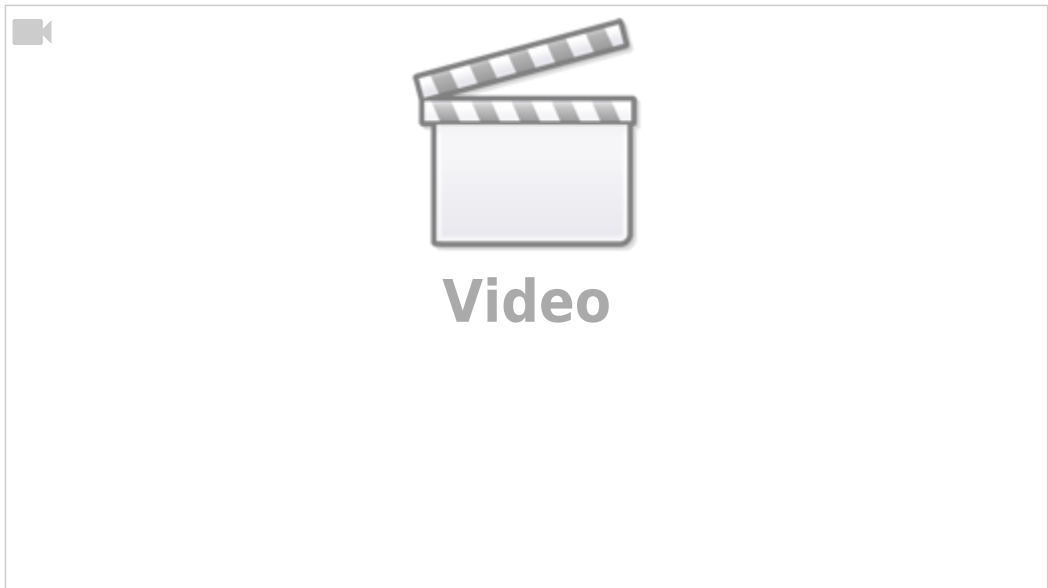
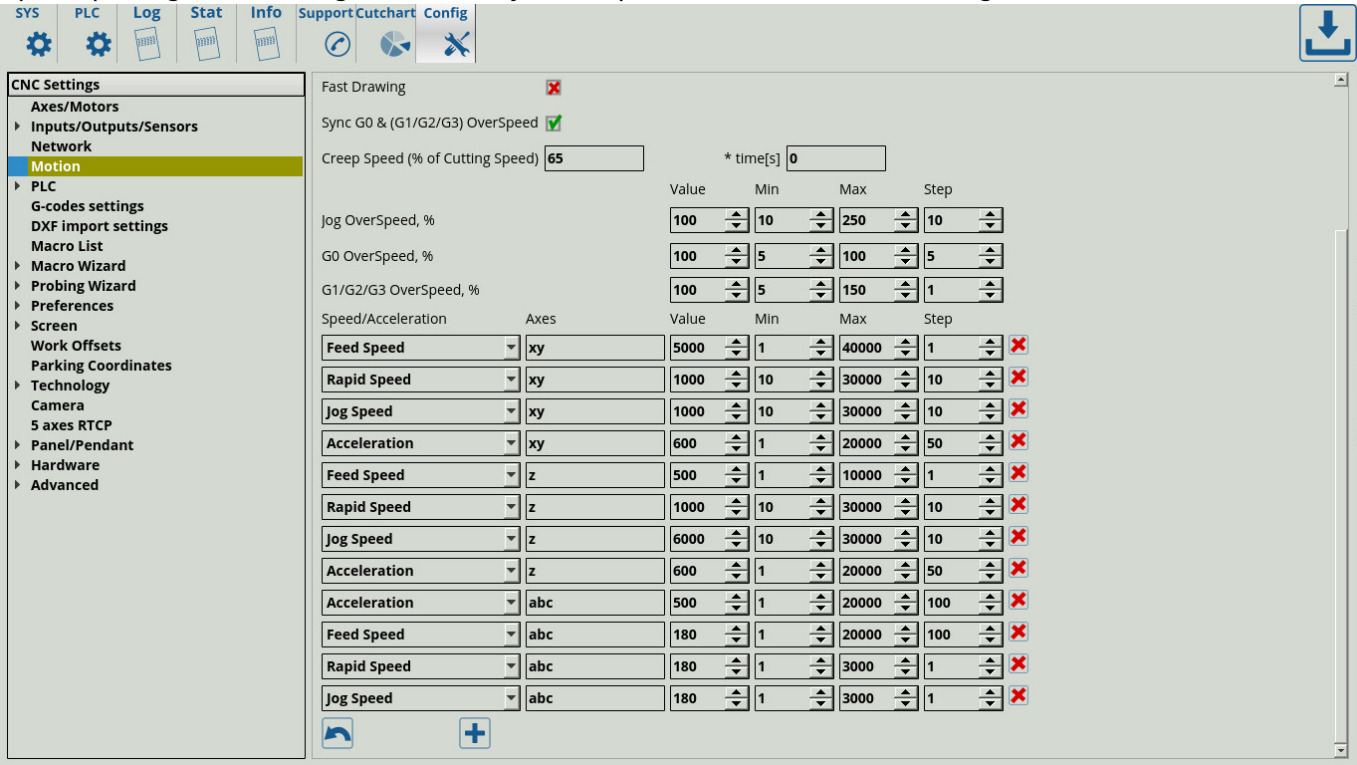


