



**Computer Weld
Technology, Inc.**

ATC II™

AUTOMATIC TORCH CONTROL

ATC II™

Computer Weld Technology's (ATC II™) is a compact, lightweight weld torch height control system. The system consists of a control enclosure, remote Volt/Amp sensor and a motor driven slide assembly. The microcontroller based Automatic Torch Control is designed to control and maintain the torch height in the horizontal or vertical plane. Employing our patented "Thru-Arc™" tracking technology, the system provides automatic "Tip-to-Work" control for most GTAW, PAW and GMAW applications.



The ATC II™ provides automatic torch height for the following processes:

- Arc Voltage Control (AVC) is used for GTAW and PAW
- Arc Current Control (ACC) is used for GMAW

The required tracking information is derived from the welding arc. The arc voltage is measured with an externally mounted voltage probe. The current is measured with an easy to install clamp-on Hall-Effect current sensor. The control provides a teachable Torch-Up and Torch-weld position. The ATC II™ also provides a Touch-Retract function for GTAW applications.

FEATURES

- Stepper motor driven slide assembly
- External interface capability
- Compact lightweight design
- Convenient flexible mounting
- Teachable Torch-up and Torch-Weld Positions
- Auto Arc Detect

BENEFITS

- Maintains Tip-to-Work distance
- No bulky probes to contend with or maintain
- Easy system integration for automated applications
- Adaptable in confined areas
- The slide can be installed in any position

ATC II™ SPECIFICATIONS

The ATC II™ provides a user definable 50 sequence Programmable Logic Controller (PLC) with four 24 vdc inputs and two N.O. relay contacts. Using the ATC II™ PLC, the user can define how the ATC II™ will interface to an external control system. It can also be used to provide external system control and a simple power source interface.

The ATC II™ Control provides the necessary control signals to the stepper motor powered slide. At power-up the slide is driven to the upper limit then the torch will be located to a user defined start location. The front panel controls allow the user to define the starting position, tracking reference values and to Enable/Disable the tracking functions. The ATC II™ will automatically detect a valid arc active condition and will perform the selected torch height tracking function. During the weld the user can Enable/Disable the Torch Tracking function. A RS-232 serial port is provided for off-line PLC programming and ATC II™ control system configuration.

ATC II™ SPECIFICATIONS

TRACKING FUNCTIONS

Run	Enable Slide Home upon power up and auto arc detect
Track	Enable/Disable Thru-Arc™ AVC/ACC tracking
Jog	Jog the Torch slide position up or down
Speed	Control the speed of the slide
Gain	Provide sensitivity control for all tracking functions

AVC/ACC CONTROL RANGE

AVC	2.0—25.5 vdc; Resolution 0.1 VDC; Max Slew Rate 1.5 inch/sec
ACC	100—510 ADC; Resolution 2 ADC; Max Slew Rate 1.5 inch/sec

ATC II™ MECHANICAL SPECIFICATIONS

Dimensions	6.62"H x 4.12"W x 8.75"L (168mm x 105mm x 222mm)
Weight	5.5 lbs (2.5kg)
Power Requirement	115/220 vac 50/60 Hz @ 220 va
Velocity	0.25 – 2.5 inch/sec
Motor Torque	120 Oz-in max (Holding Torque)

SLIDE SPECIFICATIONS

LOW DUTY SLIDE

Dimensions	13.25"H x 4.7"W x 3.5"D (336mm X 102mm x 89mm)
Max Travel	7.25" (184mm)
Weight	7 lbs (3.18kg)
Velocity	0.2 – 1.5 inch/sec
Weight Capacity	10 lbs @ 3" from slide face

MEDIUM DUTY SLIDE

Dimensions	16.66"H x 3.38"W x 2.88"D (423mm X 86mm x 73mm)
Max Travel	7.25" (184mm)
Weight	7 lbs (3.18kg)
Velocity	0.2 – 1.5 inch/sec
Weight Capacity	25 lbs @ 3" from slide face

HEAVY DUTY SLIDE

Dimensions	17.08"H x 5.00"W x 2.63"D (434mm X 127mm x 67mm)
Max Travel	7.25" (184mm)
Weight	9-1/2 lbs (4.32kg)
Velocity	0.2 – 1.5 inch/sec
Weight Capacity	45 lbs @ 3" from slide face

Note: Specifications subject to change without notice.