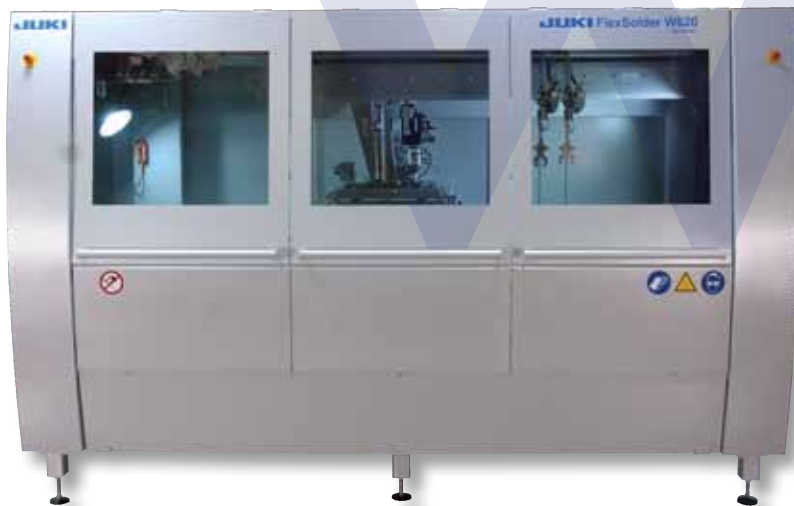


JUKI®

LOWEST COST OF OWNERSHIP

FlexSolder W510 Batch
FlexSolder W620 Inline



Everything you need for lead-free production.
Setting new standards for productivity, flexibility, and reliability.

www.jukiamericas.com



JUKI
W510

JUKI
W620



Juki FlexSolder Series

The Juki FlexSolder Series selective soldering machines are a complete, high level package ready for lead-free production. There are two models: the W510 Batch and the W620 Inline. Both versions offer the ultimate in productivity, flexibility and reliability, bringing you the Lowest Cost of Ownership for your manufacturing process.

Complete system in one compact cell: Flux, pre-heat, and soldering.

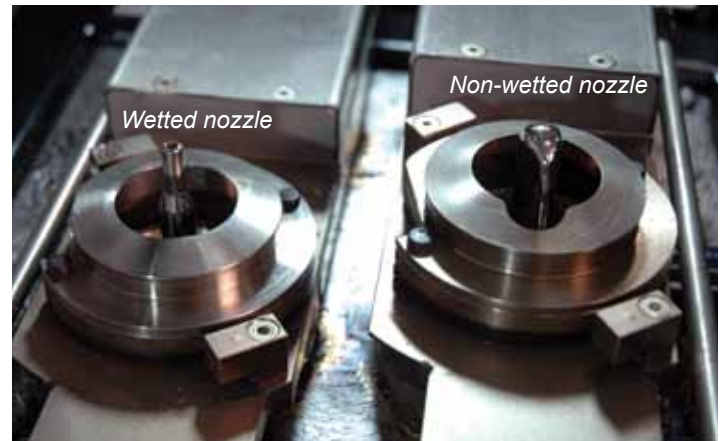
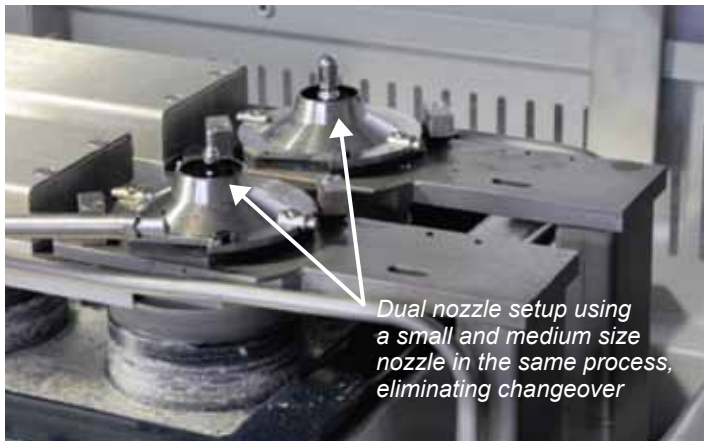


The JUKI Advantage

Dual Nozzle Functionality

The Juki FlexSolder Series is the leader in dual nozzle functionality. A dual nozzle system is faster and more flexible. By eliminating time consuming nozzle changeover and having different size nozzles installed at the same time, manufacturing efficiency is greatly improved.

