Work (Torch to Punch) and Diameter (Kerf) Inch Offset Procedure

This procedure should be used to properly adjust the G55 offset to ensure the punch hole to torch cut accuracy as well as cut to cut accuracy is correct

1. Load the ram with a punch and die set of your choice (normally 0.5" – 1.0" in diameter) using the procedure for your model of equipment. Ensure the die clearance is correct for whatever material thickness you are using
2. Load and execute your offset square program. This will generate a part similar to the one shown. Follow the instructions listed in the program to set part location on the material and set the cutting speed for the material being used

N1G00M85
N2G150M61
N3M56
N4G54
N5G20
N6G90M42
N7M00
(JOG TO CENTER OF SQUARE)
N8G92X0.Y0.
M75
X0.Y0.
M85
N9G55G00X2.25Y2.1
N10M17
N11G01X2.Y2.G41D1F215.
N12M65
N13Y-1.5
X1.5Y-2.0
N14X-2.
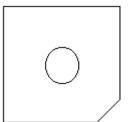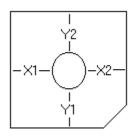N15Y2.
N16X2.
N17X2.25Y2.1G40D0
M18
M80
M00
G54
N18M29
N20M30

3. Using the following reference, measure the distance from the edge of the punched hole to the cut edge. Remember, the most accurate part of the cut is the bottom edge

X1 _____   (X1-X2)/2= X Difference

X2 _____   X Difference _____

Y1 _____   (Y1-Y2)/2= Y Difference

Y2 _____   Y Difference _____

4. When determining the difference value to input, keep the following in mind:
   When adjusting the X on ALL models, a positive (+) value will make X1 smaller
   When adjusting the Y on ALL models, a positive (+) value will make Y1 smaller
5. If the X and Y differences are less than 0.010" and the part measures 4.00" (+/- 0.010"), you are finished. If the results are off, continue with step 6
6. Press **FUNC-OFFSET** on MDI panel
7. Press **MDI** on Operator Panel
8. Press **WK. ZERO** (Work Zero) softkey
9. You will be adjusting the G55 (Offset 2) values in X and Y, using the differences calculated in step 3 & 4. Move the cursor over to the Offset 2. Add or subtract your difference to the current value, type the new value and press Input. For example: Y value is currently .03. If you need to add .015, you would type "**Y0.045**" and press **Input**
10. Make another part using the program listed above. Your hole should now be centered. If not, repeat steps 3-8. If so, and the part is 4.00" (+/- 0.010"), you are complete. If not, proceed to step 11
11. To adjust the cut size of your parts, a diameter (kerf) offset is used. This value could be a number between 1 and 32 as set by your programs. Typically, on an outside cut, the larger the offset amount the larger the part will be. To increase the part size, increase the offset. Subtract to make the part smaller. The offset value is on the **Offset** screen under **Tool** (the first screen). Note: With an inside cut, the offset is reversed (larger offset = smaller hole)

   When adjusting the parts size, X & Y should be close (+/- 0.010") to each other. If they differ from each other greatly, you should check your consumables and/or torch to make sure you are getting a straight (less than 5 degree) cut. If the cut quality is good, you should check for mechanical looseness in all axis

End of Procedure