

# System

<b>System</b>	
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# Options

Options

**Machine is set in INCHES**

Inch  mm

Table Width:

Table Height:

Color Scheme:

PLUNGERATE [inch]

SWITCHOFFSET [inch]

RAPIDCLEARANCE [inch]

RAPIDRATE [inch]

PLUNGERATE [mm]

SWITCHOFFSET [mm]

RAPIDCLEARANCE [mm]

RAPIDRATE [mm]

**Table size**

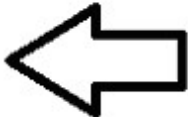
Parameters dependant on machine. You have to enter both inches and mm, regardless of unit you are running machine. That is for the case you swich units

## Material

Material Size

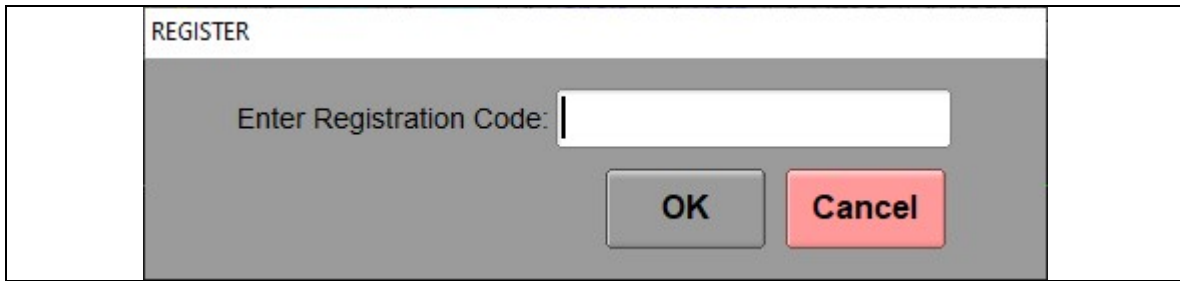
Material Width:

Material Height:



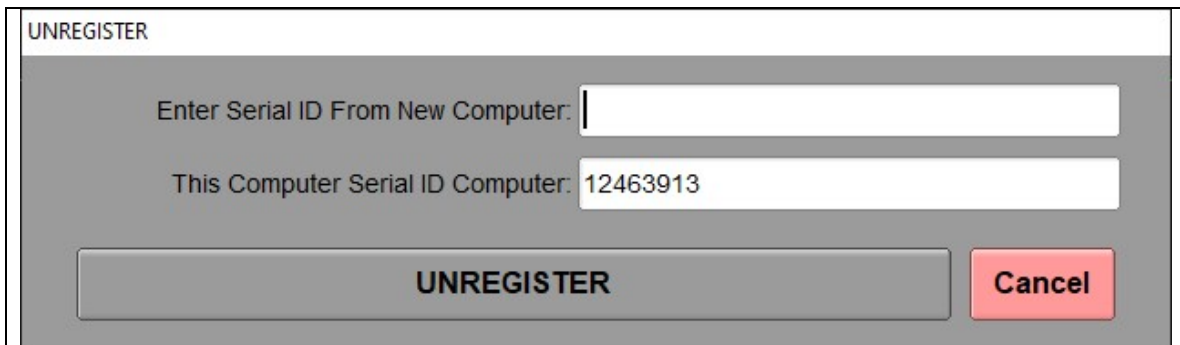
Enter material size

## Register



REGISTER

Enter Registration Code:



UNREGISTER

Enter Serial ID From New Computer:

This Computer Serial ID Computer:

If you want to transfer license to new computer, first you have to have new computer with a demo version installed on it. Click About, and write down new computer serial number. Go back to old computer, go to menu System/UnRegistration, and enter serial number from new computer. Don't try to click UNREGISTER more than one time, and try to generate new license for more than one new computer. Once you press UNREGISTER, old computer will tell you password for new computer after 2 weeks, and you will be able to register software to new computer. Old computer program will continue to work for another 2 months.

Warning: Don't try to press UNREGISTER twice, don't try to change time or date during this period, program may refuse to cooperate.

This option is not intended so you can switch computers every day, every month or so. It is intended to provide password for new computer only.

