

Full Circle Programming

The three projects are quite similar. When the vectors are used, any *I0* or *J0* can be omitted in the program.

➡ 29-06-A - Using the *I* and *J* arc vectors

```
G90 G54 G00 X22.0 Y0 S1000 M03
G43 Z3.0 H01 M08
G01 Z-5.0 F100.0
G02 X0 Y-22.0 I-22.0 J0
X-22.0 Y0 I0 J22.0
X0 Y22.0 I22.0 J0
X22.0 Y0 I0 J-22.0
G00 Z3.0
```

(P1 - EAST QUADRANT POINT)
(CLEARANCE)
(DEPTH)
(P2 - SOUTH QUADRANT POINT)
(P3 - WEST QUADRANT POINT)
(P4 - NORTH QUADRANT POINT)
(P1 - EAST QUADRANT POINT)
(CLEARANCE)

➡ 29-06-A - Using the radius *R*

```
G90 G54 G00 X22.0 Y0 S1000 M03
G43 Z3.0 H01 M08
G01 Z-5.0 F100.0
G02 X0 Y-22.0 R22.0
X-22.0 Y0 R22.0
X0 Y22.0 R22.0
X22.0 Y0 R22.0
G00 Z3.0
```

(P1 - EAST QUADRANT POINT)
(CLEARANCE)
(DEPTH)
(P2 - SOUTH QUADRANT POINT)
(P3 - WEST QUADRANT POINT)
(P4 - NORTH QUADRANT POINT)
(P1 - EAST QUADRANT POINT)
(CLEARANCE)

➡ 29-06-B - Using the *I* and *J* arc vectors

```
G90 G54 G00 X22.0 Y0 S1000 M03
G43 Z3.0 H01 M08
G01 Z-5.0 F100.0
G02 X-22.0 Y0 I-22.0 J0
X22.0 Y0 I22.0 J0
G00 Z3.0
```

(P1 - EAST QUADRANT POINT)
(CLEARANCE)
(DEPTH)
(P2 - WEST QUADRANT POINT)
(P1 - EAST QUADRANT POINT)
(CLEARANCE)

➡ 29-06-B - Using the radius *R*

```
G90 G54 G00 X22.0 Y0 S1000 M03
G43 Z3.0 H01 M08
G01 Z-5.0 F100.0
G02 X-22.0 Y0 R22.0
X22.0 Y0 R22.0
G00 Z3.0
```

(P1 - EAST QUADRANT POINT)
(CLEARANCE)
(DEPTH)
(P2 - WEST QUADRANT POINT)
(P1 - EAST QUADRANT POINT)
(CLEARANCE)

➡ 29-06-C - Using the *I* and *J* arc vectors

```
G90 G54 G00 X22.0 Y0 S1000 M03
G43 Z3.0 H01 M08
G01 Z-5.0 F100.0
G02 I-22.0 J0
G00 Z3.0
```

(P1 - EAST QUADRANT POINT)
(CLEARANCE)
(DEPTH)
(P1 - EAST QUADRANT POINT)
(CLEARANCE)

➡ 29-06-C - Using the radius *R*

Radius *R* cannot be used in a 360 degree arc sweep (full circle). Vectors *I* and *J* are the only solution.