



Arumatik®-Mi

Pioneering Icon CNC Operation

Arumatik®-Mi

Easier programming, part

Featuring the latest in advanced, ultra-intuitive touch screen technology, the Arumatik®-Mi CNC control puts a whole new level of control and customization within easy reach.

As powerful as it is user-friendly, the Arumatik®-Mi makes it easier than ever to improve operator-machine tool interaction. It is simple to learn, quick to customize, and able to handle a broad variety of tasks from small runs to high volume production work.



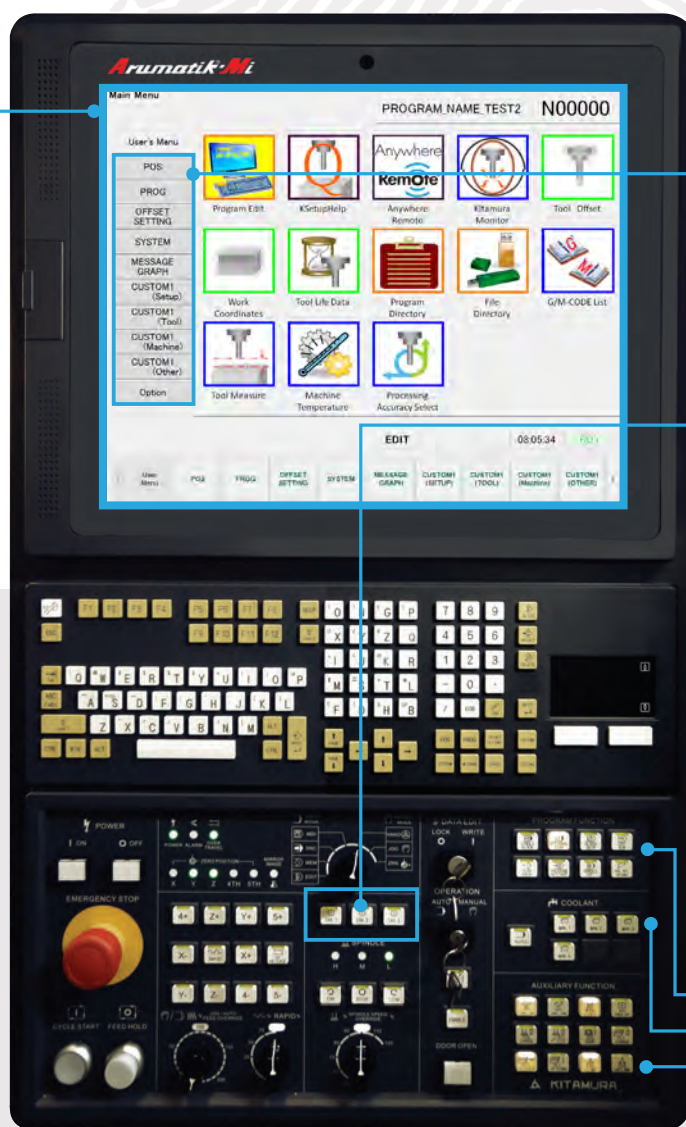
setup and operation. Right at your fingertips.

The ultimate icon-based interface

The simple touch screen graphic interface with interactive touchscreen display technology has been designed to maximize operator potential and performance. Completely customizable and expandable, the Arumatik®-Mi puts increased productivity and consistency at your fingertips.

Quick-Access, Pull-down User Menu

With a quick downward swipe of the 19" touchscreen you can instantly access a customized User Menu and Library where all of your control functions are stored.



User Library

10 additional tabs containing over 51 control programming functions, easily accessed via their own intuitive touchscreen icon.

Custom Action Buttons (C.A.B.)

Assign frequently used, user-specific programming functions. For example, moving the spindle to a specific position, measurement of tool lengths, or clamping a fixture. All customizable and available at the touch of a button.

Control Layout

Clean organization makes the control easy to navigate. Functions below are located in their respective sub-group.

- Program management
- Coolant control
- Maintenance support

Easily accessible, customizable, icon-driven 19" LCD

Intuitive, icon-based interface simplifies operator-machine tool Interaction.

Right away, you'll notice a difference in the Arumatik®-Mi interface, with quick access pull-down menus, icon-based functions, and easily customizable views. Icon-based programming screens are complemented by hard key commands, for intuitive ease of use, reduction in errors, and much faster setup times. Familiar programming functions are easy to find and learn, so that any operator can quickly master the potential of the control.

