

C.I.F

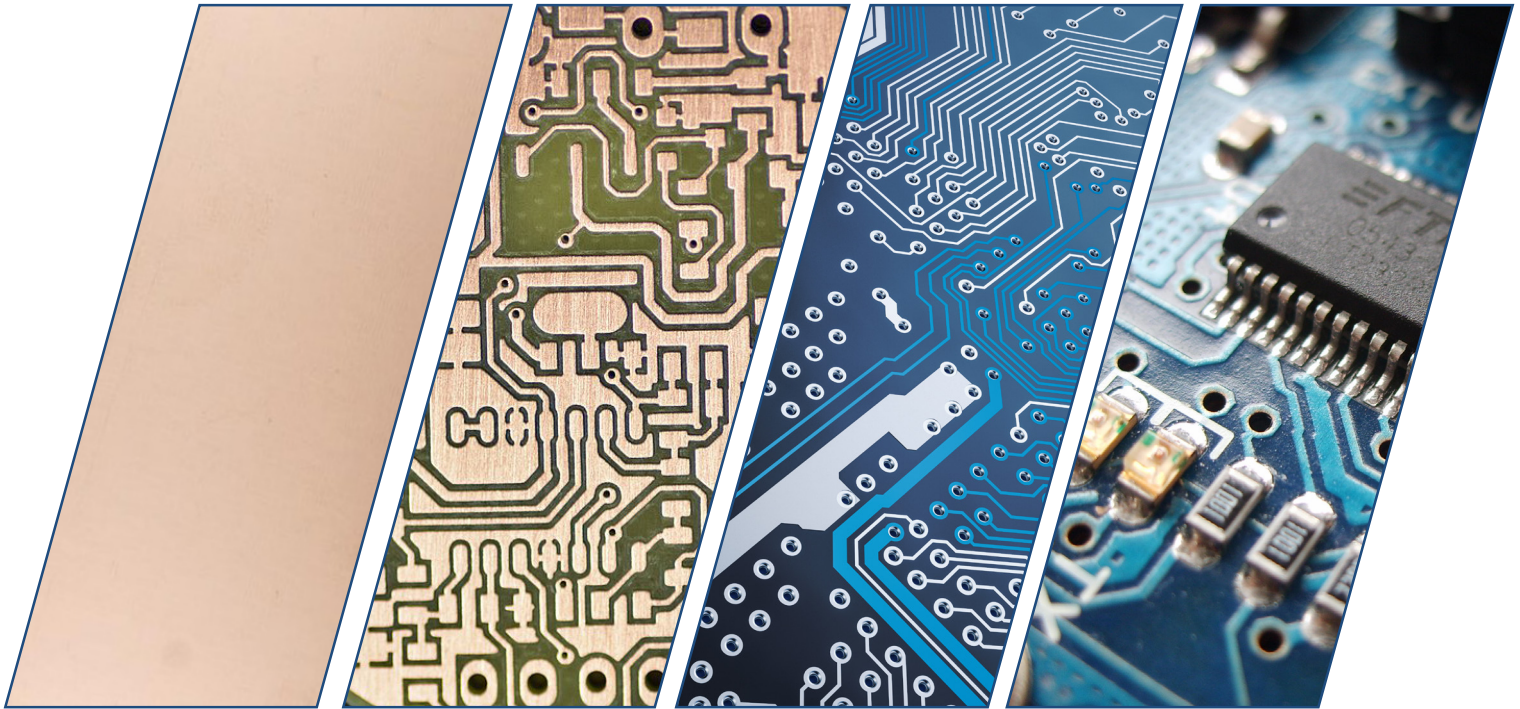
EDITION
2021.1

Expert in Equipment, Products and Services for Electronics

PCB



ASSEMBLY



EUROPE CATALOGUE



WWW.CIF.FR



Member



Partner



Member



Member

OUR BUSINESS

With 40 years of experience, we design and provide equipment, products and services for the realization of electronic cards. With more than 3,000 items, the CIF range covers all stages of the production of an electronic card, from its design to the final control. Design, manufacturing and controls guarantee you a product adapted to your needs and your budget. All CIF products comply with CE standards.

