ROBOHAKKO



AUTO-SOLDERING | CATALOG

HU-200　FU-500/HF-600



CA00622EaYa001　2026.09

HAKKO CORPORATION

HEAD OFFICE
4-5, SHIOKUSA 2-CHOME, NANIWA-KU, OSAKA, 556-0024 JAPAN
TEL:+81-6-6561-3225 FAX:+81-6-6561-8466
https://www.hakko.com　E-mail:sales@hakko.com

OVERSEAS AFFILIATES

U.S.A.
AMERICAN HAKKO PRODUCTS, INC.
28920 AVENUE WILLIAMS VALENCIA, CA 91355, U.S.A.
TEL: (661) 294-0090 FAX: (661) 294-0096
Toll Free (800)88-HAKKO 42556
https://www.HakkoUSA.com
E-mail:Support@HakkoUSA.com

CHINA
HAKKO DEVELOPMENT CO., LTD.
ROOM 1112-1115 11th FLOOR, INTERNATIONAL BANK TOWER,
191 DONGFENG ROAD WEST, GUANGZHOU, CHINA
TEL: 8135-0112,81350113,81351086 FAX: 8135-0181
https://www.hakko.com.cn
E-mail:sales@hakko.gz.cn

SINGAPORE
HAKKO PRODUCTS PTE LTD
1, GENTING LINK #02-04
PERFECT ONE, SINGAPORE 349518
TEL: 6748-2277 FAX: 6744-0033
https://www.hakko.com.sg
E-mail:sales@hakko.com.sg

Please access the web address below for other distributors.

https://www.hakko.com

Specifications and design are subject to change without notice.　Copyright HAKKO Corporation. All right reserved.

Empowering manufacturing
in the robotics era
with soldering expertise







ROBOHAKKO

HU-200



All-in-one solution
for rapid automation
deployment

» *P03*

FU-500/HF-600



Custom solutions
for building automated
production lines

HF-600 » *P09*

FU-500 » *P10*

OTHERS

Introducing options and
Tip Shape Lineup

» *P13*

All-in-one solution for rapid automation deployment

Easy-to-use operation for any operator
ensures stable soldering quality



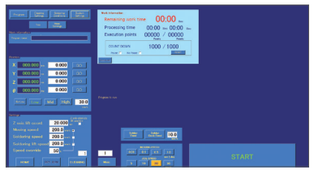
Auto-Soldering Robot System

HU-200

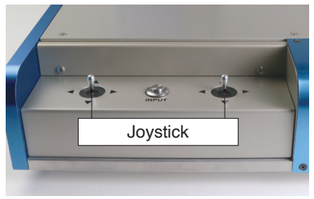
A 4-axis soldering robot integrating solder supply and motion control



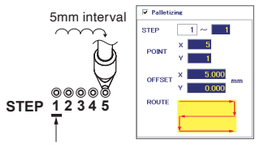
Easy Operation



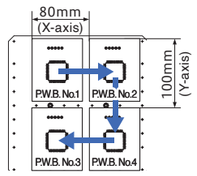
Even without specialized robot knowledge, soldering programs can be created easily using a tablet PC and joystick.



Quick Setup for Repetitive Operations



Palletizing Function
For soldering points arranged at regular intervals, such as connectors, programming is possible simply by entering the travel distance and number of positions with sequential repositioning.



Work Origin Function
When working with multiple identical boards, programming can be done simply by entering the offset from the original position.

Solder Only Where Needed, with Precision

TreeView Function

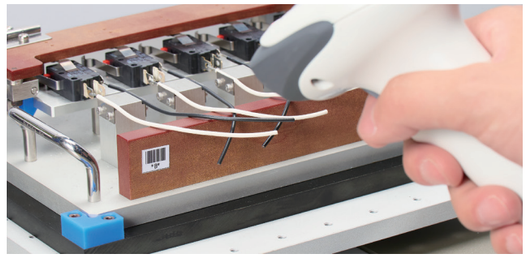


The TreeView function enables soldering only at the points specified in the program.

CASE.1	CASE.2	CASE.3
Different soldering requirements depending on product specifications	**Rework of defective areas such as unsoldered joints**	**Resume after interruption of the program**
Select the necessary soldering points for each product.	Only the specified points can be re-soldered. No need to modify the program.	In the event of an emergency stop or similar interruption, the process can be restarted from the stopped point.