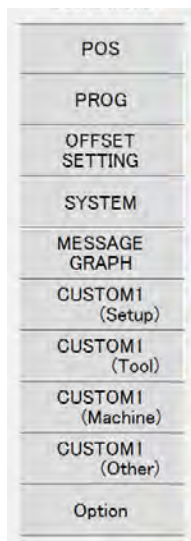
Quick-Access, Pull-Down Menu

Your customized user menu can be accessed at any time or state the machine is in as long as it is powered on. It will always appear first on the screen with all of your shortcut programming function icons. Additional User Library tabs will also be visible to access additional programming functions with just a single touch.



Customizable User Menu

Create your own user's menu as you navigate through the Library tabs by adding programming support icons to populate the screen with your most frequently used functions. Icons can be added or removed at any time and visually guide you through each function.



User Library

Tabs make familiar programming functions easy to find, navigate and master so that any operator can quickly utilize the potential of the control. Quickly navigate to programming functions, offsets, and options tabs all located within the User Library - these are just a sample of many more available functions.



Programming function library



Offsets library



Options library

maximizes operator potential and performance.

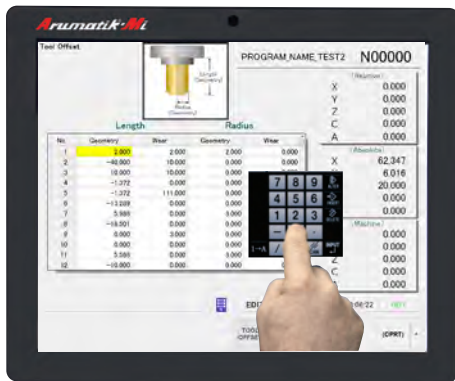
Faster and easier tool and part set up

Kitamura can help you reduce machine idle time. With the Arumatik®-Mi control you will boost your company's capacity, increase your manufacturing flexibility, and help increase overall output. The Arumatik®-Mi's simplified operation, programming and part setup will make sure your machining center is ready to go.

Tool Offset Screen



Simply select the tool offset, input its value via the touch screen, and you're ready to run your part.



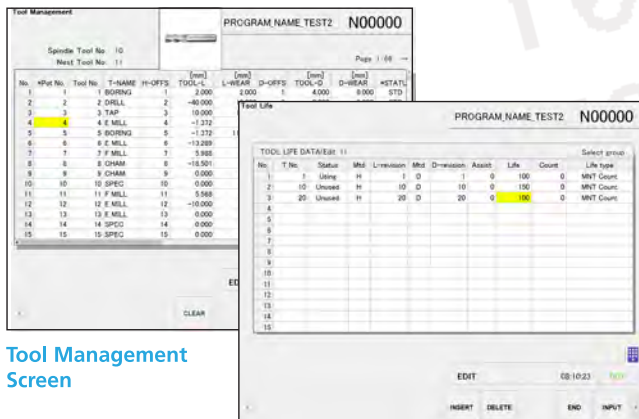
Tool Offsets Screen

Tool Management Feature



With the Arumatik®-Mi, you don't have to set tools during changeovers, making tool management simpler. Keep track of your tools easier by storing the tool name, picture and offsets within the management screen. Set your specific information:

- Offsets
- Name
- Pot Number
- Status
- Number
- Tool Life



Tool Management Screen

Tool Life Screen

Work Coordinate Screen

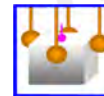


Add work coordinates by selecting the axis and position, then input values via the touch screen or hard keys. The Arumatik®-Mi also has the ability to automatically determine work coordinates, assuring greater peace of mind.



