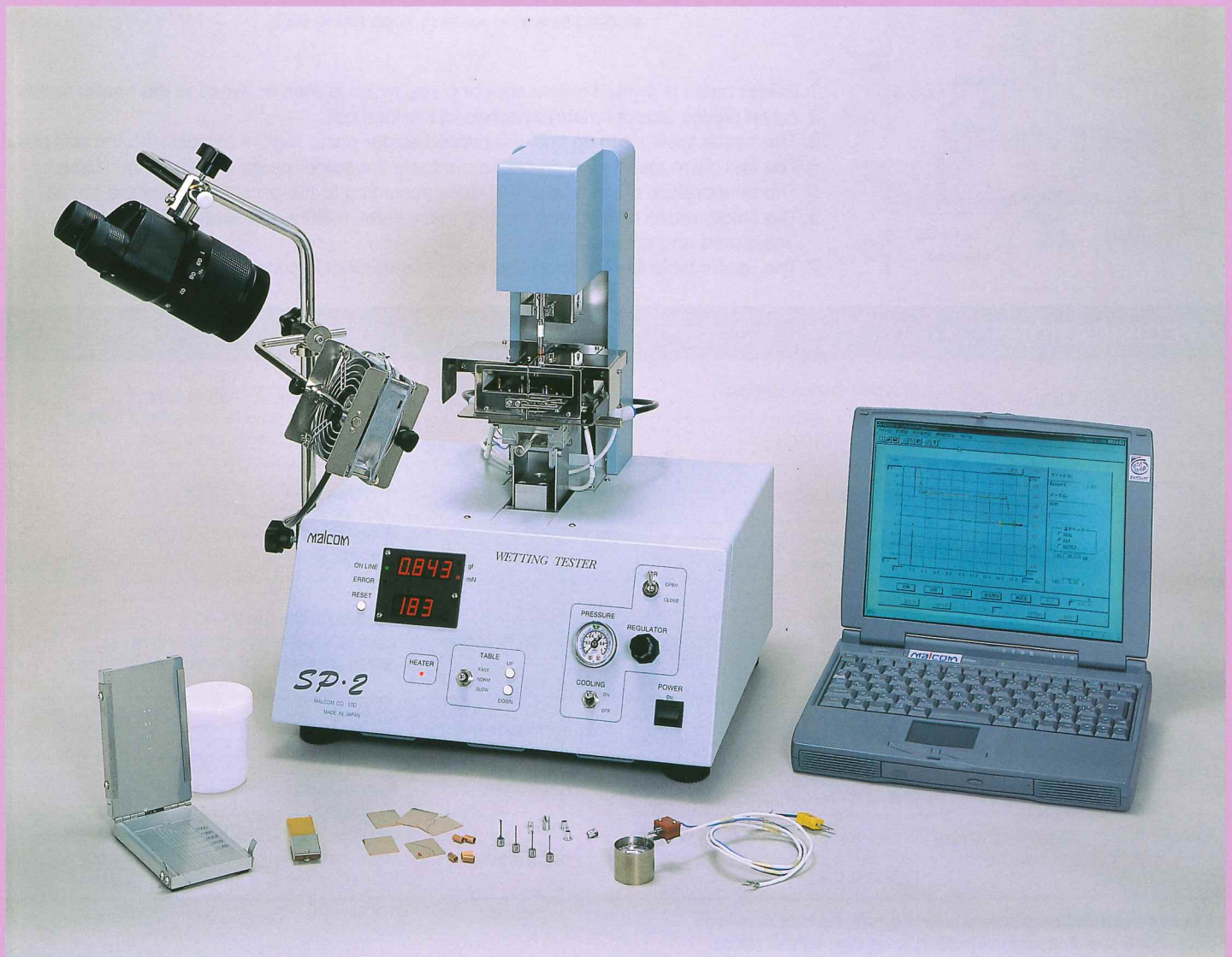


malcom

SOLDER-PASTE WETTING TESTER

SP-2

Evaluate Solderability of solder paste, component and circuit board

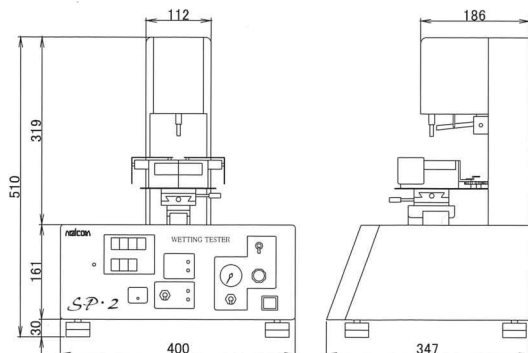


SPECIAL FEATURES

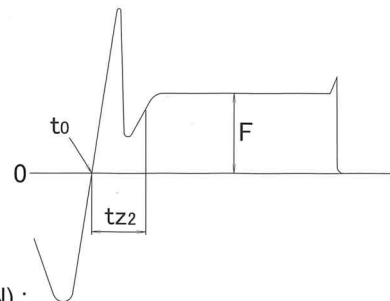
- All wetting process can be observed from glass windows.
- Can simulate reflow oven profile with hot air and N₂ purge.
- Analyze wetting time and force with exclusive software.
- Can test and evaluate solder paste, PC board and parts lead.
- "Wetting Balance Measuring Method" and "Quick Heating Method" are possible optionally.

DIMENSION

unit : mm



WAVE FORM EXAMPLE



Wetting force F (mN) :

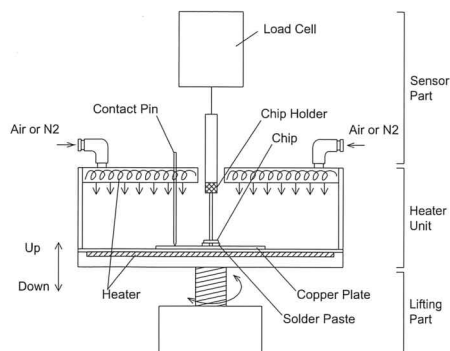
Solder paste was wetted completely, and the wetting force became stable.

Zero cross point t_0 :

Solder paste starts melting, and its load changes from pushing force to pulling force.

Wetting time t_{z2} (s) : Taking time from the point, solder paste starting to wet to wetting force being 86%.

MEASUREMENT PROCEDURES



1. Solder paste is printed onto a copper plate, which is then fastened to the heater table.
2. A test pieces (copper plate) attached to the load cell.
3. The heater table rises up until the printed solder paste makes contact with the test piece.
4. The test piece inserts the preset amount into the solder paste and stays for 10sec.
5. The temperature of the heater unit rises according to the preset temperature profile.
