

Model VTA-90

Versatile Micro Weld Head

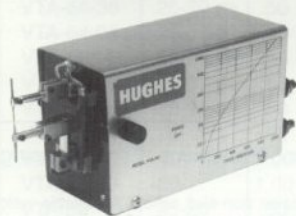
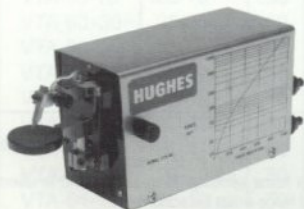
The Model VTA-90 has been developed to provide the ultimate in precision force control through the use of accurate dead weights for force application. This head is widely used in laboratory and production installations where precise control is required. The head converts quickly from parallel gap to opposed configurations. In the parallel gap welding mode, variable gap and compliant tip design features like those of the VTA-66 head are employed. A kit is available for the conversion to pulse tip thermocompression ball bonding, providing a wide range of microjoining capability. A reflow solder tip is also available.

Design of the VTA-90 incorporates a precision mechanism that completely eliminates overpressure without requiring the adjustment of mechanical stops. Force applied is independent of work thickness. This precision control prevents deformation and damage to delicate assemblies. Unique no-drag bearings are used to achieve a previously unattainable degree of repeatability of applied electrode force. Lateral and front-to-back electrode play are completely eliminated, thus assuring precise location of finely pointed electrodes on minute work areas. The VTA-90 is for vertical mounting only.

For ease of setup and to ensure repeatability, force settings are selected and displayed by means of a digital indicator. A reference curve anodized on the head's cover provides ready conversion of index units to grams.

SPECIFICATIONS • Model VTA-90

Weld head type	Dead weight, compound lever type
Electrode force range	Less than 10 g to 2 lb (.91 kg)
Force selection mode	Digital-indicated adjustment
Electrode stroke	.25 in. (6 mm)
Electrode gap	Less than .001 to .015 in (.03 to .38 mm) continuously adjustable
Electrode actuation	Foot pedal operated flexible cable type (included)
Throat depth	1.75 in. (44 mm), extenders available
Connection	Weld cables
Dimensions (H x W x D)	4 x 2.5 x 7.5 in (102 x 64 x 191 mm)
Weight (head alone)	2 lb (.91 kg)
Maximum weld energy ratings	
Parallel gap electrodes	Limited by electrodes used
Opposed electrodes optional	20 watt-seconds
Equipment included	Switch cord and feedback leads for hookup to MCW-550 power supply; special flex-line foot actuator pedal; all fixtures and mounts necessary for operation with parallel gap electrodes; one pair ESQ-815-13 parallel gap electrodes.
Additional equipment required	Welding power supply, power cables (MA-02-27).
Optional equipment	10:1 micropositioner, Model MA-XY-90 Vacuum workholder, Model MA-HZ-90 Vacuum pump, Model MA-09-08



U.S. Patent 3,316,383

VTA-90**Opposed Electrodes**

With minor part change, miniature opposed welding may be achieved. Electrode EH-062 series. Kit part number WD-2231.