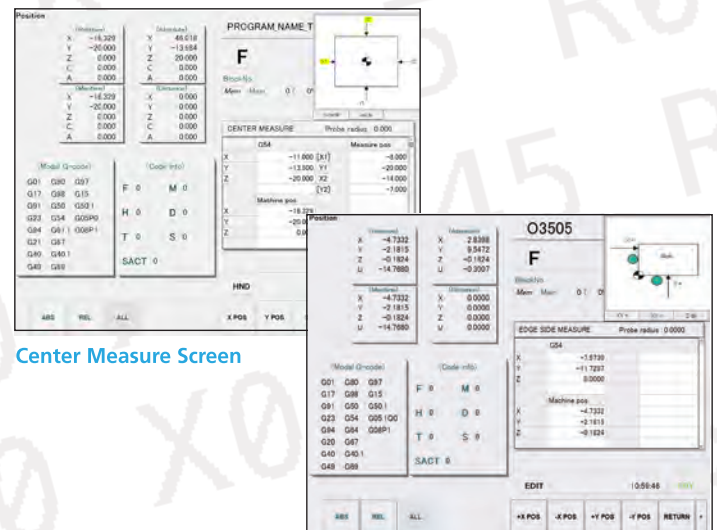
Quickly Access Work Coordinates

Work Set Assistance



Set up your part by setting work offsets with just a few keystrokes. Automatically calculate the center or origin point of the workpiece. Four types are possible:

- Edge side measure
- Center measure
- 3-point diameter center measure
- Corner measure (if angular)



Center Measure Screen

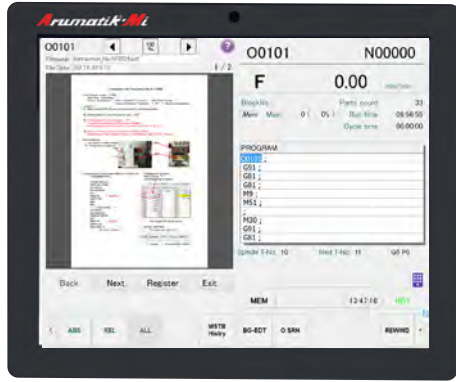
Edge Side Measure

Easy access setup guides

K Setup Help



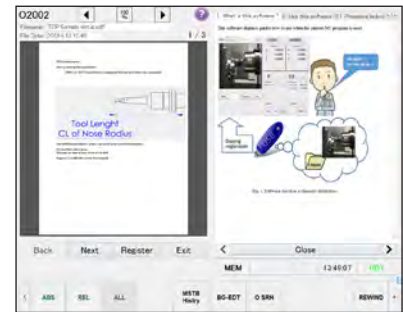
A paperless way to organize setup sheets, videos and photos on how to set up jobs or load parts. Eliminate paper from your shop and not lose important procedural information by ensuring setup documents are stored within the control.



Store setup documents



Store setup videos or pictures



Step-by-step instructions on how to upload your setup media

Reimagining what a CNC control can do for you.

In today's industry getting a machine up and running and keeping it running can make the difference between having a profitable year or merely keeping up. By combining intuitive icon operation with advanced technology, you can stay on top of your operations.

Easy Program Transfer

Moving programs from one machine to another is as simple as press and hold, so you can keep your operations running uninterrupted. Import programs either by name or program. You can transfer programs by either:



Program Directory Icon (5120 MB memory)

File Directory Icon (USB, Built-in 8GB Data Server or Ethernet)



Kitamura Monitor / Adaptive Control

Detects tool wear and controls cutting feedrate automatically by monitoring live spindle load during machining. By adapting to the change in cutting conditions, tool life is maximized and cycle time is shortened dramatically.



Kitamura Monitor Screen

No.	Average	Max
1	5	10
2	15	22
3	8	12
4	20	30
5	3	5
6	12	18
7	11	16
8	7	11
9	16	24
10	9	13

Tool Monitor Data Screen

Simple operational support.

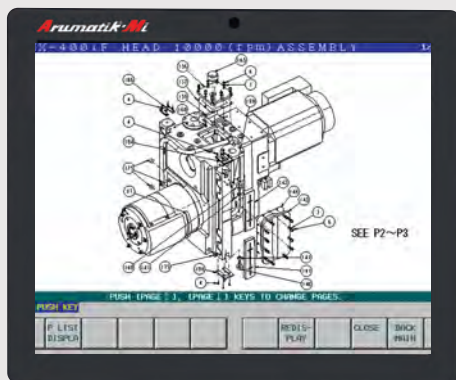
The Arumatik®-Mi makes preventative maintenance easy.

Preventive maintenance support keeps you running better, longer. Featuring easy-access to part lists, video tutorials with full and clear explanations on maintenance functions, easy-to-interpret alerts with help on how to fix and reset with no downtime, and create customized alerts.