**Three and four nozzle systems available upon request.*



Mini-wave Nozzles Are Available in a Variety of Sizes and Types for Any Application

The Juki FlexSolder Series offers both a wetted and non-wetted nozzle solution. These nozzles can be used simultaneously on the dual nozzle system, eliminating time consuming changeover. Wetted nozzles offer the ability to solder extremely close to other surface mount devices and can solder or dip in any direction. These nozzles range in sizes from 1.8mm to 25mm and typically solder at 0°.

Non-wetted nozzles flow forward and at 7° like a traditional laminar wave. This allows for good “snap-off” to break the surface tension at the end of the soldering step. These nozzles can solder or dip in any direction except backwards and they range in sizes from 4mm to 25mm. The advantages of using non-wetted nozzles are that they typically have a life span up to five years, even in a lead-free environment and they require very little maintenance.



Special double headed nozzle



43mm turbulent mini-wave

A wide range of specialty and custom nozzles are available for the Juki FlexSolder Series. The 43mm turbulent mini-wave nozzle allows soldering up to five times the speed of a small selective solder nozzle due to the coverage and amount of energy that it can supply. The double headed nozzle can be used for soldering a dual connector in one pass, dramatically improving cycle time.

Soldering Flexibility

The Juki FlexSolder Series can solder at 0° or 7° for superior flexibility across a wide range of applications.

Heated Nitrogen

Programmable nitrogen at the mini-wave makes it possible to decrease the time of contact. The nitrogen flows 360° around the nozzle and is applied precisely at the soldering location for maximum impact.

- Helps eliminate copper dissolution
- Helps eliminate leaching and delaminating
- Better flux activation
- S/W adjustable temperature control
- Provides constant bottom-side heat during soldering process

Full Wave

For the ultimate in flexibility, an optional 18" full turbulent wave can be inserted into the machine in place of the existing mini-waves. It can be pre-heated off-line and ready to swap out in minutes while the existing mini-wave pot stays in the machine with maintained temperature. After the requirements of full wave has been completed, the mini-wave pot moves back into position already heated and calibrated, and ready to go. Typically, at least a 16" PCB can be processed, often using your own existing pallets.



18" turbulent wave



18" turbulent wave with dual mini-wave nozzles

Supports Both Lead and Lead-free Alloys

When the requirement is to run multiple alloys, there are two configurations of the dual solder pot available.

Manual changeover that requires cool down and heat up. Approximate changeover time is two hours total.

Automatic changeover where both pots are in the machine together. One pot can be heating while the other is running production. When ready to change, the pot is already heated and calibrated in the machine ready for production.



Dual pot system

The JUKI Advantage

Solder Level and Solder Wave Control

A closed-loop system constantly monitors the solder level and automatically feeds more solder, using a solder bar feeder as needed. Solder bar feeders are more convenient and cost less than solder wire feeders. An optional RPM sensor is available to ensure constant, precise flow of the wave.

Process View Camera

A real-time view of the soldering process for improved quality control.



Right: Closed-loop solder bar feeder eliminates clogging and costs less than wire rolls.

Left: Real-time view of the soldering process. Each nozzle can have it's own live camera.



Pre-heat

Top-side Ceramic IR heater tubes are built into the gripper for constant process top-side heat. Bottom-side Radiant IR heaters with convection support are also available.



Bottom Radiant IR Heater with convection support.

Traveling top-side pre- and process heat.



JUKI® FlexSolder Series

by Intertec

Inline Configuration

The W620 Inline configuration makes use of a SMEMA conveyor system that allows three PCBs to simultaneously be fluxed, pre-heated, and soldered – dramatically improving cycle time.



PCB ready for solder

The Juki Advantage: Experience

Juki's partner, Intertec GmbH, has been a pioneer in selective solder systems and has been manufacturing them since 1992. We have more than 2000 installations worldwide.

The Juki Advantage: Service and Support

Juki is committed to customer satisfaction, which is why we maintain more full-time service engineers than our top competitors combined. To be the best, we offer an extensive and experienced service group trained in the latest technologies to support our large and growing customer base in the Americas. We also offer no charge for attendance at any regularly scheduled training course at a Juki facility, free machine software upgrades for the life of the machine, and free 24-hour phone support. When you combine this service and support with the most innovative selective soldering systems on the market, you partner with the most reliable team in the industry to provide expertise and support for all of your soldering needs.

