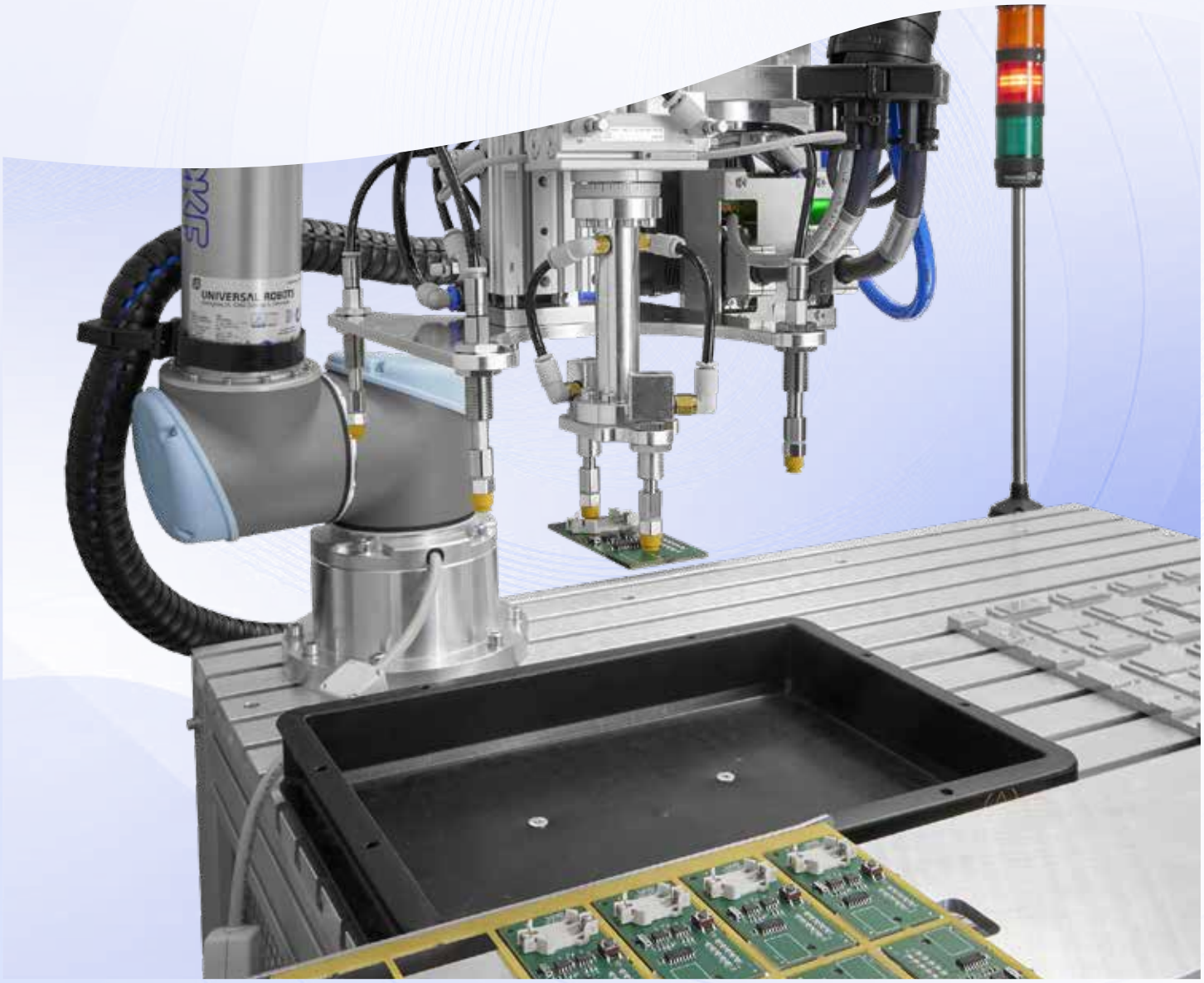
toki engineering

TOKIMEKU PRECISION ENGINEERING



TOKIMEKU PRECISION ENGINEERING

Tokimeku Precision Engineering Sdn Bhd is a sub-brand of Tokimeku Pte Ltd, specializing in bespoke automation solutions for system integration, and manufacturing custom full-fledged jigs and fixtures required for smooth operation.