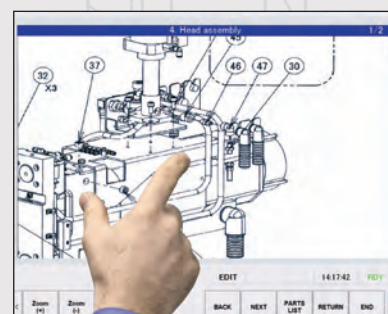
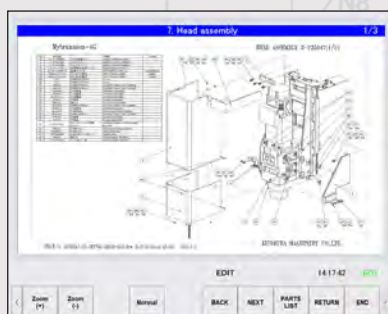


Maintenance Support Function

The Arumatik®-Mi offers operator convenience in displaying methods of machining maintenance, repair and parts support on the screen.



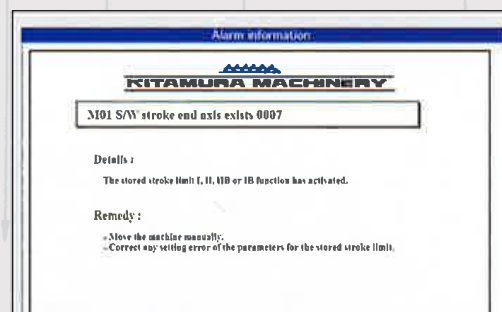
Use touch screen to zoom in or out



Easy access to part lists and prints

Video Guidance

Useful functions visually walk the user through methods of battery replacement, alarm release, APC recovery, PMC ladder and alarm release / guidance making it easier to monitor machine performance and uptime.



Alarm release guidance



Maintenance support videos



Part set-up instructions



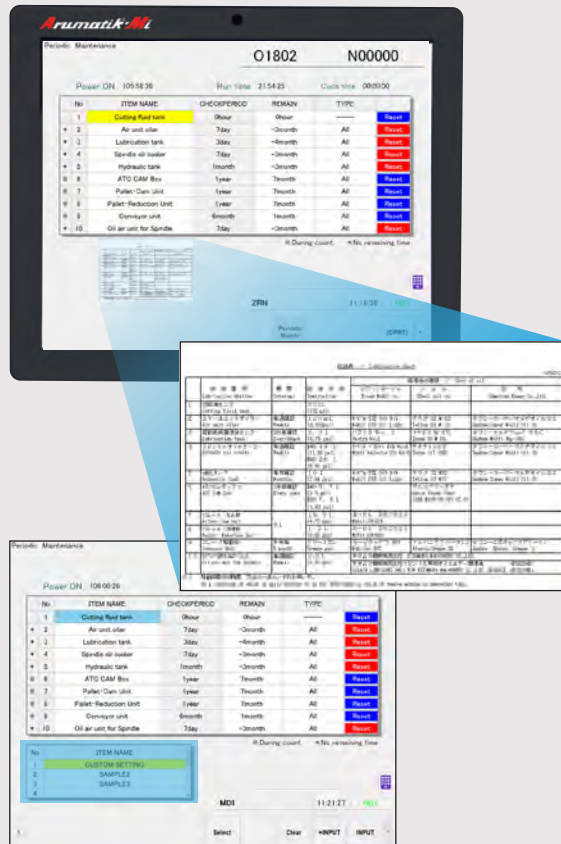
PLC instructional video



Easy-to-use support and alert systems.

Preventative Maintenance

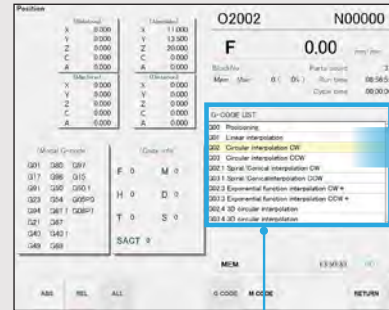
Easy-to-interpret alerts offer quick and instant access to oil / lube requirements and help on how to fix and reset with minimal downtime.



