Fagor Automation Corp.

CONSTANT SURFACE SPEED (CNC 8025T-Series)

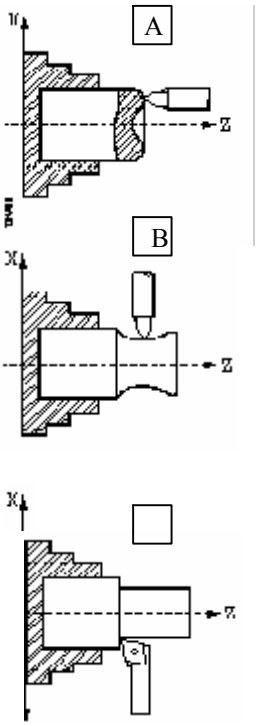
PARAMETER 619(8)=1 : constant surface speed is possible while in jog mode.
G96: spindle speed in feet/min.
G97: spindle speed in revolutions/min
G92 S....: setting of max. spindle S value when in CSS

It is recommended that G96 and S.... spindle speed be programmed in the same block. If G96 is programmed alone, the CNC assumes the last Constant Surface Speed used in that mode. If none was previously used, the CNC will issue error 10.

Under CSS, the feedrate values will be applied to the CNC in **inch/revolutions**

The speed of the spindle depends upon the diameter being cut.

When working with CSS, **correct tool calibration** is very important.
If the tools are not calibrated correctly, the CSS will work in reverse. This symptom is always due to incorrect tool measurement.



MEASUREMENT AND LOADING OF TOOL DIMENSIONS

1) make sure the machine is homed before you begin
2) press [tool measurement] in jog mode
3) key in tool #, T1.1 cycle start
4) press the letter X **(not the jog key),** enter the dimension of the part (diameter or radii depending on how the machine is working)
5) press ENTER
6) press the letter Z**(not the jog key)**, key in the part dimension and press ENTER. The Z is usually keyed in with 0
7) also make sure you are using the correct tool code, (F0 - F9).
8) move the X axis until the part is touched. press the letter X and [LOAD] will appear. press [LOAD] and the the diameter of the part should appear on the jog screen
9) do the same procedure for Z and 0 should appear on the jog screen
10) follow the same procedure for another tool

EXAMPLE. part dimension is 2 inches diameter. working units are in diameter. If the axes setup is as follows, the X dimension for toolB is a **positive** value. X2 ENTER. The X dimension for toolC is entered with a **negative** value. X-2 ENTER.

To test CSS, go to the jog mode: Press F2 [CSS]. S should appear. Key in the proper S value and then key in M3 or M4 (make sure your in the proper gear range: M41,M42,M43,M44). [CSS] should appear as long as the parameter is set correctly. The S value will display in **feet/min** with 8025 T. Call any tool and jog the X axis to position zero. As you approach zero, the spindle speed will increase. As the tool retracts from X0, the spindle speed reduces.