The JUKI Advantage

Juki FlexSolder Series Standard Features and Options

Batch W510	Inline W620
<ul style="list-style-type: none"> • Up to 20" x 20" PCB depending on nozzle configuration <ul style="list-style-type: none"> -- Uses universal type carrier (included) 	<ul style="list-style-type: none"> • Up to 18" x 18" PCB <ul style="list-style-type: none"> -- PCB picked up directly or can use carriers/pallets
<ul style="list-style-type: none"> • Servo-driven fluxing unit (including spray fluxer and 5 liter pressurized flux container) 	<ul style="list-style-type: none"> • Inline servo-driven fluxing unit for simultaneous fluxing, pre-heating, and soldering for maximum throughput (Including spray fluxer and 5 liter pressurized flux container)
<ul style="list-style-type: none"> • Solders at 0° or 7° 	
<ul style="list-style-type: none"> • Lead-free ready exchangeable solder pot 	
<ul style="list-style-type: none"> • Software-controlled heated Nitrogen at the mini-wave 	
<ul style="list-style-type: none"> • Calibrated Nitrogen flow meter 	
<ul style="list-style-type: none"> • Closed-loop solder pot level sensor 	
<ul style="list-style-type: none"> • High-end PC including second hard drive with RAID system for constant backup 	
<ul style="list-style-type: none"> ○ Options 	
<ul style="list-style-type: none"> ○ Dual lane conveyor system (Synchronous) 	
<ul style="list-style-type: none"> ○ 18" full turbulent wave for traditional wave soldering on PCBs up to 16" wide (depends on pallet) 	
<ul style="list-style-type: none"> ○ Second solder pot for running dual alloys (two configurations available) <ul style="list-style-type: none"> -- Manual changeover (about 2 hour total changeover time) -- Automatic changeover with 2 built in solder pots on the same axis for instant changeover for facilities that require constant changeover 	
<ul style="list-style-type: none"> ○ Various nozzle types and sizes from 1.8mm – 43mm depending on type <ul style="list-style-type: none"> --Special nozzles available upon request 	
<ul style="list-style-type: none"> ○ Closed-loop automatic wave RPM adjustment 	
<ul style="list-style-type: none"> ○ Top-side Ceramic IR pre-heater 	
<ul style="list-style-type: none"> ○ Bottom-side Radiant IR pre-heater (included on W620 inline machine) 	
<ul style="list-style-type: none"> ○ Live process viewing cameras 	
<ul style="list-style-type: none"> ○ Micro-Dot Drop-Jet fluxer for no clean fluxes 	
<ul style="list-style-type: none"> ○ Automatic fiducial correction camera 	
<ul style="list-style-type: none"> ○ PCB Warpage control 	
<ul style="list-style-type: none"> ○ Barcode reader 	
<p style="text-align: center;">Several other options available upon request</p>	