- Technical advice to determine with you your needs and assist you in the choice of equipment and the installation / training
- Quality technical assistance
- "Turnkey" solutions available, services included



OUR ASSETS

- A technical team at your service
- Advice and experience
- A unique and complete range including turnkey solutions
- A rigorous organisation
- CIF is IPC member

OUR SERVICES

- Specification requirements of your projects
- Installation technical support (France and International)
- Equipment maintenance
- After sale service
- Demonstration and test room
- Stock of machines
- Stock of spare parts
- Hotline on request (contract)



Turnkey solutions for your electronic boards manufacture in prototype and micro series

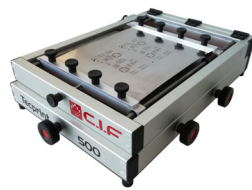
PCB

- Mechanical process



Components assembly

- Dispensing
- Pick & place
- Reflow oven



SMD assembly equipment for small series and productions
Flexible complete SMD assembly lines from the KAYOSMT brand.

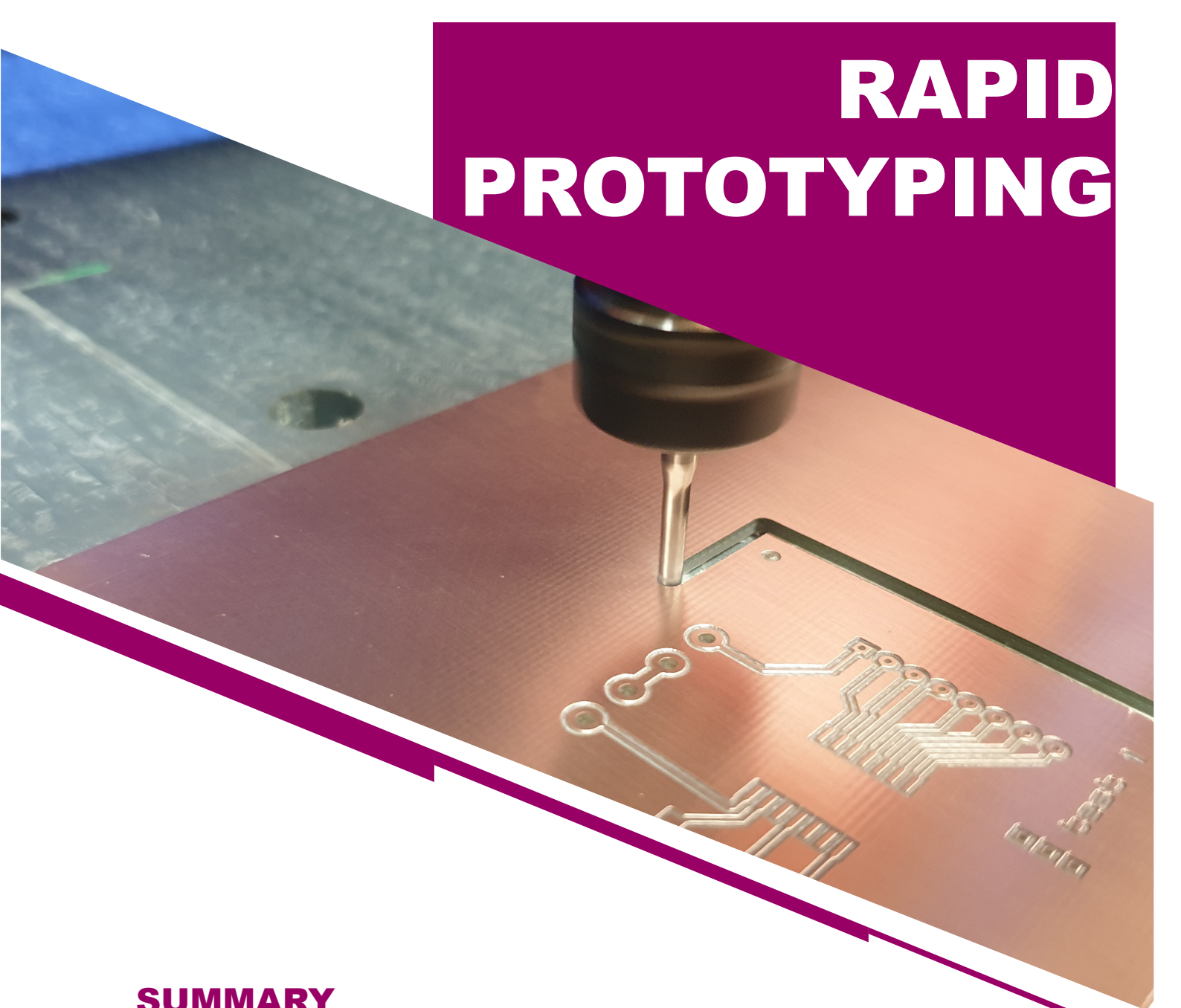
Complete automatic SMD lines

- Screen printers
- Pick & Place
- Reflow oven
- Loader, unloader, conveyor

KAYOSMT
Europe



RAPID PROTOTYPING

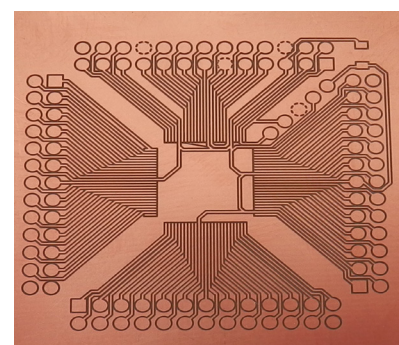


SUMMARY

1. 3 axis-3D Rapid Prototyping - TECHNODRILL 3 p.5

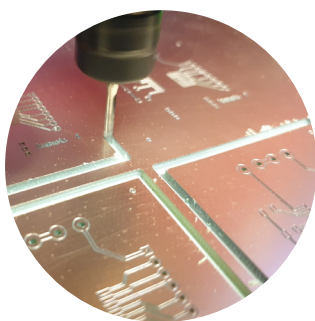
CNC RAPID PROTOTYPING MACHINE 3 AXIS - 3D TECHNODRILL 3 & TECHNODRILL 3 XL

RAPID PROTOTYPING

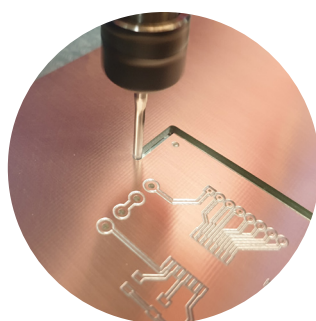


The **TECHNODRILL 3** is the versatile and scalable tool for the electronic laboratory.

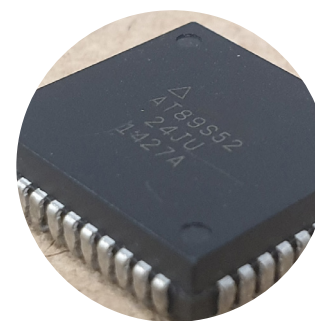
DEPANELING



ROUTING



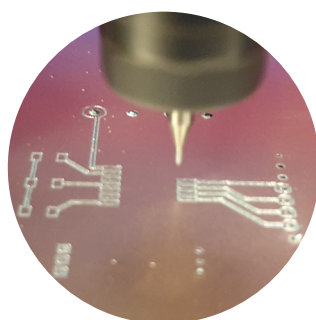
MARKING



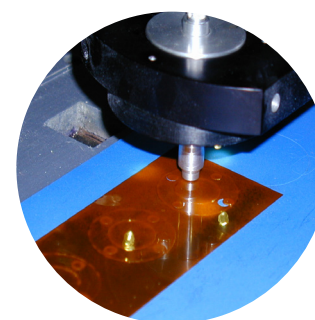
DRILLING



MILLING



CUTTING



**And More...
Contact Us !**

With the TECHNODRILL 3, drill, route, mill, cut, dispense, control, ... Versatility par excellence!

Technodrill 3, high-precision rapid prototyping. Also suitable for double sided English engraving.

