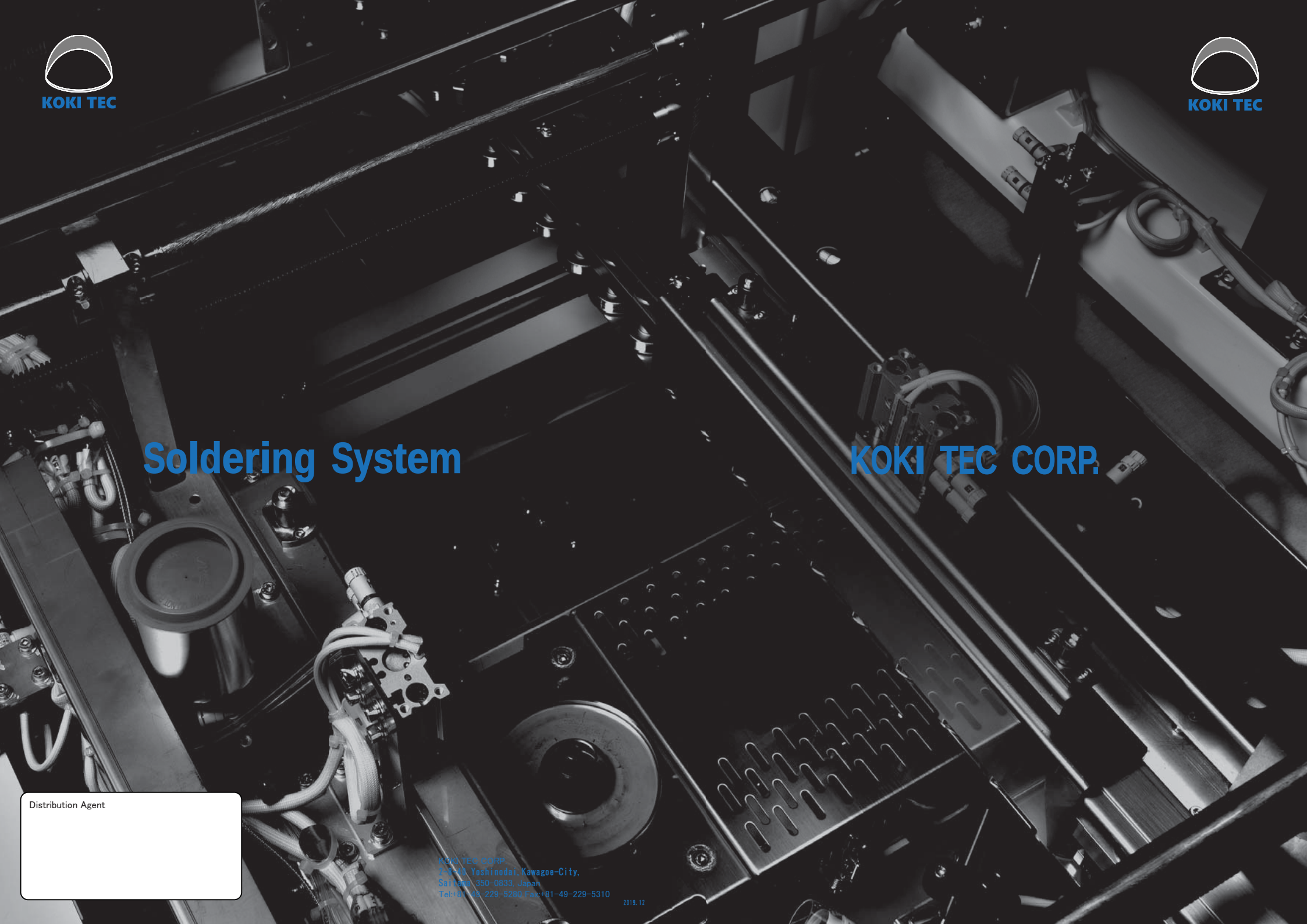


KOKI TEC

Soldering System

KOKI TEC CORP.