## Cutting Parameters

THICKNESS	<input type="text" value="3/16"/>	THICKNESS	UNIT	AMP	MAT	G
UNIT	<input type="text" value="inch"/>	26GA	inch	45	MildSteel	0.
AMP	<input type="text" value="45"/>	22GA	inch	45	MildSteel	0.
MAT	<input type="text" value="MildSteel"/>	18GA	inch	45	MildSteel	0.
GOFF	<input type="text" value="0.057"/>	16GA	inch	45	MildSteel	0.
GDIST	<input type="text" value="0.03"/>	14GA	inch	45	MildSteel	0.
FEEDRATE	<input type="text" value="70"/>	12GA	inch	45	MildSteel	0.
PIERCEDELAY	<input type="text" value="0.5"/>	10GA	inch	45	MildSteel	0.
PIERCEHEIGHT	<input type="text" value="0.15"/>	3/16	inch	45	MildSteel	0.
PAUSEATTHEEND	<input type="text" value="0"/>	1/4	inch	45	MildSteel	0.
CUTHEIGHT	<input type="text" value="0.06"/>	16GA	inch	65	MildSteel	0.
		10GA	inch	65	MildSteel	0.
		3/16	inch	65	MildSteel	0.
		1/4	inch	65	MildSteel	0.
		3/8	inch	65	MildSteel	?
		1/2	inch	65	MildSteel	
		5/8	inch	65	MildSteel	

Click on table – and press OK button

# G Code Setup

GCODE Post Processors

**Head**

```
(Post processor: Dynatorch)
G20 (Units: Inches)
G90 G17
F1
```

**End**

```
G25
G04 PPAUSEATTHEEND
```

**Start**

```
G04 P PIERCEDELAY
G23
G04 P PIERCEDELAY
```

**Foot**

```
G00 ZRAPIDCLEARANCE
M05 M3
```

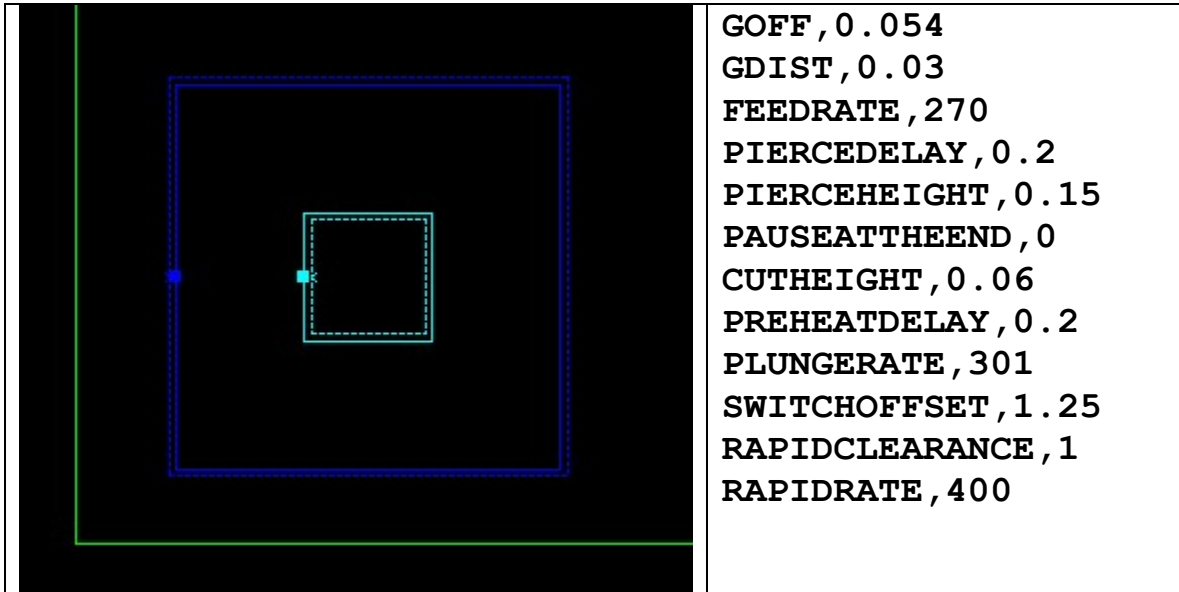
**Change** Machine:

**Save Changes** **Close**

# GCODE – definition and generation



In this example we are going to show how gcode is created. Example part is very simple: a little square for inside cut and square for outside cut. You can see our cutting parameters GOFF, GDIST, FEEDRATE



Here is our postprocessor setup:

head.txt	foot.txt
G20 (Units: Inches) G92 X0 Y0 G40 G90	G00 ZRAPIDCLEARANCE M08 M30
start.txt	end.txt
G00 ZPIERCEHEIGHT G04 PPIERCEDELAY	M08 G04 PPAUSEATTHEEND

Look at foot.txt: G00 ZRAPIDCLEARANCE and RAPIDCLEARANCE, 1

So it will be replaced like this G00 Z1

In first step gcode will look like this:

head.txt

G00 X1.8716 Y2.1101

start.txt

G01 X1.8416 Y2.0801

G01 X1.8416 Y1.6341

G01 X2.7336 Y1.6341

G01 X2.7336 Y2.5261

G01 X1.8416 Y2.5261

G01 X1.8416 Y2.0801

G01 X1.8716 Y2.0501

end.txt

G00 X0.7036 Y2.0501

start.txt

G01 X0.7336 Y2.0801

G01 X0.7336 Y3.6341

G01 X3.8416 Y3.6341

G01 X3.8416 Y0.5261

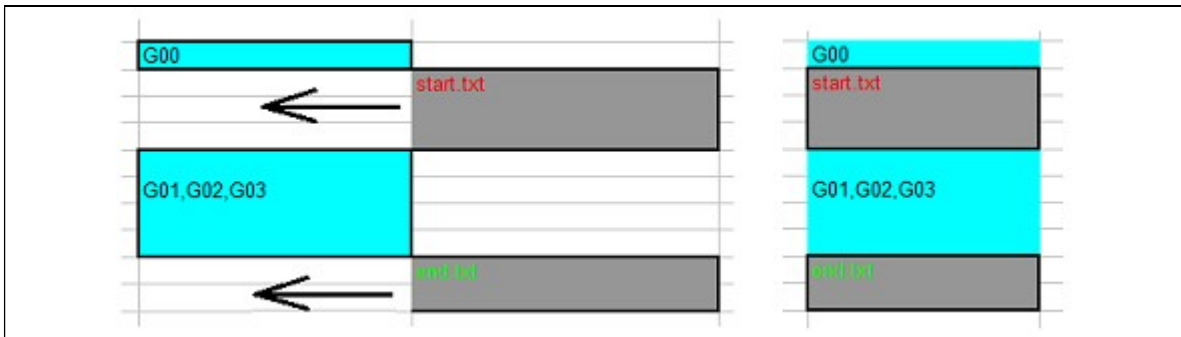
G01 X0.7336 Y0.5261

G01 X0.7336 Y2.0801

G01 X0.7036 Y2.1101

end.txt

foot.txt



For each polyline G code will be created this way

head.txt	
G00	G00
start.txt	start.txt
G01,G02,G03	G01,G02,G03
end.txt	end.txt
G00	
start.txt	
G01,G02,G03	
end.txt	
foot.txt	


File head.txt will be inserted at the beginning of the file, and foot.txt at the end.

All variables from material file will be replaced.