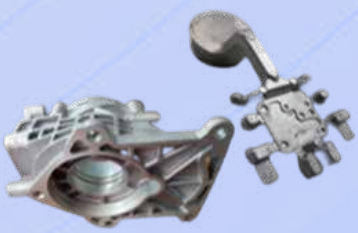
Tokimeku Precision Engineering's aim is to provide intelligently designed, customised tooling to help our customers achieve better quality and productivity in their production line. From design to implementation, our team of experts will guide you through every step of the way to create a new automated manufacturing solution.

EXAMPLE OF JIGS AND FIXTURES APPLICATIONS

- PCB Holder Jig
- BGA Holder
- Contact Holder
- QFN Work Press
- Device Clamp
- Alignment Plate
- Guiding Rails

ADDITIONAL PRODUCTS

- Customised Automation Machine Spare Parts
- Customised Precision Tools
- Automotive Parts
- Hard Disk Drives
- Consumer Electronics
- Aluminium Casting
- Cnc Milling And Turning
- Precision Machining Parts
- Free Cutting Stainless Steel, Aluminium Alloys, Copper Or Brass
- Milling/Turning Parts



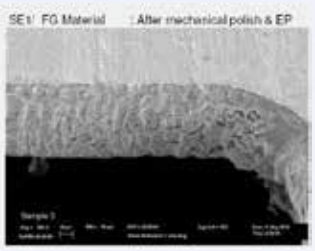
SMT PRODUCTS

STENCIL
Stencils are designed for high-volume solder paste printing onto PCB.

Technology: Fibre Laser Cut
Available thickness (mils):
3, 4, 4.5, 5, 6, 7, 8, 10, 12, 14

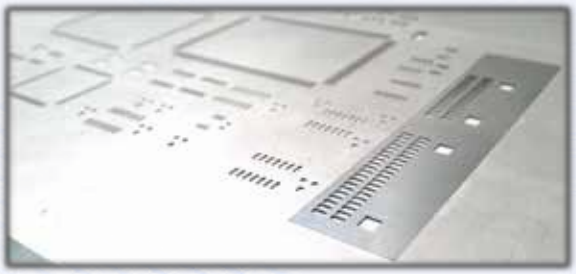
FINE GRAIN MATERIAL STENCIL
Fine Grain: 1 - 2 microns
Standard Stainless Steel: 30 - 38 microns

Fine Grain enables the printing of smaller stencil apertures without reductions in foil thickness, while the less paste residue allows for an increase in the number of prints between each stencil cleaning.



STEP UP/STEP DOWN STENCIL
The step-up/step-down stencil is a special development for the adjustment of solder paste quantity, fulfilling the needs of placement and soldering.

This includes the laser cutting and chemical etching process to remove the metal according to required thickness on specific location, as well as the resulting stencil characteristics and the potential of the printing process.



TETRABOND STENCIL
Highly rigid "frameless' stencil for easier and safer mounting and demounting.

NANOSLIC GOLD (PERMANENT COATING)
The most advanced coating for solder paste stencils. NanoSlic Stencil Coating is a turnkey system that integrates surface preparation, coating and curing to provide unparalleled printing improvements, transfer efficiency and ease-of-cleaning.

NANO COATING STENCILS
A coating which "repels" solder paste, thereby reducing solder clogging in stencil openings. This helps to increase through-put with less cleaning required, while still maintaining the sharp paste definition.

OTHER STENCIL SERVICES:
- **MINI STENCILS**
- **GOBO**
- **REMOUNTING SERVICES**

SMT PROCESS

COMPONENT TRAY & SMT PICK AND PLACE PALLET

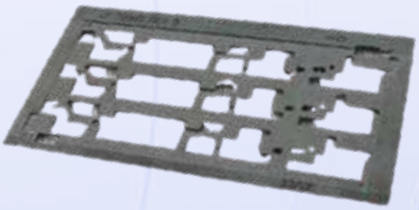
Material: Ricocel/Durostone (Temp up to 300ºC)

SMT component placement systems, or pick-and-place machines, are robotic machines used to place SMDs from a component tray or pick-and-place pallet onto a printed circuit board (PCB).

REFLOW PALLET

Material: Ricocel/Durostone

Electrical components are placed onto reflow palettes, allowing proper alignment onto the PCBs during reflow soldering.