Distribution Agent

KOKI TEC CORP.
2-9-60 Yoshinodai, Kawagoe-City,
Saitama 350-0833, Japan
Tel:+81-49-229-5280 Fax:+81-49-229-5310

2018.12

KOKI TEC

Benchtop Selective Soldering Series

ULTIMA-SSP	ULTIMA-SSP-L	ULTIMA-TRZ	ULTIMA-STR2-L (Non-benchtop type)
Outer Dimensions 630Wx640Lx365H mm	Outer Dimensions 840Wx800Lx395H mm	Outer Dimensions 620Wx940Lx442H mm	Outer Dimensions 1081Wx1300Lx1025H mm
PCB Size 50x50 – 250x330 mm	PCB Size 50x50 – 380x460 mm	PCB Size 50x50 – 250x330 mm	PCB Size 50x50 – 380x460 mm
Machine Weight Approx. 45 Kg	Machine Weight Approx. 60 Kg	Machine Weight Approx. 125 Kg	Machine Weight Approx. 180 Kg
Power Source AC100-240V	Power Source AC100-240V	Power Source Single-phase 200V	Power Source Single-phase 200V
Air 0.4-0.5mps	Air 0.4-0.5mps	Air 0.4-0.5mps	Air 0.4-0.5mps
Tank Capacity 0.75ℓ	Tank Capacity 0.75ℓ	N2 0.4-0.5mps25ℓ/min 99.99%	N2 0.4-0.5mps25ℓ/min 99.99%

AOI system D-arwin
Soldering quality supporting system

The soldering device receives inspection results. This is a next generation system with the potential of evolution by inspection data-sharing function. (PATENT PENDING)

Benchtop type preheating unit equipped with far infrared panel.

■Improving Productivity

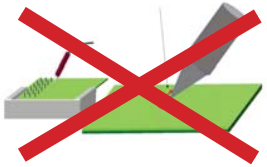
Productivity	Operators	Material
1,300 pcs/day	6 people	18 Kg
1,500 pcs/day	2 people	4 Kg
Increases 15%	Reduces 2/3	Significant reduction

■Introduction Benefits
①Cost reduction(material)
②Lavor cost reduction
③Quality improvement & stability
④Space & energy saving

Difficult to secure operators?

Worry about soldering quality?

Here is a solution.



■Cost comparison between Ultima-TRZ and conventional wave soldering.

	Electric Energy	Co2 Emission	Finger Cleaner	Oxide Dross	N2 Usage	
Wave Soldering	6.6kw(Ave.)	915kg	125L	100g/h	300L/min	
ULTIMA-TRZ	1.0kw(Ave.)	138kg	–	12.5g/h	25L/min	Capital Investment
Reduction	85% reduction	85% reduction	100% reduction	88% reduction	92% reduction	78% reduction
Palette Cost	100% reduction	Total reduction per month on simulation				
Flux Usage	97% reduction	Selective system	92% reduction			

■Reduction example of introduced user

Selective system

Soldering	270 sec
PCB change	60 sec
330 sec × 2 sides × 50 sheets=275 mini	

885 min of time taken by hand soldering

⇓

275 min

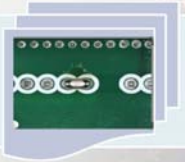
■Soldering quality supporting system “D-arwin”

1. Improve soldering quality

- Soldering system and inspection machine share the data.
- Various soldering inspection items
- Greatly reduces the risk of outflowing defective products to the market.

2. Shorten the time for improvement

- Soldering system automatically and instantly captures inspection results.
- Highlights a defect part (s) in the soldering program.
- Displays suggestion (s) of improvement.



3. Keep a history of solder quality inspection

- Inspection results, defect images, soldering conditions and production history can be stored.

All-in-one Type Selective Soldering Series

IRD-2533 "ROBO-DIP"

Outer Dimensions 1800Wx1500Lx1600Hmm	Flux Tank Capacity 0.75ℓ
Applicable PCB 50x50-250x330mm	N2 0.4-0.5mps25ℓ/min 99.99%
Palette Size 380Wx300Lmm	Solder Pot Approx. 16kg
Machine Weight Approx. 700Kg	Preheater Carbon Lamp Heater
Power Source Three-phase 200V	Fluxer Two-fluid Nozzle
Air 0.4-0.5mps	

CBSS-5050W "DUAL"

Outer Dimensions 1815Wx1600Lx1600Hmm	Flux Tank Capacity 0.75ℓ
Applicable PCB 50x50-500x500mm	N2 0.4-0.5mps25ℓx2/min 99.99%
Machine Weight Approx. 500Kg	Solder Pot Approx. 6.0kg x2set
Power Source Three-phase 200V	Fluxer Two-fluid Nozzle Aero-Jet
Air 0.4-0.5mps	

ULTIMA-NEO-L

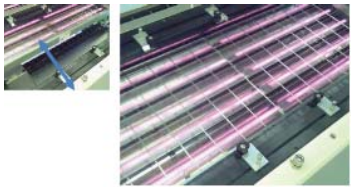
Outer Dimensions 1191Wx1761Lx1305Hmm	Flux Tank Capacity 0.75ℓ
Applicable PCB 50x50-380x460mm	N2 0.4-0.5mps25ℓ/min 99.99%
Machine Weight Approx. 500Kg	Solder Pot Approx. 16kg
Power Source Single-phase 200V	Fluxer Two-fluid Nozzle
Air 0.4-0.5mps	

■Main specification of machines that supports laege-size PCBs.

