

**Machine Tool Products**

**Siemens SINUMERIK 828 CNC Kit**

**for**

**Large-Small Bed Mills**

**(6Nm/12Nm)**

Revised: 10/08/2018

***For more information or to request a quote please contact:***

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Email: [support@machinetoolproducts.com](mailto:support@machinetoolproducts.com)  
Cell: 317-830-3057

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**Kit Photos**



## Siemens 828 CNC Kit Overview

### Included in Package:

- Siemens 828 PPU with MCP
- Pre-Built Main + Operator Electrical Enclosures (OEM color is **BLACK**)
- S120 Drives & 1FK7 Motor on Digital Drive Bus
- (3) 6 or 12 Nm Servo Motors (1 with brake)
- Absolute Multi-Turn Motor Encoders
- 10 Meter Power and Feedback Cables
- Wireless Hand Pulse Generator
- MTP Source Code (tool changer, lube, coolant code also included)
- MTP Electrical Prints
- 72in/48out IO Board

### Feature Overview

- ShopMill Conversational Programming\*
- 3D Part Simulation (3D, Top, Front, Rear, Left, Right)\*
- Advanced Technology Functions\*
- DXF Reader (DXF PC Software Available)\*
- Network Drive Management\*
- Dedicated Jog + Rapid Rate Keys (X, Y, Z)
- Up to 400ipm rapid feedrate (Dependent on pitch/ratios)
- Software Travel Limits
- Feedrate/Spindle Speed Overrides
- Custom Machine Hotkeys such as:
  - Tool Change (Z Retract)
  - Tool Carousel CW/CCW, HOME, OFF
  - Work Light
  - Coolant On
  - Spindle CW/CCW
  - G54 – G59 Work Offset Activation Keys
  - Cycle Start Keys

*\*Siemens Software options included*

### Available Options

- Pendant Arm
- Spindle Drive/Motor
- Linear Feedback Encoders
- Probing Cycles (Automatic) – *See Measuring Cycles Brochure*
- 4<sup>th</sup> Axis Motor/Drive and 3+2 Trunnion Tables
- Turnkey Installation & Commissioning

## Siemens 828 Control System Overview

### Standard Siemens 828 Control Features

- 10.4" Color Display
- Ethernet/USB Data Transfer
- Siemens ProgramGUIDE & ISO Programming (Fanuc Dialect)
- Measure Tool/Workpiece Cycles (JOG/manual)
- 4<sup>th</sup> Axis Capable (interpolating)
- Tool Wear Monitoring
- Speeds/Feeds Calculator
- Tool Table
- Full Alphanumeric Keyboard
- in to mm toggle
- Backlash & Temperature Compensation
- 3MB of User Memory (Additional Memory - CF card)
- 128 Tools/ 256 Cutting Edges
- On Screen Help Manual

### Drive/Motor Technology

- High Inertia Servo Motors with Absolute Encoders
- Absolute Encoders - NO Homing required
- Automatic Servo Tuning
- Regenerative Energy Saving Drives
- 230V or 460V Capable

### ShopMill Conversational Features

*\*non-standard features included in our kit*

- Ability to Write and Edit G-Code
- Repeat, Rotate, Mirror, Offset, and Scaling
- Solid Model Graphics (Centered Block, Pipe, Cylinder, N Corner, and Regular Block)
- 2D or 3D Multiview Operation Graphics
- Estimated Machining Time
- \*Advanced Technology Functions
- \*DXF Import
- \*3D Simulation

## Drilling Cycles

- Centering
- Drilling
- Reaming
- Deep Hole Drilling
- Boring
- \*Tapping (rigid tapping requires high performance spindle option)
- Positions (bolt hole circle, rectangle, array, position, repetition)

