

## BallBar test in SINUMERIK Operate (828D and 840D sl)

It is beneficial to also check circular interpolation with an independent method, such as a Renishaw BallBar test. Machine mechanical alignment is considered in the result.

Examples of BallBar programs:

### G-code format

```

NC/MPF/BALLBAR
N10 G17 G90 G54 G70 M5
N20 G94 F39.37
N30 G1 X-3.996 Y0 Z0
N40 M0
N50 G1 X-3.937 Y0
N60 G2 I3.937 J0
N70 G2 I3.937 J0
N80 G1 X-3.996 Y0
N90 G04 F2.5
N100 G1 X-3.937
N110 G3 I3.937 J0
N120 G3 I3.937 J0
N130 G1 X-3.996 Y0
N140 M30
  
```

### Conversational format

```

NC/MPF/BALLBAR_SHOPMILLM
P Program header Block centered G54
→ RAPID X-101.5 Y0 Z0
→ F1000/min X-100
→ F1000/min X-100 Y0 Z0
M Machine functions Programmed stop-on
↪ G3 X--100 Y=0 I=100inc J=0inc
↪ G3 X--100 Y=0 I=100inc J=0inc
→ X-101.5 Y0
→ X-100 Y0
M Machine functions DT=3
↪ G2 X--100 Y=0 I=100inc J=0inc
↪ G2 X--100 Y=0 I=100inc J=0inc
M Machine functions M5
END End of program
  
```

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