MILLPWR G2

The New Industry Standard
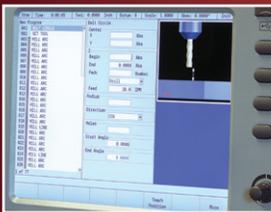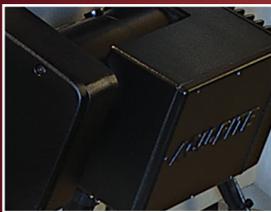
KTM-5VKF
w/MillPWR^{G2}

Powered by
ACU-RITE® Factory installed on KENT USA CNC Mills

MILL**PWR**G2

CNC Milling Machine

New & Powerful Features

Digital Spindle RPM Display

Color Spindle Load Bar

Dual integrated E-stop Safety

Programmable Spindle Prep

Programmable Coolant Prep

Programmable AUX M-code Prep

USB + Ethernet ports

12.1" High-resolution LCD display and 3D graphics

Estimated runtime feature

Expanded Tool/Datum offsets

Available offline software option

Powerful and Easy
Fast and Accurate

Our industry-leading CNC mill with the Acu-Rite MILL**PWR**G2 control brings powerful CNC capabilities to the tool room with easy-to-learn conversational programming and advanced canned cycles to empower everyone on the shop floor with greater productivity.

This versatile system can be operated manually like a full-function DRO with intelligent power feeds, or automatically with easy-to-use conversational shop floor programming for full CNC operations. Additionally, you can import and run G-code files from CAD/CAM programs. This enables you to machine full 3D contoured parts.

These CNC mills are the new industry standard for ease of use, machining flexibility, and reliable performance. They are well-suited for tool rooms and job shops, from prototyping or one-offs to small and medium production runs.

KTM-3VKF
w/MillPWRG2

CNC Bed Mill TW-32Qi
w/MillPWRG2

Why a CNC mill?

- Walk-up manual/DRO operation or easy CNC programming
- Machine pockets, islands, contours, and bolt holes easily
- Reduce set up time and machining errors
- Better parts and finishes with less tooling requirements
- Improve the capability and productivity of your existing people

KENT USA®

Since 1979

User-Friendly
Save Valuable Time

Standardized menus make it easy to program common features; simply press any function key and follow the prompts. Use MILL**PWR**^{G2} for arcs, blends and circles in any size, shape or pattern your print requires. There is no need to set up rotary tables or other devices.

MILL**PWR**^{G2} also includes an engrave function for engraving alphanumeric characters vertically, horizontally, diagonally or along an arc.

Save time with the skew feature, which enables the user to set up a workpiece without perfectly aligning it along the X and Y-axes. MILL**PWR**^{G2} will compensate for the angle offset from start to finish.

The teach position feature allows the operator to use a tool, electronic Edge Finder or indicator to create a program from an existing part.

Shop-Tough
Dependable and Durable

Every MILL**PWR**^{G2} system includes components that have been designed, manufactured and tested to withstand the elements of contamination found in even the harshest machine shop environment.

From the durable operator console to the hardened ballscrews and powerful servo motors, the components of each system are protected with die-cast metal enclosures, sealed keypads and interlocking lipseals to further protect from metal chips and other contaminants.

MILLING & DRILLING

- Probing functions for KT edge finder
- Tool radius compensation
- Hole patterns (circular and linear patterns)
- Inclined or arc milling

Fingertip Functionality
Easy Programming/Operation

Tool: Program tools by diameter, length, type, direction and speed

Position/Drill: Drill, bore and position

Rectangles: Pocket, frame, face and slot

Lines: Defined by "from" and "to" points or by angles

Circles: Pocket, frame, ring and helix

Arcs: Defined by "from" and "to" points or by sweep, center or 3-points

Hole Patterns: Full/partial circles, linear row/column, frame & array

Blends: Insert a corner radius between two lines, two arcs or lines and arcs

USB Connectivity–Front & Back: Loading and off-loading programs and importing data via USB are now a plug-and-play convenience with USB ports located on both front and back of the new G2 control system with mouse and keyboard support.

Features

% SPINDLE

Programmable Spindle Speed Option
If spindle control hardware is present, the spindle can be turned on or off automatically. If hardware is not present, the operator is prompted to turn the spindle on or off.

Tool Library Create a list of frequently used tools to save time while programming a part.

Tool Offsets Automatically compensate for the tool's dimensions while machining.

Custom Pocket/Islands Clear a continuous closed-contour with an irregular shape for multiple passes. Tool path is estimated for reduced machine time.

Mirror/Repeat/Rotate Easily manipulate part-programs to save time and reduce program steps.

