

# WT6000 AC

## Latest Generation of Resistance Welding Controls

*Finally an AC resistance welding control powered by technology that offers flexible intuitive programming for customization of your welding process. Combined with the guidance of built in diagnostic tools, the WT6000 will support process control of your resistance welding application.*

- Up to 255 Weld Schedules
- Web Based Interface - Use simple web browsing software
- Free Format Programming for Various Applications
- Configurable Input and Outputs
- Network Ready (View-R Gateway )
- Various Robotic & PLC Connectivity  
*DeviceNet, Ethernet IP, ProfiNet, ProfiBus*
- Optional Discrete (16 Inputs & 16 Outputs) Interface
- Optional One Analog Input: (0 to +10V DC)
- Optional One Analog Output: (0 to +10VDC—or 4 to 20mA)
- Weld Tool Efficiency Monitoring using C-Factor tools
- Automatic Power Factor Compensation
- Laptop or DEP Interface for Programming and Data Acquisition
- Range: 220-600VAC 50/60hz Mains
- No Batteries Required - Processor Data Backed Up by F-RAM
- Multiple Firing Modes - Primary CREG, AVC
- Available in Kit or Complete Weld Panel with Single or Multiple WCU



**WT6000 AC Kit powered by the most advanced processing technology**



**WT60TX - Robot Top Mount Resistance Welding Control**

- ◆ *Touch Safe Packaging - for Safety of Maintenance People*
- ◆ *External Water Cooling - or Direct Air Cooling*



**wtc**  
WELDING TECHNOLOGY CORP

**Adapting to Welding Excellence**



# WT6000 AC Kit and Enclosure Options

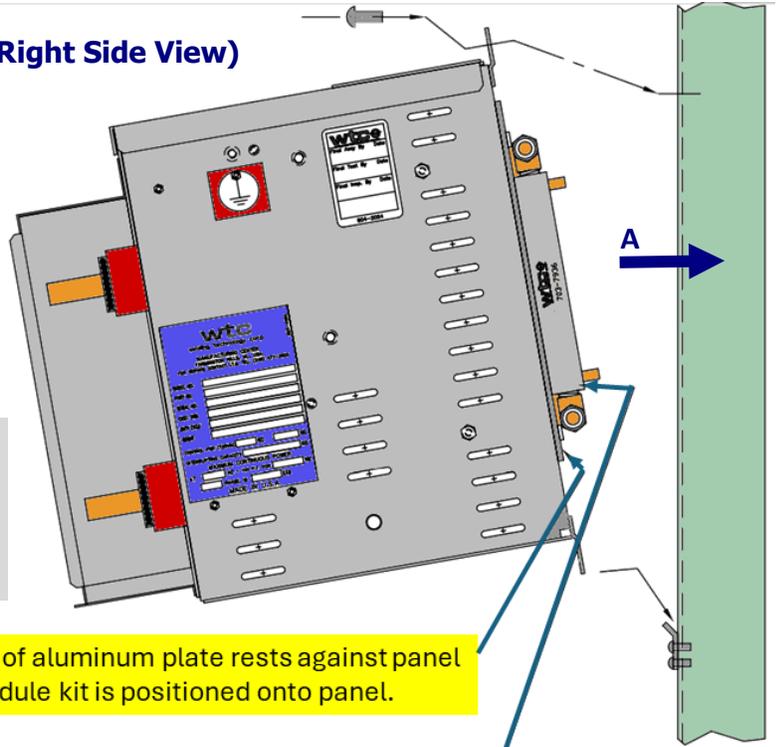
## WT6000 AC Module Control Kit (Version A Right Side View)

### WT6000 AC Module Control Kit

#### Two versions for mounting

**A:** Flush mount with cooling manifold block passing through cabinet base for water hose connections to remain outside of enclosure as shown to the right.

**B:** With added mounting bracket to route water cooling hose internally in cabinet to water ports to be installed on enclosure panel. (not shown)



#### Approximate Kit Dimensions:

Version A: (310H x 270W x 300D (mm)) (12.2"H x 10.6"W x 11.8"D)

Version A requires additional 50mm - 2" clearance behind mount panel

Version B: (310H x 270W x 340D (mm)) (12.2"H x 10.6"W x 13.4"D)

Complete set of drawings and instructions are available for review for customers who are interested in fitting their machine control panels with a WT6000 AC Module kit.

