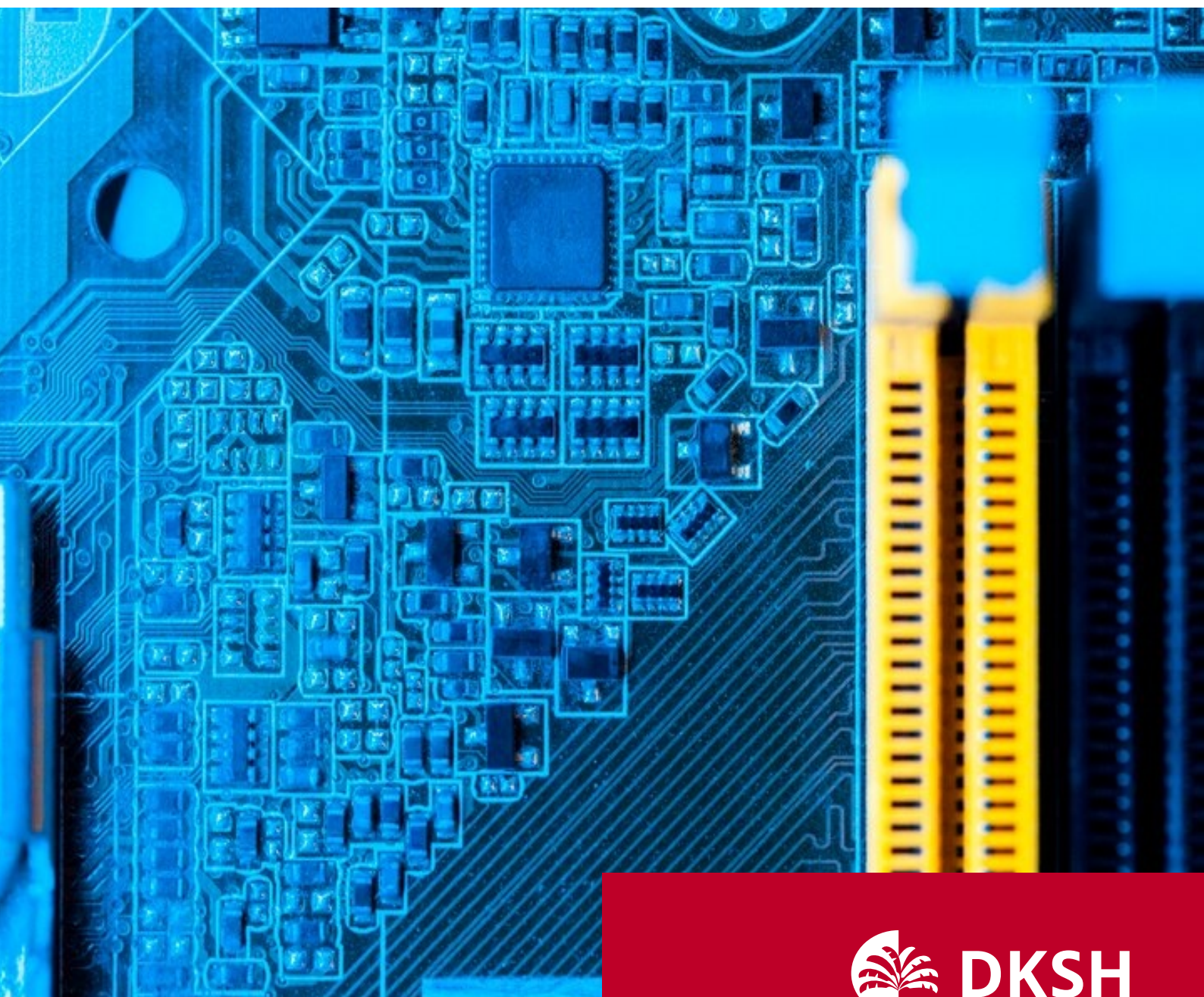


Business Unit

Technology

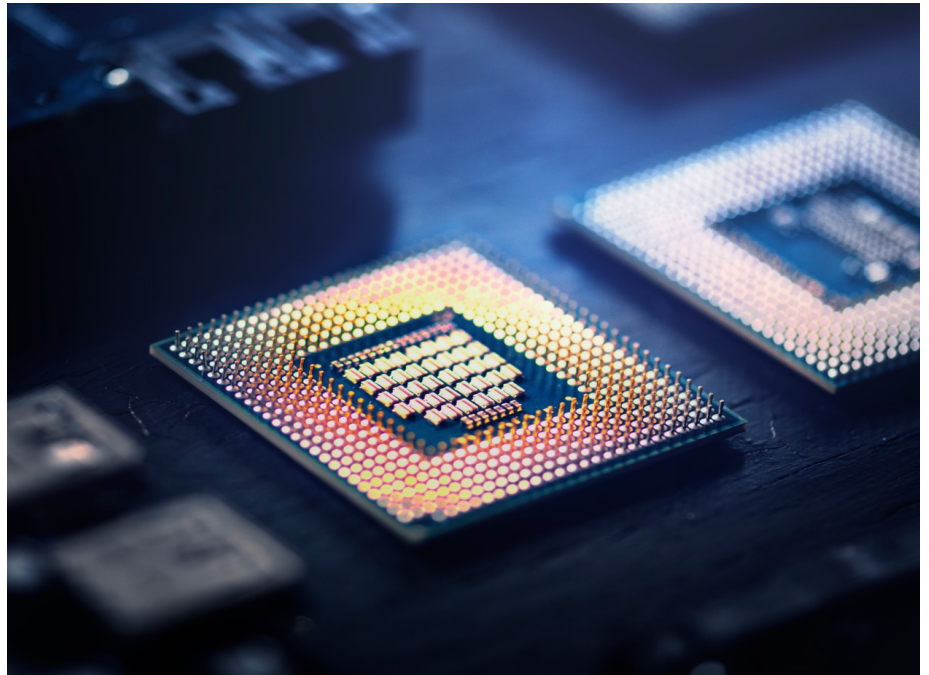
Product Catalog

Semiconductor and Electronics



Delivering Growth – in Asia and Beyond.

We provide high quality tools and advanced process auxiliaries for the semiconductor and electronics industry to support the development of new processes and to drive innovation.



Our product

We offer a complete portfolio of production equipment, characterization equipment and consumables to help you solve complex challenges

Characterization

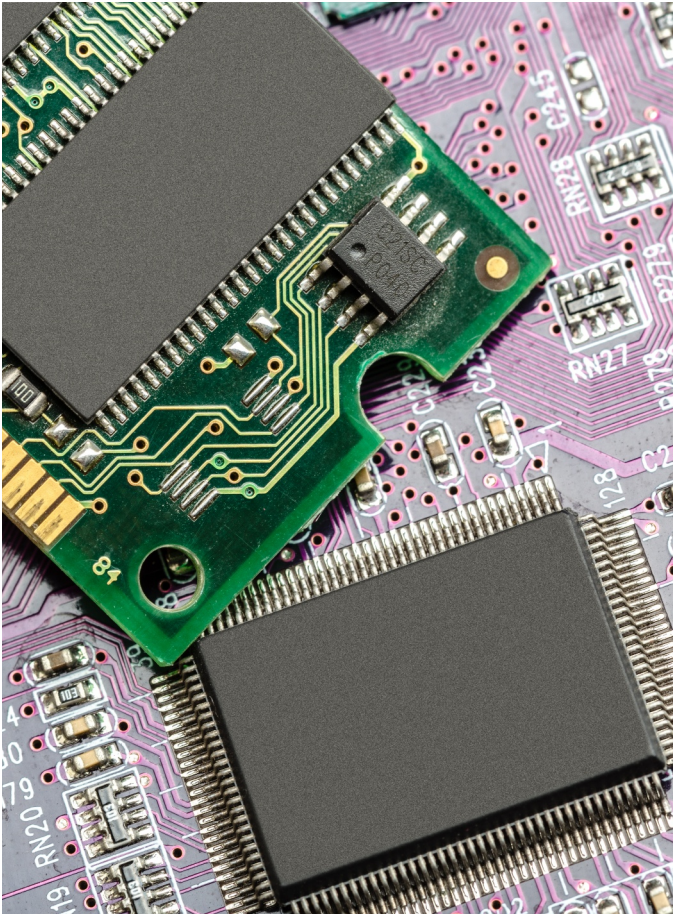
Discover a range of characterization equipment such as optical inspection of patterned and non-patterned wafers, solar cell test systems and panel test systems.

Consumables

Discover a range of consumables such as ceramics, vacuum and electrostatic chuck, chuck refurbishment, heating systems, wafer carrier, solder paste, plating and etching chemicals and solder for bumping applications.

Production Equipment

Discover a range of production equipment, products and solutions for semiconductor, LED, solar applications for Measurement such as film adhesion testing, systems for wafer, PVD systems, PECVD systems, dispensing systems, bonding systems and micro material processing.



We are a full service provider for applications in front-end processes, back-end processes, ingot and wafer manufacturing, solar cell manufacturing, module manufacturing, thin-film manufacturing, touch panels, LED and micro-electronics.

Our engineers provide expertise to help you increase throughput, raise yield and reduce cost of ownership while establishing optimized and reliable processes.

Our solutions

We provide you with solutions in following categories

Photovoltaic

Discover a range of production equipment, products and solutions for the photovoltaic industry.

Semiconductor

Discover a range of production equipment, products and solutions for the semiconductor industry.

Electronics

Discover a range of production equipment, products and solutions for the electronics industry.

