



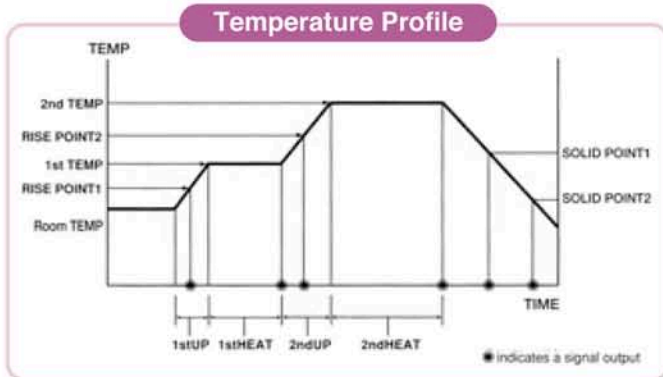
Micro Joining Welders Pulse Heat Unit Series

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Pulse Heat Unit Series - Micro Joining Welders

Excellent Versatility

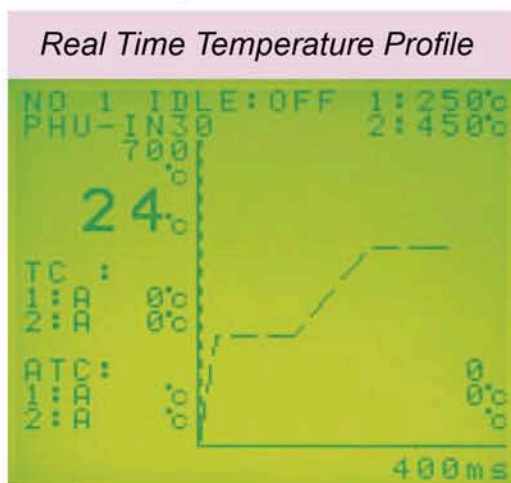
Advantages of Pulse Heating Method



- The Pulse Heat method has been shown to produce reliable soldering and thermo-compression because heating and cooling are applied under pressure.
- Excellent heating temperature versus time repeatability without skilled labor.
- Rapid pre-heating of part prior to final weld heat reduces thermal damage.
- Works well on lead (Pb) free applications.

Advantages of Pulse Heating Unit

Large Size LCD



- Wide selection of Temperature Profiles guarantees high Quality Control
 - Incorporates Digital PID Control
- Monitors and Alarms ensure High Joining Quality and Easy Operation
 - Temperature Monitors: Upper & Lower Limit Average and Peak Profile
 - Error Alarms: Overheat, TC Open, Temperature Slope, & More
- Standard Features
 - Reflow Conditions: 15
 - Up and down control signal for head movement & air-cooling
 - Auxiliary Thermocouple Input
 - RS-232C & I/O Interface

Pulse Heating Examples: Reflow Soldering, Thermo-Compression, Fusing



- Mobile Phone Applications
 - LCD Assembly
 - CCD & CMOS Camera Assembly
 - Micro-Coaxial Cable Assembly
 - Sensor
 - Electrical Parts (Covered Wire) Microphone & Speaker/Vibration Motor Transformer/Coil/Capacitor/Resistor

High Reliability

AC Type

Most Suitable for Reflow Soldering & Thermo-Compression

TCW-315: General Purpose Type



TCW-315	
Heating Temperature	Room Temperature -600°C; 1°C Step; E, J Type Room Temperature -900°C; K Type (Option)
Heating Time	000-999 (x100ms, x10ms)
Power Source	1Ø, AC200V - 230V ±10% (Option: AC100-115V)
Transformer	Built-In
Rating Power	750VA
Tap Voltage	0.88, 1.24, 1.75, 2.47, 3.5(V)
Dimensions	200(W) x 320(D) x 220(H) mm
Weight	19.5kg