	Moving Side	Applicable PCB Size(MAX)	Preheat Options
ULTIMA-SSP-L(Fluxing)"SPROBO-L"	PCB Table	380X460 mm	—
ULTIMA-STR2-L(Soldering), Non-benchtop type	PCB Table	380X460 mm	Sold separately
ULTIMA-NEO-L(Fluxing & Soldering)	PCB Table	380X460 mm	No Option
ULTIMA-MR-M、XL(Fluxing & Soldering)	Fluxer/Solder Pot	300X460 mm 600X600 mm	Retractable Heater
CBSS-5050W(Fluxing & Soldering)	Fluxer/Solder Pot	500X500 mm	Retractable Heater

Benchtop Type Preheater PHS600

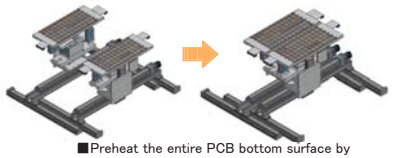
Carbon Lamp Heater



■CBSS-5050W/Upper Preheating Mechanism

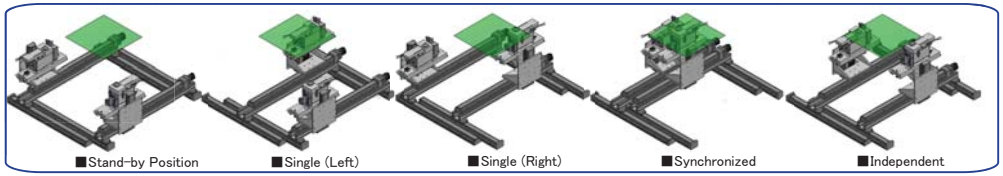
■Hot air preheating to the PCB component surface is equipped as a standard specification.

■CBSS-5050W/Lower Preheating Mechanism(OP)



■Preheat the entire PCB bottom surface by swinging the carbon lamp heater.

■CBSS-5050W/Dual Solder Pot Operation



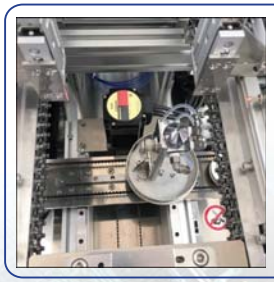
■Stand-by Position ■Single (Left) ■Single (Right) ■Synchronized ■Independent

■IRD-2533/SCARA Robot

■Turning the PCB and liner operations are possible at the desired angle.

■The flow nozzle can be cleaned automatically.

■Work can be transported with the robot.



■Equipped with a small automatic spray gun.
■X and Y direction movement with a servo motor
■Two-fluid spray nozzle

■Pressure tank method

■Sub-tank capacity 1.3kg(Max)

■Automatic feeding to sub-tank from 18-square-liter can
■Emitted via Φ197-mm duct on the top side of the machine

■Heating Method:
Carbon lamp heater

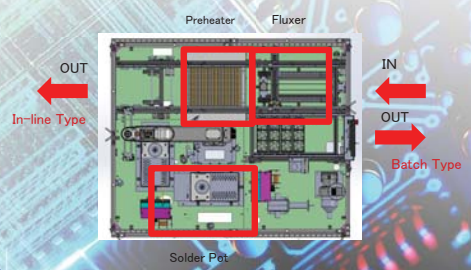
■Settable Temperature Range:
Up to 400℃

■PCB Surface Temperature:
Approx. 90℃ – 120℃

■Output Adjustment Method
Power controller:

■Swing control with air cylinder

■Flexible layout of inline type or batch type.



In-line Type Selective Soldering Series

EQS-350SDDD

Outer Dimensions 1400Wx4800Lx1400Hmm	Power Source Three-phase 200V Breaker100mA
Applicable PCB Size 100x100-350x330mm	30kVA
	Required Duct Exhaust Volume per duct 8㎥/min
Pass Line 900mm±20mm	
Machine Weight Approx.2,200Kg	Air 0.4-0.5mps N2 25ℓ/min×3

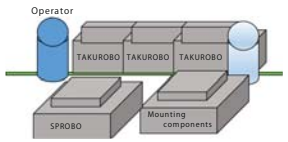
EQSS-350SD+M

Outer Dimensions 1330Wx3550Lx1400Hmm	Power Source Three-phase 200V Breaker100mA
Applicable PCB Size 100x100-330x250mm	22kVA
	Required Duct Exhaust Volume per duct 10㎥/min
Pass Line 900mm±20mm	
Machine Weight Approx.1,350Kg	Air 0.4-0.5mps N2 25ℓ/min