SMT Equipment

VJE Rework and X-ray System
 Screen Printer
 Hanwha SMT Equipment
 Reflow Oven
 GETECH Router (Depanel)
 ECD Thermal Profiler
 Automatic Optical Inspection & X-ray
 PBT Cleaning System
 Precision Cleaning Solution
 Nutek Handling Equipment
 EPM Wave Soldering System
 AccuAssembly Storage Solution
 PCBA First Article Inspection

Semiconductor Equipment

Leading Plasma Innovation
 SOLARIUS Metrology System
 Surfx Atmospheric Plasma
 SEO Contact Angle & Surface Tension Analyzer
 DOHONE Storage & Metal Products
 ADT Dicing Machine/Peripheral
 ATV Thermal Processing

General Industry

Resistance Spot Welding
 Hot Bar Bonding/ Reflow Soldering/ ACF Bonding
 Weld Checker & Monitoring System
 Accessories and Others
 WeldHead
 Laser Welding/ Laser Cutting Systems
 Hermetics Sealing Systems
 Glovebox Systems
 AIM Solder Material
 COOL CLEAN
 Heraeus (FUSION) UV Curing System
 Nordosn EFD
 EIT Radiometer Products
 TECH-SONIC Ultrasonic Metal Welding
 MIDAS Microelectronics Rework System
 EFFIMAT Storage System
 PBA Masking

VJE Rework System



Summit Series



Summit 1800i






Semi-Automatic Rework System

The Summit 1800i is the latest in the popular Summit series. Carrying forward the leading heating capacity, throughput, repeatability, and reliability of the Summit 1800, the Summit 1800i offers added performance and flexibility.

Redesigned component placement provides improved performance for micro passive devices and connectors. With up to 80mm Field of View, the Summit 1800i meets rework need for today and many years to come.

Key Features

- Placement Accuracy – 0.005" (12μ)
- Top Heater – 1.6 kw Convection
- 2.2 kw Top Heater Boost
- Bottom Heater – 4.0 kW Convection
- Optional 7.8 kW Bottom Heater
- Maximum Board
- Standard 18 x 22" (455 x 560 mm)
- Optional 22 x 30" (560 x 760 mm)

	SUMMIT LXI	SUMMIT 2200i	SUMMIT 1800i	SUMMIT 750i	SRT Micra
Model					
Component Range	~1mm to ~200mm	00804 to ~200mm			
Max. FOV	80mm	65mm (Option 80mm)		50mm	35mm
Placement Capability	0.0010" (25u) mean + 3σ	0.0005" (12u) mean + 3σ		0.0020" (50u) mean + 3σ	0.0005" (12u) mean + 3σ
Top Heater	2.2kW Focused Convection Top Heater	1.6kW High Performance Forced Convection Top Heater With 2.2kW Boots Heat Mode		1.6kW High Performance Focused Convection Top Heater	1.5Kw Forced Focused Convection Top Heater
Bottom Heater	8.0kW Convection Bottom Area Heater (Optional 10kW)	4.0kW Convection Bottom Area Heater (Optional 7.8kW)		4.0kW Convection Bottom Area Heater	800W Convection Bottom Site Heater Opitonal 2.4kW)
Local Bottom Heater		1.0kW Convection Bottom Site Heater with 2x2" Mini-Plenum			NA
Board Handling	24 x 36" (600x 900mm) 26 x 48" (650 x 1200mm)- Optional	18 x 22" (455 x 560mm) 22 x 30" (560 x 760mm) - Optional		18 x 20" (455 x 560mm)	12 x 14" (300 x 350mm)

SCAVENGER

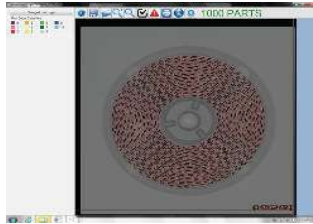


Scavenger – Non-contact Solder Removal – provides a safe and effective means to prepare rework sites for component replacement.



VJE Reels Counter & X Ray System

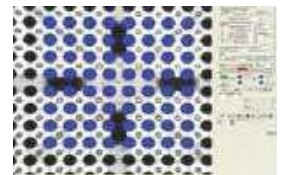
XQuikIII with AccuCount Technology



AccuCount Key Features

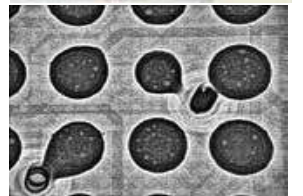
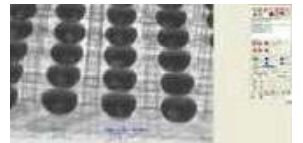
- Automatically "counts" components as small as 01005
- Counts 7" to 15" reels
- One button operation
- Reduce cycle times
- Optional barcode printing
- Connect to MES for seamless inventory control
- Substantially speed up part counting process
- >99% part count accuracy

Next Generation Affordable X-ray Inspection
VJ Electronix leads the way in providing robust and practical X-ray solutions to solve real production issues. Innovation and simplicity govern system design to maximize ease-of-use with programmed inspection and simple 1-2-Go! user interface.



Mask Software - allows automated measurement of two sided PCB

Vertex II X-ray systems are production ready, offering superior uptime and unmatched value. The Vertex Series is configurable to match a variety of applications with off-axis imaging and a variety of available X-ray sources, detectors and product manipulators.



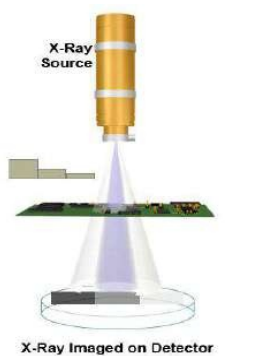
Automated Defect Enhancement (ADE) - making subtle feature easy to find



Part Library Template



Common Config



80kV	90kV	130kV	160kV
30μ	4μ	5μ	0.5mm
>20lp/mm	>40lp/mm	>40lp/mm	200 - 400μ
435X	3600X	1950X	1X - 20X
3.4" (87.9mm)	3.4" (87.9mm)	3.4" (87.9mm)	8 - 16inches (200-400mm)
+/- 45°	+/- 45°	+/- 45°	Application Dependent
20.0 x 20.7" (508 x 525mm) 18.0" x 20.4" (457 x 518mm) - with ergonomic pull out drawer option			

ESE Screen Printer



US-X Series Smart & Efficient Standard Printer



US-FX Series The World First Fully Automatic Changeover Printer



US-LX Series LED XL Size Printer (Length up to 1.8m)



US-2000BP The World First Fully Automatic Changeover Printer

Hanwha SMT Equipment



Hanwha

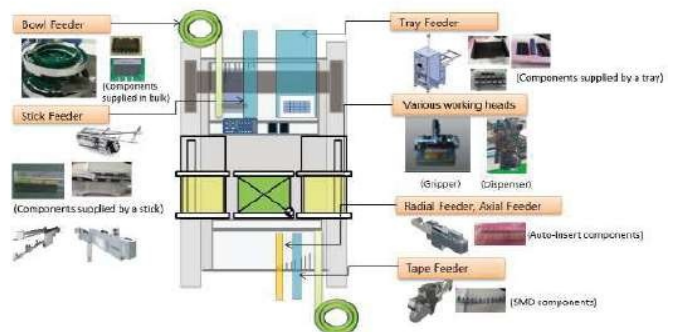
SM Series

Standard of Mid-class Mounter



Specifications	SM471 Plus	SM481 Plus	SM482 Plus
Speed	78,000 (Optimum)	40,000 (Optimum)	30,000 (Optimum)
Structure	2 Gantries x 10 spindles/Head	1 Gantry x 10 spindles/Head	1 Gantry x 6 spindles/Head
Comp. Range	0402 ~ 14mm, H12mm	0402 ~ 42mm, H10-15mm	0603 ~ 55mm, L75mm H12-15mm
PCB Size	L510xW460 (Standard) L610xW460 (Option)	460(L) x 400(W)(Standard) 510(L) x 460(W) (Option) 610(L) x 510(W) (Option) 1,500(L) x 460(W) (Option)	460(L) x 400(W) (Standard) 510(L) x 460(W) (Option) 610(L) x 510(W) (Option) 1,200(L) x 510(W) (Option)

SM485P Wide Ranged Component Placer

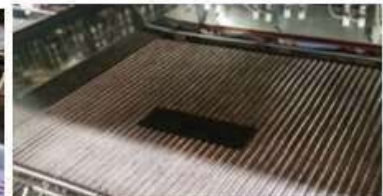
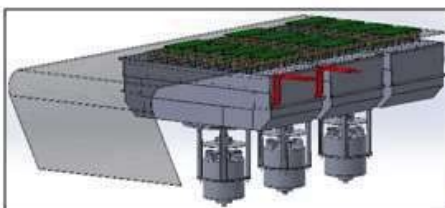


HM520**Modular High-Speed Mounter****HM520 Series**

- Modular Pick and Place Equipment Series
- High-speed Modular Chip Mounter equipped with Rotary placement head.
 - Speed: 80,000 CPH (Optimum)
 - Spindle/Gantry: 2 Gantry x 20 or 6 Spindle/Gantry
 - Accuracy: $\pm 25\mu\text{m}$ @ $\text{CpK} \geq 1.0$ (Chips)
 $\pm 30\mu\text{m}$ @ $\text{CpK} \geq 1.0$ (ICs)
 - PCB Size: 510mm x 580mm (Single lane)
510mm x 310mm (Dual lane)
Max. 750mm x 580; 750mm x 310mm

**SFM3 Flip Chip Mounter Series**

- 2 Spindles/Head * 2 Gantry
- Speed: 10.0k UPH (Optimum)
- Accuracy: $\pm 5\mu\text{m}$ @ 3σ
- Die Size: 0.5 ~ 32mm
- Die Thickness: Min. 40 μm
- Wafer Size: Up to 12"
- Substrate Size:
330(L) x 330(W)mm (1 Conveyor)
330(L) x 166(W)mm (2 Conveyor)
- Dimension: 1,681(W) x 1,460(D) x 1,430(H)mm
- C2W, FOWL P

TSM Reflow Oven**AIR REFLOW****NITROGEN REFLOW****SUCTION REFLOW FOR SEMICONDUCTOR**



GETECH Router (Depanel)

PCB Inline Routers

Getech's comprehensive range of in-line depaneling systems includes solutions for medium and high volume de-paneling, pre-routing, sawing and total EOL solutions. All machines are configurable, with a range of options including multiple X,Y,Z gripper fixtures, fixed or multiple axis tables, single or dual head spindles.



