The Hurco Advantage
Using NC Merge with Patterns
NC Merge Block
Calling Supplied NC Program
% 02012(HURCO ENGRAVE)
(MATERIAL - ALUMINUM INCH - 2024)
(T1000 | 1/8 BALL ENDMILL)
N100 G20
N102 G0 G17 G40 G49 G80 G90
N104 T1000 M6
N106 G0 G90 X-1.9763 Y.5024 S12000 M3
N108 Z.25
N110 Z.2
N112 G1 Z-.01 F200.
N114 Y.0024 F20.
N116 F200
• Enter the four digit program number into the PROGRAM NUMBER field

• You must change the M02 or M30 at the end of the program to an M99

• Make sure the conversational AND the NC program are open in the program manager screen

• All types of conversational Pattern blocks, or Transform Plane blocks can be used with a merged NC program

IMPORTANT NOTE: if a G54 thru G59 work offset is called in the NC program, that work offset WILL BE USED FOR CUTTING. If you delete the G54 thru G59 callout in the program, the conversational part setup will be used by default.
NC Merge with Patterns
Loop Linear
DATA BLOCKS
1. PATTERN LINEAR (3)
2. NC PROGRAM (P2012)
3. PATTERN END
END OF PROGRAM
NC Merge with Patterns
Loop Rotate, Scale, & Mirror
## Data Blocks

1. **Pattern Mirror**
2. **Pattern Rotate (1)**
3. **Pattern Scale**
4. **NC Program (P2012)**
5. **Pattern End**
6. **Pattern End**
7. **Pattern End**

**END OF PROGRAM**

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**Block 2: Pattern Loop Rotate**

<table>
<thead>
<tr>
<th>Number</th>
<th>Start Angle</th>
<th>Rotate Angle</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>45.000</td>
<td>45.000</td>
</tr>
</tbody>
</table>

**Diagram:**

- **Loop Rotate**
- **Number = 2**
- **Start Angle**
- **Rotate Angle**
- **XY Center**
- **XY Reference**
- **Original Pattern**
BLOCK 3

PATTERN SCALE

<table>
<thead>
<tr>
<th>REFERENCE</th>
<th>SCALE</th>
</tr>
</thead>
<tbody>
<tr>
<td>X</td>
<td>0.0000</td>
</tr>
<tr>
<td>Y</td>
<td>0.0000</td>
</tr>
<tr>
<td>Z</td>
<td>0.0000</td>
</tr>
</tbody>
</table>

DATA BLOCKS

1. PATTERN MIRROR
2. PATTERN ROTATE (1)
3. PATTERN SCALE
4. NC PROGRAM (P2012)
5. PATTERN END
6. PATTERN END
7. PATTERN END
END OF PROGRAM
NC Merge with Patterns
Scale & Loop Rectangular
DATA BLOCKS

1. PATTERN RECTANGULAR (4, 5)
2. PATTERN SCALE
3. NC PROGRAM (P2012)
4. PATTERN END
5. PATTERN END
END OF PROGRAM
DATA BLOCKS
1. PATTERN RECTANGULAR (4,5)
2. PATTERN SCALE
3. NC PROGRAM (P2012)
4. PATTERN END
5. PATTERN END
END OF PROGRAM
NC Merge with Patterns
5-Axis Transform Plane
**Data Blocks**

1. Rotary Position
2. NC Program (P2012)
3. Transform Plane
4. NC Program (P2012)
5. Transform Plane End
6. Transform Plane
7. NC Program (P2012)
8. Transform Plane End