

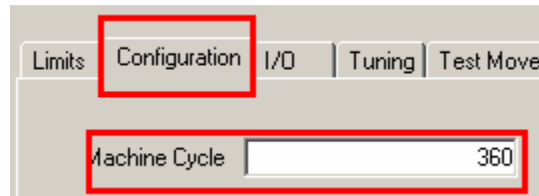
Machine cycle is used for axis that have a repetitive cycle.

Example1: rotary axis that rolls over every 360 degrees

Example2: camming application that requires repeat motion profile

The describes how the machine cycle is used and setup:

The machine cycle is set in the configuration tool.



The machine cycle input is valid only if the axis is going to be used in rotary mode. This parameter is ignored if the axis is configured to be in a linear mode.

Note: Linear mode does not always stand for linear motor. Linear mode is when the load is driven in a linear fashion. A rotary motor’s motion can be translated to linear motion using mechanical elements like a ball screw mechanism. If the load is driven using a ball screw mechanism, it is considered a linear load and machine cycle is ignored. If the load is a rotary table, machine cycle is important and should be set if the user decides to use rotary units like revolutions or degrees in the application program. Under the configuration tab in the configuration tool, parameter 1007 should be set to Rotary.

Parameter #	Parameters	Current Value
1007	Load Type	Rotary
1016	In Position Window	50
1017	At Speed Window	50
1031	Logical Axis Number	2

If the axis is in rotary mode, the machine cycle is the rollover point. For example if machine cycle is 360 degrees, the axis will rollover to 0 degrees on reaching 360 degrees (although the axis is constantly moving forward in one direction) as shown in the figure attached below. The figure illustrates feedback position from a rotary axis with a machine cycle of 360 degrees.