RBM - Router with Bording Handling

The RBM - a twin station, fully automated de-paneling system designed to deliver unrivalled performance in speed, accuracy and through put, offering:

- Twin station, single or dual spindle
- Pin or gripper fixtures for routing and post route off loading
- Auto tool change

Panels are located into the RBM on a regular edge bell conveyor, and placed securely into fixture ready for routing. An X/Y/Z gripper will secure and unload the individual PCBs and place onto tray/convey/or other EoL equipment.

GBR - Getech Bottom Router

IDM - Inline Dicing Machine



The Getech Bottom Router (GBR) has been designed to meet the needs of CEMs and OEMs having a wide variety of PCBs and multiple change-overs per day or shift. With a top Gantry Robotic hand for holding the individual PCBs, the machine cuts from the bottom making the system effectively able to work with Fixtures, High Speed with High Flexibility and Getech Precision

The IDM is a single station sawing machine, designed to deliver unrivalled stress free performance in speed and accuracy. A precision rotary table filled with a precision gripper fixture, post router and pre route board handling, plus an array software locals to enhance the performance of routing cycle, makes the IDM ideal for panels such as memory modules, where fully automated high throughput is a must.



GAR - Getech Automatic Router

GAR is an inline router machine operating two worktables continuous operation. Each table can accommodate a maximum PCB size of 350mm x 310mm. The GAR includes a dual PnP head for loading PCB's post depaneling. A new Graphical User Interface (GUI) with Getech's "Move, Teach & Cut" advanced control software provides user friendly "visual" programming for rapid and accurate online programming.

PCB Stand-alone Routers

Getech's range of stand-alone (offline) routers is suited for Low through High volume production, flexible table configurations and programming accommodate high-mix production and offers exceptional fast product set-ups and changeovers. A comprehensive range of options includes fiducial correction, Barcode scanning and integrated communication with factory information systems.



GSR2280

GSR228 is included in Getech's new range of Routing Machines. Operating revised motion control the GSR2280 is the fastest depaneling machine available today delivering dust free finished individual PCBs with a dual vacuum system and 3 stage filtration system.

The GSR2280 features a maximum panel size of 550mm x 585mm [21.5" x 23"] on each of its twin tables, Top clamp featuring a new Graphical User Interface (GUI) with Getech's "Move, Teach & Cut" advanced control software provides user friendly "visual" programming for rapid and accurate online programming.

GSR 1200/1280/1290 & GSS 1200



Maximum performance is achieved through use of advanced precision manipulators on all axis. Options available include train or single table, vacuum or conventional fixtures and rotary saw, single or dual head spindles.

Features

- High acceleration/deceleration speeds
- Powerful Servo motors powered Z axis with power of brake
- Large range of panel size from 350mm x 350mm up to 910mm x 510mm with integrated top clamping provides exceptionally rigid retention of the PCB during singulation.



Orion

ORION is the new generation standalone router, specially designed as a low-cost solution for stress free depaneling of printed circuit boards assemblies.

Router Machine Features, Specifications and Options

	FULLY AUTOMATIC IN-LINE ROUTERS			SEMI AUTOMATIC ROUTERS							
	RBM 3600	GBR	GAR 1200	ORION	GSR 1200	GSR 1280	GSR 1280E	GSR 1290	GSR 1300	GSR 1380	GSR 2280
CONFIGURATION											
Vacuum System	Top Dual	Bottom Single	Top Dual	Top Single	Top Dual	Top Dual	Top Single	Top Single	Bottom Dual	Bottom Dual	Top Dual
Number of Work Tables	32 x 25	40 x 50	35 x 31	50 x 45	35 x 35	50 x 50	61 x 61	91 x 61	35 x 35	50 x 50	55 x 58
Max panel Size WxD (cm)	na	na	Option	na	Standard	Option	Option	Option	Standard	Option	Option
150w Hybrid Bearing Spindle ³	na	na	Option	Standard	Option	Option	Standard	Standard	Option	Standard	Standard
250w Hybrid Bearing Spindle ⁴	Standard	Standard	Standard	na	GSR1200D	GSR1280D	GSR1280ED	GSR1290D	GSR1300D	GSR1380D	GSR2280D
500w Hybrid Bearing Spindle ⁵	Option	na	na	na							
Dual Spindle (only 250w Spindle)											
MACHINE STANDARDS											
CE Certification	Option	Option	Option	na	Option	Option	Option	Option	Option	Option	Option
FIXTURES											
Fixture Type ¹	D,G	None	D,G	D,U	D,U,V,G	D,U,V,G	D,U,V,G	D,U,V,G	D,U,V,G	D,U,V,G	D,U,V,G
SOFTWARE FEATURES											
Advance Edit ²	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard	Standard
Tool Life Optimization	Option	Standard	Option	Standard	Option	Option	Option	Option	Option	Option	Option
Fiducial Mark Alignment	Option	na	Option	Standard	Option	Option	Option	Option	Option	Option	Option
Independent Table Program	Option	na	Standard	Option	Option	Option	Option	Option	Option	Option	Option
Bar Code Program Verification/Interface	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Edge Vision Alignment	na	na	New	New	New	New	New	New	na	na	New
OPTIONS											
MES/ FIS Integration	New	New	New	New	New	New	New	New	New	New	New
Air Ionizer Fan	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Dual Vacuum Blower/Filter Tank System	Standard	Option	Option	Option	Option	Option	Option	Option	Option	Option	Standard
Incoming Air Pressure Sensor	Standard	Standard	Option	Option	Option	Option	Option	Option	Option	Option	Option
Automatic Tool Bit Change	Option	Option	Option	na	na	na	na	na	na	na	na
Intelligent Fixturing	na	na	Option	Option	Option	Option	Option	Option	Option	Option	Option
Vacuum Pressure Sensor	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option	Option
Safety Light Curtain Sensor	na	na	na	Option	Option	Option	Option	Option	Option	Option	Option
Tool Height (Length) Check Module	Option	Option	na	na	Option	Option	Option	Option	Option	Option	Option
Ionizer Air Nozzle (Table)	na	na	Option	na	Option	Option	Option	Option	Option	Option	Option
Stripper or Ramp Mechanism	na	na	na	na	Option	Option	Option	Option	Option	Option	Option
Automatic Top Clamps	na	na	Standard	na	Option	Option	Option	Option	Option	Option	Option

Notes:

Fixture Type¹

- D = Dedicated
- U = Universal
- G = Gripper
- V = Vacuum

Spindle Types

- 150 W Spindle³ [Type 4025] maximum PCB thickness is 3 mm
- 250 W Spindle⁴ [Type 4033] maximum PCB thickness is 8 mm
- 500 W Spindle⁵ [Type 4041] maximum PCB thickness is 8 mm

Advance Edit² software features:

1. Camera Assisted Teaching
2. Matrix Programming (Pallet/Array)
3. Manual Transformation (Easy Conversion)

ECD Thermal Profiling



SuperM.O.L.E.® Gold 2
6 Channel Thermal Profiler
Smartest Profiler on the Planet



Oven SENTINEL
Intelligent Monitoring System



V-M.O.L.E.®
3 Channel Thermal Profiler
The 1st True Profiling Innovation in Years!



Reflow Rider / OvenCHECKER®
Reflow Process Verification... Made Easy!



MEGAM.O.L.E.® 20
20 Channel Thermal Profiler Advanced Profiling for High-Reliability, High-Value PCBs



Automatic Optical Inspection & X-ray



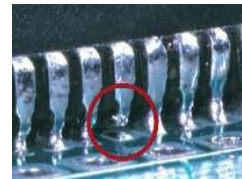
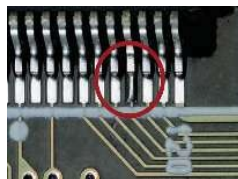
S3088 flex



- High-speed inspection of fine-pitch components with OnDemandHR function
- Extended Lifted Lead Detection
- Fast program creation with either vVision or EasyPro
- Full color evaluation
- Integrated Verification ensures a zero defect escape rate
- Extremely high throughput due to FastFlow Handling

Technical Specification

Application		Placement and solder joint inspection (reflow and wave soldering)
Camera technology		
Positioning unit	Synchronous linear motor	
Orthogonal camera module 8M (white LEDs)		
Field of view	57.6 mm x 43.5 mm (2.3" x 1.7")	
Resolution	23.5 µm (standard), 11.75 µm (high) switchable with OnDemandHR	
Number of megapixel cameras	4	
Angular view camera module 8M (white LEDs)		
Resolution	16.1 µm (standard), 8 µm (high) switchable with OnDemandHR	
Number of megapixel cameras	4, 8 (optional)	
PCB dimensions		508 mm x 508 mm (20" x 20") (L x W)
PCB support		Optional
Transport height		850 - 950 mm ± 20 mm (33.5" - 37.4" ± 0.8")
Width adjustment		Automatic
Transport concept		Single track transport
PCB clamping		Pneumatic
Upper transport clearance		35 mm (1.4"), 50 mm (2") (optional)
Lower transport clearance		50 mm (2") (standard), up to 85 mm (3.4") (optional), 40 mm (1.6") with PCB support