Simple to Read, Zero Mistakes Utilization of Barcode Reader

Utilization of Barcode Reader

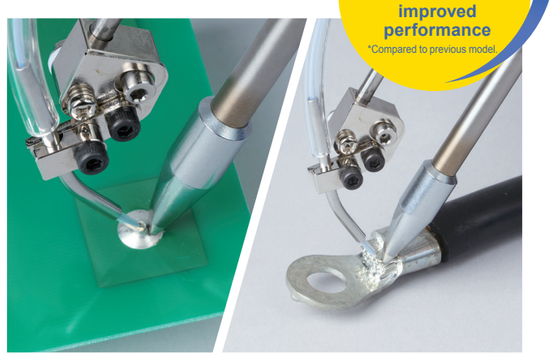


- Automatically calls up the appropriate program, preventing operator errors and improving work efficiency

※Barcode reader to be provided by the customer.
Please inquire in advance regarding compatible models.

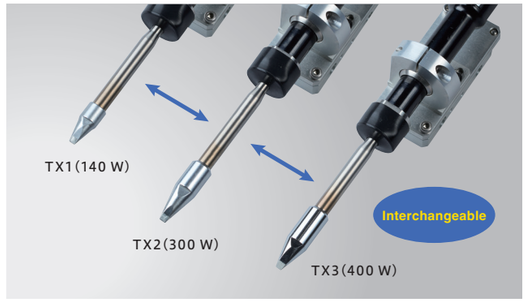
400 W Ultra Power

Approx. 20% improved performance
*Compared to previous model



20% performance increase compared to previous models. HF-600 improves work efficiency for workpieces that were previously difficult or time-consuming.

Three types of wattage tips available



TX1 (140 W), TX2 (300 W), TX3 (400 W) can be used interchangeably based on the workpiece.
The display shows the tip in use.

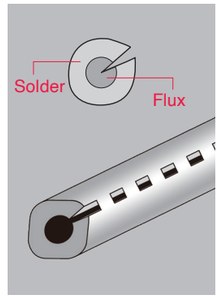
Brush-type cleaner



The rotating brush removes solder from the solder tip as well as flux carbide.

A feeder with the prevent function of flux and solder ball scattering





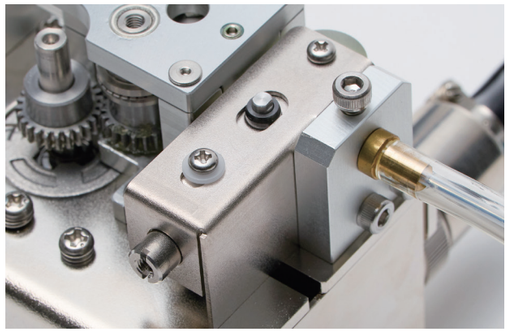
Countermeasure against solder ball and scatter of flux is equipped as standard. Solder wire diameter can be changed by simply replacing the pulley unit.

Supports solder diameters from Φ0.3 to Φ1.6 mm

Usable solder diameter
Φ0.3 mm 0.5 mm 0.6(0.65) mm 0.8 mm 1 mm 1.2 mm 1.6 mm

Using of 0.3 mm dia solder wire makes micro soldering possible.

Solder feed error detection



Solder clogging and run-out can be detected with an optical sensor for solder movement.

Packing List

- Robot
- Soldering unit (HF-600)
- Tablet PC (with a touch pen)
- Attachment holder (for tablet PC)
- Display arm (for tablet PC)
- Soldering unit mount
- Soldering unit fixture base
- Feeder unit type L
- Feeder cable 4m
- Tube units (0.3 to 1.0 mm dia, 1.2 to 1.6 mm dia)
- Tube units B (0.3 mm dia, 0.5 to 1.0 mm dia, 1.2 to 1.6 mm dia)
- Solder reel support shaft
- Cleaner
- Cleaner base
- I/O cable (for cleaner)
- USB cable
- Relay cord
- Power cord
- Instruction manual (CD-ROM)
- Quick manual