SELBO II

Outer Dimensions 1430Wx910Lx1300Hmm ※per module	Power Source Three-phase 200V Breaker100mA
Applicable PCB Size 100x100-350x400mm	Required Duct Exhaust Volume per duct 10㎥/min
Pass Line 900mm±20mm	Air 0.4-0.5mps N2 25ℓ/min ※per module
Machine Weight Approx.600Kg ※solder pot module	

■Successful Case of Introducing In-line Type System



TRZ×3 units
SSP×1unit
Two operators

550 units/day

Introduced EQS-350SDDD

Changed to In-line type system includes Spray, Preheat, and three Soldering Stages

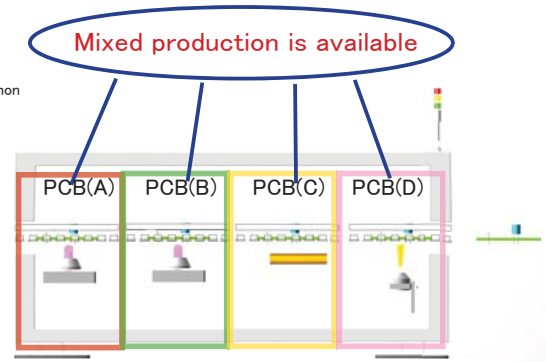
Increased by 20%

676 units/day

■Suitable for Small Lot Production with Many Varieties

Mixed production of small lots becomes possible by using (1) barcode management or (2) automatic changeover system and common frame jig for transportation.

All stages operate simultaneously.
Set tact balances.
To prevent temperature drop, it stops and waits before the preheating zone.

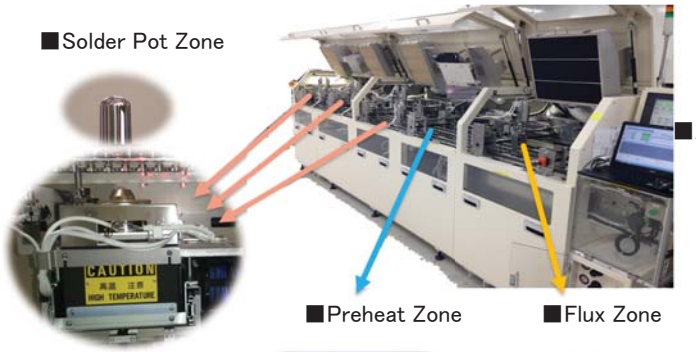


■Main Specifications ①

Machine	Spray	Applicable PCB	Preheat Method
EQS−350SDDD (Spray, Preheater, 3 Solder pots)	Two-fluid(Std)/Aero Jet(OP)	350WX330Lmm	Carbon Lamp Heater
EQS−350SDD (Spray, Preheater, 2 Solder pots)	Two-fluid(Std)/Aero Jet(OP)	350WX330Lmm	Carbon Lamp Heater
EQSS−350SD (Spray, Preheater, 1 Solder pot)	Two-fluid(Std)/Aero Jet(OP)	350WX250Lmm	Hot Air
EQSS−350M (Solder pot unit for EQS-350SD)	—	350WX250Lmm	—
SELBO (Module type in-line machine)	Two-fluid/Aero Jet	350WX400Lmm	Carbon Lamp Heater

■Main Specifications②

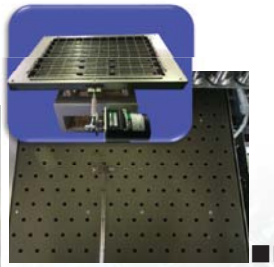
■Solder Pot Zone



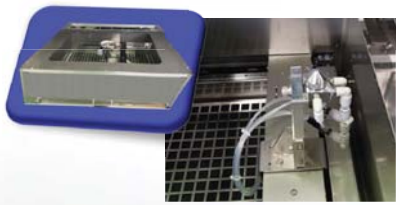
■Preheat Zone ■Flux Zone

■Aero Jet Spray (OP)

■Carbon Lamp Heater



■Hot Air Heater



■Two-fluid Spray

■Automatic Nozzle Cleaning(OP)

②Cleaning

①Before ③Finished

■Automatic Solder Feeder(OP)

■Fluxer Flowmeter(OP)