6. The solder paste reflows and the test piece wets, melting and wetting forces are measured and drawn curve.
7. The heater table lowers down and the measurement is completed.

SPECIFICATIONS

Load Sensor	Sensor Technology	Electro-balance method	Temp. Profile Settings	①Preheat time ②Preheat temp. ③Thermal up speed (standard: 3°C/sec.) ④Max. temp. ⑤Max. temp. time
	Sensor Limits	-5.00gf ~ +10.00gf		
	Sensor Accuracy * 1	± (10mgf + 1digit)	Air Supply	Air pressure: 0.2~0.5MPa (approx. 2~5kgf/cm ²) Adjustable air pressure: 0.2MPa (approx. 2kgf/cm ²)
	Resolution	Under 900mgf : 0.001gf 900mgf or more : 0.005gf		
Temp. Sensor	Measurement Range	0 ~ 300°C	Table Lifting	Automatic: Control by PC Manual: Operated with up / down switch (can select 3 steps speed)
	Measurement Accuracy	± 3°C		
Heater Unit	Temp.	0 ~ 300°C	Power Supply	AC 100V 50 / 60 Hz 700W
	O ₂ Concentration	Simple airtight heater unit with Nipple for N ₂ purge test	Weight	Approx. 20kg
Melting Point Setting		Preset solder paste melting point	Option	Menisco tools, Quick Heating Method, Micro scope, N ₂ Flow Meter : NAM-100, Video Camera Capture System : VDM-1
Digital Output		RS232C (Malcom format)		

* 1 Load sensor accuracy is exclusive of errors, such as oscillation.

※The above specifications are subject to change without notice.

Spiral Viscometer
Soldering Process Devices

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