GEN-S SERIES

K&S SMART SERIES: GEN-S

The ***GEN-S Series*** of Ball Bonders from K&S is a brand new series of equipment succeeding the ***Power Series*** lines of bonding equipment.

In addition to its superior capability in wire bonding, the ***GEN-S Series*** of bonders marks the introduction of Smart bonding equipment.

AUTOMATIC WIRE BONDER

RAPID™ Pro

RAPID™ Pro introduces advanced process capabilities, real-time monitoring and diagnostics to ensure the best quality and efficient assembly serving high-performance and high-reliability semiconductor applications.

RAPID™ Pro is the first K&S ***GEN-S Series*** Automatic Bonder engineered to enable Industry 4.0 communication and is RoHS compliant.



KEY FEATURES

- Real-time Process & Performance Monitoring
- Equipment Health Monitoring
- Advanced Data Analytics & Traceability
- Predictive Maintenance Monitoring & Analysis
- Detection & Enhanced Post bond Inspection
- Latest Response Based Processes
  - ProCu-6, ProAu-2, ProAg
  - PSP-Cu, PSP-Ag
  - ProCu Loop





Real-time Process Monitoring

*Enabling a **Smart Future**.*

Kulicke & Soffa®
Technology . Innovation . Solutions

TECHNICAL SPECIFICATIONS

WIRE BONDING CAPABILITY

Ultra Fine Pitch

35 µm inline bond pad pitch

Wire Size

0.6 mil to 2.5 mil copper, silver, or gold wire
(heavy wire kit needed for wire diameter > 2.0 mil)

Bonding Area

X Axis: 56 mm
Y Axis: 80 mm (Standard), 87 mm (LA), 90 mm (ELA)

Total Bond Placement Accuracy

2.0 µm @ 3 sigma

Pattern Recognition/Optics/Vision

Higher Resolution Progressive Scan Vision System
CCD Camera

- Dual Magnification Optics (standard: 2x & 6x)
- Optional Programmable Focus for High Magnification

Premium Processes

New - ProCu-6 and ProAu-2
Pro Series - ProBond, ProStitch PLUS, ProLoop, and ProCu SSB

Program Compatibility

Compatible with all standard processes from existing models
Process programs are NOT backwards compatible. Programs taught on a new bonder model will not run on an older bonder.

LOOPING CAPABILITY

Maximum Wire Length

7.6 mm with 1.0 mil wire
3.0 mm with 0.6 mil wire

Minimum Loop Height

Ultra-low loop with Power Series Low Loop
40 µm with 0.6 mil wire

Wire Sway

Wire length ‹ 2.54 mm: 25 µm @ 3 sigma
Wire length › 2.54 mm: ± 1% wire length @ 3 sigma

SET UP & CONVERSION TIMES

If Wire Type remains unchanged, the time estimated below applies.
If Wire Type changes, the time estimated would be doubled.

Same Leadframe Type: ‹ 4 min

Heat block insert & clamp changes, program load from disk

Different Leadframe Type: ‹ 8 min

Leadframe width & length changes, magazine size change, heat block insert & clamp change, program load from disk

CONNECTIVITY ENHANCEMENTS

Standard – K&S *Connect*

K&S *Connect* enables automatic transfer of data generated by RPM for future traceability.

Optional – KNet *PLUS*

KNet *PLUS* improves efficiency and productivity, by monitoring equipment status in real-time. It collects data and controls process programs locally or from anywhere on a customer's network. Contact your K&S Sales Representative to learn more.

MATERIAL HANDLING CAPABILITY

Package/Leadframe Dimensions

Length:	90 to 300 mm (L/F shorter than 100 mm will require optional injector kit and short magazine kit)
Width:	15 to 92 mm (Standard) 15 to 95 mm (LA) 25 to 100 mm (ELA)
Thickness:	0.10 to 0.9 mm (L/F thicker than 0.9mm will require optional Flat Boat Kit)
Die Pad Downset:	Up to 2.3 mm

Magazine Dimensions

Width:	20 to 110 mm
Length:	127 to 305 mm
Height:	50 to 178 mm
Slot Pitch:	1.27 to 25 mm
Max. Weight:	5.22 kg

MAN-MACHINE INTERFACE

Monitor

21.5″ color LCD display

Durable Control Panel

Function keys and dedicated buttons, and user-friendly mouse.

Industry-Recognized User Interface

Simple pull-down menus. Color-overlays of wire groups for easy programming and teach.

FACILITY REQUIREMENTS

Minimum Air Pressure

3.52 kg/sq cm (50 psi)

Nominal Air Consumption (flow rate)

185 liters/min @ 4.6 kg/sq cm (6.5 CFM @ 65 psi)

Cover Gas Consumption for Cu & Ag wire bonding (flow rate)

Minimum 0.6 liters/min
Maximum 1.5 liters/min
Nominal 1.1 liters/min

Input Voltage

Standard
200 - 240 VAC; - 15% to + 10%
Single Phase 50/60 Hz (± 3 Hz)
Optional
100 - 115 VAC; - 15% to + 10%
Single Phase 50/60 Hz (± 3 Hz)

Power Consumption

1.5 KVA (nominal), 2.6 KVA (max.)

Footprint

Base machine with MHS
889 mm wide x 1009 mm deep (35" x 39.7")

Weight (estimated)

Machine:	590 kg (1300 lbs)
Machine & Crate:	670 kg (1477 lbs)

For more information, contact your local authorized K&S sales representative or visit **www.kns.com**

© 2019 Kulicke & Soffa Industries Inc. All specifications subject to change without notice.
Trademarks used herein are the property of Kulicke & Soffa Industries, Inc. or their respective owners.

BB-032-07/2019 (rev)

CE RoHS compliant Technology Innovation Solutions