X8011 - II PCB

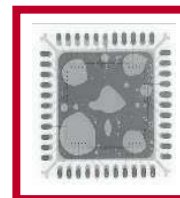
Brilliant quality, optimized processes



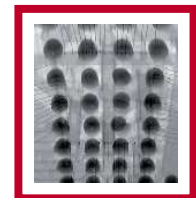
THTs under angled radiation



QFP orthogonal radiation



QFN orthogonal radiation



BGA under angled radiation

Technical Specification

	X8011-II PCB eco	X8011-II PCB plus	X8011-II PCB plus
X-ray technology			
X-ray tube	Sealed direct beam tube or open microfocus transmission tube (optionally also TXD X-ray tube, < 1.5 µm)		
High voltage	10 - 130 kV / 10 - 160 kV / 10 - 200 kV		
X-ray current	50 - 300 µA / 5 - 1000 µA		
Target power	max. 20 W / max. 40 W		max. 40 W
Geometric magnification	max. 35 times / max. 2650 times		max. 2650 times
Image converter	High resolution		
Diagonal	7.3" FPD, 14 bit		11" FPD, 14 bit
Proven resolution (at 90 kV/80 µA)	< 16 - 50 µm / < 4 µm		
Detector swivel range	0°	0 - 60°	0 - 60°
Additionally via the rotation and tilt axis +/- 45° (90°)			
X-ray cabinet	Designed to meet requirements for fully protected devices in accordance with RoV (German X-ray regulation), CE mark and additional international standards. Radiation leakage rate < 1 µSv/h		
Sample handling			
Manipulator	X-Y-Z	X-Y-Z plus rotation module	
Max. table travel range	Horizontal x/y-axis: 460 mm x 435 mm (18.1" x 17.1") Vertical z-axis: 290 mm (11.4")		
Max. rotation module travel range	-	Horizontal x/y-axis: 350 mm x 430 mm (13.8" x 16.9") Vertical z-axis: 290 mm (11.4") n x 360°	
Max. sample weight	10 kg (22 lbs) (with rotation module, 5 kg/11 lbs)		
Sample change	Manual or motorized window opening		
Optional additional axes available	Yes		

PBT Cleaning System



SUPERSWASH / TWINGO / HYPERSWASH

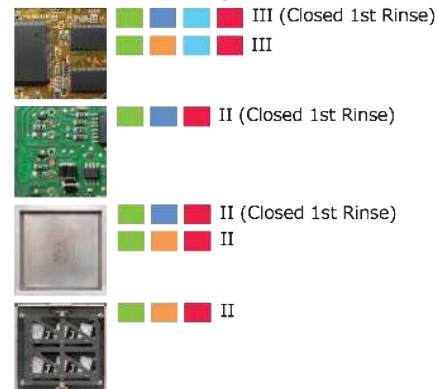
DIRECT RAY AGAINST SURFACE TECHNOLOGY



APPLICATION

- Universal cleaning solution (PCBA, misprint, stencil in one system)
- Designed to clean difficult Hi-density PCBA, with low standoff components
- HDI, DCB, BGA, hybrids, PoP, SiP, etc.
- High throughput & low process cost stencil cleaning
- Excellent PUMP PRINT® stencil cleaning

Recommended Super SWASH version:



- Spray cleaning with water based agent
- Tap water semi closed loop rinsing
- Closed loop for 1st Rinse (DI water)
- Closed loop for 2nd Rinse (DI water)
- Pressed heated air drying



HYPERSWASH

- Defluxing-removing all kind of solder residues
- Highly populated electronic assemblies with low standoff components such as BGA, CSP, BTC, QFN, MELF

CompaCLEAN

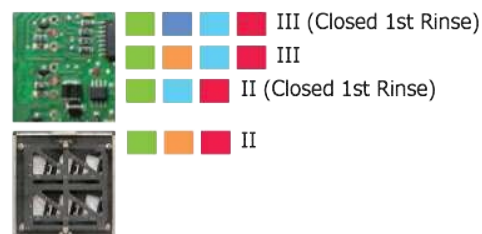
HIGH PRESSURE SPRAY-IN-AIR CLEANING SYSTEM



APPLICATION

- Defluxing, removing activators and resin residues
- Cleaning contamination from handling and board manufacturing
- Cleaning second side misprints on complex assemblies
- Cleaning before conformal coating
- Cleaning of soldering pallets
- Fine degreasing of mechanical parts

Recommended COMPACLEAN version:



- Spray cleaning with water based agent
- Tap water semi closed loop rinsing
- Closed loop for 1st Rinse (DI water)
- Closed loop for 2nd Rinse (DI water)
- Pressed heated air drying

MINISWASH

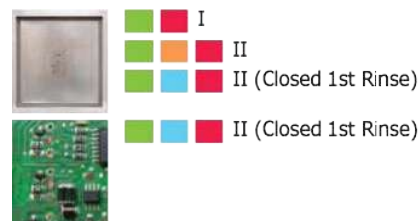
AUTOMATIC CLEANING SYSTEM FOR STENCILS AND PCB



APPLICATION

- Price-effective & reliable stencil cleaning
- Effective also for PUMP PRINT® stencil
- Available for PCBA cleaning
- Very competitive price/performance level!

Recommended version:



- Spray cleaning with water based agent
- Tap water semi closed loop rinsing
- Closed loop for 1st Rinse (DI water)
- Pressed heated air drying

Cleaning Machines Overview

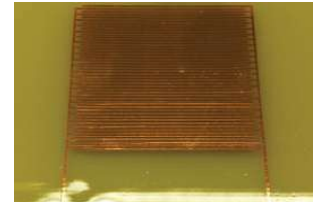
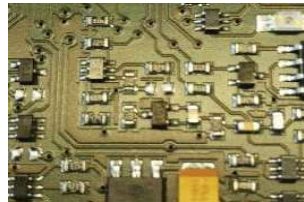
	SuperSWASH Single /SuperSWASH Twingo*	CompaCLEAN	HyperSWASH	MiniSWASH
Usable space of chamber: WxLxH (mm) (W-left/right, L-front/rear, H- height) Including fixture and clamping	835x80/150x816/ 2x835x50x740*	480x500x500	3x890x170x850 Or 2x890x60x850 Or 890x215x850	820x80x740
PCBA, HDI, DCB, BGA, PoP, SiP, CSP, BTC, QFN, MELF hybrids, etc.	√	√	√	√
Eurocards pcs/cycle (100x 160mm)	20/ 40*	140	112/168	20
Cycle time/min	20-40	30-60	20-40	20-40
Metal & plastic stencil (paste, glue)	√	X	X	√
Stencils/pcs/cycle	1/ 2*	X	X	1
Cycle time/min	7-10	X	X	10-15
Cleaning agent volume (RtU)	66 l	80 l	80 l	70 l
Max temperature clean/rinse/dry	60°C/40°C/110°C*	60°C/40°C/11 0°C	60°C/40°C/110°C	60°C/40°C/90°C
Machine dimensions WxLxH (mm) (W-left/right, L-front/rear, H- height) Weight w/o liquid	1700x1300- 1500x1735 520-630 kg	940x1700x214 0 455-485 kg	1900x1400x1960 1000kg	1600x800x1200 (I, II) 1600x1400x1200 (optional 1600) (III) 220-450 kg

Precision Cleaning Solution



Perfect SMD cleaning

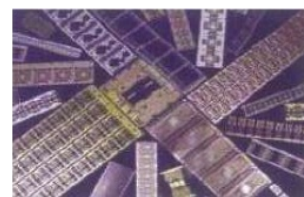
- SMD stencils
- Misprinted PCBs
- Soldering frames and condensate traps
- Soldering equipment
- Stencil undersides
- Board cleaners



Cleaning Solution Overview

Substrates	Contamination	Cleaning Media (Non DG)		
		Solvent Based	Water-Based	Aqueous Alkaline Based
PCBA/Semiconductor Defluxing	Flux Residues	Etimol DFX80 CA*	-	-
Stencils	Solder Paste SMT Adhesives	-	Etimol SW25RAN Etimol SW 20 CN*	Etimol SW26RAA Etimol SW 21 CA *
Dispensing Needles	SMT Adhesives	Etimol NC 88 RSN	-	-
Misprint Boards	Solder Paste MT Adhesives	-	Etimol SW25RAN Etimol SW 20 CN*	Etimol SW26RAA Etimol SW 21 CA*
Solder Pallets / Ovens / Condensation Traps	Baked on Fluxes	-	-	Etimol SEM 10RAA Etimol SEM 11 RAA Etimol PC 55 CA *
Conformal Coating Frames	Silicone lacquers Acrylate/Urethane lacquers	Etimol CR 65 RS Etimol CR 66 RSA	-	-

* Concentrated Version - to be mixed with DI water



Nutek Handling Equipment



BARCODE LABELLING CELL SERIES 3



Features

- Integrated 600dpi Brady printer
- ZebraDesigner 2 user licence
- Label placement programmable in 1° step
- Vacuum sensing of label from pick-up to placement
- Scanner for value verification after printing
- PCB side clamping
- Model No. : NTM5710-X
- Machine Dimension(L x W x H): 850 x 1680 x 1440 mm
- Weight(Approximately) 750 kg

SPECIFICATIONS

Description	This unit is used to print, pick and apply labels onto bare PCB or on top of components.
Minimum Label Size	5 x 5 mm
Cycle Time	2.5 seconds per label (Print/Sacr/Pick & Place)
Transfer Time	≤ 5 seconds (Load, unload & shuttle doors)
Conveyor Speed	24 m/min.
PCB Width	65 - 460 mm
PCB Length	80 - 460 mm
Power Source	100, 230VAC 1Ph
Power Consumption	920VA max.
Air Pressure	6 bar

LASER MARKING CELL SERIES 5



Features

- 10 Watt CO₂ (Class 4)
- Class 1 laser protected housing
- Air cooling system
- Fume extraction device
- PCB side clamping
- Integrated inverting unit for double-sided marking (Optional)
- Barcode scanner or camera for readability check (Optional)
- Machine Dimension(L x W x H): 850 x 1558 x 1752 mm
- Weight(Approximately) 640 kg

SPECIFICATIONS

Description	This unit is used to mark text, barcode, 2D code & graphic onto PCBs.
Marking Area	350 x 350 mm total coverage
Cell Size	≥ 0.195mm
Laser Wave Length	10.63 μm
Conveyor Speed	24 m/min.
PCB transfer time	≤ 5 seconds
PCB Width	65 - 460 mm
PCB Length	80 - 508 mm
Power Source	100, 230VAC 1Ph
Power Consumption	1600VA max.
Air Pressure	5 bar
Air Consumption	20 ltr/min. max.



