

# Weld Heads

## Model VTA-66

## Parallel Gap Weld and Reflow Soldering Head

The Model VTA-66 has been designed specifically for precision parallel gap type series welds, where electrode gap spacing is normally of small magnitude and must be rigorously controlled. The VTA-66 is supplied as the basic welding head on Hughes MCW/EL and MCW/SS microcircuit systems. In the VTA-66 head, a single electrode-holding assembly with two electrodes is used, each side being electrically isolated from the other. Both electrodes move downward together upon activation of their common supporting arm.

Gap spacing between the two electrodes is easily controlled by a calibrated knob with which the user can quickly dial in the precise gap needed. Each electrode is mounted on a blade-like cantilever. Upon making contact with the work surface, the cantilever is permitted a controlled degree of flexing that compensates for normal, minor irregularities in material thickness. This compliance with the work surface ensures good mechanical fit-up and preserves the electrical contact necessary for good welding.

Welding is accomplished by passing the weld energy through the work material located beneath the gap between the positive and negative electrodes. Activation of the welding power supply is automatic when a predetermined weld force is reached.

The Model VTA-66-12 is a special mounting of the VTA-66 providing 12-inch throat depth and 6-inch throat height with no work platform.

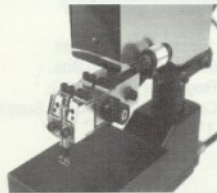
The Model VTA-66-TC thermocouple (see closeup) is used with the Hughes time-at-temperature power supply for reflow soldering. Thermocouple type is ANSI Type E, Chromel (+), Constantan (-).

### SPECIFICATIONS • Model VTA-66 Parallel gap weld head including variable gap and compliant tip features.

Gap range	0 to .040 in (1.02 mm) continuously adjustable
Max. step	.025 in (0.64 mm) (Electrodes may be installed with preset step for greater variations.)
Throat depth	4.50 in (114 mm) standard, to 12 in (305 mm) backmounted
Electrode travel	Adjustable up to 0.50 in (13 mm)
Electrode force	4 oz to 10 lb (225 g to 5 kg) continuously adjustable
Switch cord (standard)	15 in (381 mm) long, includes voltage feedback leads necessary for use with MCW-550 power supply. Amphenol 91 series 4-pin plug attached.
Switch cord (optional)	15 in (381 mm) long, with 2-pin Amphenol 80MC-2M plug attached for use with standard capacitor discharge power supplies. Specify VTA-66-MA.
Operation mode	Foot pedal, swing pedal, air or flexline activation
Equipment included	One pair ESQ-2545-02 electrodes of RWMA-2 alloy, weld cables
Additional equipment required	Foot pedal, welding power supply
Conversion kits available	

Catalog No. MA-09-02 parallel gap conversion kit contains all parts and instructions necessary to convert any basic VTA-60 head to a VTA-66 variable gap, compliant tip weld head.

Dimensions (H x W x D)	11 x 3 x 7.5 in (279 x 76 x 191 mm)
Weight	4 lb (2 kg) net, 9 lb (4 kg) shipping



## Model VTA-68

## Dual Reflow Soldering Head

The Model VTA-68 is supplied in several configurations for reflow soldering of surface-mounted components. This dual reflow soldering head provides a mount for two heater bars. Leads of most common surface-mounted components can be reflow soldered simultaneously. Teamed with Hughes time-at-temperature power supplies, systems can be assembled to take the guesswork out of reflow solder operations. Typical systems provide for a fully timed reflow cycle while the head latch maintains precise pressure at the tips throughout heat-up, reflow, and cool-down.

### SPECIFICATIONS • Model VTA-68

Tip mounting	Dual compliant
Gap range	0 to 1.00 in (25 mm) standard, up to 3.00 in (76 mm) special
Throat depth	4.50 in (114 mm) standard, to 12.00 in (305 mm) backmounted
Vertical motion	Adjustable to 0.50 in (13 mm) stroke
Tip force	8 oz to 10 lbs (224 g to 5 kg) continuously adjustable
Switch cord (standard)	15.00 in (381 mm) long, includes thermocouple feedback leads necessary for use with HTT-1000 power supply
Operation mode	Manual foot pedal or air actuation
Equipment included	2 ea MLS-375-TC heater bars, weld cables
Additional equipment required	Foot pedal, welding power supply
Dimensions (H x W x D)	1 x 3 x 7.5 in (279 x 76 x 191 mm)