Create your own customized alerts set to your specific parameters

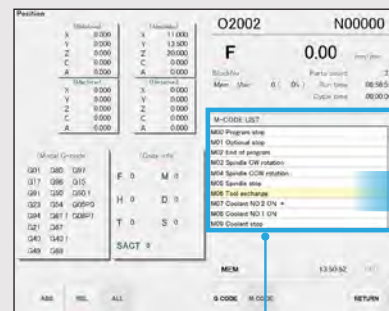
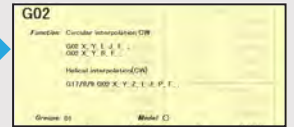
G-code Assistance

Easy access to G/M code library.

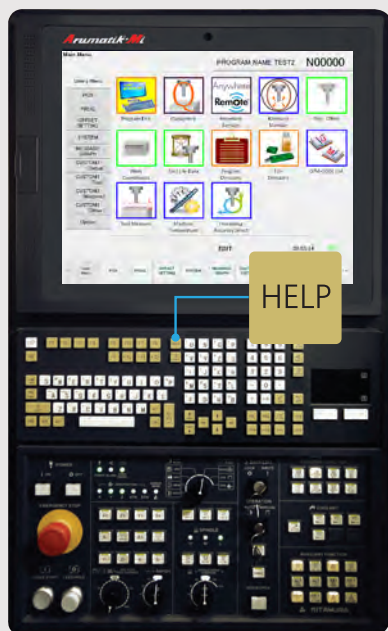
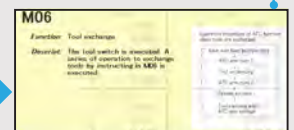


Quickly access G code library

Quick reference code pop-up window



Quickly access M code library



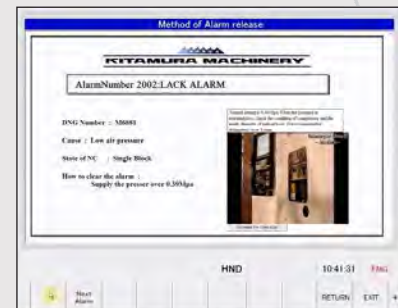
HELP

No matter what screen you're on, pressing HELP can get you back online quickly. Not only will it pull up the operation manual but it also will access program editing and alarm reset methods.

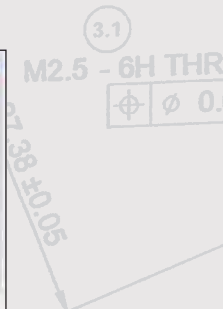
Auto call-up of instructional information



Operation Manual



Guidance on resetting alarms





Anywhere Remote®

Automatically receive live machine production data anywhere, anytime via email to your desktop, smartphone and mobile devices — all based on customizable, pre-set variables.

Anywhere-Remote®

Email notification

Anywhere-Remote® includes email status updates, machine monitoring software suites that range from basic plug and play packages to those that are customized to suit each individual customer's application, and MTConnect® Ready Adaptor (Basic).

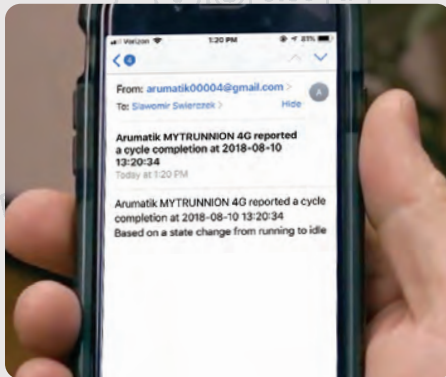


Preset alarms to notify you of machine and/or program status

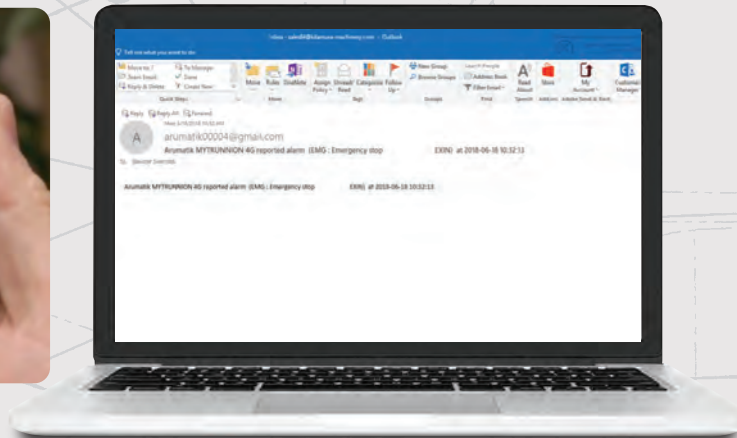


Configure data alerts and set your notification frequency.