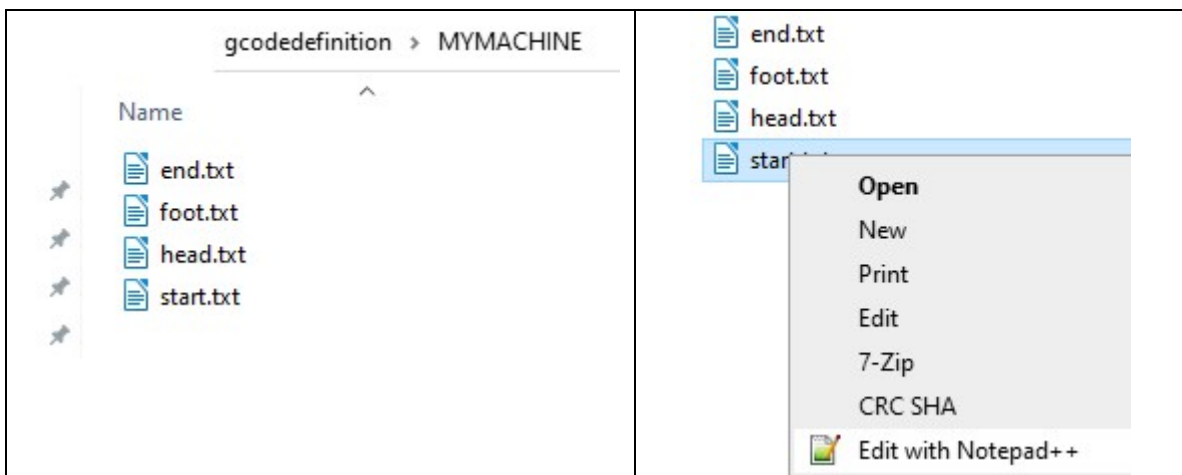
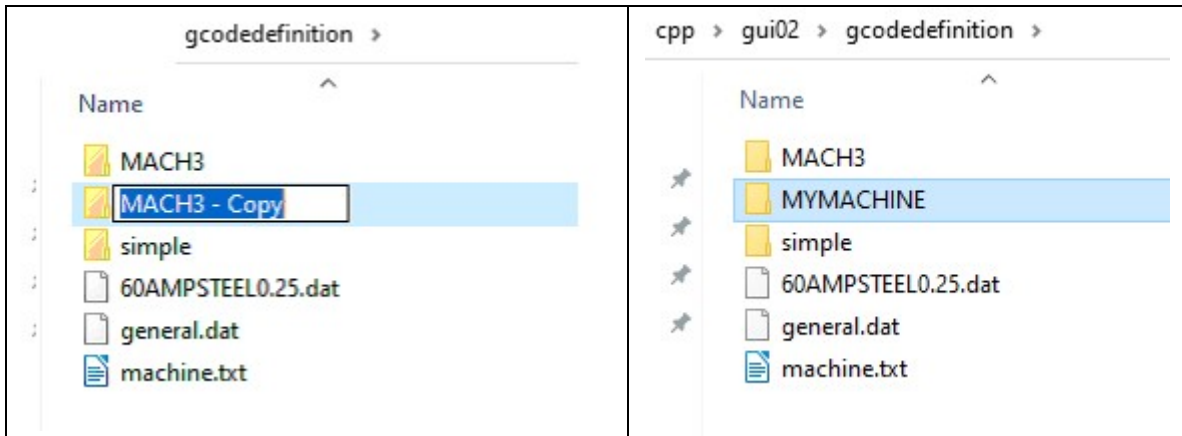
```

GOFF, 0.0717
GDIST, 0.215
RAPIDCLEARANCE, 4
PLUNGERATE, 8
SWITCHOFFSET, 2
PIERCEDELAY, 7
PIERCEHEIGHT, 0.1
PAUSEATTHEEND, 1
CUTHEIGHT, 0.1

```

  
**Material**

## How to create files for new machine



#	Line	T
N0000	(Post processor: Dynatorch)	H
N0001	G20 (Units: Inches)	H
N0002	G90 G17	H
N0003	F1	H
N0004	(PART: 0 POLY: 0)	T
N0005	(PLACEHOLDER)	t
N0006	G00 X33.5268 Y39.7700 (move to startpoint)	* G
N0007	G04 F 0.4	S
N0008	G23	S
N0009	G04 F 0.4	S
N0010	G01 X32.2268 Y41.0700 (point A leadin)	I G
N0011	G01 X30.2585 Y41.0700 (bb)	B G
N0012	G01 X30.2585 Y29.2858	C G
N0013	G01 X37.3951 Y29.2858	C G
N0014	G01 X37.3951 Y23.6443	C G
N0015	G01 X24.6170 Y23.6443	C G
N0016	G01 X24.6170 Y46.7115	C G
N0017	G01 X37.3951 Y46.7115	C G
N0018	G01 X37.3951 Y41.0700	C G
N0019	G01 X32.2268 Y41.0700 (aa)	A G
N0020	G01 X30.9268 Y39.7700 (leadout)	O G
N0021	G25	E
N0022	G04 P0	E
N0023	(PART: 1 POLY: 1)	T
N0024	(PLACEHOLDER)	t
N0025	G00 X-1.1924 Y27.6772 (move to startpoint)	* G
N0026	G04 F 0.4	S
N0027	G23	S
N0028	G04 F 0.4	S
N0029	G01 X0.6347 Y27.4734 (point A leadin)	I G
N0030	G01 X-2.6197 Y24.8719 (bb)	B G
N0031	G01 X2.2717 Y24.8719	C G