Explode Explode a program step into several, more detailed steps for easier editing.

Reverse Step/Reverse Path Switch the end points and tool offset of any step or path.

Change Steps Change or edit the depth, offset and feed rate of several steps simultaneously.

3D Graphics System
Improves Efficiency and Accuracy

Intuitive navigation menus eliminate the need for multiple screens. Program cycles, using a simple and easy-to-understand set of machinist language prompts, are accompanied by content-specific "help" graphics. Here is a step-by-step look at the new G2 graphical interface, as a simple bolt hole circle and pocket are entered.
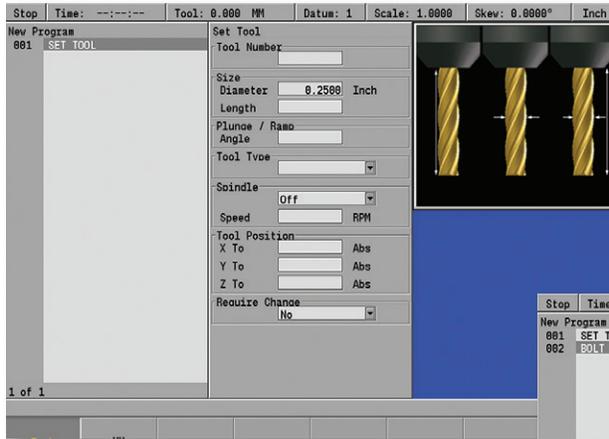
ONE All programs begin with the **tool button.** Parameters are entered in the middle column and are graphically supported in the right column for each field.

TWO Select a cycle to be created. In this case, a **circular bolt hole pattern.** Once the data has been entered into the form, press the "USE" key.
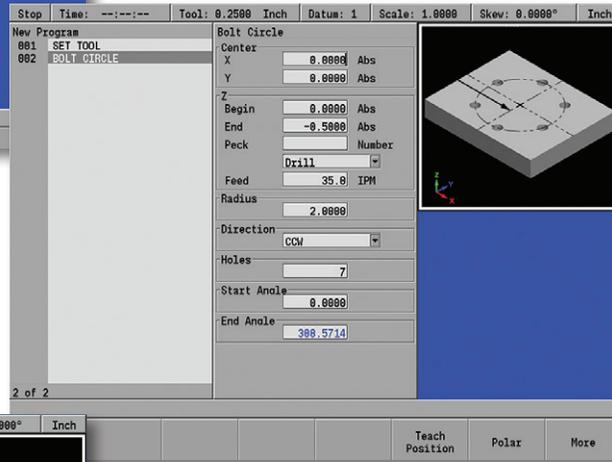
THREE Create a second cycle. Add a **circular pocket** that is mapped in real time within the "help" graphic screen.

FOUR Tool paths are also displayed in 3D graphics that can be rotated and manipulated. The program is ready to run. Simply press "GO."
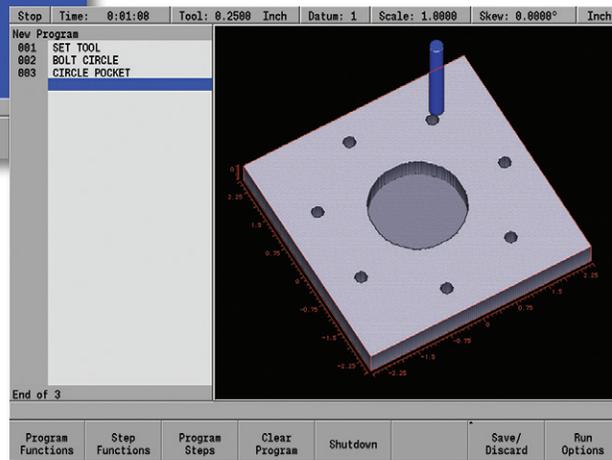
From Sketches to Program to Finished Parts
In Minutes!

Bring a brainstorming session to life with simple features that reduce programming time. DXF file input allows the operator to import part geometry directly from a CAD file. After the DXF file has been loaded, save on MILL**PWR**^{G2}'s large internal memory, USB or on your PC (via Ethernet) for easy retrieval later on.

The primary benefit is saving time and increased productivity. The addition of a readout system on any machine allows for reduced scrap due to the elimination of measuring inaccuracies.

Aside from the elimination of positioning problems, there are other operator-oriented benefits. For example, there is no longer a need to do paper-and-pencil calculations for offsets or other dimensions that may not appear on the drawing since exact positioning is displayed on the DRO.

