

Horizontal Machining

The completed program is self explanatory. Some jobs may require **G28 Y . . Z . .**, rather than **G28 Z . .** only.

```
(46-01 - HORIZONTAL MACHINING)
(TOOL T01 IN THE SPINDLE)
```

```
(20 DIA END MILL)
N1 G21
N2 G17 G40 G49 G80
(B0 - G54 - 300 DIA - Z-10.0)
N3 M79
N4 G90 G00 B0
N5 M78
N6 G54 G00 X150.0 Y0 S1500 M03
N7 G43 Z25.0 H01 M08
N8 Z3.0
N9 G01 Z-10.0 F250.0
N10 G03 I-150.0 F500.0
N11 G00 Z25.0
N12 G28 Z25.0
(B90 - G55 - 250 DIA - Z-7.0)
N13 M79
N14 B90.0
N15 M78
N16 G90 G55 G00 X125.0 Y0
N17 G43 Z25.0 H01
N18 Z3.0
N19 G01 Z-7.0 F200.0
N20 G03 I-125.0 F500.0
N21 G00 Z25.0
N22 G28 Z25.0
(B180 - G56 - 275 DIA - Z-5.0)
N23 M79
N24 B180.0
N25 M78
N26 G90 G56 G00 X137.5 Y0
N27 G43 Z25.0 H01
N28 Z3.0
N29 G01 Z-5.0 F200.0
N30 G03 I-137.5 F500.0
N31 G00 Z25.0
N32 G28 Z25.0
(B270 - G57 - 200 DIA - Z-3.0)
N33 M79
N34 B270.0
N35 M78
N36 G90 G57 G00 X100.0 Y0
N37 G43 Z25.0 H01
N38 Z3.0
N39 G01 Z-3.0 F200.0
N40 G03 I-100.0 F500.0
N41 G00 Z25.0 M05
N42 G28 Z25.0 M09
N43 G91 G30 Z0
N44 G30 X0 Y0
N45 M79
N46 G90 G28 B270.0
N47 M78
N48 M30
%
```

```
(UNLOCK TABLE)
(0 DEGREES TABLE POSITION)
(LOCK TABLE)
```

```
(CLEAR POSITION BEFORE TOOL PLUNGE)
```

```
(CUT 300 DIA GROOVE)
```

```
(HOME IN Z-AXIS FOR CLEARANCE)
```

```
(UNLOCK TABLE)
(90 DEGREES TABLE POSITION)
(LOCK TABLE)
```

```
(CLEAR POSITION BEFORE TOOL PLUNGE)
```

```
(CUT 250 DIA GROOVE)
```

```
(HOME IN Z-AXIS FOR CLEARANCE)
```

```
(UNLOCK TABLE)
(180 DEGREES TABLE POSITION)
(LOCK TABLE)
```

```
(CLEAR POSITION BEFORE TOOL PLUNGE)
```

```
(CUT 275 DIA GROOVE)
```

```
(HOME IN Z-AXIS FOR CLEARANCE)
```

```
(UNLOCK TABLE)
(270 DEGREES TABLE POSITION)
(LOCK TABLE)
```

```
(CLEAR POSITION BEFORE TOOL PLUNGE)
```

```
(CUT 200 DIA GROOVE)
```

```
(HOME IN Z-AXIS FOR CLEARANCE)
(SECONDARY MACHINE ZERO RETURN IN Z)
(SECONDARY MACHINE ZERO RETURN IN XY)
(UNLOCK TABLE)
(0 DEGREES TABLE POSITION = HOME)
(LOCK TABLE)
```