- Problems
- Cycle complete
- Part counter
- Periodic status
- Status change



Instantly find out if a machine is at the end of its cycle, anywhere



View notifications on any device

Advanced machining technology.

Ultra high-accuracy with (IAC) and (SSS) Controls.

The Arumatik®-Mi is the result of a lifetime of Kitamura experience in simplifying machining challenges through uniquely intuitive, user-focused solutions. Featuring the latest technological advances, we make it possible to put a new level of efficiency at your fingertips.

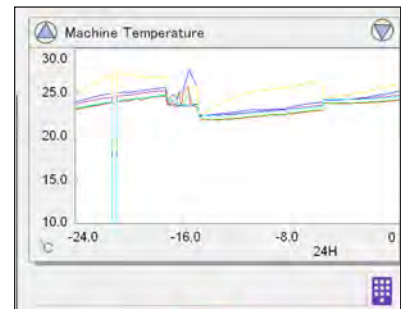
Intelligent Advanced Control (IAC)

Since 1998, the patented IAC feature is a series of strategically located sensors and machine efficiency monitors. This high efficiency system keeps component growth due to machining heat build-up to less than +/- 5 microns (0.0002").



Sensor machine temperature measurement

Machine Temperature				
Sensor pos	Temp	Dsp-col	MIN	MAX
1. HOUS	24.1181		13.799	29.9974
2. HEAD1	24.2176		14.3128	28.29
3. SPM	25.0529		15.0015	29.317
4. COLUM	26.0544		15.5372	31.4484
5. BED	24.6902		14.188	27.6585
6. ZAXIS	24.5073		13.7823	27.8234
Disp min 10 Start T/M -0 0				
Disp max 30 End T/M -24 -12				



Daily thermal graphic display

Improve cycle times with faster program processing.

Faster, smoother operation along with a better finish, less scrap resulting in higher productivity and profitability for your business



Super Smooth Surface (SSS) Control

The SSS control function improves high speed cutting and optimizes acceleration / deceleration times for each axis. This allows for shorter cutting times with a high degree of accuracy.

Machine priorities for accuracy or speed can be easily adjusted for improved performance.



Processing Accuracy Select (PROCESS SLCT)	
	Standard
Time before interp	150
Bell shaped time	57
Time in look-ahead	100
Corner accuracy	50
Curve accuracy	50
Arbitrary item	0

- 8192 Block look-ahead
- 270 m/min Feed with 1 mm/block
- 4500 blocks/sec
- Exceptional surface finish capabilities
- Ideal for die-mold/3D applications
- Smoother and faster machining

Help along the way.

Completely customizable. Profit-enhancing features.

The Arumatik®-Mi is easy to customize to your specific needs and applications. Which means you can create a user experience that maximizes operator-machine tool interaction. New users of the control consistently find that it saves valuable time and reduces operator error for greater productivity and peace of mind.

Set and Inspect

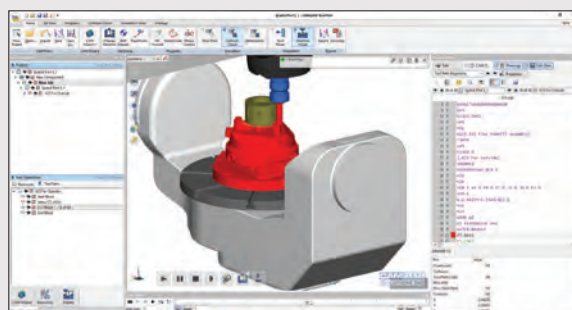
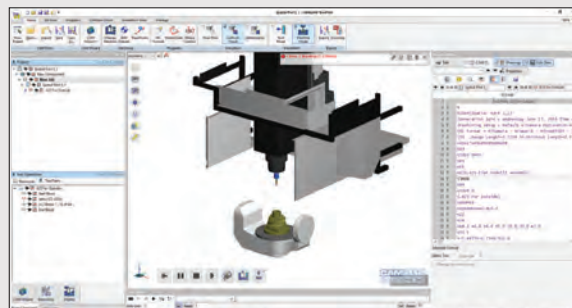
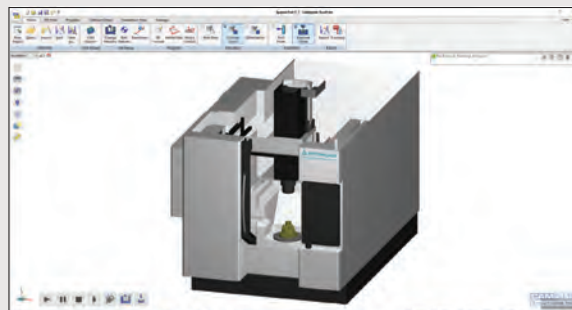