- 3-axis machine - 3D. Available in 2 versions TECHNODRILL 3 and TECHNODRILL 3 XL.
- Height under Z axis of 90 mm
- Working area 390 x 315 x 60 mm for TECHNODRILL 3 and 385 x 580 x 60 mm for TECHNODRILL 3 XL
- Control of spindle rotation by software
- Immediate learning
- Versatile: drilling, milling, routing depaneling, cutting, control, dispensing...
- Compatible with all types of files HPGL, ISO, EXCELLON, GERBER, GCODE, DXF,...
- GALAAD 3 control software (with free updates)
- Integrated electronic control unit
- Z-axis movable probe as standard
- Safety: mechanical clamping and clamping by software
- Protective cover and low-voltage lighting as standard
- Many options available

In its full version, the TECHNODRILL 3 is delivered with its control software, the GALAAD 3 pack (industry or education version), an 800 W pin and a protective cover with circuit breaker.

This 3D software includes "English engraving" of printed circuits.

Compatible with many machines and many CAD and CAD / CAM software, it accepts HPGL, ISO, EXCELLON, GERBER, GCODE, DXF files.

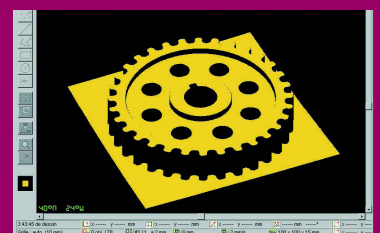
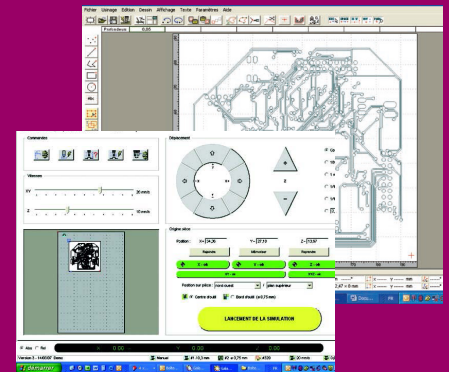
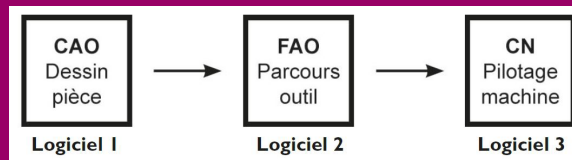
INFORMATION ON THE TECHNODRILL OPERATING SOFTWARE

GALAAD 3 is a set of Windows® software (95/98 / ME / NT / 2000 / XP) intended for intelligent control of numerically controlled machines from 1 to 5 axes. Designed «all in one», it integrates the entire manufacturing process into a coherent whole, and adds additional modules for special applications. Galaad software is available in German, English, French and Italian.

From idea to object, the processing chain generally consists of three stages: drawing the part, using 2D, 2D 1/2 or 3D CAD (Computer Aided Design) software that produces a file describing the geometry thus designed, for example in HPGL, DXF or other format; Then definition of toolpaths, supported by CAM software (Assisted Manufacturing by Computer) which generates a file of trajectories that the tools will have to follow, most of the time ISO G -code format; and finally a CNC (Computerized Numerical Control) software for controlling the numerically controlled machining machine (milling machine or lathe), responsible for producing the part in following the toolpaths thus produced.

GALAAD brings together these three steps in one software. In offering a specialized drawing module which takes into account the fact that the drawn part must be machined, it allows the user to impose constraints very early of achievement. The link with the machining part is immediate, requiring no heavy handling intermediate files. From the drawing module, a simple mouse click is enough to start the process manufacturing on a machine controlled directly by GALAAD.

That said, Galaad remains open software. There is no question of fixing a rigid framework for the process by imposing Galaad on all steps. It is therefore quite possible to substitute an external software at a key point in processing. Thus, the processing part downstream of the drawing can very well use CAD or CAM files from software other than Galaad. Likewise, the drawing module is able to directly call an external pilot to interact with the machine, without even requiring the manipulation of files.