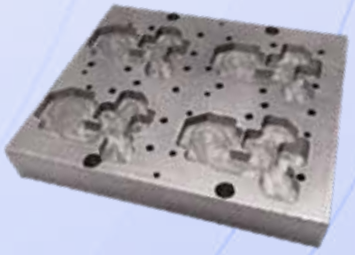


SOLDER PASTE PRINTING PROCESS

PASTE PRINTER VACUUM BLOCK

Material: Aluminium

A vacuum block enables the PCB to lie flat, preventing it from moving or bowing during printing, resulting in a crisp and precise solder paste print. This is especially useful for DEK and semi-auto printers.



MANUAL OR AUTO SOLDER PROCESS

MANUAL SOLDERING JIG

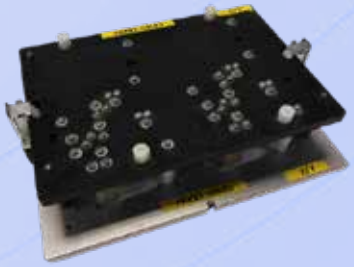
Material: Bakelite/Aluminium

Customisable jig for manual soldering processes to hold components and PCB in place.

AUTO SOLDERING JIG

Material: Bakelite/Aluminium

Customisable jig for automatic soldering processes to hold components and PCB in place.

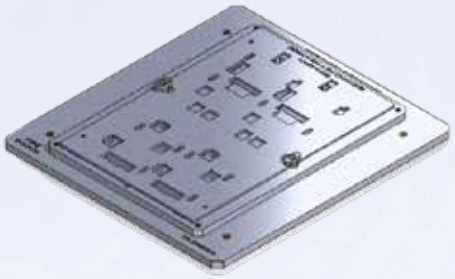


DEPANELING PROCESS

DEPANEL ROUTER FIXTURE

Material: Aluminium

A depaneling router is a machine that uses a router bit to mill the material of the PCB. The depanel router fixture guides the router bits to cut PCBs.



WAVE SOLDER PROCESS

WAVE SOLDER PALLET

Material: Ricocel/Durostone and G10 for Top cover.

Wave solder pallets protect and supports the SMT components in a PCB, exposing the unmasked components for wave soldering.

SELECTIVE SOLDER PALLET

Material: Ricocel/Durostone and G10 for Top cover.

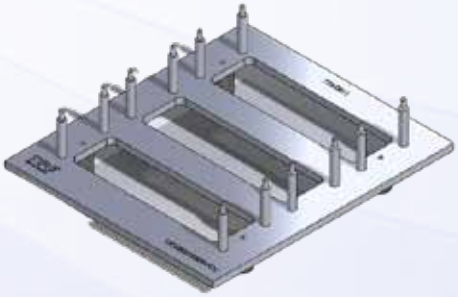
Selective soldering pallets allow for the soldering of plated through-hole components while protecting SMDs. These pallets have machined pockets to clear for components, and to shield thermally sensitive or non-glued parts from the heat and solder.

BACK END PROCESS

CONFORMAL COATING PALLET

Material: Aluminium

The conformal coating pallet holds the PCB in place and covers the area that do not require coating.



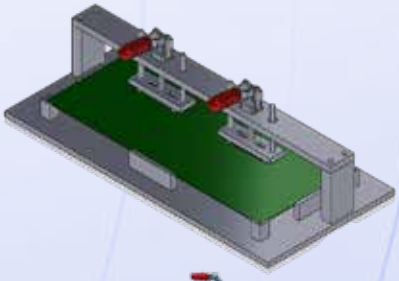
MULTI-FUNCTIONAL JIG

REWORK JIG
Material: Aluminium

SCREW JIG
Material: Ricocel/Aluminium/
Bakelite/G-10 (top cover)

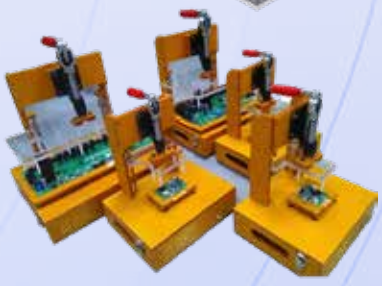
PRESS FIT JIG
Material: Aluminium

MULTI-FUNCTIONAL JIG
For Automotive, to pull, rotate, press and assembly



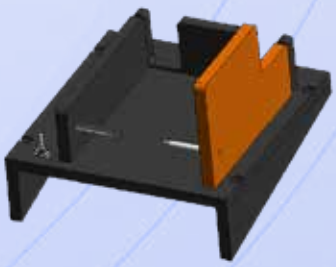
MULTI PRESS JIG
Press jig with high load pressure