PHU-35: High Power Type



PHU-35	
Heating Temperature	Room Temperature -600°C; 1°C Step; E, J Type Room Temperature -900°C; K Type (Option)
Heating Time	000-999 (x100ms, x10ms)
Power Source	1Ø, AC200V - 230V ±10% (Option: AC100-115V)
Dimensions	278(W) x 250(D) x 120(H) mm
Weight	7.4kg
NT-35	
Rating Power	3KVA
Tap Voltage	1.0, 2.0, 3.0(V)
Dimensions	200(W) x 270(D) x 220(H) mm
Weight	25kg

Inverter Type

Most Suitable for Precise Joining of Covered Wires & Micro Components

PHU-IN30: Precise Type



PHU-IN30	
Heating Temperature	Room Temperature -600°C; 1°C Step
Heating Time	000-999 (x100ms, x10ms, X1MS)
Power Source	3Ø, AC200V +10% -15% (Option: AC100-115V)
Dimensions	170(W) x 350(D) x 265(H) mm
Weight	12kg
NT-IN1	
Rating Power	1KVA
Tap Voltage	2.1, 3.0, 4.2, 6.0 (V)
Dimensions	130(W) x 200(D) x 200(H) mm
Weight	5.2kg

System Heads

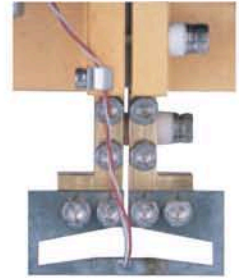
Best Suited for a Precise Joining & Automation

Heater Tip Type

● NA-111, NA-112



Heater Tip & Shank



Items	NA-111	NA-112
Pressure Range	0.7-5N	5-65N
Pressure Method	Spring	Spring
Electrode Stroke	Max. 50mm	Max. 50mm
Dimensions	106(W) x 48(D) x 287(H) mm	106(W) x 48(D) x 285(H) mm
Weight	0.6kg	0.6kg
Drive Method	Manual, Motor, Air	

