



**PENTA**  
MACHINE CO.

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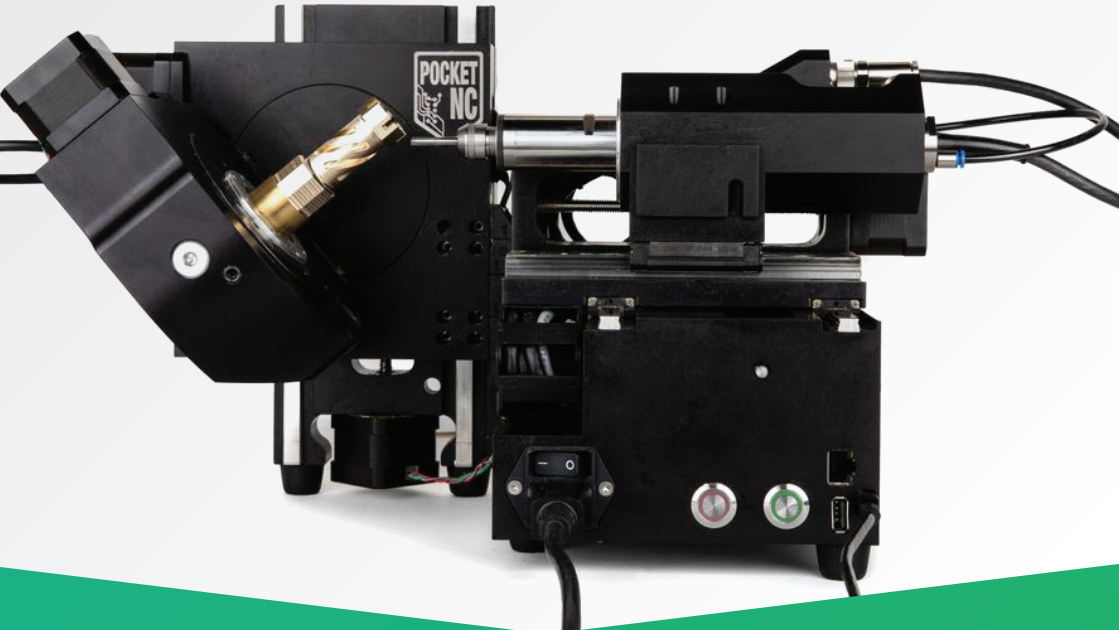
# POCKET NC V2-50 CHK SPECIFICATIONS

## MAX TRAVEL

X: 4.55 in (115.5mm)  
Y: 5.05 in (128.3 mm)  
Z: 3.55 in (90.1mm)  
A: -25° to 135°  
B: Continuous Rotation  
(-9999° to 9999°)

▶ Tested on G5 titanium,  
6061 aluminum, 303  
stainless, machinable  
wax, acetal

Accepts standard  
G Code: .ngc, .nc, .txt, .cnc files  
Test G Code at  
[sim.pocketnc.com](http://sim.pocketnc.com)



| AXIS     | MAX TRAVEL                            | SPEED                   |
|----------|---------------------------------------|-------------------------|
| <b>X</b> | 4.55 in (115.5 mm)                    | 60 in/min (1524 mm/min) |
| <b>Y</b> | 5.05 in (128.3 mm)                    | 60 in/min (1524 mm/min) |
| <b>Z</b> | 3.55 in (90.1 mm)                     | 60 in/min (1524 mm/min) |
| <b>A</b> | -25° to 135°                          | 40°/second              |
| <b>B</b> | Continuous rotation (-9999° to 9999°) | 40°/second              |

| AXIS             | BACKLASH   |
|------------------|--|
| <b>X &amp; Y</b> | 0.0005 in (12.7 μm) at tool base                         |
| <b>Z</b>         | Backlash at 18 pound (8.16 kg) load: 0.0005 in (12.7 μm) |
| <b>A &amp; B</b> | 0.01°  |

| AXIS   | RESOLUTION & REPEATABILITY  |
|--|---|
| <b>XYZ</b>                                   | Resolution: 0.00024 in (6.10μm)<br>Homing Repeatability: ±0.0005 in (12.7μm)<br>Repeatability: ±0.002 in (50.8μm) at 0% |
| <b>A&amp;B</b>                               | Resolution: 0.01°<br>Homing Repeatability: ±0.05°<br>Repeatability: ±0.05° at 0% load<br>Runout: < 0.002 in (50.8 μm)   |
| Recommended part tolerance ±0.005in (.127mm) |   |

| SPINDLE                 |                                 |
|-------------------------|---------------------------------|
| <b>NSK Spindle Mode</b> | NR-2551                         |
| <b>Tool Change</b>      | Collet Nut<br>CHK Collet        |
| <b>Spindle Speed</b>    | 1,000-50,000 RPM*               |
| <b>Power</b>            | 200 W (Max Power)               |
| <b>Spindle Motor</b>    | BLDC 3 Phase with Hall Feedback |
| <b>Spindle Runout</b>   | 0.0001 in (2.5 μm)              |

| MACHINE CONTROL   |   |
|---|---|
| Texas Instruments Arm Cortex A8 running Machinekit/Rockhopper |   |
| Accepts Standard Gcode  |   |
| Features  | Spindle Override<br>Feed Override<br>Stop, Start, Pause<br>5 axis simultaneous movement |
| Connectivity  | Ethernet, USB, and mini USB   |
| Power Source  | 90-264 VAC, 127-370 VDC, 47-63Hz  |

| COMPONENTS   |  |
|--|--|
| 6061 Aluminum Frame, ±0.001 in (+/-25.4 μm) squareness in all axes |  |
| Machine Footprint: 17.5 in (444.5 mm) x 12.5 in (279.3 mm)         |  |
| 5 NEMA 17 Motors   | 3 linear lead screws with preloaded nuts<br>2 Rotary Worm Drives |
| Linear Bearings  | 9 and 42mm, 10% preload  |
| Integrated angular contact rotary bearings                         |  |

**PURCHASE INCLUDES:**  
 1/8 inch CHK collet  
 3mm end mill, single flute, 1/8" shank  
 Pocket NC vise and hardware  
 Limited Pocket NC Warranty

*\*Sold Separately: Air Compressor (required)  
 1 gallon (3.7L)/minute of air at 25 psi*



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