Setup option

The following options are required for initial set-up.
Select them according to solder wire diameter.

Solder feed pulley unit

For Ø0.3 mm	BX1000
For Ø0.5 mm	BX1001
For Ø0.6 mm	BX1002
For Ø0.8 mm	BX1003
For Ø1 mm	BX1004
For Ø1.2 mm	BX1005
For Ø1.6 mm	BX1006

Solder feed guide set

For Ø0.3 mm	BX1046
For Ø0.5 to 1 mm	BX1047
For Ø1.2 to 1.6 mm	BX1048

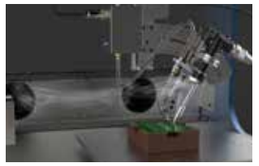
Teflon tubes
(10 tubes are included.)

For Ø0.3 mm	BX1010
For Ø0.5 to 0.6 mm	BX1011
For Ø0.8 mm	BX1012
For Ø1 mm	BX1013
For Ø1.2 mm	BX1014
For Ø1.6 mm	BX1015

Option

Smoke absorption system

A large amount of flux smoke is attached to the robot movable part and the periphery before flux smoke rises upward and is exhausted. Providing the absorption nozzle on the lower part with the same height as the work table can absorb smoke before smoke flows upward. Furthermore, since the nozzle also covers the width of the robot in horizontal direction, the nozzle absorbs smoke properly even if the handpiece moves horizontally. Thus, flux smoke amount adhering to the movable part, etc. becomes low, reducing the number of maintenance sessions and leading to increased productivity. Using the absorption nozzle together with the FA-431 as a set allows you to build the smoke absorption system easily without performing facility work.



Smoke absorption nozzle
for HU-200 No. BX1059

Equipped with 2 adaptors (for connection of FA-431), 2 ducts (Φ75 mm), an absorption nozzle and 4 duct bands

Mounting example viewed from the backside

Smoke absorber air purifying type Model No. FA-431

* Duct and nozzle are optional.
* For further details such as specifications, see the website.

Smoke goes up without the absorption nozzle.

Specifications

Table-top type robot

Model No.	HU-200
Power consumption	300 W*1
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)
Speed	X/Y/Z axis: 1 to 800 mm/sec., θ axis: 1 to 800 degrees/sec.
Repeatable position accuracy	X/Y/Z axis: ±0.01 mm, θ axis: ±0.01 degrees
Motor type	X/Y/Z/θ axis: Servomotor, Solder feed: Stepping motor
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: 140W*2, TX2: 300W*2
Air	Not required
External input/output	Input: 20 Output: 12 (NPN) (2 places for cleaner)
Operating environment	Ambient temperature range: 0 to 40°C (without condensation or freezing) Ambient humidity range: 85% or less RH (without condensation or freezing) There shall be no corrosive or combustible gas. There shall be no exceedingly dusty.
External interface	USB x 4 (1 place for PC)
Dimensions	600 (W) x 910 (H) x 650 (D) mm
Weight	50 kg

*1 For the power supply and power consumption for soldering iron unit FU-601, see the website.
*2 For the soldering tip type and size, see the website.

Solder feed setting range

Number of solder feed programs	250 conditions (max.)
Solder feed amount	0.1 to 99.9 mm
Solder feed speed	0.1 to 99.9 mm/sec.
Solder return amount	0 to 20.0 mm
Solder return speed	0 to 99.9 mm
Heating time	0.1 to 9.9 sec.

* The above values show the values for primary soldering.
* For the secondary and tertiary soldering, all items can be set from 0. Unless the secondary feed speed is input, the setting operation will be cancelled. If setting "0" or "blank" to any item, the following steps can be skipped.

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AUTO-SOLDERING ROBOHAKKO

Easy-to-operate 4-axis + 1 (feeder) control soldering robot system

HAKKO
HU-200

Easy-to-operate 4-axis + 1 (feeder) control soldering robot system

HAKKO HU-200 AUTO-SOLDERING SYSTEM

All-in-one soldering robot system into which the solder feed controller and the programming software are incorporated. All operations such as soldering conditions including solder feed amount and heating time can be controlled collectively by the tablet PC provided as standard equipment.

