



ADAPTI CNC

SPECIALIZED CONTROLLER FOR EDM MACHINES

ADAPTI CNC is a lean PC based motion controller for EDM machining. It enables full 3D interpolated movement from two to four axes. Smart software design with preset Sink Shapes™ and intuitive graphical user interface assure fast to learn and easy operation.

ADAPTI CNC controller is designed with EDM machining in mind. The controller moves axes proportional to analog process servo signal. Different withdrawing modes on negative servo process signal enable optimized withdrawing for the different programmed electrode movements.

Same modes are supported independently for internal timer triggered or external signal triggered washing cycle. Optimized fast electrode movements provide efficient flushing of gap area without a need for additional through-electrode flushing.

Both withdrawing and washing mode are selected automatically for each Sink Shape™.

Most motor servo drives can be used with ADAPTI CNC. DC and AC servo drives, hydraulic drives as well as stepper motors are supported. Standardized 12V/24V digital input/output to control axes amplifiers, limit switches, reference switches and additional IO signals such as short-circuit and probe touch signal is provided. Position encoder logic can latch the axes position fast on the selected signal.

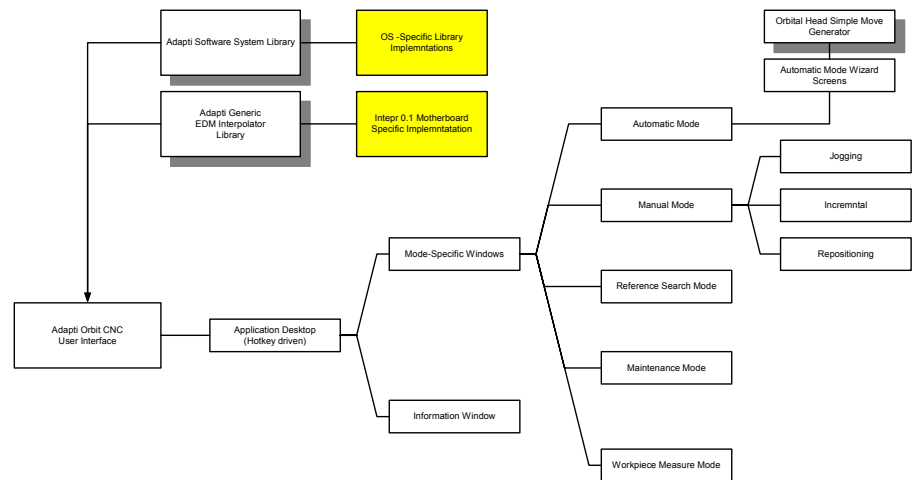
Large variety of machine-specific input can be selected. Specialized operator console and/or pilot can be connected but the controller will work with standard PC keyboard only as well. If needed an external PLC control unit with up to four additional axes can be connected to the controller to extend functionality.

SOFTWARE CONCEPT

We know our ideas are not yours as well. Open architecture together with an object-oriented modular concept of software enables fast and simple tailoring to the customer needs. Software is made in C++ programming language and runs on Microsoft Windows XP operating system.

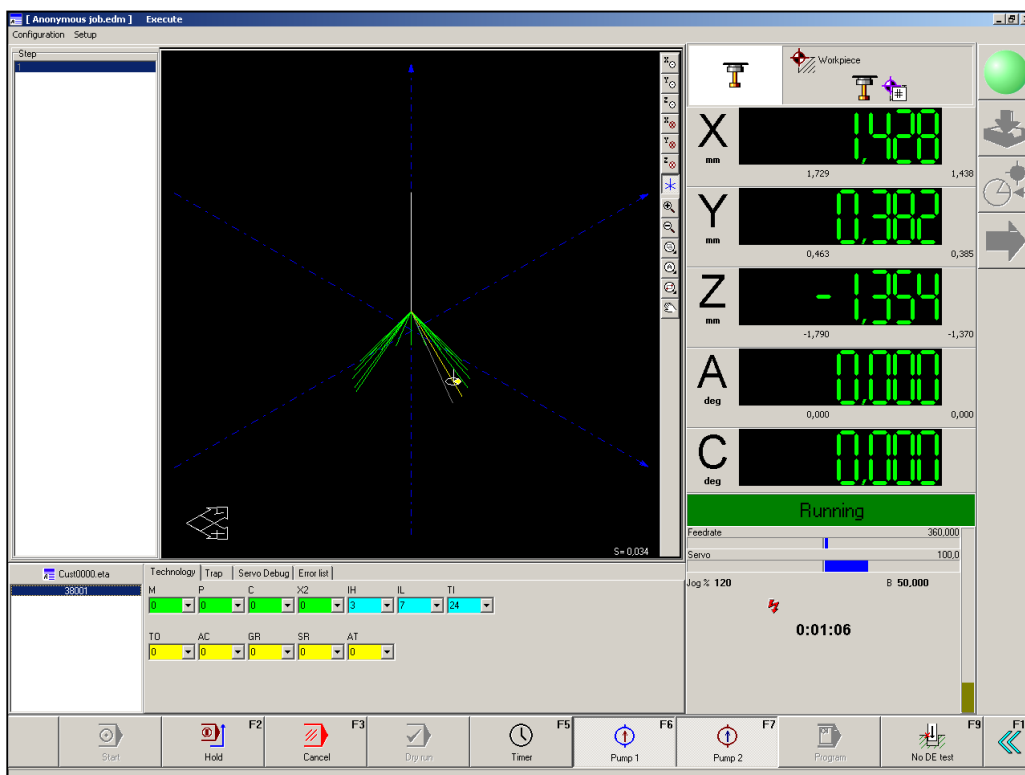
The controller is designed in such a way that all the hardware specific routines are isolated from the core program. That makes the software highly controllable and easy to port.

