

WELDING HEADS

Model VTA-66

Parallel Gap Weld 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. This compliant tip assembly has been awarded U.S. Patent No. 3,283,351. 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.

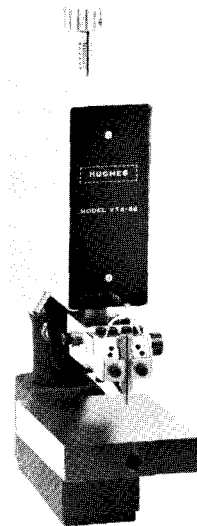
Gap spacing between the two electrodes is easily controlled by a calibrated knob with which the user can quickly "dial in" the precise gap needed. Each electrode is mounted on a blade-like cantilever that, upon making contact with the work surface, is permitted a controlled degree of flexing that compensates for normal, minor irregularities in material thickness. This "compliance" with the work surface insures 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 sides of the electrodes. Activation of the welding power supply is automatic when a predetermined weld force is reached.

This force in the standard VTA-66 can be adjusted from 6 oz. to 10 lbs. A work platen attached to a mounting post set in the base of the VTA-66 provides a means of rapid, convenient work alignment beneath the electrodes. It can be removed to facilitate installation of special fixtures when desired.

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

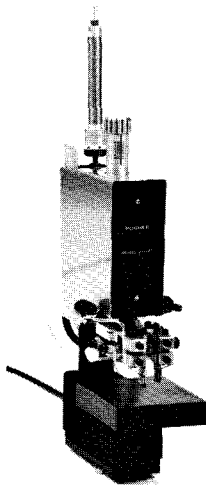
Gap Range.....	0 to .040" continuously adjustable
Max. Step.....	.025" (but electrodes may be installed with preset step for greater variations)
Throat Depth.....	4.5 inches
Electrode Travel.....	Adjustable up to 0.5 inches
Electrode Force.....	8 oz. to 10 lbs. continuously adjustable
Dimensions.....	11" high, 3" wide, 7½" deep
Weight.....	4 lbs. net, 9 lbs. shipping
Switch Cord (standard).....	15" long, includes voltage feedback leads necessary for use with MCW-550 power supply. Amphenol 91 series 4-pin plug attached
Switch Cord (optional).....	15" 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 flex line activation
Equipment Included.....	One pair ESQ-2545-02 electrodes of RWMA-2 alloy, integral stroke stops
Additional Equipment Required.....	Weld cables, 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.
U.S. Patent 3,283,351	



Model VTA-67

Reflow Soldering Head

The Model VTA-67 is supplied in several configurations for reflow soldering of surface-mounted components. This head provides for mounting of two heater bars for the simultaneous reflow soldering of all leads of most common surface-mounted components. Teamed with Hughes time-at-temperature power supplies and with the MA-09-35 air latch accessory, 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-67

Tip Mounting.....	Dual compliant
Gap Range.....	.30" to .45" typical
Throat Depth.....	4.5" standard, to 12" backmounted
Vertical Motion.....	Adjustable to 0.5" stroke
Tip Force.....	8 oz. to 10 lbs. continuously adjustable
Dimensions.....	11" high, 3" wide, 7½" deep
Weight.....	5 pounds net, 9 pounds shipping
Switch Cord (standard).....	15" long, includes thermocouple feedback leads necessary for use with HTT-550 power supply
Operation Mode.....	Manual foot pedal or air actuation.