Wave Soldering Series

VIS-350

Outer Dimensions
1180Wx1352Lx1222Hmm

Power Source
Three-phase 200V
6 kVA

Applicable PCB
50x100-350x450mm

Required Duct Exhaust Volume per duct
15 ㎥/min

Pass Line
750mm±20mm

Air
0.4-0.5 mps
100 NL/min

Machine Weight
Approx. 300 kg

WS-302LF

Outer Dimensions
1220Wx3700Lx1460Hmm

Power Source
Three-phase 200V
Breaker 100 mA
27 kVA

Applicable PCB
50x100-300x350mm

Required Exhaust Volume of Conveyor
15㎥/min

Pass Line
750mm±20mm

Air
0.5mps
30L/min

Machine Weight
Approx. 1,350 kg

GFL-350N

Outer Dimensions
1400Wx4853Lx1613Hmm

Power Source
Three-phase 200V
Breaker 100 mA
34kVA

Applicable PCB
50x120-350x450mm

Required Exhaust Volume of Conveyor
40㎥/min

Pass Line
950mm±20mm

Air
0.5mps
30L/min

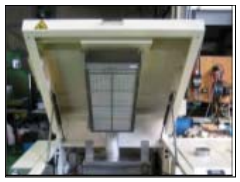
Machine Weight
Approx. 1,500Kg

N2
0.5mps
330L/min

■ Spray Fluxer / VIS-350

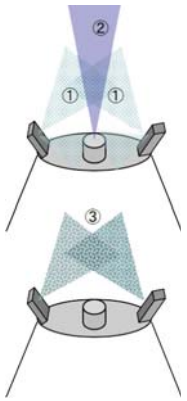
■Opens in 3 forward directions

■Upper dust collection filter with replaceable cassette type



■Flux tank (level sensor)

■Air Blowout For Preventing Clogging
Sequence controlled air blow that eliminates flux residue after ejection prevents flux clogging.



■Lower dust collection filter

■Finger cleaning brush

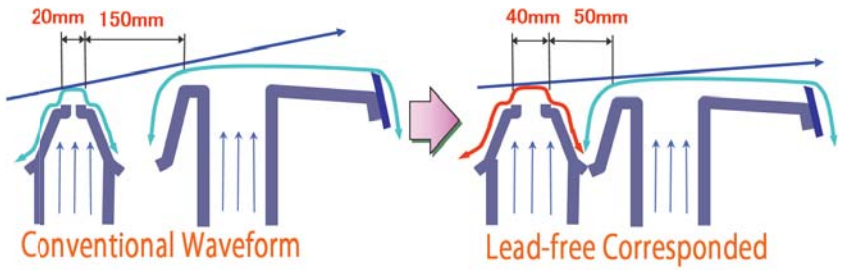
■Filter slide-out

■Spray Efficiency

Before (g)	After (g)	Adhered (g)	Sprayed (g)	Efficiency (%)
239.97	240.31	+0.39	+0.47	82.9
239.97	240.31	+0.39	+0.46	84.7

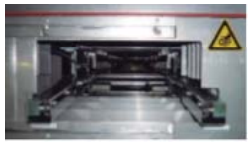
※Conducted two times
※Adhered amount is a measured value of solid content after natural drying (more than 10 min.)
Sprayed amount is also calculated based on the measured solid content.

■Inclined Type Air Flow Soldering System/WS-302LF

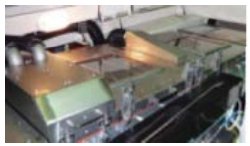


■The width of the first wave has been increased to secure DIP time for lead-free solder with low wettability.
■Narrowed the interval of the first and second wave nozzles from 150mm to 50mm so that the temperature drop can be reduced. (Supports the second wave temperature recovery)
■By increasing the solder flow pressure, the solder contactability to PCB and the quality of through-hole up have improved.
■The peel back point of the second wave can be set with the external handle. Solder filet formation / Reducing solder bridge

■Inclined Type N2 Flow Soldering System/GFL-350N



■ N2 tunnel structure without blocking curtains



■Removal tunnel cover

■Open tunnel structure without air block curtain /supports component heights up to 100mm. ■Inlet & outlet pressure control systems to maintain low O2 level inside the tunnel. ■Wave soldering system designed to reduce solder dross & solder ball generation. ■Dipping-zone PCB warp prevention unit operable externally without need to open the tunnel (Option)
■Externally-operable peel-back point adjustment unit at dipping zone (Option)