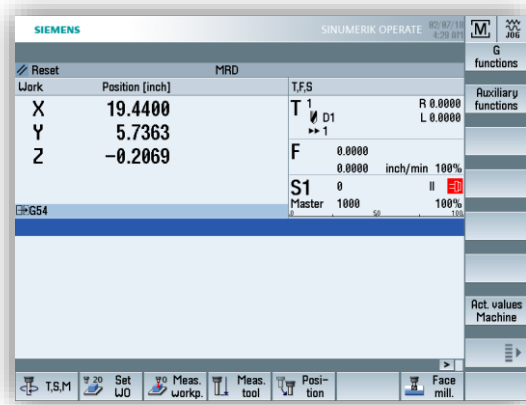
## Milling Cycles

- Face Milling
- Pocket Milling (\*expansion pack for pocket milling cycles included)
  - Rectangular Pocket
  - Circular Pocket
- Slot Milling (\*expansion pack for slot milling cycles included)
  - Circumference Slot
  - Open Slot
  - Longitudinal Slot
- Helix Milling
- \*Multi-Edge Spigot (rectangular, circular, multi)
- \*Thread Milling (requires high performance spindle option)
- \*Engraving

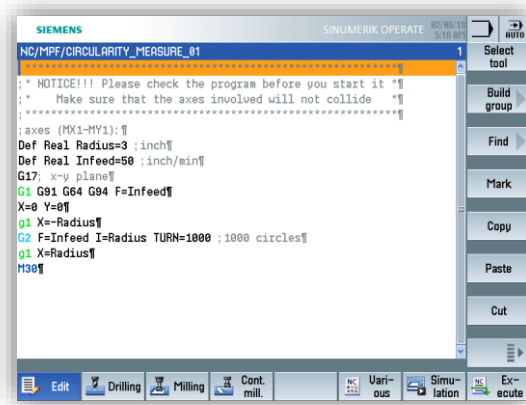
## Contouring Cycles

- Path Milling (rough, finishing, chamfer)
- Rough Drill
- Pocket & Spigot
- Chamfering