Heater Tip Type

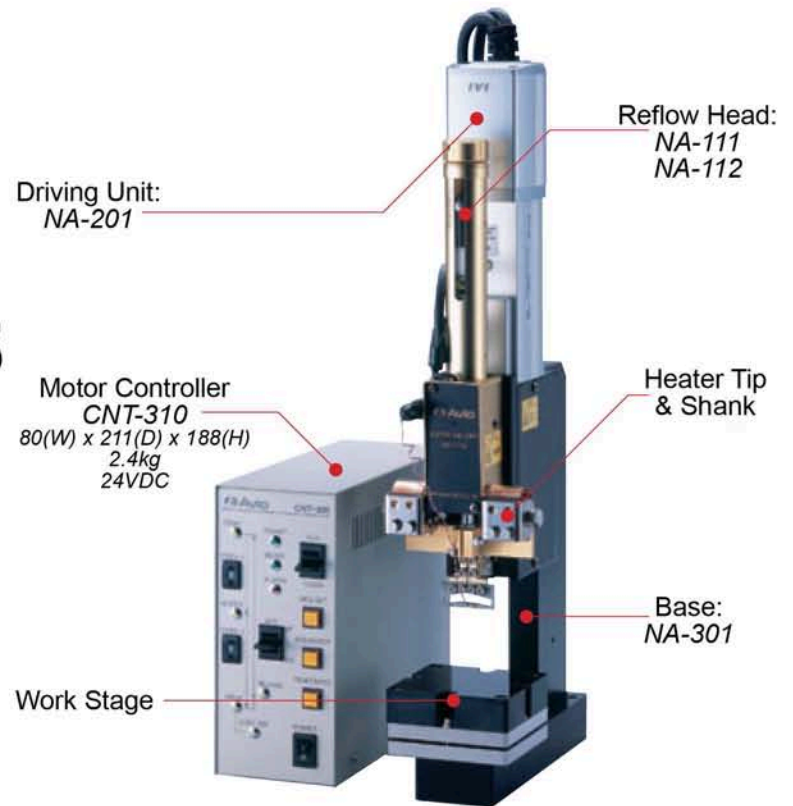
● NA-111, NA-112



Items	NA-151	NA-152	NA-153	NA-154
Pressure Range	1.2-7N	5-70N	20-150N	40-300N
Pressure Method	Spring	Spring	Spring	Spring
Applicable Heater Tip	Heater Tool Type Max. 40(L) x 4(W) mm			Heater Tool Type Max. 100(L) x 4(W) mm
Dimensions	124(W) x 54.8(D) x 298(H) mm			145(W) x 64.5(D) x 332(H) mm
Weight	1kg			2.2kg
Drive Method	Manual, Motor, Air			Air

Motorized System

- Includes soft landing and teach-in features
- 5-step switch-selected operation speed
- Highly Repeatable Fine Point Welding using Servo Motor Driven In-Line/Opposed Weld Head (shown) with Precision Controlled Applied Force and Weld Temperature Profile
- Large Selection of In-Line and Offset Weld Heads for Opposed, Series and Gap Joining Available
- LED Display of Joining Time with Available Force and Displacement Monitors to Enhance QC
- Force Applied to work piece is Unaffected by Weight of Welding Cable



Micro Joining Robot with XYZ Stage



Accessories

System Head Accessories

Drive Unit

Motor Drive & Controller NA-201&CNT-310



Air Drive NA-221, 222



NA-221: ~150N
NA-222: ~300N

Manual Drive NA-231



Bass, Stage & Cable

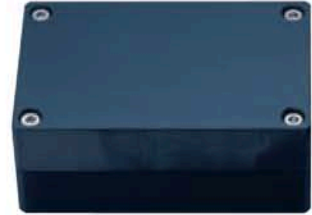
Base NA-301, 302



Leveling Stage 11X-BS-F



Stage 11X-BS



XYZ Stage 11X-BS-F-MM



Heater Stage 11X-BS-H



Cable SFC



Microscope Set & Pallet

Microscope,
Microscope Mounting Stand,
LED Light,
Pallet

S-SMS,
S-SMS-MS,
S-SMS-LED



Pallet S-MP, S302-MP



Reflow Heads

Performance Driven Reflow Heads

Standard Type

NA-62D



Air Drive Type

NA-66



Head	NA-62D	NA-66
Pressure Range	4.9-44.1N	4.9-44.1N
Stroke	8mm	8mm
Driving Method	Foot	Air
Dimensions	77(W) x 212(D) x 275(H) mm	77(W) x 212(D) x 360(H) mm
Weight	2.4kg	3.8kg

Accessories

Microscope / Stand / Pallet



• NA-62D, NA-66
8X ~ 50X
550(W) x 800(D) x 20(H)
Height: 434mm

Microscope Set & Pallet



Options: Color Monitor, CCD Camera Microscope, Halogen Lamp, Heater Tool

■ The Versatile Model TCW-125 configured system offers a wide variety of application solutions including Anisotropic Conductive Film (ACF) bonding, heat-seal bonding, and reflow soldering of PWB.

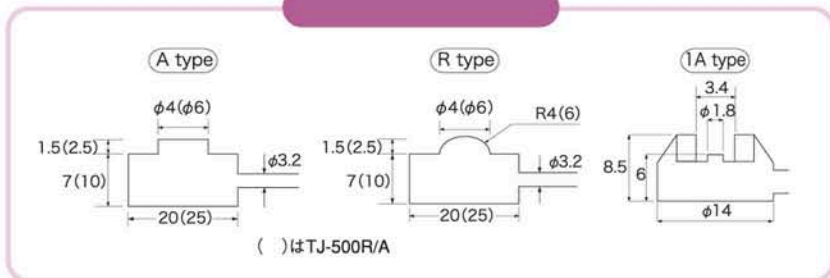
Digital Force Gage

Precise Measurement of Applied Force

FG-400 & TJ Series: Digital Force Gage



- Compact & Light Weight
- 3-Way Power Supply
- Display Hold Function
- Easy Zero Adjust
- Automatic Sensor Type Recognition
- Hi/Low Judgement Feature