Automatic Loader & Unloader

- Sturdy and stable design
- User friendly 'soft touch' LED membrane control panel
- Pneumatic clamps provided for magazine alignment
- Pneumatic pusher's pressure regulated
- High throughput with short magazine change-over time
- SMEMA compatible

Description

This unit is used for loading or unloading of PCBs.



Telescopic Gate Conveyor

- User friendly 'soft touch' LED membrane control panel
- Passage way 'Normally Closed' (745 mm)
- Swift and smooth retraction/extension of conveyor (frequency inverter controller)
- Additional built-in buffer zone
- Safety sensor installed to enhance safety
- Smooth and parallel width adjustment (leadscrew)
- SMEMA compatible

Description

This unit is used when a passage way is required in a production line (fully automatic).



Multi Function Buffer Stocker

- User friendly 'soft touch' LED membrane control panel
- First In First Out (FIFO), Last In First Out (LIFO), loader, unloader, reject stock and pass through operating modes
- Fast, smooth and precise indexing (frequency inverter controller)
- Pneumatic clamps provided for magazine alignment
- Pneumatic pusher's pressure regulated
- Threshold system provided
- Additional magazines buffering capacity available upon request
- SMEMA compatible

Description

This unit is used as a buffer between SMD machines or testers.



Transverser / Shuttle Conveyor

- Surrounded with covers to provide highest level of safety
- User friendly 'soft touch' LED membrane control panel
- Swift, smooth and precise operations (frequency inverter controller)
- PCB traffic flows can be customised
- Smooth and parallel width adjustment
- SMEMA compatible

Description

This unit is used to redirect flow of PCBs into different channels in a production line.



Advanced Platform Wafer Loader

- Touch screen panel enables swift adjustment for various wafer types (8" & 12")
- Servo motor drive for precise indexing and wafer loading
- Vacuum suction provide better grips of wafer while loading from wafer cassette or magazine
- Slot detection feature
- SMEMA compatible

Description

This unit is used for loading of 8" & 12" wafer



High Speed Mini Loader

- Applicable to various substrates, leadframes or carriers
- 'Servo control' lifting motion
- High speed and precise indexing
- Machine size depends on the type of magazine used
- Stores up to 10 different types of magazine dimensions
- Stainless steel magazine guide
- Pneumatic pusher's pressure regulated
- Easy loading or unloading of magazines
- User friendly touch screen panel
- SMEMA compatible

Description

This unit is used for loading of substrates, leadframes or carriers.

Applicable PCB General Specifications

	PCB Length	PCB Width
M size	80 - 330 mm	70 - 250 mm
L size	80 - 457 mm	70 - 407 mm
PCB Weight	3 kg max	
PCB Edge Clearance	3 mm min	
PCB Thickness	0.1 - 4 mm (unless otherwise specify)	
Components Height	Top: 30 mm	Bottom: 30 mm
PCB Warpage	0.5% of PCB width max	

EPM Wave Soldering System



Economy SIG - The soldering machine for small series



Premium SIG - The soldering machine for medium size series



CIG compact SIG (N2) - The full nitrogen soldering machine for medium size series



CIG highspeed SIG (N2) - The full nitrogen soldering machine for high volume series



AccuAssembly Component Tower



AccuStock 8000
SMD Reel Automatic Storage and Retrieval System

AccuStock 8000	
Max. Capacity	8,000
Reel Diameter	7,10,13,15 inches (180,255,330,380 mm)
Max. Input capacity 1	7 inch dia x 60 13 inch dia x 60
Max. Input capacity 2	7 inch dia x 120 13 inch dia x 30
Max. Reel Height	44 mm (additional thickness upon request)
Cycle Input/Output	15 seconds in/out 7.5 seconds in/out Simultaneous
Weight	Silo 2,500 kg. in/out unit 1,250 kg Total 6,250 kg
Power Requirement	220-240 VAC 3 phase
Air Requirement	80 psi
Footprint	5.33 m x 2.23 m (0.6 m in width for I/O unit)
Height	2.82 m
Software Requirement	SQL server
Network	Required

PCBA First Article Inspection



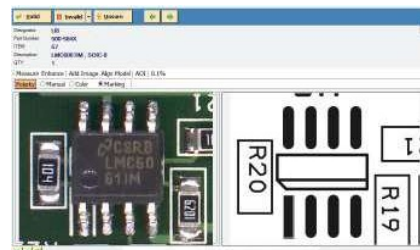
Model	X3000	X-4000
Max PCB size:	380 X 450 (mm)	500 X 540 (mm)
Max component height:	50 (mm)	50 (mm)
Image resolution:	1100 DPI	1100 DPI



“Extra Eye for FAI
First Article Inspection (FAI) is one of the most important steps of the PCB assembly process as every mistake from the Placement. Machine setup multiplies into hundreds of incorrectly assembled PCBs if left unchecked. Therefore, it is extremely important to accomplish FAI with maximum accuracy.”



View with Golden PCB



View with Drawing

ATN Automatic Soldering System



induction Soldering



Iron Tips Soldering



Dispenser



Laser Soldering



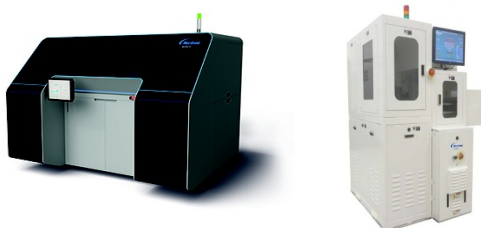
Light Beam Soldering



Leading Plasma Innovation

TRAK Series Plasma - Inline or built-in handler

FlexTRAK SHS **FlexTRAK™ -CD**



AP Series Plasma - Batch

AP-1000 **AP-300**



PCB Series Plasma - VIA Series

ROIIVIA™ **ProVIA™**



SPHERE Series Plasma - Wafer level and 3D packaging application

StratoSPHERE™

Up to 12"



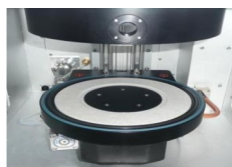
MesoSPHERE™

Up to 12"



AP Series Plasma - Batch

RIE-1701



Plasma Solution for:

- Semiconductor
- Printed Circuit Boards
- Life Science
- Photovoltaic/ Solar
- LED
- Hard Disk Drives
- Industrial

Nordson Progeny

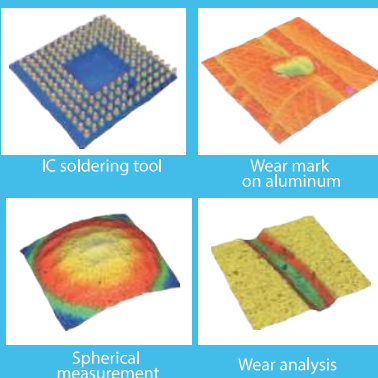


Metrology System

SOLARIUS™

SOLARIUS 3D non-contact surface measurement

An ECONOMICAL 3D surface profilometer meets wide VARIETY OF SURFACE inspection needs



Application Include:

- Thick Film
- IC -Packaging
- Engineering Surfaces
- Tribology
- Metal
- Plastic
- Rubber

Atmospheric Plasma



Surfx Low Temperature In-Line Plasma Processing

Low Temperature Atmospheric Plasma



Atomflo™ 600



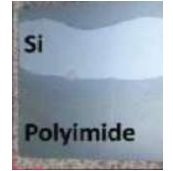
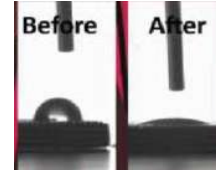
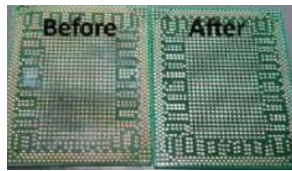
Minibeam Plasma Head



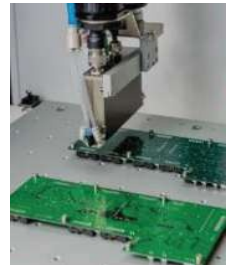
100-mm Linear Plasma Head



50-mm Linear Plasma Head



- Surface Activation
- Adhesive Promotion
- Cleaning and Decontamination
- Etching
- Coating



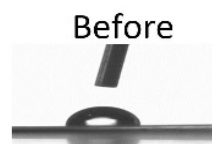
SEO Contact Angle And Surface Tension Analyzer



Horizontal



Vertical



Before



After

DOHONE



Specializing in storage series products and other metal products





ADT Dicing Machine



ADT 8020 Fully Automatic Twin Spindle Dicing System

Model 8020 Highlights:

- Fully Automatic Twin system for high throughputs
- Supporting 2" and 3" Blades O.D.
- Enhanced vision software algorithm
- Protective optics
- Comfortable blade accessibility
- Easy to maintain and servicing
- Friendly and intuitive user interface (NUI)
- Industrial PC with Win 7 (OS)
- CE Compatible
- High power spindle up to 2.4KW (Option)
- UV Curing system / Dress cassette (Option)



- Simplicity
- Automation
- Ease of use
- New generation of graphic user interface (GUI)
- Small foot print systems

7900 Series Semi Auto Single/ Dual Spindle Dicing System



7120/7130 Series Semi Auto Dicing System

Advantages:

- 2" and 4" spindle dicing systems
- A full range of automatic vision capabilities
- Advanced hardware platform for high reliability and low maintenance
- Heavy Duty, cast-iron base structure for superior precision and accuracy
- Increased yield, throughput and process control
- Unique multi-panel processing capabilities
- Special blade wear forecast algorithm
- User-friendly software platform

ADT Peripherals



967 AUTO WAFER MOUNTER

- Compact (tabletop)
- Fast <math>< 25\text{ sec frame}</math>
- Cost Saver (-20% tape)
- Bubble free
- Consistent tape Tension
- Hands-Free operation



966 WAFER MOUNTER



977 WAFER CLEANER



927 WAFER RECYCLING



937-A SPINDLE CHILLER



947 CO₂ INJECTOR



955 UV CURING SYSTEM

Hub/Hubless Dicing Blades

- Resin-Bond Blade
- Metal Sintered Blade
- Nickel-Bond Blade



ATV – Thermal Processing



SRO i-Line



Features SRO i-Line

- High Throughput
- Short cycle times
- Vacuum level 10^{-2} mbar
- Formic Acid
- Process temperature up to 450°C
- Temperature ramp-up rate 3K/sec.
- Temperature cool-down rate 2K/sec.
- Excellent temperature uniformity
- IR Heating
- Small footprint (No footprint change up to 3 Process Chambers)

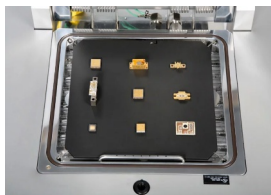


SRO-700



Features SRO-700

- Flux-less, with Flux and solder paste
- FORMIC ACID ENRICHED ATMOSPHERE
- Direct IR Heating
- Multiple TC monitoring
- Process temperature 450°C up to 700°C
- Temperature ramp-up rate 3,5K/sec.
- Temperature cool-down rate 2K/sec.
- Rapid single wafer processing < 20°C/sec.
- Oxygen < 1,0ppm with PURIFIED N2
- 100 steps/RECIPE program



RV Diamond Scriber

Precision diamond scriber for manual scribing with 8"-Ø, vacuum, chuck, fine adjustable in X-and Ø- digital gauge for X resolution 10µm, cross hair microscope lined up with the scribe trace to use it as a reference for further scribes. max. scribe length 220 mm, max. X travel 190 mm.

For fast and easy scribing of ceramics, glass, silicon, GaAs, InP and many more



LTCC SINTERING PRESS

PHP-630

Features Data PHP-630

- Low Power consumption 4kW @ 1000°C
- Zero % LTCC X/Y shrinkage
- Heating Rate: < 70min. to 1000°C (empty chamber)
- Cooling Rate: < 90min. from 1000°C to 100°C (empty chamber)
- Control range:
 - 250°C – 1 100°C, under vacuum up to max. 1 000°C
 - Accuracy < ±0,5°C > 350°C
- Pressure up to 50kN

AMADA Resistance Spot Welding



DC29/UB29/UB29A Linear DC Welding Controls

Dual pulse with independent control of current, voltage or power on each pulse

Squeeze, upslope 1, weld 1, downslope 1, cool, upslope 2, weld 2, downslope 2, hold

Save up to 99 different weld schedules, protected from unauthorized changes
Allows automatic linking of weld schedule sequence

TYPICAL APPLICATIONS



Air bag detonator module (squib wire)



Battery tab to lithium ion cell

TECHNICAL SPECIFICATIONS

MODEL NUMBER	DC29	UB29	UB29A
Nominal line voltages (single phase)	88-264 VAC 47-63 Hz	88-264 VAC 47-63 Hz	88-264 VAC 47-63 Hz
Repetition rate	2000 A @ 1 weld/sec for 10ms	500 A @ 3 weld/sec for 10ms	1500 A @ 1 weld/sec for 10ms
Setting ranges:			
Current	200 A - 4000 A 10 amp/step	5A - 500A 1 amp/step	15A - 1500A 1 amp/step
Voltage	0.1 V - 9.9 V 10 mV/step	0.01 V - 9.9 V 10 mV/step	0.01 V - 9.9 V 10 mV/step
Power	0.1 kW - 25.0 kW 10 Watt/step	0.05 kW - 4.99 kW 10 Watt/step	0.1 kW - 9.9 kW 10 Watt/step
PEAK:			
Current	4000 A	500 A	1500 A
Voltage	10 V	10 V	10 V
Power	25.0 kW	4.9 kW	9.9 kW

HF27 / HF25 High Frequency Welding Control



Dual pulse with independent control of current, voltage, power or combo mode (HF27) on each pulse.

Squeeze, upslope 1, weld 1, downslope 1, cool, upslope 2, weld 2, downslope 2, hold.

Save up to 100 different weld schedules, protected from unauthorized changes.

Independent monitor of current, voltage, power, and resistance on each pulse. Envelope, time limits and energy monitor (HF27).

Back-lit LCD displays programmed and actual weld current, voltage or power, upper and lower limits, and resistance.

TYPICAL APPLICATIONS



Switch assembly



Anti-lock brake system solenoid

TECHNICAL SPECIFICATIONS

Model Number	HF25/240	HF25/400	HF25/480	HF27/240	HF27/400	HF27/480
Nominal line voltage (3 phase)	240 VAC	400 VAC	480 VAC	240 VAC	400 VAC	480 VAC
Line voltage range (VAC)	192 to 264	320 to 440	384 to 528	192 to 264	320 to 440	384 to 528
Input circuit rating (perphase)	25 A	20 A	13 A	25 A	20 A	13 A
Input KVA @ 3% duty cycle	30 KVA					
Output KW @ max. demand	12 KW					
Output transformer voltage @ max. rated output current	5.2 V					
Open circuit max. output voltage @ normal lie	11.5 V					
Setting ranges	Current - 100 A to 2400 A; Voltage - 0.2 to 10V; Power - 50 W to 10 kW					
Output current	2400 A @ 3% duty cycle					
Output feedback response time (current, voltage, power)	40 Microseconds					
Output regulation versus line voltage variance	2%					
Output regulation versus load resistance variance	2%					
Output repeability current, voltage, power ± of setting	2%					



HF2, HF2S High Frequency Inverter Welders

2 KHz pulse width modulated (PWM) inverter welding control with constant current, voltage or power feedback operating modes. Feedback response every 250 microseconds.

TYPICAL APPLICATIONS



Capacitor to lead frame



Brazing

TECHNICAL SPECIFICATIONS

Line voltage	Three phase, 208, 230, 380 or 460 VAC ±13%, 50/60 Hz					
Input circuit rating	HF2/208-50 A: HF2/230-50A; HF2/380-30 A; HF2/460-30 A					
Weld current	0.05 - 4.0 kA					
Weld power	0.10 - 9.99 kW					
Weld voltage	0.1 - 5.0 V					
Weld period	2000 milliseconds (maximum)					
HF2 TRANSFORMER MODEL	X3/4000A	X3/4/380A	X3/4/460A	X9/6000A	X11/4000A	X11/4/460
Nominal AC input voltage	208/240	400	480	208/240	208/240	400/480



125/300/1000ADP Capacitive Discharge Welders

- Built-in current monitor
- Set pulse limits
- Four pulse widths with fast rise times
- Programmable, automatic polarity switching
- Upslope function
- Quick view color screen

TYPICAL APPLICATIONS



10 gauge wiring harness assembly



Motor fusing



STA Series Single Phase AC Spot Weld Control



High Power Mid Frequency Inverter Welding Power Supplies

High power mid frequency inverter spot welding power supplies. Closed loop technology.

- Inverter Spot Welder - IS-300A
- Mid-Frequency Inverter Weld Controls - IS-800CR / IS-1400CR



Hot Bar Bonding/Reflow Soldering/ ACF Bonding

Fully integrated, standard hot-bar systems utilize pulsed heat thermode technology for hot bar reflow soldering, bonding, and heat staking applications
 Hot-Bar Reflow Soldering & Heat Staking Systems - newhorizon
 ACF Bonding and Heat Staking Systems - newhorizon
 Desktop Hot-Bar Bonding Systems - DT Series
 Hot Bar Bonding LCD Repair Station - Emerald Series

ACF laminating and ACF bonding systems create robust electrical conductive adhesive bonds between flexible and rigid circuit boards, glass panel displays, and flex foils with very fine pitch (<30 micron)
 newhorizon ACF Laminating/Pre-Bonding System
 ACF Laminating/Pre-Bonding System

Weld Checker & Monitoring System



Desktop Weld Monitors

- Desktop weld monitors for resistance spot welding
- Color Digital Weld Monitor for Resistance Spot Welding - MG3
 - High Precision Weld Checker - MM-122A
 - Machine-Mountable Portable Weld Monitor - MM-370A
 - Advanced Data Analysis Monitor for Resistance Spot Welding - ADAM



Handheld Weld Checkers

- Handheld, portable weld monitors for resistance spot welding
- Portable Weld Checker - MM-315B
 - Electronic Force Gauge - MM-601A

Accessories and Others



TCW Thermocouple Welder

- Argon Gas Weld Chamber
- Easy to Use
- Designed to Operate Either in a Production or Laboratory Environment
- Weld Fire Lockout
- Line Voltage Regulator
- Wire Gauge Selection from 38 AWG to 20 AWG

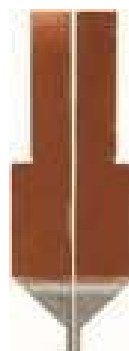
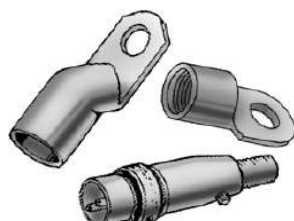


Micro TIG Welding



Electrodes, Handpieces & Cables

- TWP Tweezer Weld Handpiece
- PHP Probe Handpiece
- GHP Gun Handpiece
- HFP High Force Probe Handpiece



Consumable Items - Resistance Spot Welding

- Common consumable items utilized in the resistance spot welding process
- Polishing Disks
 - Kovar Ribbon
 - Nickel Battery Tabs

Weld Head



Manual and Pneumatic Weld Head.