Specifications

Soldering Robot System

Model No.	HU-200
Power consumption	300 W
Movable range (stroke)	X axis : 400 mm Y axis : 300 mm Z axis : 200 mm θ axis : ±200 degrees
Payload capacity	Y axis : 20 kg (jig table)
jig table size	250×250 mm
Speed	X/Y/Z axis : 1 to 800 mm/sec., θ axis : 1 to 800 degrees/sec.
Positioning repeatability	X/Y/Z axis : ±0.01 mm, θaxis : ±0.01 degrees※1
Drive system (motor type)	X/Y/Z/θ axis : Servo motor, Solder feed : Stepping motor
Voltage Tolerance Range	AC 100~240 V 50/60 Hz ±5%
Noise level	56 dB
Position teaching	Remote teaching (JOG) / Numeric entry (MDI)
Teaching style	Direct teaching by joystick Offline teaching by tablet PC
Soldering tip	TX1 : 140 W TX2 : 300 W TX3 : 400 W
Air	Not required
External input/output	Input : 20 Output : 12 (NPN, 2 places for cleaner)
Operating Environment	Ambient Temperature Range: 0–40°C (No condensation or freezing) Ambient Humidity Range: 85% RH max. (No condensation or freezing) Operating Atmosphere: Non-corrosive, non-flammable environment with minimal dust
External interface	USB × 4 (including one port for PC)
Dimensions	600 (W) × 910 (H) × 650 (D) mm
Weight	50 kg

※1 The repeatable position accuracy for X/Y/Z/θ axes is limited to the case where the temperature of the main body is constant.
The absolute accuracy is not guaranteed.

HF-600 Soldering iron unit (FU-6002 Soldering iron L-type)

Power consumption	460 W
Temperature range	50~500°C
Dimensions	140(W)×111(H)×212(D) mm
Weight	4 kg

Solder feed setting range※2~※3

Solder feed length	0.1~99.9 mm
Solder feed speed	0.1~99.9 mm/sec.
Solder back feed length	0~20.0 mm
Solder back feed speed	0~99.9 mm
Heating time	0.1~9.9 sec.

※2 The values in the above table are for primary soldering.
※3 For secondary and tertiary soldering, all items can be set from “0”.
If the feed speed for secondary soldering is not set, the operation will be canceled.
If any other parameter is set to “0” or left blank, subsequent operations will be skipped.

Number of Programs

Soldering Programs	Virtually unlimited※4
Solder Feed Conditions	Max. 250 settings

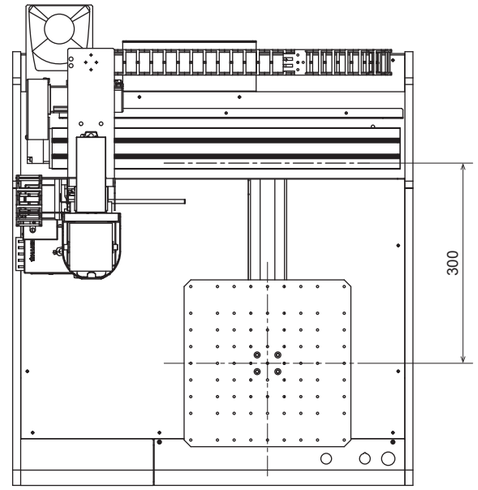
※4 The number of stored programs depends on the storage capacity of the tablet PC.