Modules can be added or removed according to the customer needs. Upgrading to more complex version on the demand is fast and easy.



ADAPTI GRAPHICAL USER INTERFACE

Due to intuitive graphical user interface working with ADAPTI CNC software is easy. Operator can learn all the software function fast. No-nonsense design disables the possibility of disastrous errors.



Standardized icons and error dialogs are a helpful feedback to operator if anything goes wrong.

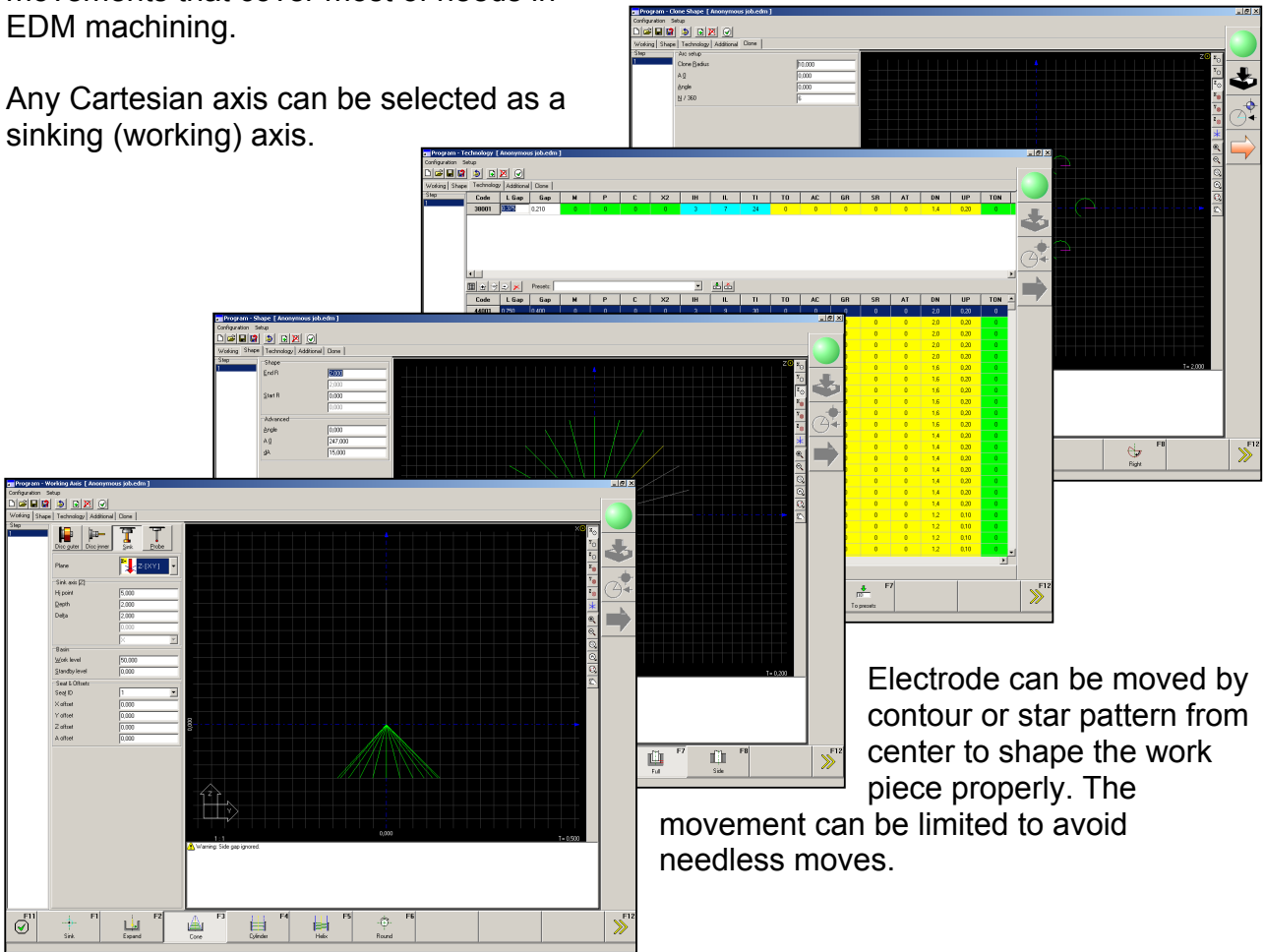
Visual and sound feedback is provided on any important event. The operator does not need to monitor the process constantly.