**Control Screenshots**



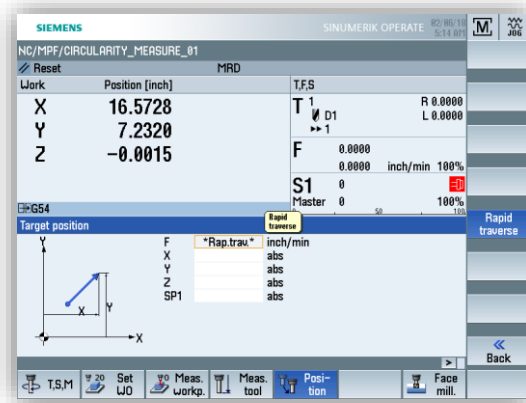
**Main Start Up Screen**



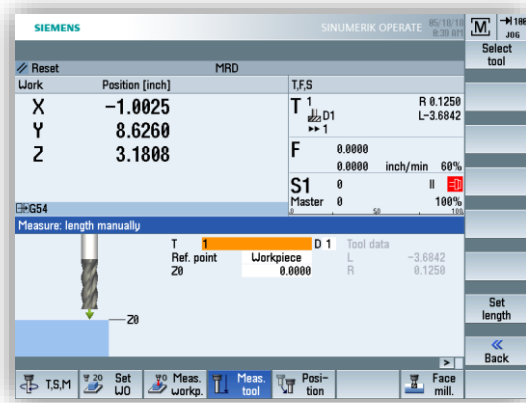
**G-Code Editor**



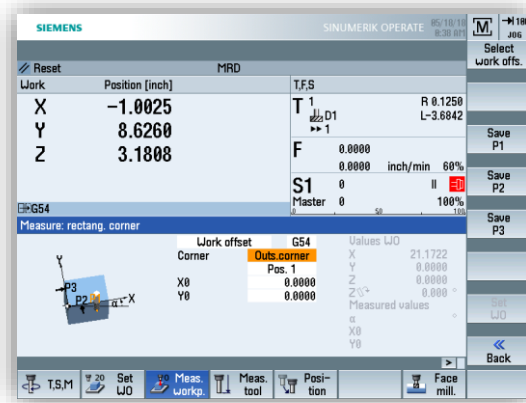
**“DRO” Mode**



**Move Position Command**

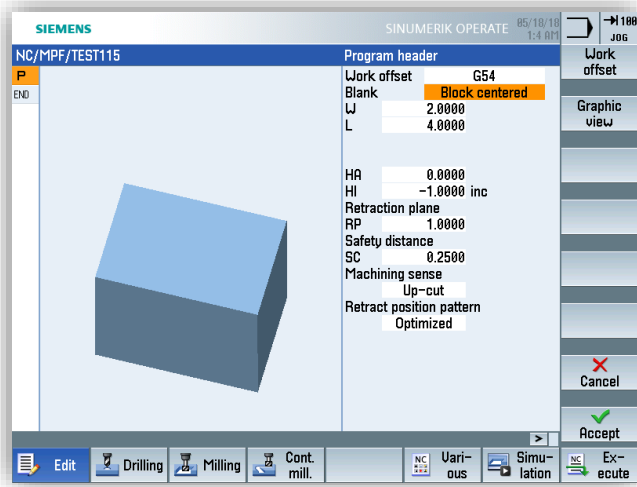


**Measure Tool**

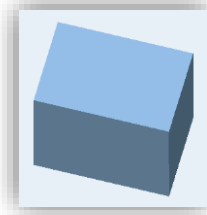


**Measure Workpiece**

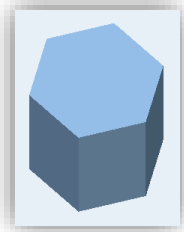
**Solid Model Graphics (Blank)**



**Block Centered**



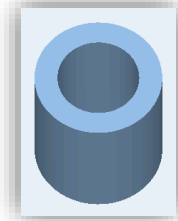
**Block**



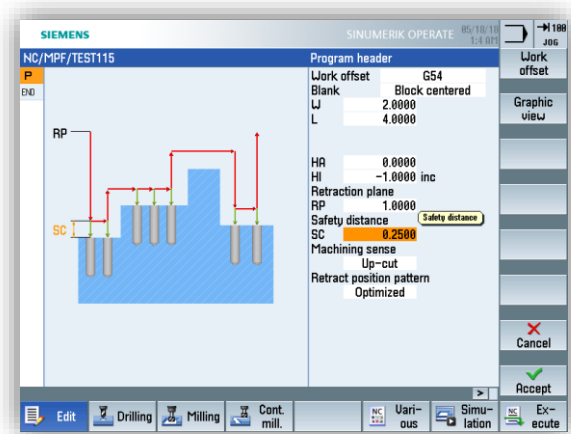
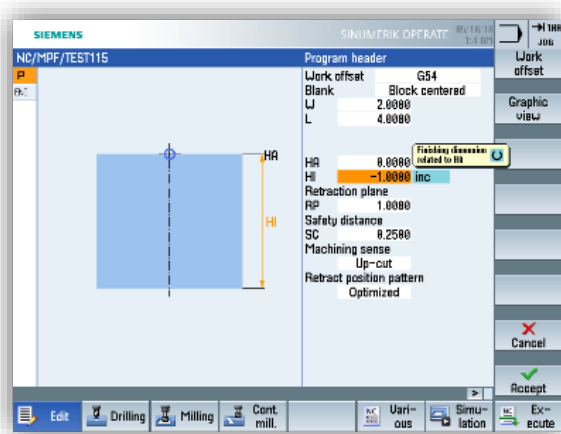
**N Corner**