Juki FlexSolder Series Specifications

Warranty	Machine Parts and Labor	1 year, additional warranty programs available upon request		
Training	At customer site At Juki Site i.e. NC or CA	1 week install and training, additional 1 week of advanced process training which can be used anytime during warranty period of machine Free life time training classes available during scheduled training classes		
System Size/Weight		Batch	Inline	
	Length of the System	86" (2.2m)	122" (3.1m)	
	Width of the System	43" (1.1m)	43" (1.1m)	
	Height of the System	68" (1.750m)	76" (1.950m)	
	Weight of the System	2600 lbs. (1200kg)	3300 lbs. (1500kg)	
Power			Power Consumption	
	Voltage	208V, 3 phase, Ground	400V*1*4, 3 phase, Ground, Neutral	
	Frequency	60 Hz.	50/60 Hz.	
	Base machine with only N2 nozzle heaters	25 Amps	13 Amps	5.6 Kw
	With N2 heaters and top heater	32 Amps	17 Amps	9.1 Kw
	With N2 heaters and bottom heater	54 Amps	28 Amps	15.6 Kw
With N2 heaters and top and bottom heater	60 Amps	32 Amps	17.1 Kw	
Air Supply (into machine)	Air supply min./max. Standard connection size	72-116 PSI (5-8 bar) 6mm tube		
Nitrogen Supply	Nitrogen supply pressure	72-87 PSI (5-6 bar)		
	Standard connection size	6mm tube		
	Quality recommendation	(99.999) 10PPM minimum (99.99 100PPM)		
	Usage	Single nozzle 63-85 CFH (30-40 LPM)	Dual nozzle 148-170 CFH (70-80 LPM)	
Recommended supply	Large pot with full wave 340 CFH (160 LPM) Nitrogen generator			
Exhaust		Batch	Inline	
	Extraction Rating Exhaust port size	176-235 CFM (300-400 CMH) 7.87" (200 mm)	2 Stacks at 176-235 CFM (300-400 CMH) Each 7.87" (200 mm)	
Motors	XYZ, fluxer and solder pumps Positioning Accuracy	Servo (Maintenance free) 0.0039" (0.100 mm)		
Solder Unit	Temperature solder pot	Up to 660°F (350°C) (Standard. Special HMP available up to 840°F (450°C)		
	Capacity solder pot	110 lbs. (50 Kg) Pb / 100 lbs. (45 Kg) Pb free		
	(POT) Lead-Free Ready	Lead-Free compliance: Stainless solder pot/pumps with Ceramic/Teflon composite material		
	Mini-Wave Nozzles	Quick exchange mini-wave nozzle with multiple sizes available		
	Mini Wave Nozzle sizes	Wetted 1.8mm - 25mm	Standard 4mm - 23mm	
(Nozzles) Lead-Free Ready	Special wide waves (43mm)			
Solder Refill System	Lead-Free compliance: Stainless solder nozzles with Patented Tenifer Nitrate protection			
Wave Measurement	Automatic solder bar feeder Sensor with automatic RPM adjust			
Fluxing Units (Drop jet and spray fluxer)	Flux Pot Capacity	1.3 gallon (5.0 liter)		
	Flux Frequency, Micro Drop	2-500Hz		
	Flux Volume, Micro Drop	0.005" (130 micron standard) or 0.010" (270 micron)(Must specify if special is needed)		
	Usable flux	Low solid fluxes which use isopropyl alcohol as thinners are recommended		
	Max Flux Solids	Drop jet: <3% Spray: <26%*2		
Workspace		Batch	Inline	
	Gripper (PCB transport)	Universal Carrier	Adjustable PCB gripper	
	Gripper angle	0° and 7°	0° and 7°	
	Max. Board Size/solderable area	20"x20" (510mm) with single nozzle*3 18"x18" dual nozzle	18"x18" (460mm) single and dual nozzle*3	
	Minimum Board Size width	No limit, but may require special holding	2.5" (63mm)	
	Top-side clearance	Std. 3.5" (90mm)	Std. 3.9" (100mm)	
	Bottom-side clearance	0.59" (15mm) around the nozzle	0.59" (15mm) around the nozzle	
	Board thickness MIN/MAX	MIN 0.050" (1.2mm) Max 0.120" (3mm) (Can accommodate others as special setup)	MIN 0.050" (1.2mm) Max 0.120" (3mm) (Can accommodate others as special setup)	
PCB Edge Clearance	SMEMA 1.2" (3 mm)	SMEMA 1.2" (3 mm)		
PC	Processor	Minimum P4		
	RAM	Minimum 512 MB		
	Hard drive	Dual hard drive with minimum 80 GB. Built in RAID systems for automatic backup protection.		
	Monitor	Flat Screen		
	Networkable	Yes		
	USB Connections	Yes		
	CD Read/Write	Yes		
Programming	Data input	Gerber (274x or 274d) .JPG, .BMP, etc		
	Method	Point and Click (Nozzles are Pre-defined in Library with Line Speed, Dip, Dwell, Etc)		
	Offline Programming S/W	Yes, Included		
Other	Machine Noise	<65dB		

*1 Requires step up TF from 208 or step down TF from 480 (preferred)

*2 Special heads can be used for higher solids flux use but should be discussed with JUKI prior to making this change.

*3 Up to 24" can be achieved on a case by case applications.

*4 W620 is built for 400V connection. See above note about transformer. 208 can be ordered but may delay in the shipping.



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JUKI Specifications and appearance may be changed without notice.

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