SINK SHAPES™ PROGRAMING

Automatic mode wizards allow operator to create EDM program easily and fast. The progress can be monitored constantly on the built in graphical display.

Combining well-organized preset partial moves gives a large variety of sinking movements that cover most of needs in EDM machining.

Any Cartesian axis can be selected as a sinking (working) axis.



Electrode can be moved by contour or star pattern from center to shape the work piece properly. The movement can be limited to avoid needless moves.

The EDM technology can be selected from predefined or custom-made EDM tables easily using self-descriptive Adapti EDM codes.

4th axis can be programmed as independent orbiting axis, position axis or interpolated fourth axis.

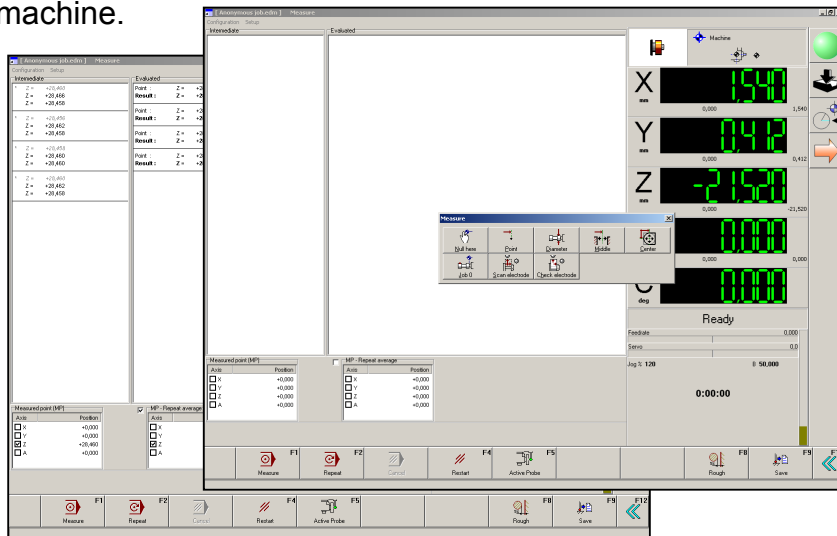
Smart software design disables the possibility of creating impossible or potentially disastrous moves.

Job templates give the operator possibility to re-use often used setting in different programs quickly.

Cloning of machining step and multiple-seat machining is supported too. Up to 100 different work piece offsets can be stored and used independently.

MEASURE ON THE MACHINE

Electrical-contact measurement allows user to detect work piece origin and electrode dimensions with ease. Optionally the measure probe can be installed and used on the machine.



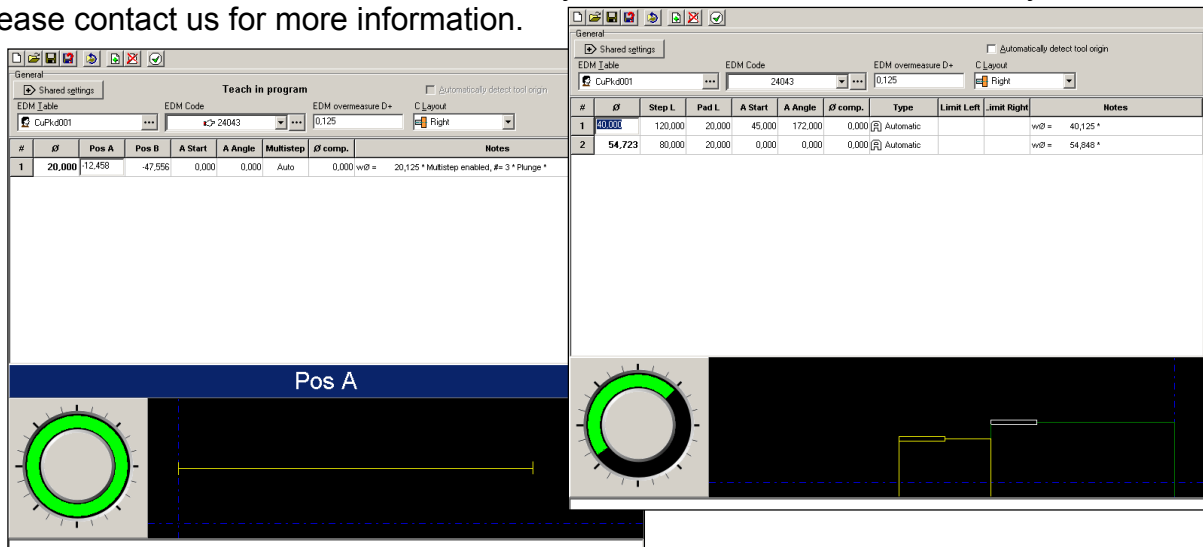
Any electrode as well as the measure probe can be used as a measure device.

For better accuracy each measurement can be repeated.

Measure of electrode dimensions against the known caliber is provided too.

CUSTOMIZATION

If the standard software is not suitable for you we can customize it to meet your needs. Please contact us for more information.



Customized teach-in software for round EDM of PKD plates on cutting tools.

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