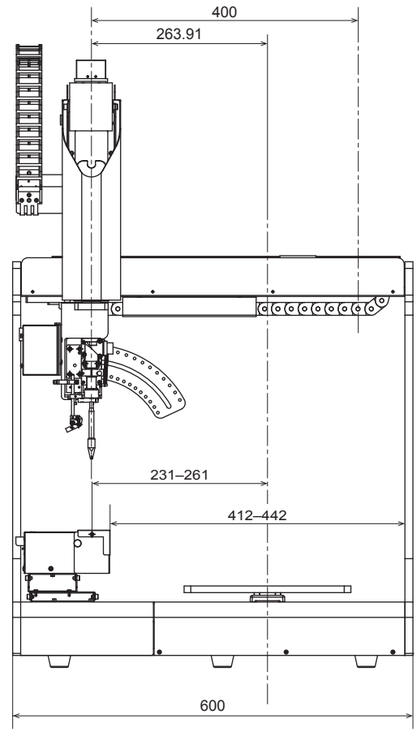
Setup Options

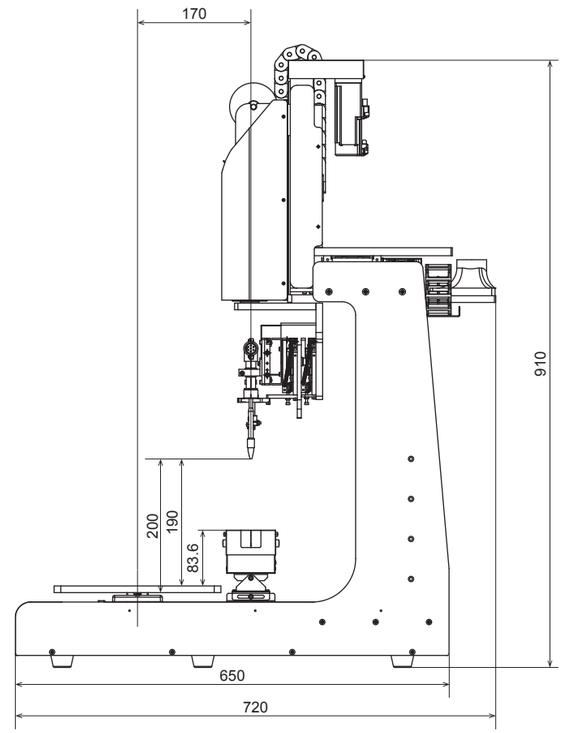
Options listed below are required separately from the main unit.
Please select according to the solder wire diameter.

	Φ0.3 mm	Φ0.5 mm	Φ0.6 mm (Φ0.65 mm)	Φ0.8 mm	Φ1 mm	Φ1.2 mm	Φ1.6 mm
Solder feed pulley unit	BX1076	BX1077	BX1078	BX1079	BX1080	BX1081	BX1082
Solder feed guide set	BX1046	BX1047				BX1048	
Fluoroplastic tube (Set of 10)	BX1010	BX1011		BX1012	BX1013	BX1014	BX1015

Dimensions (Units: mm)







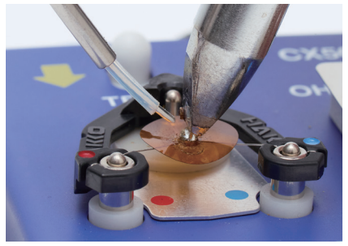


Auto Temperature Measurement and Adjustment System

Part No.CX5041

Improving Productivity through Automation of Tip Temperature Measurement

※Use of the CX5041 requires the FG-101B soldering iron tester (sold separately).





Camera Unit & Traceability Application

Part No.CX5039

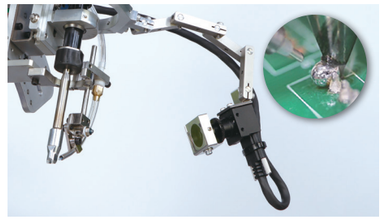
Improving quality through visualization of the automated soldering process





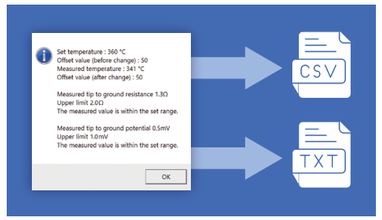
Point. 01

Automated tip temperature measurement and adjustment



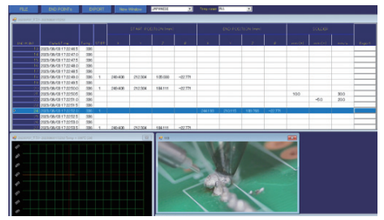
Point. 01

Records soldering conditions as video data



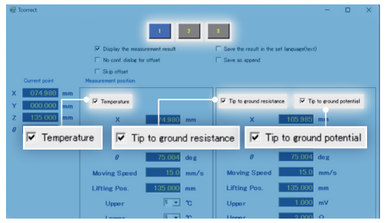
Point. 02

Automatic recording of measurement results



Point. 02

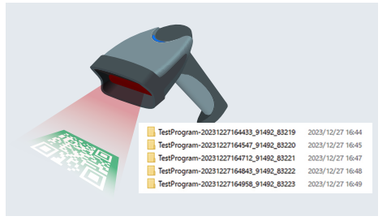
Centralized management and analysis via dedicated application