With *optional spindle control,* you can automatically control your spindle's speed and/or direction on milling machines that are equipped with an electronic variable speed spindle.
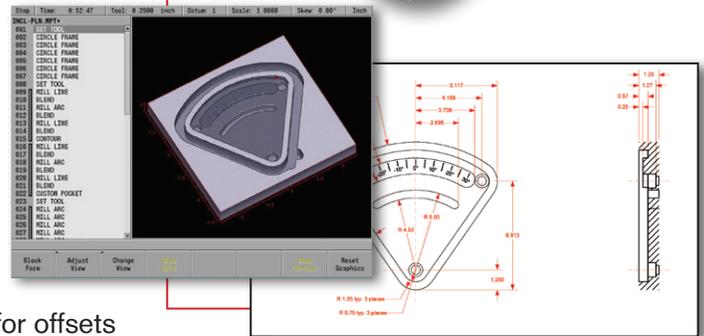
Options & Accessories

Electronic Edge Finder or Touch Probe The edge finder allows you to set datums quickly and easily, without leaving marks on the workpiece.

Knee Scale for Coupling Z (Quill) and W (Knee) This option provides the machine operator positional feedback on the control when the knee is manually moved.
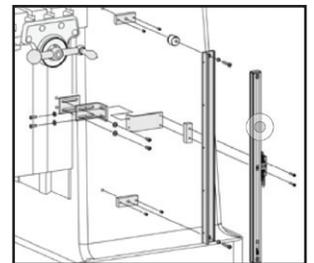
Offline Software This allows you to create programs on a Windows compatible PC and permits those programs to be loaded into the MILL**PWR**^{G2} via USB or Ethernet.

KENT USA ®

Since 1979

MillPWR^{G2}
Control Specifications

DRO Mode	
Multiple Datums (Fixture Offset)	99
Skew	Yes
Zero Reset	Yes
Near Zero Warning	Yes

PGM Mode	
Estimated Machining Time	Yes
Graphic View	2D Line / 3D Line / 3D Solid
Block Form	Yes, with User Override
Custom Pocket & Islands	Yes, Ramp Feed & Optimized Path
Replication (Repeat, Rotate, Mirror)	Yes
Engrave (Line / Arc)	Yes
Program Manager Navigation	Tree with Program Type Filter
Long Program Names	Yes
Program Preview	Listing & Graphic w/ Estimated Machining Time
Explode Step	Hole Patterns & Repeat / Rotate / Mirror
Reverse (Step / Path)	Yes
Shift Steps	Yes
Auto Save (Program)	Yes
Program Size Limit (MPT only)	9999 Steps
DXF File Import	Yes
G-code Program	Yes, with Graphics Support/Simple Edit
On-Screen Help	User Manual Viewer (Text & Graphics)
Parts Counter & Clock	Yes
Manual / Auto Z Control	Yes, 3-Axes
Optional Stop (G-code Only)	Yes
Feed Override	Potentiometer
Error Compensation	Linear & Bidirectional Non-linear

Hardware	
Processor	1.4 GHz Celeron® M
Display	12.1" 1024 x 768 Color LCD with LED Backlight
Internal Storage	2.5 GB Flash (User)
Remote Pendant (Stop / Go)	Yes
Housing	Die Cast Metal (Bezel & Back Sheet Metal)
Connections	Ethernet, USB (x2), RS-232
Protection	IP 54 (front) / IP 40 (back)

KENT USA
in partnership
with *ACU-RITE*®

AWARDS

**Top 5 OEM Award
2004**

**Elite Customer
Award 2013**

**Largest Sales
Increase Award 2005**

**Elite Customer
Award 2014**

**Top 5 Customer
Group Award 2006**

**Elite Customer
Award 2015**

**Top Customer Group
Award 2007**

**Elite Customer
Award 2016**

A proud member of

Easy-to-use
conversational CNC
with advanced
features for **maximum**
productivity

THE NEW INDUSTRY STANDARD

- Large Digital Spindle RPM Display with multi-turn speed control VR

- Real-time color LED spindle load bar to monitor spindle load condition

- Smart-Range feature keeps spindle direction and For/Rev switch in sync when changing between High and Low (back gear) spindle gear range

- Integrated E-stops on CNC console and milling head for extra safety to stop both spindle and CNC table feeds if either E-stop on console or milling head is pressed

- Integrated AMI function for programmable spindle and speed override knob (prep)

- Integrated AMI function for programmable coolant (prep)

- Integrated AMI function for programmable AUX (m-code) outputs (prep)

- Absolute Linear scale feedback on X (table), Y (saddle), and Z (quill) axes

- Latest generation sensor-less vector EVS spindle drive/motor for quick and powerful machining performance on either 1-phase or 3-phase power