ICT AND PROGRAMMING JIG
For testing and programming



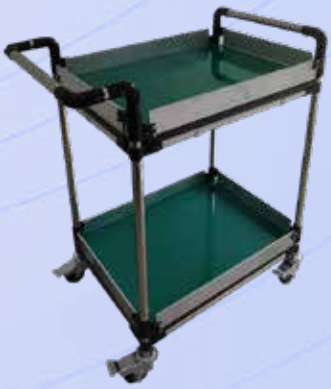
FCT JIG
Functional test jig with pogo pin

TEST JIG AND FIXTURE
Material: Ricocel/Aluminium/Bakelite/G-10



CUSTOM FABRICATION

ESD SAFE WORKSTATION



ESD SAFE TROLLEY

ESD SAFE CABINET/RACKING

DCT CLEANING SYSTEMS

	LEGEND	★★★	Highly Recommended
C	Cleaning	★★	Recommended
R	Rinsing	★	Applicable
D	Drying	NA	Non-applicable
1F	1-floor	↻	Total Cleaning Process Time
2F	2-floor	▲	Cleaning Capacity
🌡	Recommended Cleaning Fluid Temperature	*	PCB eurocards / per 8 hours (100 x 160 mm / 3.94 x 6.3 in)
👍	Recommended applications	**	Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12.6 x 19.7 x 1.97 in)
w/0A	Without used air knife	***	Stencils, pumpprints larger than 29″ x 29″ / per 8 hours

CLEANING SYSTEMS		InJet 388 CD			InJet 388 CRD		
CLEANING APPLICATIONS	🌡 (°C / °F)	👍	↻	▲	👍	↻	▲
Stencils, Misprints, Squeegees	20-40 / 68-104	★★★	15 min	32	★★★	18 min	27
PCB	35-55 / 95-131	NA	-	-	★★	30 min	384*
Pumpprint	40-55 / 104-131	★★	15 min	32	★★★	18 min	27
Reflow and Soldering Parts	30-50 / 86-122	NA	-	-	NA	-	-
Conformal Coating	40-55 / 104-131	NA	-	-	★★★	60 min	192* / 16**

PARAMETERS				
Number of Process Chambers	1		1	
Processes	C, D		C, R, D	
Dimensions (W x L x H)	1050 x 1360 x 2400 mm	41.3 x 53.5 x 94.4 in	1200 x 1390 x 2400 mm	47.2 x 54.7 x 94.5 in
Max Dimensions of Cleaned Parts	190 x 800 x 760 mm w/oA	7.48 x 31.5 x 29.9 in	190 x 800 x 760 mm w/oA	7.48 x 31.5 x 29.92 in
Weight	420 kg	926 lbs	450 kg	992 lbs
Exchangeable Mechanical Filter of Cleaning Agents	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm
Cleaning Agents Flow Rate	200 l/min	52.8 gal/min	200 l/min	52.8 gal/min
Operating Pressures	C: 1,5 – 2,8 bar	21.75 – 40.6 PSI	C: 1,5 – 2,8 bar	21.8 – 40.6 PSI
Operating Pressures			R: 0,3 – 1,5 bar	4.35 – 21.5 PSI
Cleaning Agents Consumption Per Cycle	0,05 – 0,2 l	0.01 – 0.08 gal	0,05 - 0,3 l	0.01 – 0.08 gal
Volume of Storage Tank	75 l	19.8 gal	60 l	15.8 gal

INJET: SPRAY-IN-AIR TECHNOLOGY

InJet 388 CRRD (Combo)			InJet 388 TWIN CRD *Sausage Dog*			InJet 388 TWIN CRRD *Sausage Dog*		
👍	↻	▲	👍	↻	▲	👍	↻	▲
★★★	18 min	27	★★★	18 min	48	★★★	18 min	48
★★★	30 min	384*	★★	30 min	768*	★★★	30 min	768*
★★★	18 min	27	★★★	18 min	48	★★★	18 min	48
NA		-	NA	-	-	NA	-	-
★★★	60 min	192* / 16**	NA	-	-	NA	-	-