Outer surface of aluminum plate rests against panel once WTC module kit is positioned onto panel.

Cooling manifold passes through back panel cutout as WTC module kit is positioned onto panel.

#### Dimensions of available enclosures:

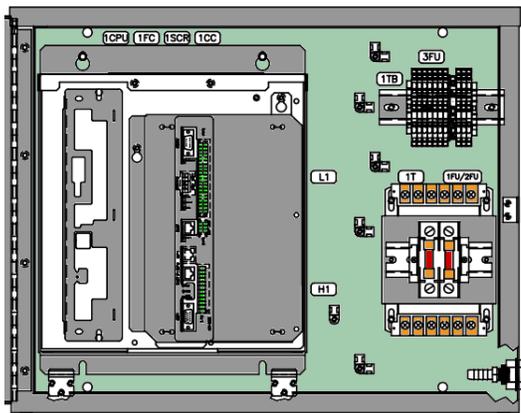
Compact Control: (406H x 508W x 330D (mm)) (16"H x 20"W x 13"D)

Top Mount: (610H x 740W x 390D (mm)) (24.02"H x 29.13"W x 15.40"D) dimensions of TM does not include the shipping feet

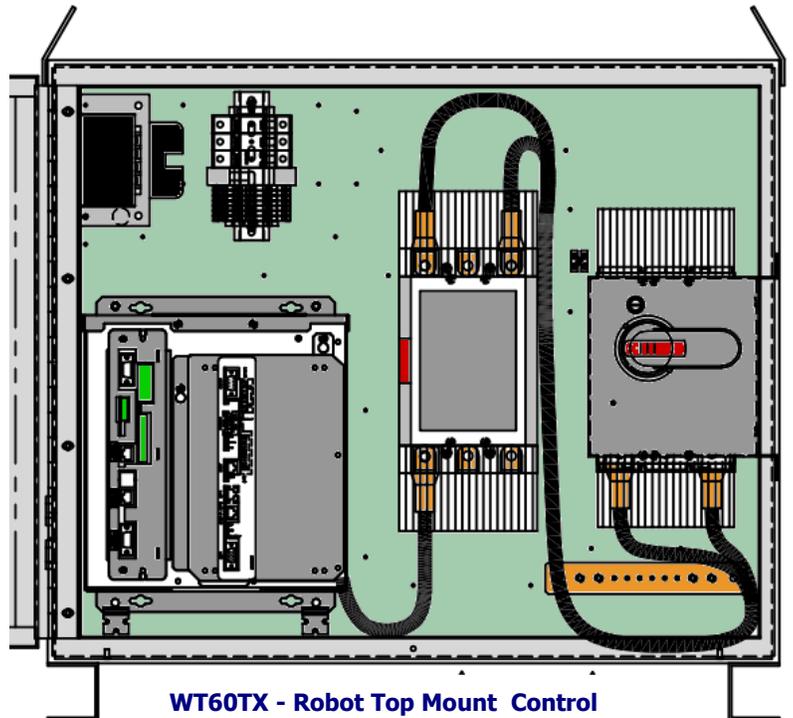
A1 Stand: (950H x 510W x 410D (mm)) (37.4"H x 20"W x 16"D)

Floor Mount Enclosure: (950H x 510W x 410D (mm)) (37.4"H x 20"W x 16"D)

Dimensions provided above are for general reference only. Precise dimensions are provided in drawings that are specific to individual control part numbers.



WT6000-SL - Compact Control



WT60TX - Robot Top Mount Control

Power Source	
Voltage:	Single Phase AC 220V - 600V (± 10%)
Line Power Frequency:	50/60Hz (Automatic Selection)
Device Type:	SCR - Water Cooled - 1650A—50% duty cycle
Power Consumption:	70VA (Idling Condition)
Processor	
Weld Processor:	WT6000 Integrated
I/O Protocol:	Ethernet IP
Optional I/O Protocol:	Device Net, PROFINET, PROFIBUS, Discrete I/O
Local Inputs & Outputs:	2 IN @ 24VDC and 3 OUT @ 120VAC
Optional Discrete I/O	16 IN @ 24VDC and 16 OUT @24VDC
Optional Analog I/O:	1 IN @ 0 - 10VDC, 1 OUT (1-10VDC or 4-20mA)
Number of weld schedules:	255
Number of steppers:	10
Processor Storage Type:	F-RAM (No Battery Required)
Weld Processor Languages:	English

