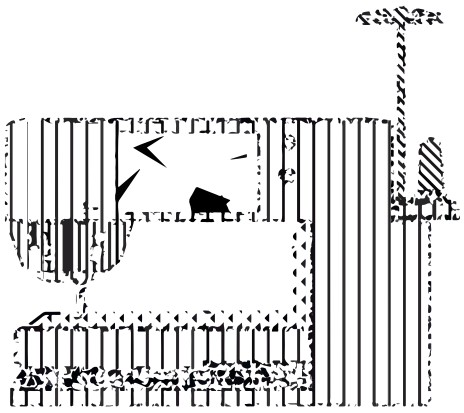


figure 3- marking

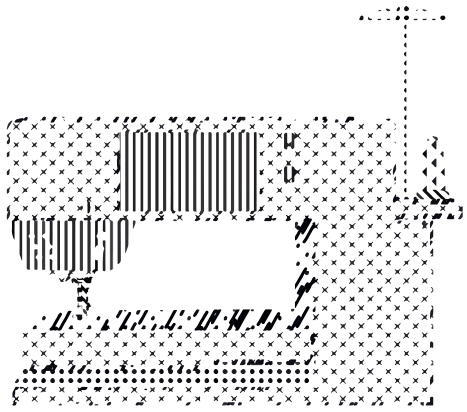


figure 4 - marking

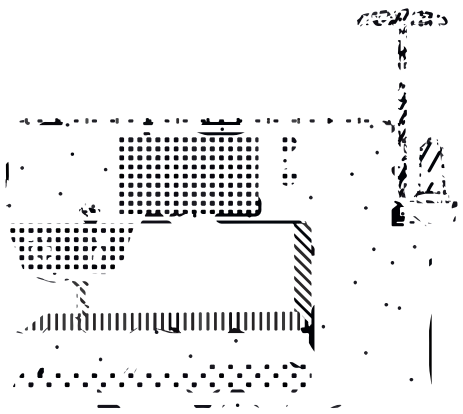


figure 5 - marking

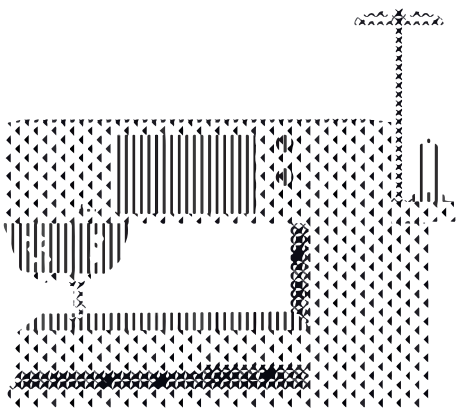


figure 6 - marking

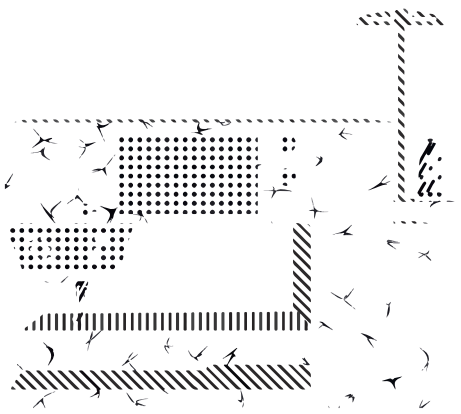


figure 7 - marking

figure 8 - marking

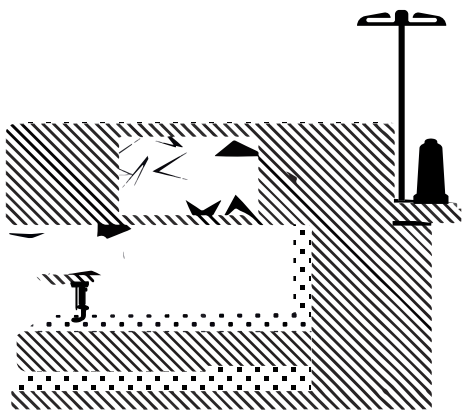


figure 9 - marking / engrave