Point. 03

Three measurement modes can be set

- Tip temperature
- Tip-to-ground potential difference (leak voltage)
- Tip-to-ground resistance



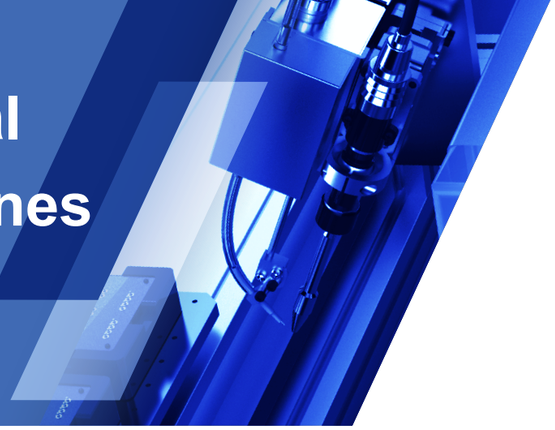
※Barcode reader to be provided by the customer.

Point. 03

Individual unit management by serial number

Ideal for building original automated production lines

Achieving "Improvement" of soldering quality
at a "Lower cost"



Soldering Iron Unit

HF-600



Ultra Power × Ethernet!
Improve work efficiency with a 400 W soldering unit.
Further reduction in running costs.

400 W Ultra Power

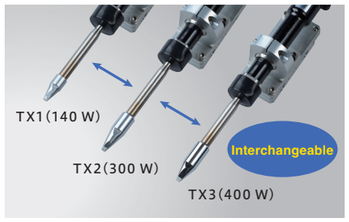


20% performance increase compared to previous models. HF-600 improves work efficiency for workpieces that were previously difficult or time-consuming.

Maintaining its compact design

Tip size remains at Φ10.5 mm even with increased wattage.

Three types of tips available



TX1 (140 W), TX2 (300 W), TX3 (400 W) can be used interchangeably based on the workpiece.
The display shows the tip in use.

External output function



Ethernet communication, allowing for remote configuration changes and data output such as tip temperature during soldering.

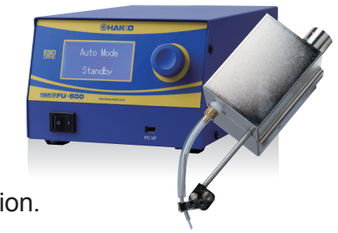
Automatic temperature correction/calibration via infrared communication



Using thermometers (FG-100B,FG-101B), measurement results can be sent to the main unit for automatic temperature correction / calibration. Measurement results can be also saved as data, by connecting to a PC.

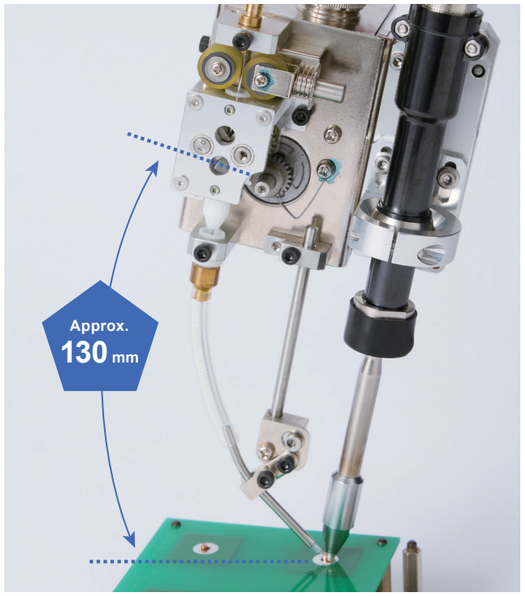
Solder Feed Unit

FU-500



Simple I/O connections for operation.
Compatible with various robots, enabling diverse soldering automation.

Accurate solder feeding



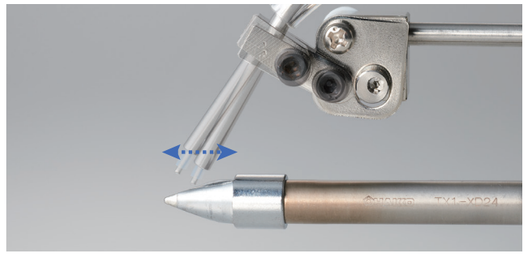
The compact drive unit is designed to be set beside the iron part for superior repeat accuracy of solder feeding due to the short distance from feeder to tip.