Light Force Microwelding Head - 50 Series

- Very Low Force - 40 to 1000 grams
- True Vertical Electrode Force Motion
- Exclusive "Unitip" Electrodes
- Specifically Designed for Microwelding and Thermocompression Bonding Applications



Motorised Weld Head

Motorized weld heads designed for integration into automated resistance spot welding production lines

- Servo Motor Welding Head - 70 Series
- High Force Servo Motor Driven Spot Welding Head - 73 Head
- Motorized High Precision, Low Force Spot Welding Head for Automation - MFP25
- Motorized High Speed, Low Force Spot Welding Head for Automation - MFP60



Electromagnetic Weld Heads

Linear actuated, electromagnetic weld heads for spot welding applications

- Low Force Electronic Weld Head - Series 320
- Electromagnetic Spot Welding Head - 300 Series

Laser Welding Systems

Delta Series Laser Welding Workstation

- Economical with High Performance Industrial Laser Equipment
- Class I Eyesafe Enclosure
- Multi-axis CNC Motion with G & M Code Programming
- Lean Manufacturing Style - Small Footprint
- Stable, Ergonomic Platform
- Customizable



End Effector Cap



Airbag Initiator



Dental Tool

Micro Spot Laser Welder: 0.25 W

- 30 Micron Spot Diameter with Fiber Delivery
- Real-time Power Feedback
- Precise Laser Welder Energy Control
- Pulse Durations from 0.04ms
- Peak Power from 0.04 - 1.0 kW
- Exceptional Pulse-to-Pulse Power Stability
- Air cooled, Single phase



Pacemakers

Laser Marking System (Green/Fiber/UV)

- State-of-the-art standard laser systems for spot or seam welding
- Laser Welding Gloveboxes
- Low Cost, Flexible Laser Welding Workstations
- Fiber Laser Welding Workstation





Laser Marking System (Green/Fiber/UV)

Laser engravers for industry

- Largest Q switch range of 2-500 kHz
- High speed, High Contrast marks on plastics
- High speed annealing and engraving of metals
- Multi language software support
- Rotary and XYZ integrated motion for marking on cylinders and tubes
- PC, touchscreen, pendant or standalone



Single Use Only



Cast Part Marking



Butterfly

Laser Cutting System (Fiber/UV)



Higher throughput specification
0.01-1" tube diameter capability
Up to 3m length tubes
Wet and dry cutting
Automated tube feeder option



Cannula



Stents



Laser cut flexible tubing



Laser cut stainless steel tube

Hermetics Sealing System



Parallel Seam Sealing System - SM8500

- Current control mode for both the hermetic welding and sealing process
- Programmable electrode force
- Most complete line of power supplies in the industry
- Extended electrode life with electrode Auto-Trak software
- Position-based weld pulses
- Electrode roll-bak feature
- Process inhibits



Rollspot



Aerospace Device



Semiconductor Components
- Metal Lid to Metalized Seal
Ring on Ceramic

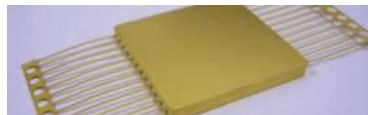
TECHNICAL SPECIFICATIONS

Part size	0.158 in to 8 in (4mm to 203mm)	
Position encoder resolution	X - 20,000 cts/in,	
Position encoder resolution	Y - 40,000 cts/in	
Weld force (programmable)	500 to 5000 grams	
Linear weld speed	0.01 to 1.5 in/sec	
Rotary weld speed	0.01 to 1.5 linear- in/sec (720° max. rotation)	
Input gas requirement	60 psi minimum	
Input power - HF25 power supply	Three phase, 192-264 VAC (240V nominal), 50/60 Hz, 25 a Three phase, 320-440 VAC (400V nominal), 50/60 Hz, 20 a Three phase, 384-528 VAC (480V nominal), 50/60 Hz, 13 a	
HF25 current output	100 to 2400 A, ±2 A	
HF25 pulse width	0.10 to 99.00 ms	
Mechanism input power	Single phase, autovolt 110 to 240 VAC 50/60 Hz, 15 A	
Calibration	To NIST standards	CE Certified



Lid Placement, Tack and Seam Sealing System-AF8500

- Current control mode for sealing
- Programmable electrode force
- Most complete line of power supplies in the industry
- Vision system
- Electrode roll-back feature
- Automated magazine loader option



Aerospace Device

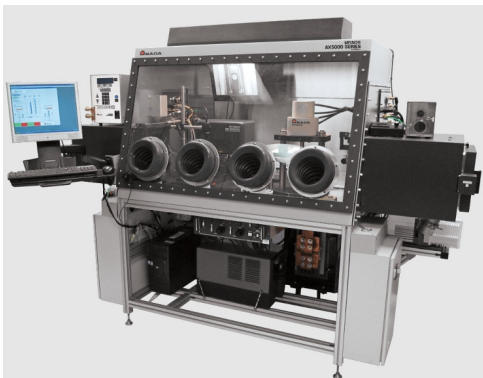


Parallel Seam Sealing

TECHNICAL SPECIFICATIONS

Part size without vision, pick-place and tack	0.118 in - 4.3 in (3mm-110mm)	
Part size without vision and pick-place	0.118 in - 8 in (3mm-203mm)	
Lid placement accuracy	+/-0.003 in (+/-0.08mm)	
Weld force (programmable)	500 to 3000 grams (1g increments)	
Linear weld speed	0.01 to 1.5 in/sec (0.1 increments)	
HF25 current output	100 to 2400 amps, ±2 amps	
HF25 pulse width	0.01 to 99.00 milliseconds (0.1 increments)	
Input power - HF25 power supply	192-264 VAC (240V nominal), 3 Ph, 50/60 Hz, 25 amps 320-440 VAC (400V nominal), 3 Ph, 50/60 Hz, 20 amps 384-528 VAC (480V nominal), 3 Ph, 50/60 Hz, 13 amps	
Mechanism input power	Autovolt 110 to 240 VAC 50/60 Hz single phase 15 amp	
Compressed gas requirement	60 psi minimum	
Calibration	To NIST standards	CE Certified

Glovebox Systems



Advanced Glovebox Welding System - AX5000

- Fully computerized operation
- Historical and real time graphical display
- Independent vacuum pumping systems on all ovens and antechambers
- Integrated moisture, oxygen, argon, and helium monitoring
- Configurable modular design



Basic Entry - Level Gloveboxes - Alpha Series

- Designed for integrated seam sealing, projection welding, or stand-alone use
- Vacuum bakeout oven range from ambient-125 plus higher options
- Secure locking oven door
- Includes oil-free vacuum pump
- Ergonomically designed viewing
- Extremely low maintenance

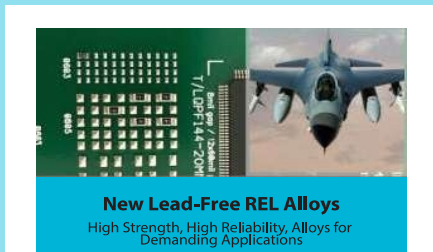
AIM Solder Material



Environmentally Friendly Solder

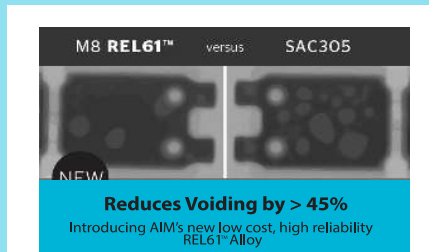
Lead-Free | Halogen-Free | VOC-Free

- High Reliability Alloys (Lead Free Solder)
- Water Soluble
- No Clean
- Rosin Based
- Epoxy & Underfill
- Dross Recycling
- Special Materials (including performs, wire, foil, ribbon, seals & etc)



New Lead-Free REL Alloys

High Strength, High Reliability, Alloys for Demanding Applications



Reduces Voiding by > 45%

Introducing AIM's new low cost, high reliability REL61™ Alloy

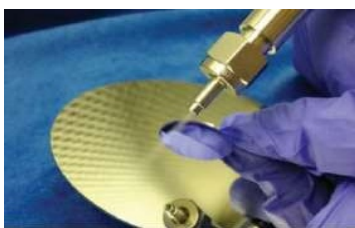


Revolutionary M8 Solder Paste

No Clean, High Reliability, Mitigates Voiding Issues

COOL CLEAN

CO2 Cleaning, Cooling and Extraction



Surface Preparation

- Particle Removal
- Soot Removal
- Solder Flux Removal
- Residue Removal
- Degreasing
- Pre-Inspection Cleaning
- Sintered Metal Cleaning
- Drilling CFRP Stackups
- Dry Machining
- Plastic Deburring
- Botanical Oil Extraction
- Silicone Extraction
- Elastomer Outgassing
- Dry Cleaning