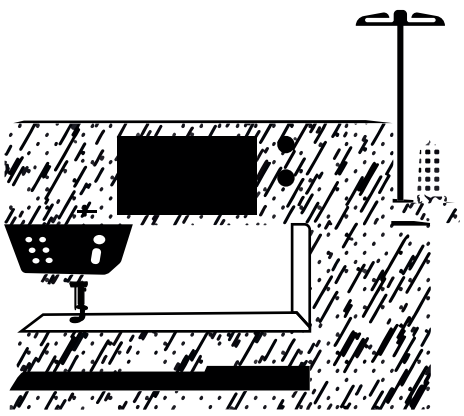


figure 10 - marking / engrave

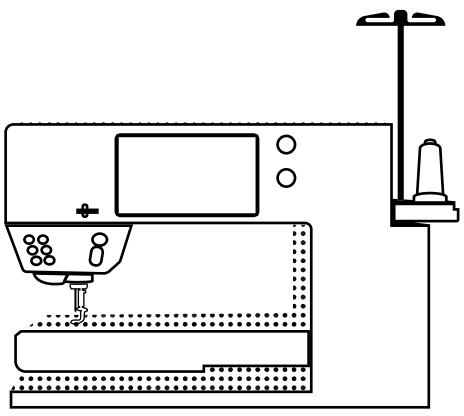


figure 11 - marking / engrave

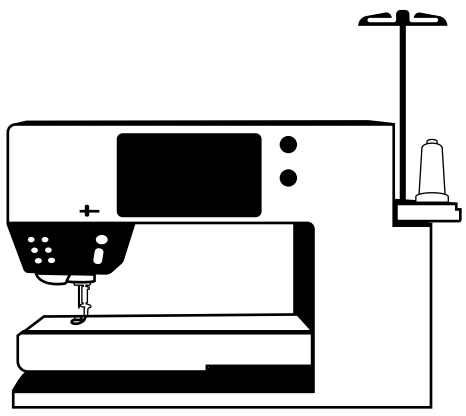


figure 12 - marking / engrave

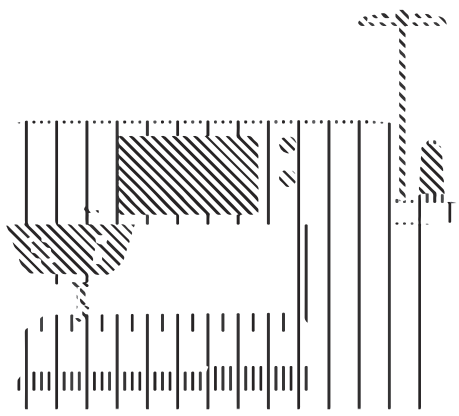


figure 13 - engrave

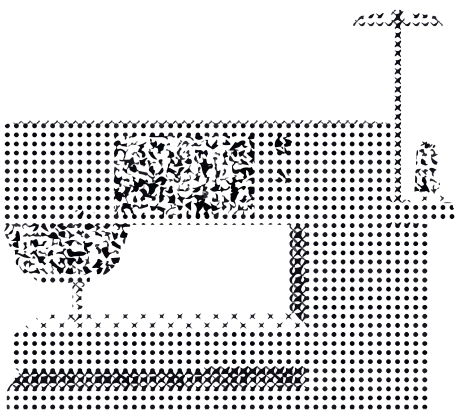


figure 14 - engrave

figure 15 - engrave

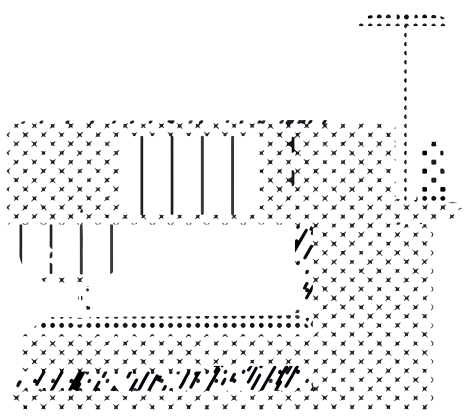


figure 16 - engrave