Offset  
Off 1.6  
Dist 1.3

Lead In  
Line  
Arc  
None

Lead Out  
Line  
Arc  
None

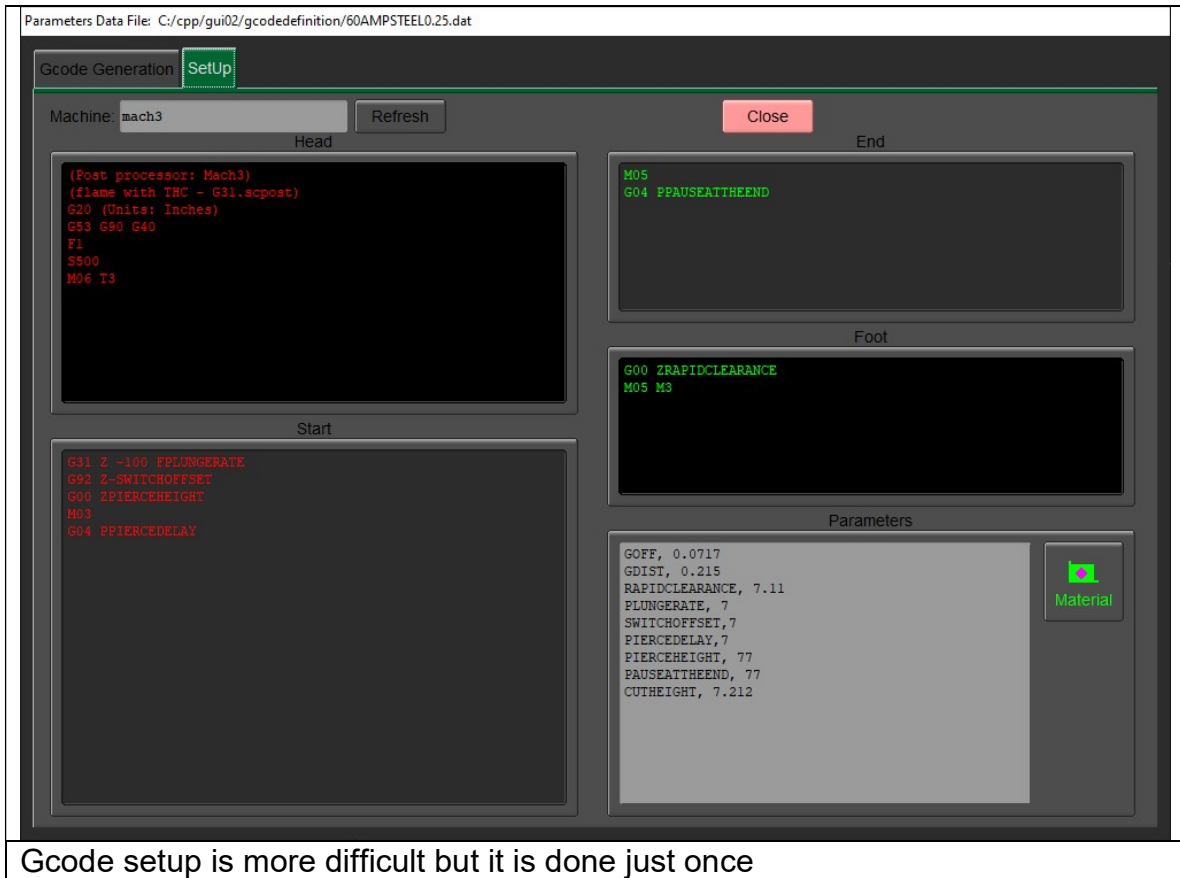
Material

Generate

Save

Close

To generate GCODE is simple Choose all options and press Generate



There is 4 files: head.txt, foot.txt, start.txt and end.txt

head.txt is a header foot.txt is a footer  
and it is inserted at the beginning of new created nc file