1		2		2	
C, R, R, D		C, R, D		C, R, R, D	
1410 x 1390 x 2400 mm	55.5 x 54.7 x 94.4 in	1200 x 2500 x 2150 mm	47.2 x 98.4 x 84.6 in	1200 x 2500 x 2150 mm	47.2 x 98.4 x 84.6 in
190 x 800 x 760 mm w/oA	7.5 x 31.5 x 29.9 in	100 x 810 x 740 mm	3.9 x 31.9 x 29.1 in	100 x 810 x 740 mm	3.9 x 31.9 x 29.1 in
560 kg	1235 lbs	750 kg	1653 lbs	800 kg	1764 lbs
5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm
200 l/min	52.8 gal/min	200 l/min	52.8 gal/min	200 l/min	52.8 gal/min
C: 0,9 – 2,8 bar	13 – 40.6 PSI	C: 1,5 – 2,8 bar	27.8 – 40.6 PSI	C: 0,7 – 3 bar	10.15 – 45.51 PSI
R: 0,0 – 1,5 bar	0,0 – 21.76 PSI	R: 0,1–2 bar	1,45- 29 PSI	R: 0,1 – 2,8 bar	1.45 – 40.61 PSI
0,05 – 0,3 l	0.01 – 0.08 gal	0,05 – 0,3 l	0.01 – 0.08 gal	0,05 – 0,3 l	0.01 – 0.08 gal
60 l	15.9 gal	80 l	21 gal	80 l	21 gal

DCT CLEANING SYSTEMS

	LEGEND	★★★	Highly Recommended
C	Cleaning	★★	Recommended
R	Rinsing	★	Applicable
D	Drying	NA	Non-applicable
1F	1-floor	↻	Total Cleaning Process Time
2F	2-floor	▲	Cleaning Capacity
	Recommended Cleaning Fluid Temperature	*	PCB eurocards / per 8 hours (100 x 160 mm / 3.94 x 6.3 in)
	Recommended applications	**	Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12.6 x 19.7 x 1.97 in)
w/0A	Without used air knife	***	Stencils, pumpprints larger than 29″ x 29″ / per 8 hours

CLEANING SYSTEMS		InJet 388 TRIPLE CRRD			InJet 388 DOUBLE TRIPLE CRRD		
CLEANING APPLICATIONS	(°C / °F)		↻	▲		↻	▲
Stencils, Misprints, Squeegees	20-40 / 68-104	★★★	20 min	48	★★★	32 min	96
PCB	35-55 / 95-131	★★★	32 min	768*	★★★	20 min	1536*
Pumpprint	40-55 / 104-131	★★★	20 min	48	★★★	20 min	96
Reflow and Soldering Parts	30-50 / 86-122	NA	-	-	NA	-	-
Conformal Coating	40-55 / 104-131	NA	-	-	NA	-	-

PARAMETERS				
Number of Process Chambers	3		3	
Processes	C, R, R, D		C, R, R, D	
Dimensions (W x L x H)	1205 x 3200 x 1860 mm	47.4 x 126 x 73.2 in	1710 x 3200 x 1930 mm	67.3 x 126 x 76 in
Max Dimensions of Cleaned Parts	100 x 810 x 740 mm	3.9 x 31.9 x 29.1 in	100 x 810 x 740 mm	3.9 x 31.9 x 29.1 in
Weight	890 kg	1962 lbs	1500 kg	3307 lbs
Exchangeable Mechanical Filter of Cleaning Agents	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm
Cleaning Agents Flow Rate	200 l/min	52.8 gal/min	200 l/min	52.8 gal/min
Operating Pressures	C: 0,3 – 2,8 bar	4.35 – 40.61 PSI	C: 0,3 – 2,8 bar	4.35 – 40.61 PSI
Operating Pressures	R: 0,0 – 1,5 bar	R: 0,0 – 1,5 bar	R: 0,0 – 1,5 bar	R: 0,0 – 1,5 bar
Cleaning Agents Consumption Per Cycle	0,05 – 0,3 l	0.01 – 0.08 gal	0,05 – 0,3 l	0.01 – 0.08 gal
Volume of Storage Tank	75 l	19.81 gal	150 l	39.6 gal