Time-reduced programming work and excellent operability

1 Collecting control from soldering conditions to robot control with the tablet PC provided as standard equipment

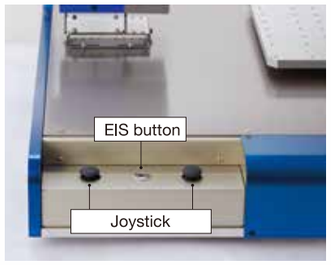
The tablet PC provided as standard equipment allows you to set all items, such as programming and soldering conditions, by the touch-panel operation on the same panel without connecting a teaching pendant or a PC.

2 Pre-installed Easy Programming Software

An easy programming software (Easy Programming Software II) is preinstalled, which allows you to create a soldering program easily without expert knowledge about robots. This software also allows you to control the number of accumulated soldering points and work time. Thus, only setting the tip replacement timing allows the robot to undergo automatic stop.

3 Easy teaching by EPS (Easy Positioning System)

Teaching can be intuitively made using the joystick. The joystick use feeling such as speed and inching pitch can be easily changed. When performing delicate position adjustment, setting the mode to inching pitch allows you to operate the robot as finely as 0.01 mm unit at minimum. Using the EIS (Easy Input Switch) allows you to input the coordinate of robot and feed steps automatically, which can reduce the teaching time.



4 Convenient work origin and palletizing functions to shorten the teaching time

In the case of teaching with the same plural P.W.B.s arranged, programming is possible only by inputting the offset value from the original position. Soldering positions arranged at the same interval in the case of connectors, etc. can be soldered only by inputting the movement distance and number of soldering sessions after positioning at one section.

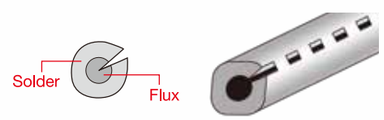
5 Prevents malfunctions by reading 2D codes

Reading the barcode and QR code attached on a P.W.B. using a barcode reader allows you to select operation channels automatically. This prevents malfunctions by a worker's mistake.
* A barcode reader is optional.

Useful functions to stabilize the soldering quality

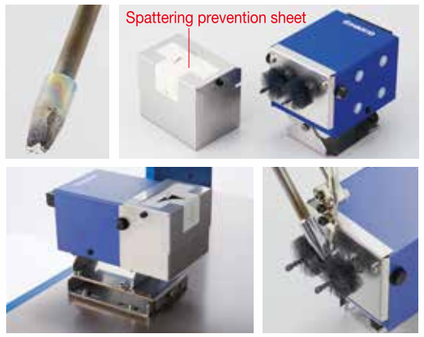
6 A feeder with solder balls and flux splash-prevention function provided as standard equipment

Cutting a V-groove on solder surface (as shown below) can prevent solder balls and flux from splashing.



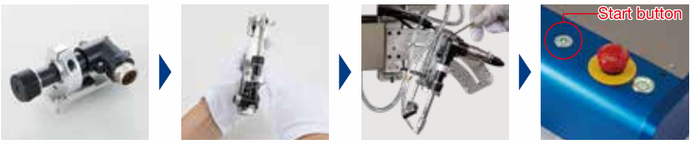
7 A brush-type cleaner provided as standard equipment

A brush-type tip cleaner is employed. This brush type cleaner can remove not only residual solder but also carbide generated from burned flux.



8 Quick and easy tip replacement by the tip position adjustment jig

If one more handpiece is prepared, another soldering tip can be mounted on the spare handpiece during operation of the robot.



Prepare a new handpiece. → Perform positioning beforehand using the included jig. → Replace the handpieces. → Operate the robot

Soldering work and efficiency improvement

9 Soldering quality and workability increased remarkably using 300 W high power

Using 300 W high power can improve the conventional failures "non-soldering due to insufficient heating" and "insufficient solder rising on through-hole back side". Work requiring long heating time can be shortened drastically. In the case of fine work, the tip for 140 W can be also used.