**Cylinder**



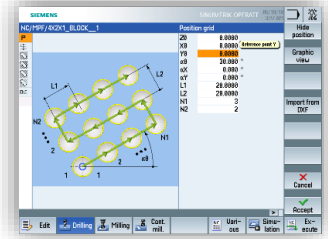
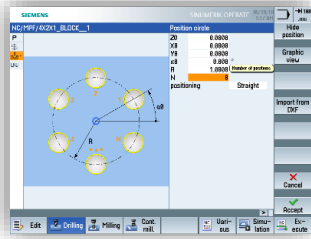
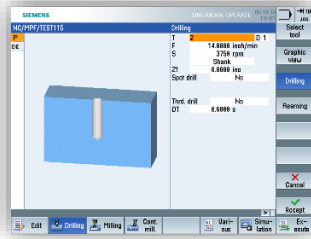
**Pipe**



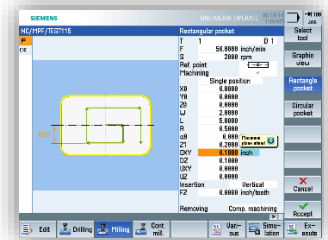
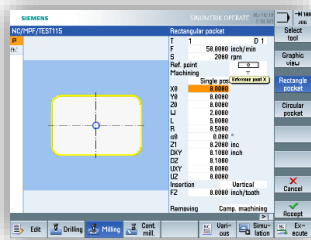
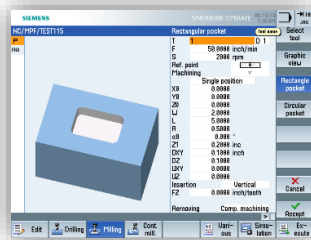


**ShopMill Machining Cycles**

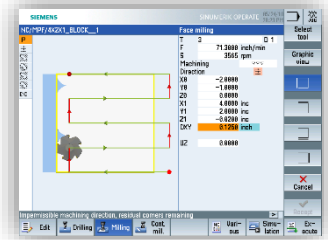
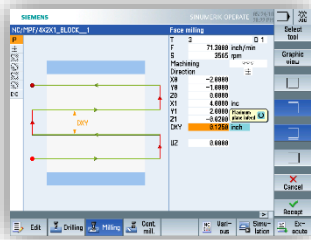
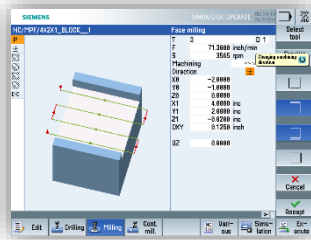
**Drilling**



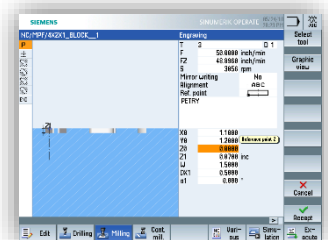
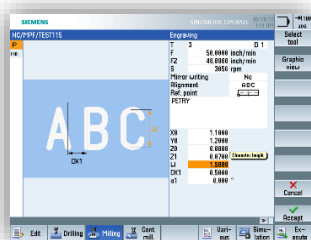
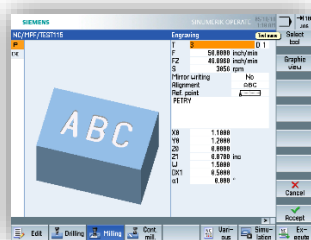
**Pocket Milling**



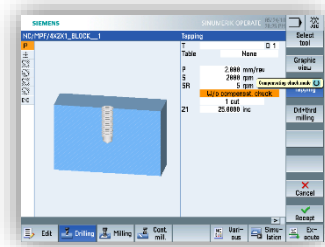
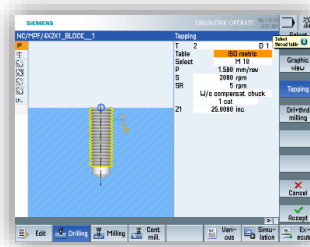
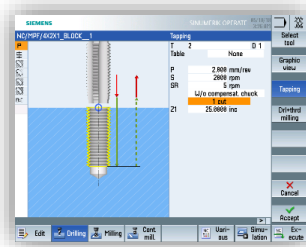
**Face Milling**