FG-400

Display	4 digit (0000-9999) N:Newton
Zeroing Adjustment	Automatic Zero Adjust
Hold Function	External/Sample/Peak/SW
Interface	RS-232C
Power Source	AA & Ni-H batteries or AC Adapter (AC100V - 240V)
Dimensions	77(W) x 140(D) x 27(H) mm
Weight	300g

	TJ-1A	TH-20R/A	TJ-100R/A	TJ-500R/A
Measuring Range	0-10N	0-196N	0-980N	0-4900N
Critical Load	20N	294N	1470N	7350N
Accuracy	±2% (of full scale)			

QC Monitor

Monitor Displacement and Force



QC-100



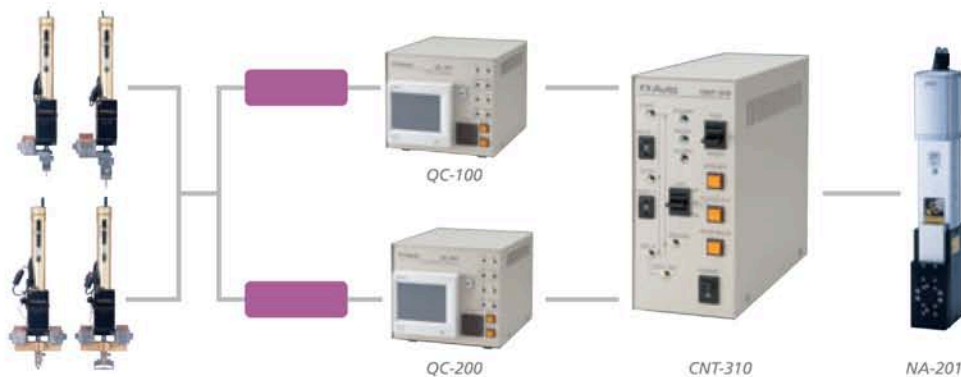
QC-200

● **QC-100: Force Monitor**

● **QC-200: Displacement Monitor**

Ideal for Automation!

- Monitors are easily combined with system head for Automation
- Enhances QC
- Output Measured Values & Results
- Easy Force Sensor Installation
- View Graphic display of Wave Analysis sampled at 2000 times/second
- 2-Condition Measurement and Judgement of Before & After Welding Process



Items	Force Monitor QC-100	Displacement Monitor QC-200
Measurement Range	0 ~ 1000N	0 ~ 7.5mm
Accuracy	F.S. 3% (of full scale)	F.S. 1% (of full scale)
Sampling Time	0.5ms (2000 times/sec)	
Squeeze/Hold Time	0 ~ 0.9sec	
Interface	RS-232C, I/O Analog Output	
Power Source	24VDC; ±10%; 2A	
Dimensions	170(W) x 210(D) x 150(H) mm	170(W) x 210(D) x 150(H) mm
Weight	3.0kg	3.4kg

Items	Force Sensor TJS-1R	Force Sensor TJS-20R	Force Sensor TJS-100R
Measurement Range	0 ~ 10N	0 ~ 200N	0 ~ 1000N
Accuracy	F.S. 3% (of full scale)	F.S. 3% (of full scale)	F.S. 3% (of full scale)



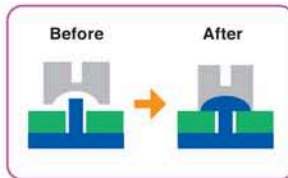
Pulse Heat Fusing Unit

Most Advanced Solution for Fusing of Plastic Materials

Rapid Heating & Temperature Feedback

● **NCU-10: General Purpose Type**

● **NCU-15: High Power Type**



- Superior Temperature Control
 - Good temperature accuracy superior to open-circuit control
 - Over shoot reduction function (to avoid over-melting)
- High Repeatability of Heating
 - Low temperature fluctuation by eliminating environmental and periodic factors
- Various Functions of Heating and Cooling
 - Heating: temperature rise time, holding time, idling function
 - Cooling: cooling returns temperature to solid point of plastic