Integration with Renishaw's Set and Inspect guides users through the process of creating a probing cycle, automatically generates the required machine code for the probing cycle, and loads it to the control.



Advanced 5-Axis NC Simulation and Verification Solutions

- Full G-code verification
- Accurate models provided directly by Kitamura
- Prevents crashes, near-crashes, over-travels and set-up errors
- Verify entire set-up
- Evaluate multiple machining strategies
- Optimize toolpath to run more efficiently
- Minimize tool lengths and fixture heights
- Optimize approaches/retracts and feed rate
- Direct integration with most CAM software



TruePath - customized for Kitamura

Control Standard Specifications – Arumatik®-Mi Highlights

- High-Speed Machining Mode I, II (G5P1, G5P2)
 - High-Speed High Accuracy Control I (G5.1 Q1)
 - SSS (Super Smooth Surface) Control
 - 67 Million Pulse Encoder Feedback System
 - Rigid Tapping (High Speed Synchronized Tapping)
 - Linear Interpolation, G01
 - Circular Interpolation, G02, G03
 - Circular Cutting, G12, G13
 - Helical Interpolation
 - Spiral/Conical Interpolation
 - Cylindrical Interpolation
 - Hypothetical Axis Interpolation
 - Spline Interpolation
 - 3-Dimensional Circular Interpolation
 - Inverse Time Feed
 - Memory (Total 1280m) (0.5MB)
 - Registered Programs (Total 1000 Pcs)
 - Part Program and Storage Editing
 - Program Name (32 Characters)
 - Data Server, 8GB
 - Program Number Search
 - Sequence Number Search
 - Rapid Traverse Override (0,1,10,25,50,75,100%)
 - Cutting Feed Override (0-240%, 10% Increment)
 - Background Editing
 - Ethernet Interface
 - USB Memory Interface, 3 Ports
 - Screen Hard Copy (Outputs Screen Data to Memory Card)
 - Tool Offset (Total 200 Pcs, 6 Digits)
 - Tool Offset Memory C (Geo/Wear, H/D)
 - 3-Dimensional Tool Radius Compensation
 - Work Coordinate System Preset, G92.1
 - Work Coordinate System, G54~G59
 - Extended Work Coordinate (Total 96 Sets), G54.1P1~P96
 - Optional Block Skip
 - Program Restart
 - Tool Retract and Return
 - Corner Chamfering/Corner R
 - Polar Coordinate Command
 - Programmable Data Input, G10
 - *Tool/Work Offset, Parameter
 - Sub Program Call Up (M98, M99)-8 Folds Nested
 - Macro Interruption
 - Custom Macro, G65, G66, G66.1, G67
 - *Macro Variable, Total 700 Pcs.
 - Canned Cycle, G70~G89, G99
 - Tool Life Management (400 Pcs)
 - Tool Life Management, Editing Function
 - Skip Signal
 - Multi-Step Skip (G31.1, G31.2, G31.3)
 - Speed Change Skip
 - Scaling Function, G50, G51
 - Small-Diameter Deep-Hole Drilling Cycle
 - Coordinate System Rotation by Program, G68, G69
 - Coordinate System Rotation by Parameter
 - 3-Dimensional Coordinate Conversion
 - Stored Stroke Limit IB (Soft OT)
 - Stored Stroke Limit C
 - Self-Diagnosis Function
 - Alarm Guidance
 - Operator Message History Display
 - Servo Setting Screen
- Note: Additional standard functions available, refer to full quotation*
- **Free lifetime software upgrades to assure continued feature performance**
 - **Easy option email installation, no onsite engineer needed**



KITAMURA®

Machining Challenges-Simplified®

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