■ Dross generation state in the air flow

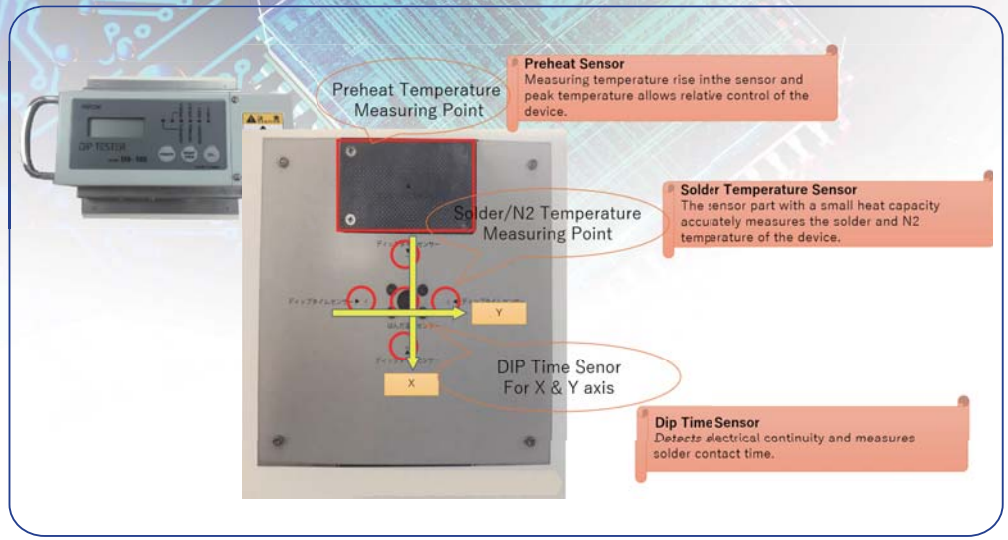
■Dross amount after introducing of GFL350N

With air flow soldering, the average daily consumption is 5 to 8 solder bars.
(Cost range approx.¥20,000 – ¥30,000)

⇩

8-hour operation
700g/day

■Dip Tester For Selective Soldering System　DS-10S (Malcom)



■DS-10S/Measurement Data Specifications / General Specifications

Items	Sensor	Memory	Display	Meas. Range	Accuracy
Solder temperature	K-type sheath thermocouple	5	Digital LCD 3-digit and PC Software	0 – 330℃	±1℃
PCB lower surface temperature	K-type thermocouple	5		0 – 330℃	±1℃
Dip time	Electrode (8 pcs.)	5		0 – 10.0 sec	±0.2 sec
X、Y axis moving speed	Electrode (8 pcs.)	5		0 – 20mm/sec	–
X、Y solder size	Electrode (8 pcs.) Calculated from the moving speed & contact time to the electrodes.	5		0 – 35mm	–
Temp. profile (sampling: 50ms)	Solder/Preheat sensor	1	PC Software	0 – 330℃	±1℃

Items	Remark
Cold contact point compensation	Automatic compensation with platinum temp. measuring resister.
Ambient temperature	150℃ and within 5 minutes
Power supply	AAA battery x 2 pcs.
External connection	USB(mini B type)
Number of memory	1 data /5 connection (nozzle stages) available
Sampling time	50 ms (fixed)
Outer dimensions	214mm(D) × 78mm(W) × 43.6mm(H)
Weight	820g (without batteries)

■Small Type Nitrogen Gas Generator (KOFLOC)

Nitrogen gas generating volume increased by up to 54.5%, achieving industry No.1 performance.*1

Sound level of 58.8dB achieved in front of device.*2

New LCD panel used.

Note*1&*2
Based on public information announced by KOFLOC.

■What is a nitrogen gas generator?

The nitrogen gas generator is designed to supply nitrogen gas by extracting nitrogen from air.

Nitrogen Gas Generator Mounted Table

Specifications			
Purity(%)	99.99	Dew Point	≦-55℃
Generating Volume (NL/min)	30.0	Dimension	1300 × 780 × 520
Pressure(MPa)	0.4	Weight	Approx.205kg
Electricity Consumption	100w	PW Voltage	AC100V 50/60Hz
Air Condition	200–250L/min 0.5–0.65MPa ≦10℃ Oil free and dry air		