Setting up Motion parameters





In order to properly set up the speed at which your system will be moving, granular settings for the axes speeds are available in **CNC Settings > Motion**. This tutorial introduces the basics of setting up the parameters for the speed/acceleration values in the Motion menu.

Upon opening CNC Settings > Motion, you are presented with the following screen:



The settings inputted in this window focus on the current, maximum and minimum values for the feed speed, rapid speed, jog speed and acceleration of the machine in their respective axes.

Setting these values and restarting the program will mirror the new values in the Custom Machine Settings window:



	XY, mm/min	Z, mm/min	A, degree/s
Feed Rate	5000	500	180
Rapid Rate	1000	1000	180
Jog Rate	1000	6000	180
Acceleration	600	600	500

Speed	
On Delay, sec	0.5
Spindle Off Delay, sec	0.5
Lift Programming	ABS
Lift Height, mm	21.0
Lift Speed, mm/min	1000

Step-Dir Coolant control	
Rate, ml/hour	0.0
Ratio	1359

Mileage/Oil Change	
X Trip counter	81.007 of 100
Y Trip counter	20.262 of 100
Z Trip counter	13.295 of 100

In order to input the specific axis or axes, they can be named in the **Axes** column, as shown below. Note that both a single axis can be inputted ("x" for the x-axis), or a number of axes can be set to have the same values ("xyz" for the x-, y-, and z-axes).

SYS

PLC

Log









Stat

Info

Support

Cutchart

Config



CNC Settings

Axes/Motors

Inputs/Outputs/Sensors

Network

Motion

PLC

G-codes settings

DXF import settings

Macro List

Macro Wizard

Probing Wizard

Preferences

Screen

Work Offsets

Parking Coordinates

Technology

Camera

5 axes RTCP

Panel/Pendant

Hardware

Advanced

Fast Drawing

Sync G0 & (G1/G2/G3) OverSpeed

Creep Speed (% of Cutting Speed)

Jog OverSpeed, %

G0 OverSpeed, %

G1/G2/G3 OverSpeed, %

Speed/Acceleration

Feed Speed

Rapid Speed

Jog Speed

Acceleration

Feed Speed

Rapid Speed

Jog Speed

Acceleration

Feed Speed

Rapid Speed

Jog Speed

Acceleration

Feed Speed

Rapid Speed

Jog Speed

Axes

Value

Min

Max

Step

xy

5000

1

40000

1

xy

1000

10

30000

10

xy

1000

10

30000

10

xy

600

1

20000

50

z

500

1

10000

1

z

1000

10

30000

10

z

6000

10

30000

10

z

600

1

20000

50

abc

500

1

20000

100

abc

180

1

20000

100

abc

180

1

3000

1

abc

180

1

3000

1

The values themselves can be edited in their rows for each respective axis or axes. The maximum and minimum values serve as the limits for the movement speeds of the machine, while the current value should be set to be somewhere in-between the two.