For each polyline Gcode is inserted this way:

```

G00 X5.4650 Y3.3154(move to startpoint) START
G31 Z -100 F7
G92 Z-7
G00 Z77
M03
G04 P7
G01 X5.6800 Y3.1004(point A leadin)
G01 X6.2102 Y3.1004 (bb)
G01 X6.2102 Y3.8574
G01 X5.1499 Y3.8574
G01 X5.1499 Y3.1004
G01 X5.6800 Y3.1004 (aa)
G01 X5.8950 Y3.3154(leadout) END
M05
G04 P77

```

### START.TXT

```

G31 Z -100 FPLUNGERATE
G92 Z-SWITCHOFFSET
G00 ZPIERCEHEIGHT
M03
G04 PPIERCEDELAY

```

### 60AMPSTEEL0.25.dat

```

GOFF, 0.0717
GDIST, 0.215
RAPIDCLEARANCE, 4
PLUNGERATE, 8
SWITCHOFFSET, 2
PIERCEDELAY, 7
PIERCEHEIGHT, 0.1
PAUSEATTHEEND, 1
CUTHEIGHT, 0.1

```

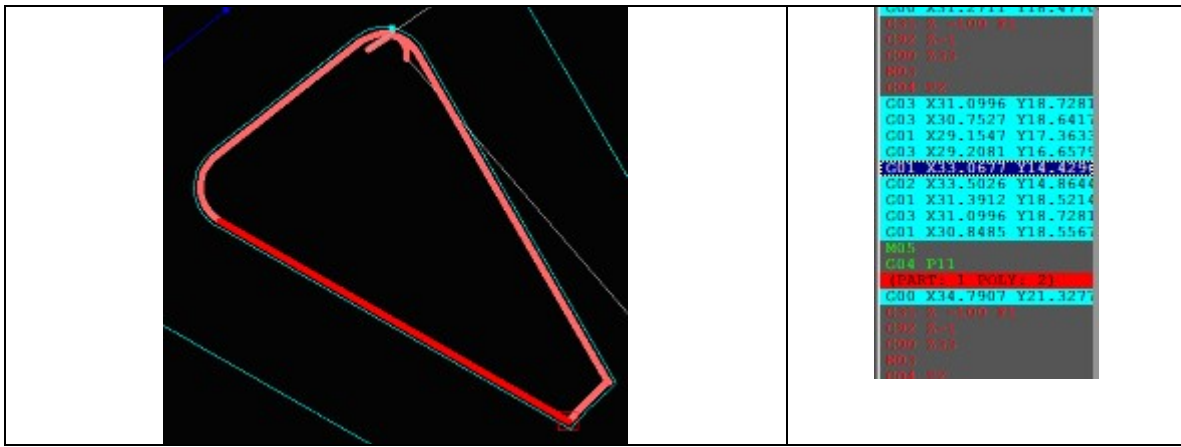
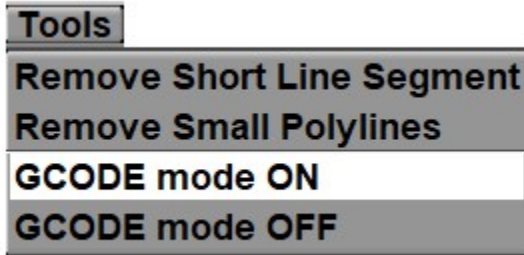
### GENERATEDGCODE.NC

```

N0009 G31 Z -100 F8
N0010 G92 Z-2
N0011 G00 Z0.1
N0012 M03
N0013 G04 P7

```

To preview GCODE choose **GCODE mode ON** on Tools menu



Use arrow keys on right side list box to see commands one by one