Option List

■For selective soldering system

	TRZ	STR2-L	SSP	SSP-L	IRD-2533	CBSS	NEO-L	EQS-350	SELBO Ⅱ
Applicable PCB Size (Max)	250x330mm	380x460mm	250x330mm	380x460mm	250x330mm	500x500mm	380x460mm	350x330mm	350x400mm
Superfine Nozzle(φ2、φ2.5、φ3、φ4mm)	○	○	—	—	○	○	○	○	○
Standard Nozzle(10 sizes from φ5 to φ20mm)	○	○	—	—	○	○	○	○	○
Safety Cover(Front/Upper area sensor/Exhaust duct)	○	○	—	—	—	—	○	—	—
Safety Cover(No area sensor/Exhaust duct)	○	○	—	—	—	—	○	—	—
Safety Cover(for SSP/ open&close type)	○	—	○	○	—	—	—	—	—
Safety Cover (for SSP/area sensor type)	—	—	○	○	—	—	—	—	—
Input with Scanner & Gerber data NC creation software	○	○	—	—	Standard Equipment	Standard Equipment	Standard Equipment	Standard Equipment	Standard Equipment
Weekly Timer	○	○	—	—	○	○	○	○	○
Solder Low-level Warning System	○	○	—	—	○	○	○	○	○
Three-light Signal Tower	○	○	○	○	○	○	○	○	○
Laser-type Wave Height Detection & Feedback Control	○	○	—	—	○	○	○	○	○
CCD Camera Teaching & Camera Simulation	○	○	—	—	—	○	○	—	—
Automatic Solder Feeder(φ2mm/1-kg bobbin)	○	○	—	—	○	○	○	○	○
Witness Camera(USB connection/ wih LED light)	○	○	—	—	○	○	○	○	○
Bar/QR-code-enabled Automatic PCB Model Switching	○	○	○	○	○	○	○	○	○
Automatic Nozzle Cleaning System	×	×	—	—	○	○	×	○	○
Adoptive Voltage/Step-down Transformer	○	○	—	—	○	○	○	○	○
Specifying Color	○	○	○	○	○	○	○	○	○
Spare Solder Pot	○	○	—	—	○	○	○	○	○
Automatic Width Adjustment	—	—	—	—	—	—	○	○	○
Preheating Process	Separate Unit	Separate Unit	—	—	Standard Equipment	Up&Low(OP)	No Option	Standard Equipment	Standard Equipment
PCB Detection & Error Proofing System	—	—	○	○	—	○	○	—	—
Flux Flowmeter	—	—	○	○	○	○	○	○	○

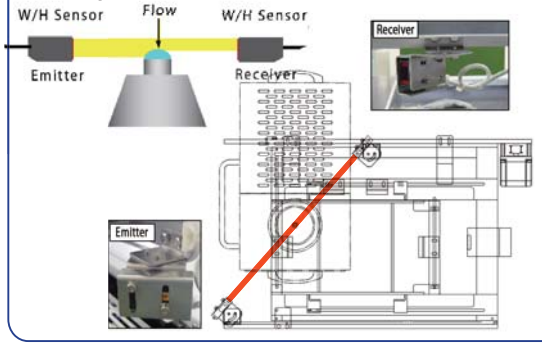
Safety Cover for TRZ

Safety Cover for SSP

PCB Detection & Error Proofing Sensor

Scanning System with CCD Camera

Wave Height Detection



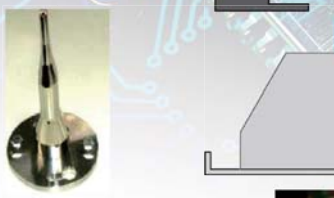
■Automatic Nozzle Cleaning

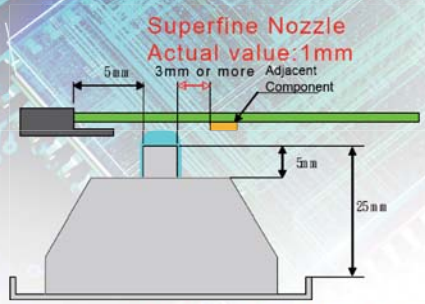
■Automatic Solder Feeder

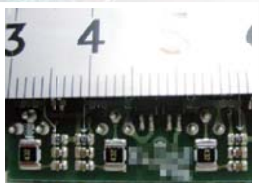
■Flux Flowmeter ⇒See page 8

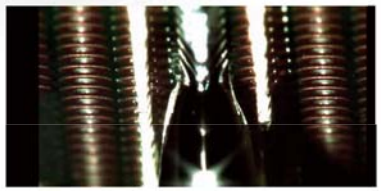
Technical Data

■Superfine Nozzle/Φ2.0 2.5 3.0 4.0 mm



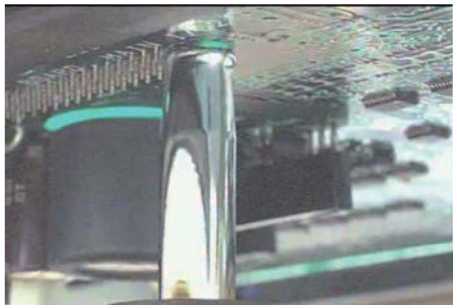


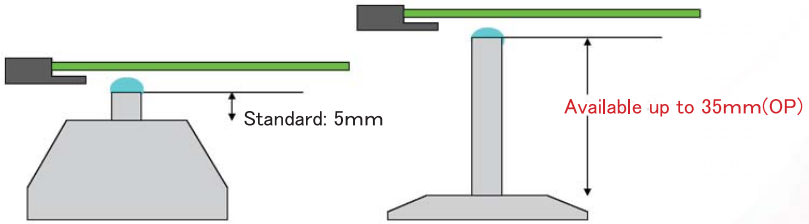




Lead Pitch: 2.5 mm, Land Interval: 0.5 mm
Solderable only in the middle.