SYS

PLC

Log

Stat

Info

Support/Cutchart

Config

CNC Settings

Axes/Motors

Inputs/Outputs/Sensors

Network

Motion

PLC

G-codes settings

DXF import settings

Macro List

Macro Wizard

Probing Wizard

Preferences

Screen

Work Offsets

Parking Coordinates

Technology

Camera

5 axes RTCP

Panel/Pendant

Hardware

Advanced

Fast Drawing

Sync G0 & (G1/G2/G3) OverSpeed

Creep Speed (% of Cutting Speed)

Value

Min

Max

Step

Jog OverSpeed, %

G0 OverSpeed, %

G1/G2/G3 OverSpeed, %

Speed/Acceleration

Axes

Feed Speed

Rapid Speed

Jog Speed

Acceleration

Feed Speed

Rapid Speed

Jog Speed

Acceleration

Acceleration

Feed Speed

Rapid Speed

Jog Speed

Value

Min

Max

Step

65

0

100

10

250

10

100

5

100

5

100

5

150

1

5000

1

40000

1

1000

10

30000

10

1000

10

30000

10

600

1

20000

50

500

1

10000

1

1000

10

30000

10

6000

10

30000

10

600

1

20000

50

500

1

20000

100

180

1

20000

100

180

1

3000

1

180

1

3000

1

Note that editing of these values can be also done in the Custom Machine Settings window, as shown above. For example, when setting the value for the Jog Rate for the xy axes to 860 in the Custom Machine Settings, the value is automatically mirrored in the Motion settings.

Speed

XY, mm/min

Z, mm/min

A, degree/s

Feed Rate

5000

500

180

Rapid Rate

1000

1000

180

Jog Rate

860

6000

180

Acceleration

600

600

500

Spindle

On Delay, sec

0.5

Spindle Off Delay, sec

0.5

Lift Programming

ABS

Lift Height, mm

21.0

Lift Speed, mm/min

1000

Step-Dir Coolant control

Rate, ml/hour

0.0

Ratio

1359

Mileage/Oil Change

X Trip counter

81.060

of

100

Y Trip counter

20.288

of

100

Z Trip counter

13.295

of

100

CNC Settings

- Axes/Motors
- Inputs/Outputs/Sensors
- Network
- Motion**
- PLC
 - G-codes settings
 - DXF import settings
 - Macro List
 - Macro Wizard
 - Probing Wizard
 - Preferences
 - Screen
 - Work Offsets
 - Parking Coordinates
 - Technology
 - Camera
 - 5 axes RTCP
 - Panel/Pendant
 - Hardware
 - Advanced

Fast Drawing ✗

Sync G0 & (G1/G2/G3) OverSpeed ☒

Creep Speed (% of Cutting Speed) * time[s]

	Value	Min	Max	Step
Jog OverSpeed, %	100	10	250	10
G0 OverSpeed, %	100	5	100	5
G1/G2/G3 OverSpeed, %	100	5	150	1

Speed/Acceleration

	Value	Min	Max	Step
Feed Speed xy	5000	1	40000	1
Rapid Speed xy	1000	10	30000	10
Jog Speed xy	860	10	30000	10
Acceleration xy	600	1	20000	50
Feed Speed z	500	1	10000	1
Rapid Speed z	1000	10	30000	10
Jog Speed z	6000	10	30000	10
Acceleration z	600	1	20000	50
Acceleration abc	500	1	20000	100
Feed Speed abc	180	1	20000	100
Rapid Speed abc	180	1	3000	1
Jog Speed abc	180	1	3000	1

This is done for the ease of the operator, to be able to switch the Feed/Jog/Rapid rates without going into the full settings window. However, since each profile is configured slightly differently, the Custom Machine Settings window in each particular profile might not have all the axes (or not the right configuration of axes) for the user's particular needs. By using the Motion menu, and adding the specific values and axes configurations as needed, one can edit each of the individual axes speeds despite them not being visible in the Custom Machine Settings window.

If a user requires a Custom Machine Settings window or any other window that is customized to their particular needs, they are able to do so by going into the XML files for their particular profile and editing them as described in the [MyCNC Screen Configuration manual](http://docs.pv-automation.com/mycnc/mycnc_setup/motion_setup). However, for the end-user's ease of use, the Motion settings will suffice if a customized Custom Machine settings window is not strictly necessary.

From:

<http://docs.pv-automation.com/> - **myCNC Online Documentation**

Permanent link:

http://docs.pv-automation.com/mycnc/mycnc_setup/motion_setup

Last update: **2021/06/17 09:17**