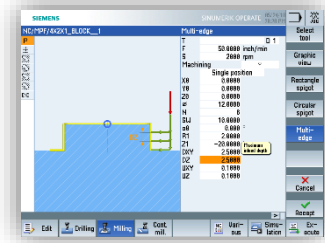
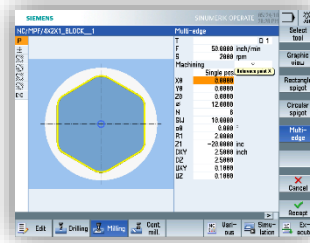
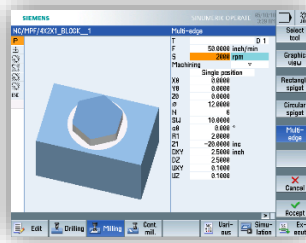
**Engraving**



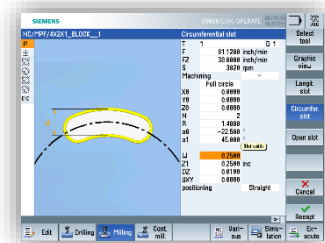
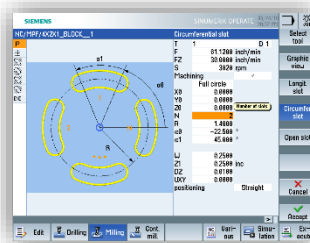
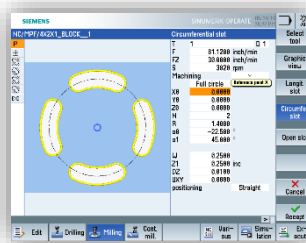
**Tapping**



**Spigot**



**Slot Milling**

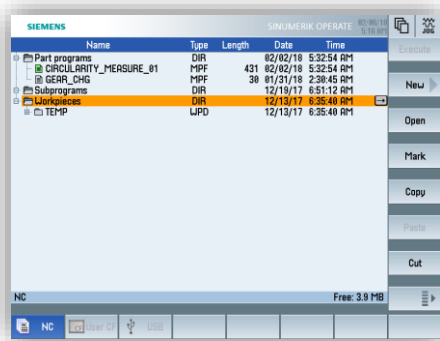


\*This is not a complete list of the included machining cycles

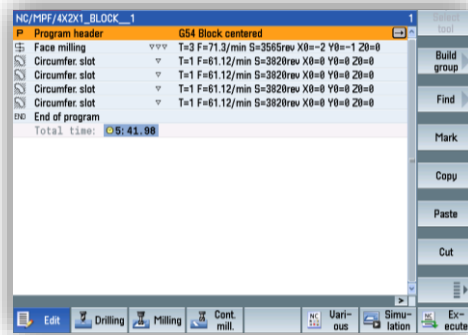
**Tool Table**

Loc.	Type	Tool number	D	H	Length	Radius	Tip angle			
1	1	0	-3.6842	0.1250			2			
2	1	0	-1.6900	0.1750	90.0		2			
3	1	0	-2.6230	0.1250			2			
4	1	0	-1.4730	0.3750			2			
5	1	0	0.0000	0.1007			2			

Loc.	Type	Tool number	D	H	Length	Radius	N			
1	1	0	-3.6842	0.1250			2			
2	1	0	-1.6900	0.1750	90.0		2			
3	1	0	-2.6230	0.1250			2			
4	1	0	-1.4730	0.3750			2			
5	1	0	0.0000	0.1007			2			