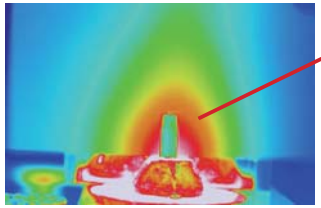
■Long Nozzle





■N2 Temperature

without N2 Heating



With N2 Heating

Settings

N2 Heater Set Temp:350℃

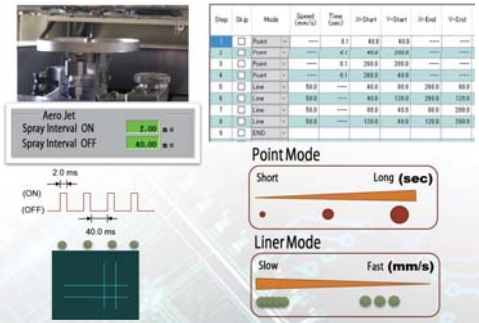
N2 Volume:20ℓ/min

Solder Pot Set Temp:280℃

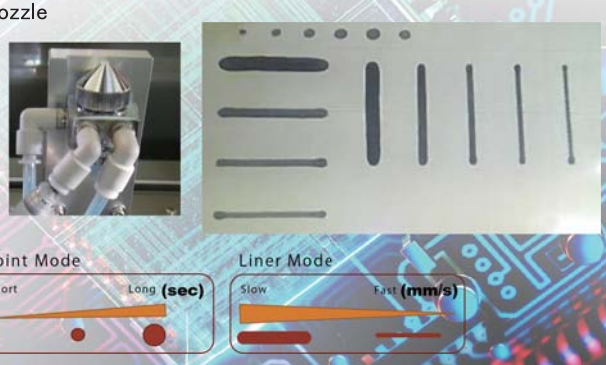
Benefits of using N2 heating

- Preheating PCBs
- Flux activation (Wettability improvement)
- Bridge reduction by low oxygen atmosphere
- Nozzle oxidation prevention (Stable flow)

■Fluxer/Aero Jet Nozzle



■Fluxer/Two-fluid Nozzle



Company Information

■Overview

Company Name: KOKI TEC CORP. Head Office: 2-8-40 Yoshinodai, Kawagoe-City, Saitama 350-0833 Japan
Tel:+81-49-229-5280 Fax:+81-49-229-5310
Establishment Date: November 6,1985
Capital: 80 Million Yen
President: Eiji Mori
Financing Banks: Saitama Resona Bank,Limited. Urawa-Chuo BO
MUFG Bank, Ltd. Ginzadori BO
Mizuho Bank, Ltd. Omiya BO
Sumitomo Mitsui Banking Corporation Shinbashi BO
Type of Business: Manufacturing and sales of automatic soldering system such as flow machines,reflow machines and spray fluxes.
Number of Employees: 45
Nagoya Branch: #102 Ⅱ, 7-4-28, Kozoji-cho, Kasugai-city, Aichi 487-0013 Japan
Tel:+81-568-29-7075 Fax:+568-29-7076
Osaka Branch: #301, 1-2-6, Minoh, Minoh-city, Osaka 562-0001 Japan

■Overseas Sales bases & Maintenance bases

China KOKI TEC (SHENZHEN) CO., LTD
Room A, 4th Floor Laifu Building, Left Side of 2 Fuyong Subdistrict Office Baoan District, Shenzhen City Guangdong Province. P.R.C
Tel: +86-755-2738-0950
Fax:+86-755-2733-2202

Korea KOKI TEC KOREA
http://www.kokitec.co.kr

Taiwan Wave Jet Electrical Co., Ltd.
www.wavejet.com.tw

Thailand TREND Electronics (Thailand) Co.,Ltd.
www.trend.co.th

Malaysia TREND ELECTRONICS (M) SDN.BHD.
www.trend.com.my

Vietnam MEDIN CO., LTD.
www.medin.com.vn

Mexico SUN-WA TECHNOS MEXICO S.A. DE C.V.
www.sunwa.co.jp

India SUMITRON EXPORTS PVT. LTD.
www.sumitron.com

Brazil MEGURO INSTRUMENTOS ELECTRONICOS LTDA.
www.meguro.com.br