Supports solder diameters from Φ0.3 to Φ1.6 mm

Usable solder diameter
Φ0.3 mm 0.5 mm 0.6(0.65) mm 0.8 mm 1 mm 1.2 mm 1.6 mm

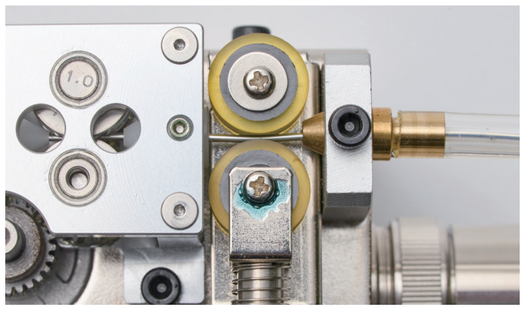
Using of 0.3 mm dia solder wire makes micro soldering possible.

Easy adjustment of solder feeding position



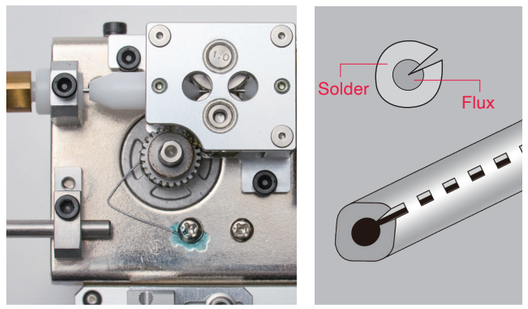
Solder feeding position, which is a critical point for auto-soldering, can be easily adjusted by turning the screw.

Solder feed error detection

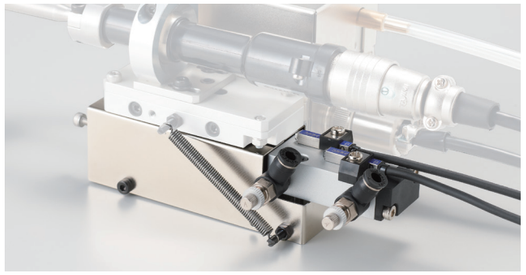


Solder clogging and run-out can be detected with an optical sensor for solder movement.

Countermeasure for solder ball scattering

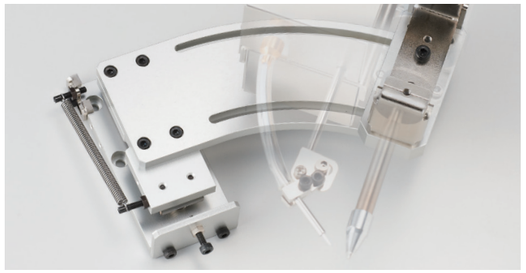


Countermeasure against solder ball and scatter of flux is equipped as standard. Solder wire diameter can be changed by simply replacing the pulley unit.



Slide unit
Part No.CX1000

This unit can give vertical movement to a soldering iron part. Since it is already wired with the solenoid valve, it can be used simply by connecting it to the FU-500 with a dedicated connector and supplying air from the outside.



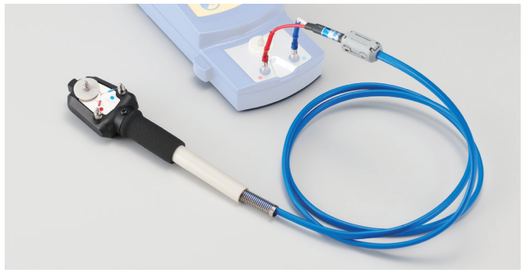
Slide unit (for drag soldering)
Part No.CX1001

This unit can absorb height variations during drag soldering.



Cleaner
Part No.CX1003

The rotating brush removes solder from the solder tip as well as flux carbide that could not be removed by air only. ON/OFF of the brush rotation can be controlled by an external signal.



Temperature probe
Part No.CX1002

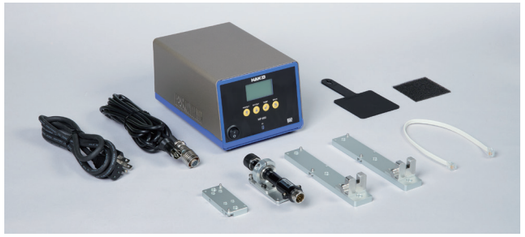
Temperature probe can make it easy to measure the temperature of tip used in an auto-soldering system. (Applicable thermometers: FG-100B, FG-101B, FG-102)

Setup option

Options listed below are required separately from the main unit.
Please select according to the solder wire diameter.