Pulse Heat Fusing Unit

	NCU-10	NCU-15
Heat Temperature	Main: Room Temperature ~ 499°C	
	Idling: Room Temperature ~299°C	After Heat: Room Temperature ~299°C
Heat Time	0.1 ~ 9.9 sec (0.1 sec step)	
Power Source	AC100V ±10% 1Ø	AC100V ±10% 1Ø (Option: 100, 115, 230V)
Compressed Air	0.4MPa or more	-
Dimensions	200(W) x 302(D) x 90(H) mm	200(W) x 302(D) x 120(H) mm
Weight	3.5kg	4.1kg

Transformer

	NCU-10	NCU-15 (NT-15)	NCU-15 (NT-35)
Rated Power	150VA	1500VA	3000VA
Output Voltage	1.75V, 2.5V, 3.5V	1.0V, 2.0V, 3.0V	1.0, 2.0, 3.0 (V)
Dimensions	200(W) x 302(D) x 90(H)mm	200(W) x 302(D) x 120(H) mm	200(W) x 270(D) x 220(H) mm
Weight	3.4kg	14.2kg	25kg

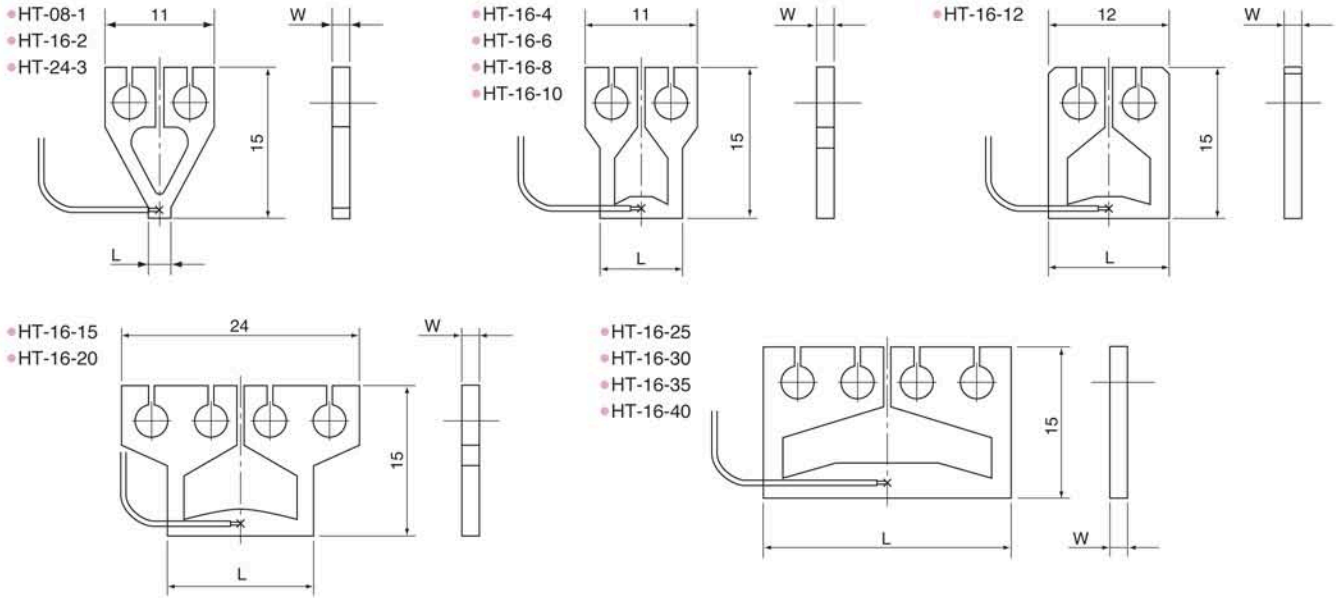
Heater Tips & Tools

Wide Selection of Standard Parts

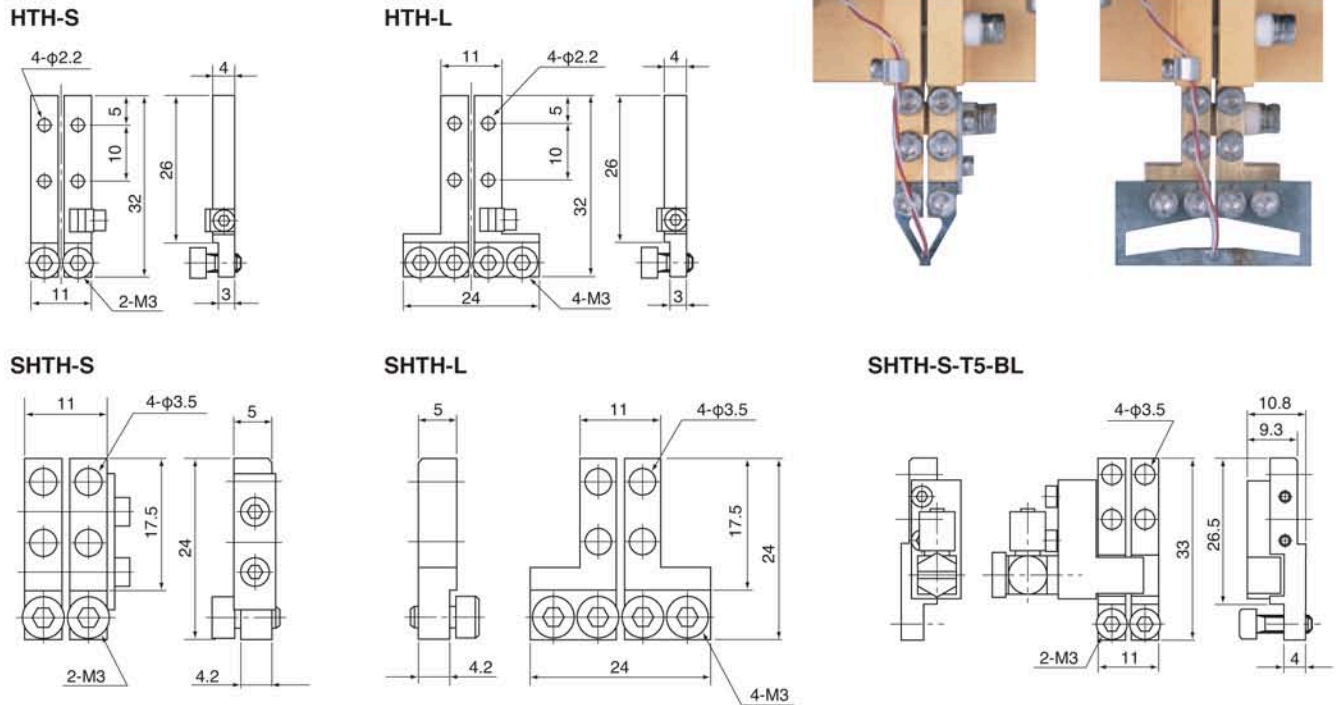
Heater Tip for TCW

Unit: mm

Standard Heater Tip: HT- W (Plate Thickness) - L (Tip Length)



Standard Shank



Custom Ordered Items

Applicable Plate Thickness: 0.5/0.8/1.0/1.2/1.6/2.4/3.0/3.2/4.0mm
 If special requirements like step shape, chamfering or other features are required, please contact SOLTEC and provide a drawing of the specifications.