INJET: SPRAY-IN-AIR TECHNOLOGY

InJet 3179 CRD *Big Board*			InJet 888 CRD 1F / 2F *Horizontal Systems*			InJet 888 CRRD 1F / 2F *Horizontal Systems*		
👍	↻	▲	👍	↻	▲	👍	↻	▲
★★★	18 min	54 / 27 ***	★	20 min	24	★	20 min	24
★★	30 min	768 *	★★	55 min	1100 / 2200*	★★★	60 min	1008 / 2016*
★★★	18 min	54 / 27 ***	NA	-	-	NA	-	-
NA	-	-	★★★	40 min	240**	★★★	40 min	240*
NA	-	-	NA	-	-	NA	-	-

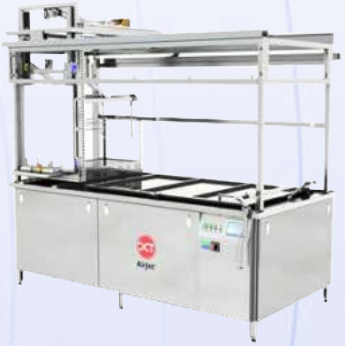
1		1		1	
C, R, D		C, R, D		C, R, R, D	
1170 x 2160 x 2015 mm	46.1 x 85 x 79.3 in	1620 x 1400 x 2350 mm	63.8 x 55.1 x 92.5 in	1620 x 1400 x 2350 mm	63.8 x 55.1 x 92.5 in
100 x 1700 x 900 mm	3.9 x 66.9 x 35.4 in	850 x 800 x 600 mm	33.46 x 31 x 22.7 in	850 x 800 x 600 mm	32.7 x 31 x 22.7 in
900 kg	1984 lbs	660 kg / 680 kg	1455 lbs/ 1500 lbs	775 kg / 795 kg	1708 lbs / 1753 lbs
5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm	5 – 200 µm
400 l/min	105.67 gal/min	210 l/min	55.5 gal/min	210 l/min	55.5 gal/min
C: 1,5 – 3,5 bar	21.76 – 50.76 PSI	C: 1,0 – 2,8 bar	14.5 – 40.6 PSI	C: 1,0 – 2,8 bar	14.5 – 40.6 PSI
R: 0,3 – 2,0 bar	4.35 – 29 PSI	R: 0,0 – 1,5 bar	0.0 – 21.76 PSI	R: 0,0 – 1,5 bar	0.0 – 21.76 PSI
0,05 – 0,3 l	0.01 – 0.08 gal	0,2 - 0,5 l	0.05 – 0.13 gal	0,2 - 0,5 l	0.05 – 0.13 gal
125 l	33 gal	85 l	22.4 gal	85 l	22.4 gal

DCT CLEANING SYSTEMS

	LEGEND	★★★	Highly Recommended
C	Cleaning	★★	Recommended
R	Rinsing	★	Applicable
D	Drying	NA	Non-applicable
1F	1-floor	↻	Total Cleaning Process Time
2F	2-floor	▲	Cleaning Capacity
🌡	Recommended Cleaning Fluid Temperature	*	PCB eurocards / per 8 hours (100 x 160 mm / 3.94 x 6.3 in)
👍	Recommended applications	**	Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12.6 x 19.7 x 1.97 in)
w/0A	Without used air knife	***	Stencils, pumpprints larger than 29″ x 29″ / per 8 hours

CLEANING SYSTEMS		AirJet 486 CRD		
CLEANING APPLICATIONS	🌡 (°C / °F)	👍	↻	▲
Stencils, Misprints, Squeegees	20-40 / 68-104	NA	-	-
PCB	35-55 / 95-131	NA	-	-
Pumpprint	40-55 / 104-131	NA	-	-
Reflow and Soldering Parts	30-50 / 86-122	★★★	35 min	192 **
Conformal Coating Removing	40-55 / 104-131	NA	-	-
PARAMETERS				
Number of Process Chambers		3		
Processes		C, R, D		
Dimensions (W x L x H)		1795 x 1080 x 1145 mm	70.7 x 42.5 x 45.1 in	
Max Dimensions of Cleaned Parts		400 x 800 x 600 mm	15.8 x 31.5 x 23.6 in	
Dimensions of Carrier Basket		390 x 715 x 610 mm	15.35 x 28.15 x 24 in	
Weight		300 kg	661 lbs	
Mechanical Filtration		NA	NA	
Reservoir Tank Volume		100 l	26.4 gal	