	Φ0.3 mm	Φ0.5 mm	Φ0.6 mm (Φ0.65 mm)	Φ0.8 mm	Φ1 mm	Φ1.2 mm	Φ1.6 mm
Solder feed pulley unit	BX1076	BX1077	BX1078	BX1079	BX1080	BX1081	BX1082
Solder feed guide set	BX1007	BX1008				BX1009	
Fluoroplastic tube (Set of 10)	BX1010	BX1011		BX1012	BX1013	BX1014	BX1015

Soldering Iron Unit HF-600



- Station
- Soldering iron (FU-6001 or FU-6002)
- Iron unit fixing assembly
- Tip adjustment jig unit (for TX1 series)
- Tip adjustment jig unit (for TX2, TX3 series)
- Heat resistant pad
- Filter
- Iron cable (5 m)
- Connecting cable
- Power cord
- Instruction manual

Specifications

Model No.	HF-600	
	Soldering iron: FU-6001 Straight type	Soldering iron: FU-6002 L type
Power consumption	460 W	
Temperature range	50 to 500°C	
Temperature stability	±5°C (At idle temperature)	

Station

Output voltage	AC 30 V
Dimensions	140 (W) × 111 (H) × 212 (D) mm
Weight	4 kg

Handpiece

Power consumption	390 W (29 V)	
Tip to ground resistance	＜2 Ω	
Tip to ground potential	＜2 mV	
Cord length	5 m	
Total length	197 mm	171 mm
Weight	133 g 172 g (with Iron unit fixing assembly)	135 g 174 g (with Iron unit fixing assembly)

※Total length and Weight are measured without cord.
※Total length and Weight are based on use with the TX3-XD4 tip.

Solder Feed Unit FU-500



- Main unit
- Feeder unit (Straight type)
- Solder reel stand
- Feeder cable (5 m)
- Tube unit for 0.3 mm to 1.0 mm dia.
- Tube unit for 1.2 mm to 1.6 mm dia.
- Power cord
  Instruction manual

Specifications

Model No.	FU-500	
	Feeder unit: straight type	Feeder unit: L type
Power consumption	35 W	
Applicable solder diameter	Φ0.3 mm Φ0.5 mm Φ0.6(0.65) mm Φ0.8 mm Φ1 mm Φ1.2 mm Φ1.6 mm	
Dimensions	145(W) × 100(H) × 230(D) mm	
Weight	2.3 kg	