**Optional Programming Devices**

Data Entry Panels (DEP600)

View-R Network / View-iT Software

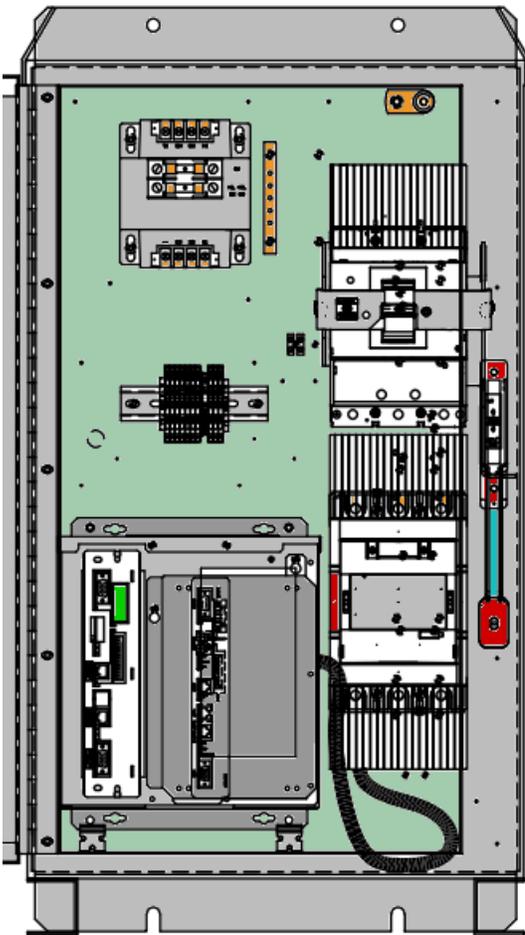
**WT6000 Welding Applications**

Resistance Spot Welding

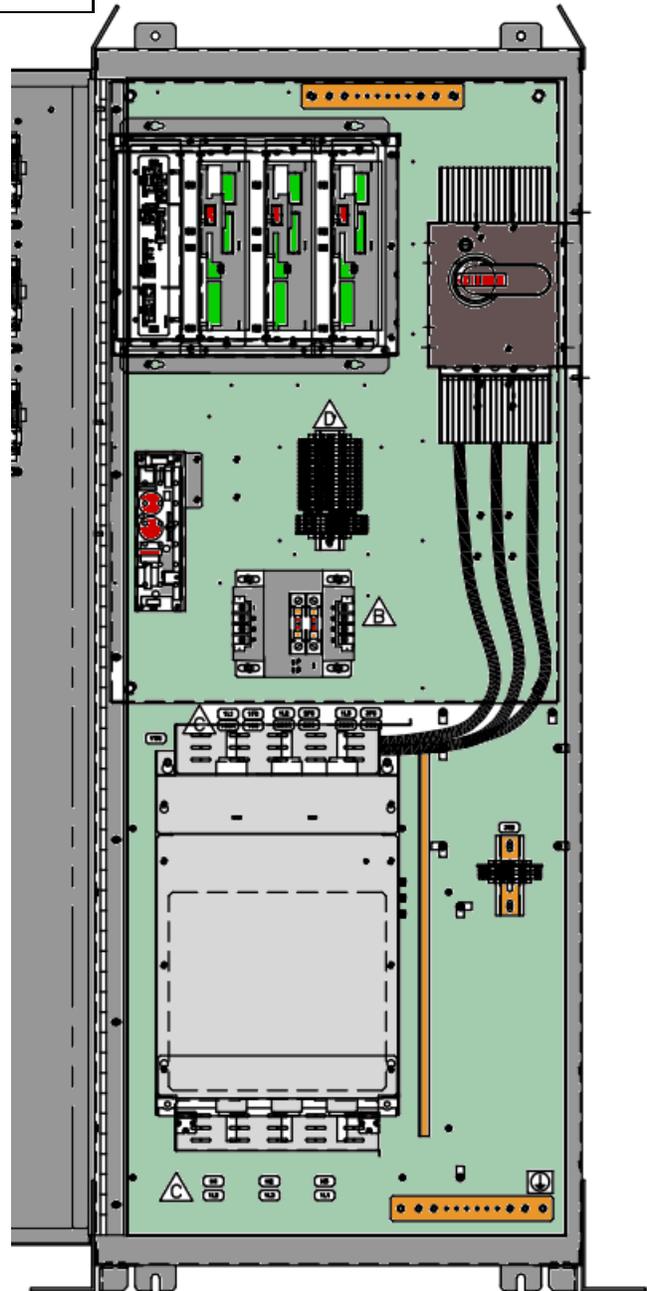
Seam Welding

Robotic Welding

Projection Welding

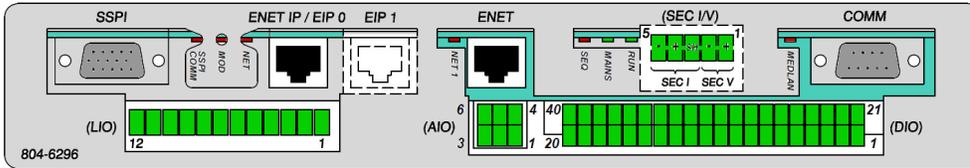


**WT601X - A1 Single Stand Control**



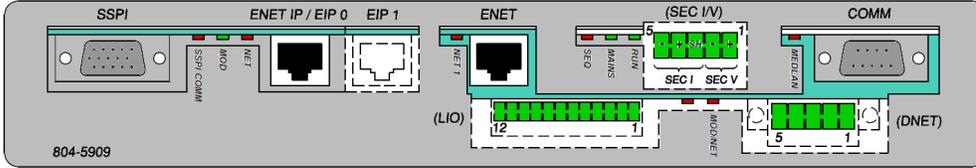
**WT603X- A3 Floor Mount TriPak Control**

# WT6000 Weld Processor Options



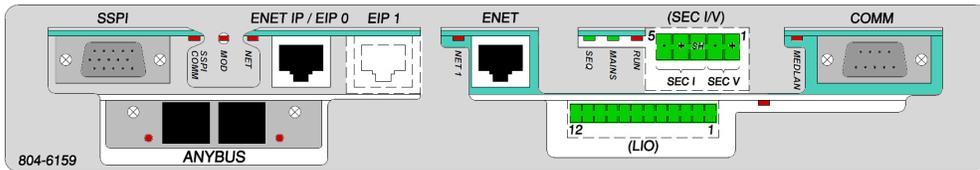
## WT6000 Processor - Optional ADIO

Two (2) 100BASE T Ethernet Ports  
Local I/O and External Discrete I/O with Analog I/O  
Secondary Current & Secondary Voltage Monitoring



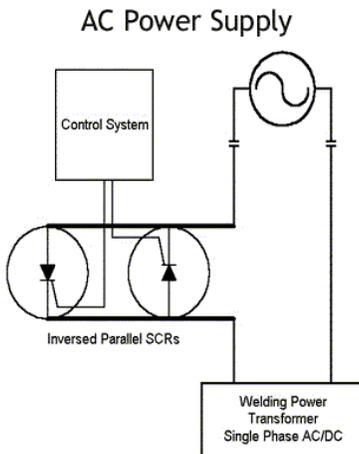
## WT6000 Processor - Optional Device Net

Two (2) 100BASE T Ethernet Ports  
Local I/O and Device Net  
Secondary Current & Secondary Voltage Monitoring



## WT6000 Processor - Optional ProfiNet / ProfiBus

Two (2) 100BASE T Ethernet Ports  
Local I/O and Anybus Module  
Secondary Current & Secondary Voltage Monitoring



## SINGLE PHASE CONTROLS (AC OR DC) FOR RESISTANCE WELDING

From a single phase power supply, the low frequency welding control utilizes an inversed parallel pair of Silicone Controlled Rectifiers (SCR) to control the output the welding power transformer. SCRs are turned on by pulsing a gate with a voltage signal. The welding control uses predictive algorithms to determine the best point to pulse the gate of the SCRs during the half cycle of the alternating current supply. The SCRs are turned off only when the alternating current supply is below the threshold point called "minimum holding current". This occurs near the zero crossing point of the AC power supply.

Monitoring and Control Functions	
Firing Control:	SCR Phase Control with Auto Power Factor
Firing modes:	Primary Constant Current Voltage Control
Primary Current Accuracy:	± 1% Setting, ± .5% Repeatability
AC Mains Measurement Accuracy:	± 1% Setting, ± .5% Repeatability