Heraeus FUSION UV



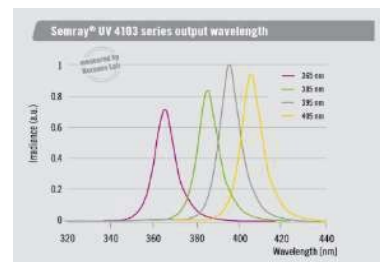
	F300 Series	Light Hammer[®] 6 Mark II	F600 Series	Light Hammer[®] 10 Mark II
Bulb Length	15cm (6-inch)	15cm (6-inch)	25cm (10-inch)	25cm (10-inch)
Extended Curing Width	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end	Unlimited cure width by stacking lamps end-to-end
Bulb Type	H, D, V, H+, Q	H, D, V	H, D, V, H+, Q, A, M	H, D, V
Start Up Time	20 seconds (cold start), 5 seconds (warm start)	15 seconds (cold start), instantaneous (warm start) ²	15 seconds (cold start), 5 seconds (warm start)	15 seconds (cold start), instantaneous (warm start) ²
Shutter	Optional Mechanical	Electronic Rapid Cycle	Optional Mechanical	Electronic Shutter ³ Optional Mechanical
Power Class	120w/cm (300W/inch)	200w/cm (500W/inch)	240w/cm (600W/inch)	240w/cm (600W/inch)
Power Level	Fixed or Quick Restart (optinal) ³	Full, Variable (35-100%) or Rapid Cycle	Dual level (160/240 W/cm) or Variable (25-100%)	Variable (35-100%) Quick Restart ³
Cooling Blower	Modular or Remote	Modular or Remote	Remote Only	Remote Only

¹Not available with "electronic shutter"; ²Depending on Duty Cycle and Power Level; ³Not for Cycling operation

HERAEUS SEMRAY UV LED



Model	UV4103 Segment	UV4103-01	UV4103-20
Peak wavelength [nm]		365, 385, 395, 405	
Typ. Irradiance [W/cm ²]		365 nm: 13 385 nm: 15 395 nm: 18 405 nm: 17	
Emission Window [mm ²]		1.540 x 45	
Dimensions (W x D x H) [mm]	77 x 136 x 253	112 x 136 x 253	1.540 x 136 x 253



UV AIR DISINFECTION ROBOT

(AIR DISINFECTION-HAD RR)

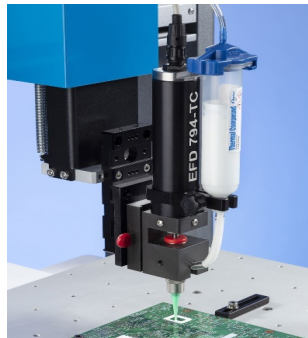


(DIRECT UV-HAD RF)



Nordson EFD

- Accessories & Auxiliary Equipment
- Automated Dispensing Systems
- Components
- Controllers and Control Systems
- Dispense Tips and Needles
- Filling Systems
- Fluid Dispensers
- Jet Valve Systems
- Lubrication Systems
- Mixers
- Reservoirs and Pumps
- Solder Products
- Syringe Barrels and Cartridges
- Thermal Compounds
- Two-Component (2k) Products
- Valve Systems



EIT Radiometer Products

ITR d i a g n o s t i c s



UviCure® Plus II & UV Power Puck® II

- UviCure® Plus II-single UV bandwidth
- Power Puck® II-four UV Bandwidths
- Updated electronics & display, USB port
- Provides energy density & irradiance values, irradiance profile and comparison to reference run
- High-Standard(10 Watt), Mid (1W) & Low (100 mW) Power versions available
- User adjustable parameters & changeable batteries



3DCURE™



Sensors:

- Calibrated, Single Spectral Bandwidth Radiometer
- UVA, UVB, UVC, UVV
- Mix & Match Bandwidths in the same string
- Provides mW/cm² and mJ/cm²
- Connect up to 32 sensors in a daisy-chain digital network
- Sensor mounting adapters ("Positioners") for convenient permanent positioning

Powered by a DCM
• Size: 1.75" diameter x 0.5 h

DCM-Data Collection Module:

- Collects and transfers data to a PC via EIT Cure3D Software
- Provides power to the sensors
- Portable, or tethered
- Rechargeable battery
- Size: 4.5" x 2.75" x 0.8"

EIT 3D Cure Software - Provides ActiveX controls for user customization.

MicroCure & DataReader

- One piece construction of filter & detector
- 2048 samples/second, "smooth-off" irradiance
- MicroCure good for 200 readings
- Values displayed on DataReader
- UVA & UVV available



Spotcure Intensity Meter

- Self contained unit that accepts different sizes of light guides
- Medical Applications
- Display of irradiance (W/cm²)
- Standard unit: 20 W/cm²
- Extended range also available for high intensity sources



Ultrasonic Metal Welding



Ultrasonic Wire Splicer US-3020WN



Frequency	20kHz nominal
Ultrasonic Power Output	3.0 kW max Power Supply 220-240 VAC single phase; 16 Amp max; Nema 6-20r outlet
Pneumatic Pressure	6.5 bars/94psi; Air Filter built into system; requires 6 mm OD Hose
Weld Force	~1,600 N maximum
Weldhead	12 kg/ 26.5 pounds; 7.5W x 20D x 8H inch
3020C Controller	Power Module with integrated weld controls 33kg / / 1 pounds; 9W x 20D x 16H inch
Touchscreen HMI	17" LCD Display with touch keyboard



RAPID EVERYTHING

High weld rate with consistency
Welds stay within small SD of spec
Quick change tooling under 5 minutes



THOUGHTFUL

One step calibration
Visual interface
Easy to use and learn



SUSTAINABLE

Long-lasting and inexpensive tooling
Lasts > 1M welds for small splices
Environmentally friendly process



15 YEARS TESTED

Proven solution for:
Automotive Industries



MIDAS Microelectronics Rework System

MIDAS
TECHNOLOGY, INC
for microelectronic rework since 1986



de-lidder™

machines remove lids from hermetic packages non-destructively, leaving a particle-free cavity and reseal-ready surface so product can be reworked and resealed. We have multipurpose and dedicated models for rectangular, round, and optical fiber modules.

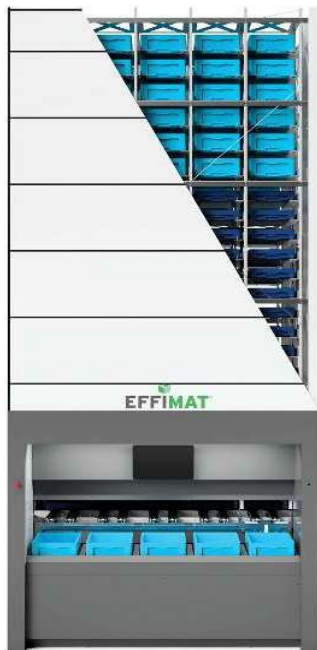


HGRS **HOT** Gas Workstations

safely remove components from assembled circuits with momentary jets of precisely localized very hot Nitrogen. A full suite of tools also make these machines the ideal "thermal workbench" for prototypes & advanced applications.

EFFIMAT Storage System

New high-speed generation of vertical lift modules



Technical Info:

- Width:** A flexible number of towers are connected. Each tower has a width of 5 totes of 40 cm or 4 totes of 60 cm
- Height:** Up to 12 meters
- Capacity:** Up to 25 kg pr. tote. Number of totes depending on tote-sizes and lift height
- Electricity:** 400 volt

TECHNICAL DATA

- | | |
|--|--|
| WIDTH OF TRAYS
From 2.500 to 4.000 mm* | DEPTH OF TRAYS
from 650 to 1.200 mm* |
| HEIGHT
Up to 20 metres | CAPACITY
400 or 500 kg per tray* |

* We offer specialised solutions



PBD Hot Melt Dispensing/Masking System



Unity Robot



Hot Melt and Rigidizing Component



PUR



Electronics Device Bonding & Sealing

NorCom 2020



Fine & gross leak test system



Features:

- Simultaneously tests for fine and gross leaks
- Quantitative results measured in cc-atm/second helium
- One-step calibration and setup
- Tests variety of hermetically sealed devices, including PC-board-mounted and pig-tailed packages
- Provides Statistical Process Control (SPC) for tracking of test results
- MIL-STD 883 and MIL-STD-750 compliant

Benefits:

- Reliable and repeatable test results
- No helium mass spectroscopy or bubble testing
- Increases production throughput
- Improves packaging process control
- Eliminates back-end production bottlenecks
- Minimal training required.
- Accommodates "welding trays" from typical seam welders
- Eliminates red dyes used with Kr85 gross leak testing
- Not susceptible to gas absorption like helium mass spectroscopy and krypton 85 testing
- No helium bombing required

Specifications

Inspection Specifications	2020-6	2020-12
Inspection pallet size	5.5" x 4.5" (14.0cm x 11.4cm)	12" x 6.0" (30.5cm x 15.2cm)
Max. number of device/cycle Throughput/hour	Up to 1,000 devices per Cycle Up to 10,000 device per hour	Package size dependant Package size dependant
Leak Rate Measurement Unit	cc-atm/sec helium	
Dimensions/Weight System with Isolation Table	56" L x 42" W x 53" H / 425 lbs 142cm L x 107cm W x 135cm H / 193kg	
Power Requirement Input Power	Domestic Model - 115 VAC, 60Hz, 15amps Export Model - 220-240 VAC, 50Hz, 8 amps	
Helium Consumption	0.9 cubic ft/cycle@50psi	1.4 cubic ft/cycle@50psi
Laser Safety Classification	CDRH Class 2	
Operating System	Windows 7 [®] Professional	
MIL-STD Compliant	MIL-STD 883 TM1014 and MIL-STD 750 TM1071	

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