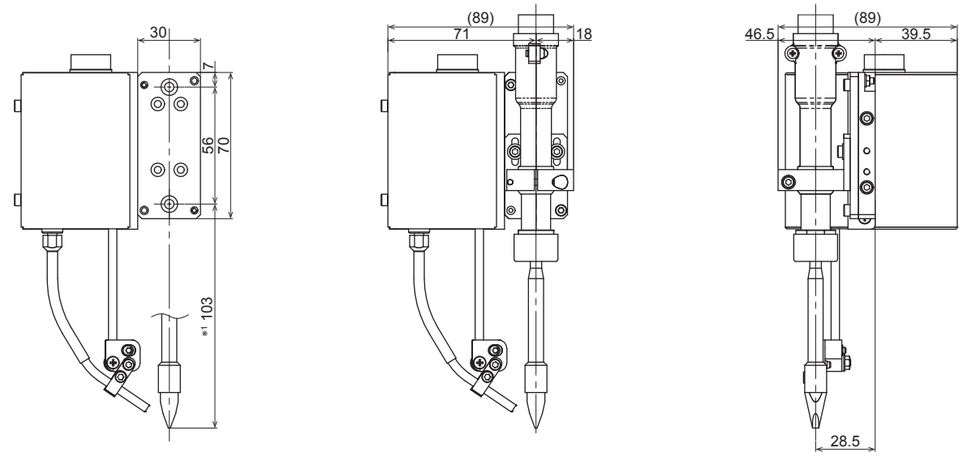
Feeder unit

Weight	800 g

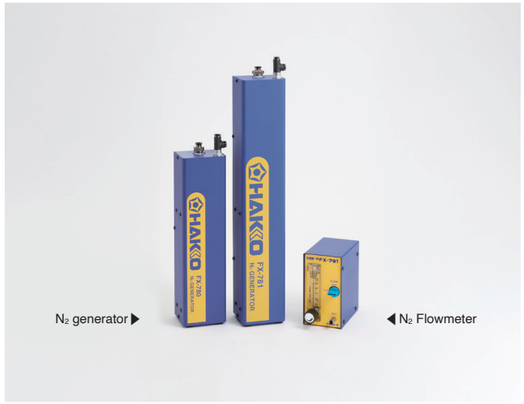
※The dimensions of the feeder unit section indicate the maximum values when a solder feed pulley unit, solder feed guide set, and fluoroplastic tube are installed.

Dimensions (Unit: mm)

When using a combination of the FU-6001 soldering iron and the straight-type feeder unit



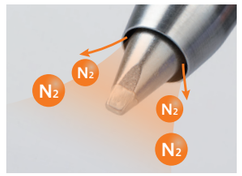
※1 When TX3-XD4 is attached.



N_2 System

N_2 generator : Model No.FX-780 or FX-781(large- capacity type)
N_2 Flowmeter : Model No.FX-791

Utilizing N_2 gas enhances solder spread and provides a preheating effect, improving work efficiency.



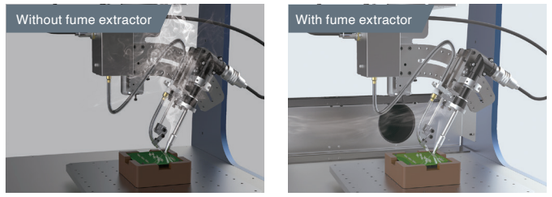
Compatible adapter & nozzle assemblies for each tip shape

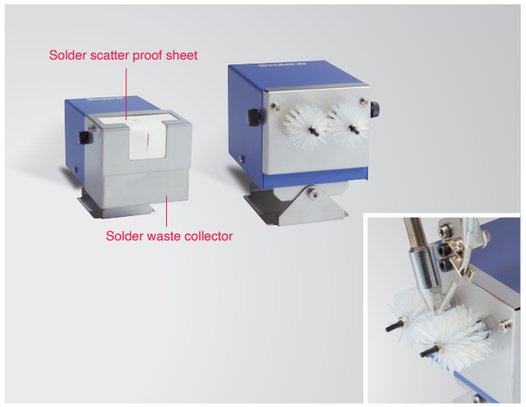


Fume Extractor (HU-200 Only)

Fume Extractor : Model No.FA-431 Duct : Part No.BX1059

Powerfully removes fumes generated during soldering operations.





Silicone Brush for Cleaner

Model No.AX1005

Long-life cleaning brush.

- Silicone material minimizes solder adhesion to the brush
- More flexible than metal brushes, reducing splatter and improving durability
- Silicone brush has a lifetime of **21 times longer** than the standard one (Part No.A1567) made of steel※.

※Based on our in-house test

XD Type



General-purpose type suitable for a wide range of applications, including through-hole component soldering, drag soldering and cross-joint soldering.

XDF Type



XD type single-sided plating. Solder flows only on one side, minimizing solder bridging even at fine pitches.

XDR Type



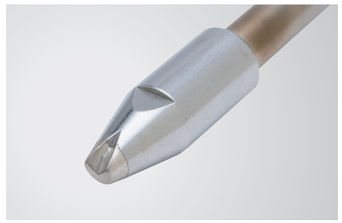
XD Type grooved design. Provides superior heat transfer efficiency and is ideally suited for through-hole mounting applications.

XDRF Type



XDR type single-sided plating. Designed for fine-pitch PWBs that require efficient heat transfer.

XBCR Type



Contacts both the PWBs land and the lead, providing efficient heating of through-hole components through superior heat transfer. Also effective for irregularly shaped terminals.

XRK Type



Ideal for drag soldering multi-pin components. Its versatile tip design also supports a wide range of soldering applications, including terminals and lead wires.

XNC Type



A high heat-transfer efficiency design that makes vertical contact with the PWBs, enabling soldering by pressing onto wires and terminals.

List of tip options here