

# Standard Controller

## Standard Servo Controller

FlexiCAM manufactures its own PC driven Servo control system. This is a true closed loop Servo controller, not a Stepper controller running Servo motors. At the heart is a 64 bit motion controller, with look ahead functionality, incredibly fast 3D contouring, easy to use keypad interface, 100's of Megs of storage, ethernet connection, and many other features all standard. Support is made easy with "Remote Service", the ability for us to run your machine and configure it from our factory.

## ACS Control

The ACS control system has a graphical user interface with optional touchscreen and handwheel, making it perfect for customers who are used to working with machine tools from other CNC applications. It is designed to hold up in a rugged work environment, even with the touch screen, and has an easy to use interface on it. This system is set apart from other controllers as it integrates a dual channel PLC to go along with the motion control system. This system offers amazing performance at extreme speeds while performing 3D machining operations. Advanced features such as rotary axis for aggregates, rotary tables and realtime surface compensation options.

## Features

- Powerful NC operating system with programming to ISO/DIN66025
- Integrated PLC, programmable in all languages to IEC 61131-3
- Extended command set and additional formula interpreter for the generation of mathematically sophisticated part programs
- Availability to have up to 12 axes of which 6 interpolate simultaneously
- Networking and PC-MMI interfacing are implemented via TCP/IP
- Network connection via Ethernet (TCP/IP, 10BaseT or 100BaseT)
- Graphical user interface based on a Windows 2000 Professional workstation with additional software packages for axis optimization, advanced remote diagnostics etc.
- Handwheel function for superimposed motions (optional)
- Look-ahead function to optimize processing speeds Geometry filter to reduce the density of points
- Block preparation for processing extremely short NC blocks
- Feed-forward to compensate the following error
- Reverse travel and restart on the contour
- Spatial rounding for fast jolt-free motions
- Variable acceleration profiles for changing load conditions
- Block search for entering anywhere in prolonged machining operations
- Recording of axis positions followed by data reduction and generation of polynomials
- Tangentially slaved C axis for tool alignment during contour machining
- Synchronous/gantry axes
- Tool management for selection of any tools with compensation and geometry data
- Analog output dependent on the contouring speed to improve performance and dosing etc.
- Fast inputs and outputs for immediate reactions in the NC program
- Spindle lead/backlash compensation to balance out mechanical errors
- PLC positioning axes in parallel with contour machining
- Touch trigger inputs for fast recording of measured data
- Multiple channels for simultaneous machining of several NC programs
- 3D online spline for processing teach-in contour points in space coordinate transformation for easy programming
- Modally active comparison operations for flexible program execution
- Adaptive control to improve the quality of and to shorten machining times
- Tool slaving in space (6-axis) taking the machine geometry into account
- Fast Z axis slaving to focus on the workpiece surface
- 3D axis compensation to compensate for mechanical tolerances
- Additional digital drive bus interfaces such as SERCOS and CANopen or RS232 interfaces are also available (eg. for interfacing of further machine facilities such as identification systems)