AIRJET: AIR BUBBLE TECHNOLOGY



AirJet 4127 CRD			AirJet 954 CRD *Piano*			AirJet 594 CRD-SAC		
👍	↻	▲	👍	↻	▲	👍	↻	▲
NA	-	-	NA	-	-	NA	-	-
NA	-	-	NA	-	-	NA	-	-
NA	-	-	NA	-	-	NA	-	-
★★★	35 min	288**	★★★	45 min	144**	★★★	35 min	192**
NA	-	-	★★★	45 min	980* / 144**	NA	-	-

3		1		3	
C, R, D		C, R, D		C, R, D	
1900 x 1550 x 1465 mm	74.8 x 61 x 57.7 in	2350 x 1140 x 2150 mm	92.5 x 44.9 x 84.6 in	2600 x 1700x 2600 mm	102.3 x 66.9 x 102.3 in
430 x 1280 x 700 mm	16.93 x 50.39 x 27.56 in	870 x 440 x 320 mm	34.2 x 17.3 x 12.6 in	470 x 880 x 600 mm	18.5 x 34.65 x 23.62 in
410 x 1210 x 670 mm	16.14 x 47.64 x 26.38 in	750 x 375 x 600 mm	29.53 x 14.76 x 23.62 in	455 x 855 x 500 mm	17.91 x 33.66 x 19.69 in
480 kg	1058 lbs	680 Kg	1499.1 lbs	720 kg	1587 lbs
NA	NA	5 – 200 µm	5 – 200 µm	NA	NA
400 l	105.7 gal	225 l	59.4 gal	200 l	52.8 gal

SONIX: ULTRASONIC TECHNOLOGY

	LEGEND	★★★	Highly Recommended
C	Cleaning	★★	Recommended
R	Rinsing	★	Applicable
D	Drying	NA	Non-applicable
1F	1-floor	↻	Total Cleaning Process Time
2F	2-floor	▲	Cleaning Capacity
🌡	Recommended Cleaning Fluid Temperature	*	PCB eurocards / per 8 hours (100 x 160 mm / 3.94 x 6.3 in)
👍	Recommended applications	**	Parts in soldering palette / per 8 hours (320 x 500 x 50 mm / 12.6 x 19.7 x 1.97 in)
w/0A	Without used air knife	***	Stencils, pumpprints larger than 29″ x 29″ / per 8 hours

CLEANING SYSTEMS		Sonix 355 CRRD			Sonix 954 CRD *Piano*		
CLEANING APPLICATIONS	**(°C / °F)**	👍	↻	▲	👍	↻	▲
Stencils, Misprints, Squeegees	20-40 / 68-104	NA	-	-	NA	-	-
PCB	35-55 / 95-131	★	35 min	1440**	★★	35 min	1261**
Pumpprint	40-55 / 104-131	NA	-	-	NA	-	-
Reflow and Soldering Parts	30-50 / 86-122	NA	-	-	NA	-	-
Conformal Coating	40-55 / 104-131	★★	60 min	960* / 80*	★★★	45 min	980* / 144***

PARAMETERS				
Number of Process Chambers	4		1	
Processes	C, R, R, D		C, R, D	
Dimensions (W x L x H)	1740 x 1220 x 1210 mm	68.5 x 48 x 47.6 in	2350 x 1180 x 2150 mm	92.5 x 46.5 x 84.6 in
Max Dimensions of Cleaned Parts	280 x 540 x 630 mm	11.2 x 21.2 x 24.8 in	800 x 400 x 350 mm	31.5 x 15.7 x 13.7 in
Dimensions of Carrier Basket	270 x 530 x 620 mm	10.6 x 20.8 x 24.4 in	750 x 375 x 350 mm	29.53 x 14.7 x 13.7 in
Weight	400 kg	882 lbs	720 Kg	1587 lbs
Mechanical Filtration	NA	NA	NA	NA
Reservoir Tank Volume	120 l	31.7 gal	225 l	59.4 gal

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