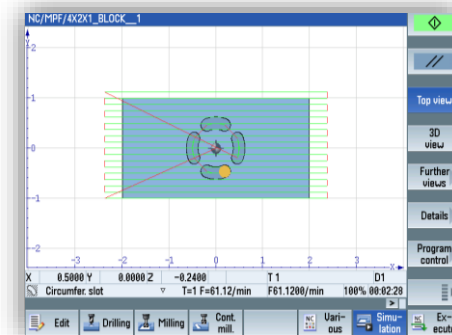
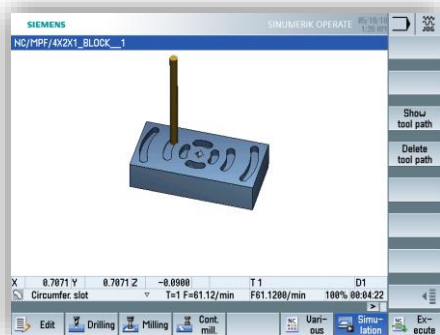
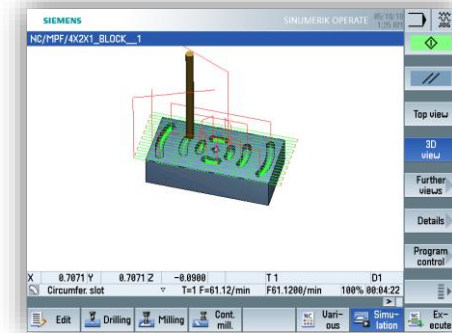
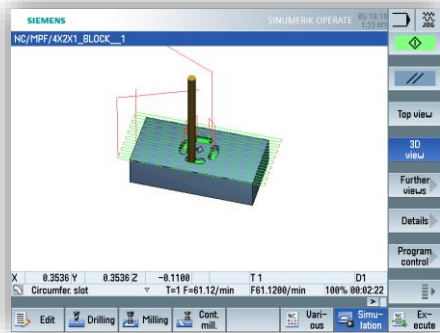


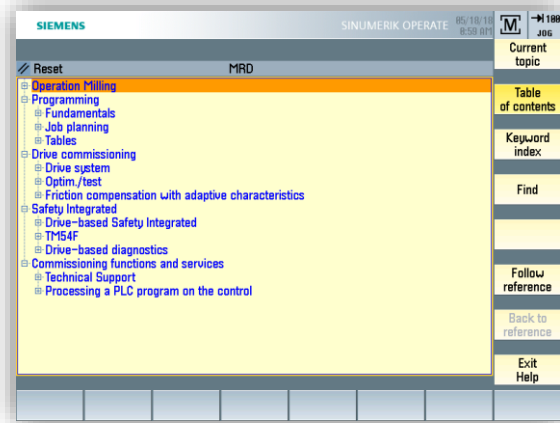
**Program Manager**



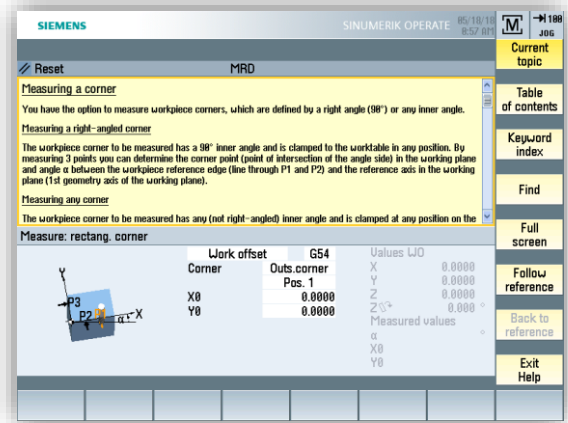
**Program Edit Screen**

**3D Simulation**



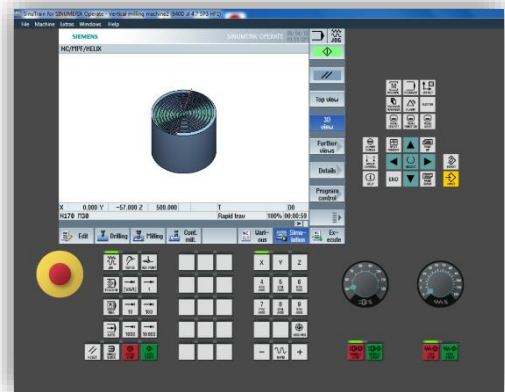


**Help Manual Main Menu**



**Help Manual Example**

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