

INSTALLATION GUIDE

NC2 RAPID BROKEN TOOL CYCLE – STAND ALONE (O800)

Call line G65 P800 (H.2) (Z10) (M1)

Brackets () where used, denote options

Inputs H = Broken tool tolerance from the bottom of the tool. Default 0.5 mm

Z = Clearance plane

The first move happens in the Z-axis from the **ACTIVE WORK OFFSET** before moving to the laser beam. The Z-axis is the final position after the cycle has run. If the laser beam position is higher than the clearance plane, the tool is positioned to the laser beam height in the Z-axis. When the cycle has finished, it remains in the beam. The tool offset should still be **ACTIVE**.

If no Z value is input on the call line, then the first and last moves are to the Z-axis reference position and the tool offset will be **CANCELLED**.

M= No input, machine stops with alarm

M=1 No alarm, #148 is set to 1

BEFORE THIS CYCLE IS RUN, EDIT'S ARE TO BE MADE TO O800 AS SHOWN BELOW:

O800	
#14= 100	(EDIT X AXIS BEAM POSITION FROM HOME)
#15= 200.9	(EDIT Y AXIS BEAM POSITION FROM HOME)
#16= -300.1	(EDIT Z AXIS BEAM POSITION FROM HOME)
#17=2	(EDIT TOOL OFFSET TYPE 1=TYPE A 2=TYPE B & C)
#5=61	(EDIT*M*CODE*ENABLE BROKEN TOOL)
#6=62	(EDIT*M*CODE*DISABLE BROKEN TOOL)

SKIP CONFIGURATION:

The example software program is configured for 'Normally open' skip (N/O). For software configurations using 'Normally closed' Skip (N/C), the following lines in the program must be edited to include figures shown in **RED**:

Line N100 IF[ABS[#3-#2]**GT.005**]GOTO999

Line N101 IF[ABS[#3-#2]**LT.001**]GOTO9999

An example program is shown below:

O10	
T1M6	
G0 G54 X0.Y0.	
G43 Z10.H1	
CUTTING HERE	
END OF CUTTING	
G65 P800 H.2 M1	TOOL GOES HOME IN Z AXIS, CHECKS TOOL AT 0.2 MM AND RETURNS HOME WITH NO ACTIVE TOOL OFFSET . IT DOES NOT ALARM OUT.
IF [#148 EQ 1]GOTO100	ESCAPE ROUTINE IF TOOL IS BROKEN.
M01	
O20	
T1M6	
G0 G54 X0. Y0.	
G43Z10.H1	
CUTTING HERE	
END OF CUTTING	

G65P800 Z50.

TOOL GOES TO 50 MM ABOVE WORK OFFSET AND MOVES TO LASER. IT THEN CHECKS TOOL AT 0.5 MM, RETURNS TO 50 MM ABOVE WORK OFFSET AND IN THE CENTRE OF THE LASER WITH THE **TOOL OFFSET ACTIVE**.

G0 X10. Y10. Z10.

MORE CUTTING HERE IF REQUIRED

M01