





**GEOCAD** 

SLOVENIA-ESTONIA-GREECE-PORTUGAL-TURKEY





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# 1) EQUILATERAL TRIANGLE

(Equilateral triangle production with CNC)

Drawing equilateral triangle with AutoCAD drawing program, generating G code with CAM program and obtaining equilateral triangle with CNC machine.

How to creating an equilateral triangle?

To creating an equilateral triangle without protractor you will need:

- a computer;
- AutoCAD drawing program
- CAM program
- CNC or laser machine

Let's do this!

- 1. A 10 cm horizontal line is drawn with the line command on the AutoCAD screen..
- 2. By clicking on the line, holding the left edge of the line and typing "10<60" on the command screen and clicking enter.
- 3. As a continuation of the same line, enter 10<-60 by typing on the command line. The drawing is ended by clicking enter once more.
- 4. The drawing is saved and transferred to the CAM program, the appropriate blade selection and necessary settings are made and the G code is extracted.
- 5. Triangles are produced on 5mm plywood by loading the G code into the machine.





### 2) PENTAGON PRODUCTION

Pentagon production on plywood by drawing a pentagon with AutoCAD program and extracting G code in CAM program.

### How to Pentagon production?

materials you need to descend perpendicularly from a point:

- A computer
- AutoCAD drawing program
- CAM program
- CNC or laser machine



Let's do this!

**1**. Polygon is clicked in AutoCAD program, the number 5, which will be the number of sides, is clicked..

**2**. Click a random place on the AutoCAD screen and click the inscribed in circle to capture the apex of the pentagon..

**3**. The apex of the pentagon formed is fixed by opening the ortho and pulling the mouse up, for the measurement from the center of the pentagon to the apex, 150 mm is typed and clicked enter..

**4**. The drawing is saved and transferred to the CAM program, the appropriate blade selection and necessary settings are made and the G code is extracted.

5. Pentagon production on 5mm plywood by loading the G code into the machine.





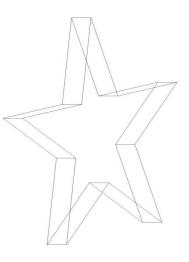
## 3) EUROPEAN UNION STAR PRODUCTION

Star production on plywood with CNC or laser machine by drawing stars with the help of AutoCAD

#### How to Star making?

materials you need to descend perpendicularly from a point:

- A computer,
- AutoCAD drawing program
- CAM program
- CNC or laser machine



Let's do this!

1. In AutoCAD, we draw a pentagon with a height of 3 cm.

**2.** We connect all the inner corners of the drawn pentagon with the two opposite corners with the help of line..

**3.** To reveal the star, we erase the pentagon with the erase command, and trim the lines inside the star with the trim command..

4. With the region command, we combine all the lines of the star and make it one piece..

**5.** The drawing is saved and transferred to the CAM program, the appropriate blade selection and necessary settings are made and the G code is extracted.

6. Star making on 5mm plywood by loading the G code into the machine.





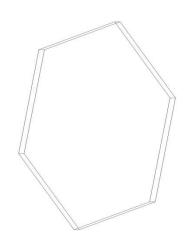
### 4) HEXAGONAL TRIVET PRODUCTION

Using appropriate material, draw a circle with a diameter of 5 cm on the axis lines on the given worksheet and draw a quadrilateral inside the circle using the points on the circle..

#### How to draw a rectangle

materials needed to draw a rectangle:

- A computer,
- AutoCAD drawing program
- CAM program
- CNC or laser machine



Let's do this!

1. Click on the polygon command and type 6, the number of sides, and click enter.

2. Click on a random place on the AutoCAD screen and move the mouse to the right by selecting ortho..

3. Enter is made by typing the edge size of 200 mm with the keyboard..

4. The drawing is saved and transferred to the CAM program, the appropriate blade selection and necessary settings are made and the G code is extracted.

5. Hexagonal trivet production on 5mm plywood by loading the G code into the machine.





### 5) RECTANGULAR KEYCHAIN MAKING

Making keychain from rectangular shape on plywood.

### How to rectangular keychain making

materials needed to draw a hexagon:

- A computer,
- AutoCAD drawing program
- CAM program
- CNC or laser machine

Let's do this!



1. A rectangle with a length of 40 mm and a width of 15 mm is drawn with the line command in AutoCAD program..

2. Using the fillet command, curves with a diameter of 5mm are given to the sides of the rectangle..

3. A circle with a diameter of 5 mm is drawn on the upper left edge of the rectangle..

4. The drawing is saved and transferred to the CAM program, adjusted in the CAM program so that the inside of the circle is emptied, the name of the countries is placed on the rectangle with the appropriate writing style to be engraved 0.1 mm, the appropriate knife selection and necessary settings are made, and the G code is extracted..

5. Rectangular keychain on 5mm plywood by loading the G code into the machine.