TECHNODRILL 3

Model	TECHNODRILL 3	TECHNODRILL 3 XL
Education reference	U900100	U900200
Industry reference	U900120	U900220
Interpolation	3 axis – 3D	
Height under Z axis	90 mm	
Axes X. Y. Z. (real under the tool with options)	390 x 315 x 60 mm	385 x 580 x 60 mm
Plateau	380 x 500 mm	500 x 645 mm
Resolution	0,0015 mm in micro step (0,059 mil)	
Reproductibility	+ ou - 0.005 mm (0.2 mil)	
Spindle power	800 W.10000 to 24000 rd/min	
Tool positioning	Semi-automatic as standard, automatic as option 5, 10 or 15 tools)	
Drilling rate	360 holes/min (ø 0,8)	360 holes/min (ø 0,8)
Mini track width	0.15 mm (5.9 mil)	0.2 mm (8 mil)
Isolation mini	0,15 mm (5.9 mil)	0.2 mm (8 mil)
Mini drilling Ø	0,3 mm (12 mil)	
Travel speed	100 mm/s maxi	
Linear guide	Screw and ball socket (pitch 5 mm)	Screw and ball socket (pitch 4 mm)
Motor X. Y. Z	3 steper motor set at 1/16 pitch (3200 steps/rd)	
Frequency	Up to 200 KHz	
Table	Grooved aluminium for quick placement	
Positioning tool sensor	Included and mobile	
Electrical supply	230 V – 50 Hz - 8 A	
Net weight	76 Kg	90 Kg
External dimensions (L x W x H)	880 x 700 x 590 mm	850 x 1000 x 670 mm
Sound level	<65 dBA	
Delivered with	GALAAD 3 software (free updates)	
Security	Mechanical clamping and software clamping	

Machines delivered with spindle, GALAAD 3 software and integrated PC PRO OEM

		Starter kit for TECHNODRILL 3 (U800122)	Starter kit for TECHNODRILL 3 XL (U800123)
	Reference	Qty	Qty
Set of 10 drilling counter plates 200 x 300 mm	EP116	1	1
Raw epoxy boards 1 side 16/10 35µ 200 x 300 mm	AD20	5	5
Raw epoxy boards 2 sides 16/10 35µ 200 x 300 mm	AE20	5	5
Martyr plate thickness 15 mm - dimensions 320 x 315 mm	U700030	1	2
Surfacing milling bit for martyr plate Ø 8 mm, Shank Ø 8 mm (ref DU202)	DU202	1	1
Diamond milling cutter, Ø 2.5 mm for PCB	DUFD2	1	1
Engraving bits Ø 0.2 mm for printed circuits	DU17	3	3
Carbide drills Ø 0.6 mm, shank Ø 3.17 mm, L = 38 mm	DU66	3	3
Diamond milling cutters, Ø 0.8 mm	DUFD6	3	3
Aluminum engraving drill, 90 °, shank of 3.17 mm	DU201	1	1
Plastics engraving drill, 45 °, shank of 3.17 mm, Ø 0.32 mm	DU204	1	1
Repositioning adhesive roll, 2 sides, width 50 mm, length 25 meters	U800023	1	1

OPTIONS AND ACCESSORIES FOR TECHNODRILL 3 & XL

Integrated PC Windows 10 PRO OEM

U500058



Martyr plate in laminated wood or PVC, thickness 15mm, dimensions 320 x 315 mm

U700030



Embedded camera

U700115



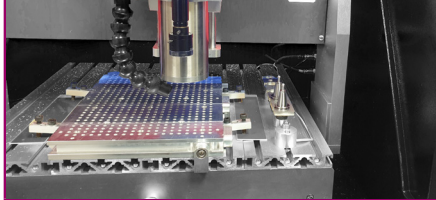
Repositioning tape, 2 sides, 1.50 mm, L 25mm unit

U800023



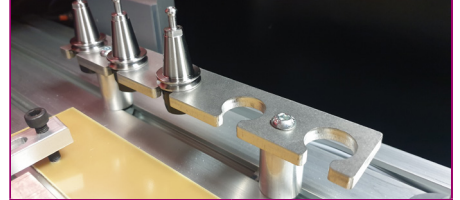
Professional automatic tool change pack with its cooler

U700120



Storage pack +5 tools for automatic tool change spindle

U700180



CS50 compressor

F41043



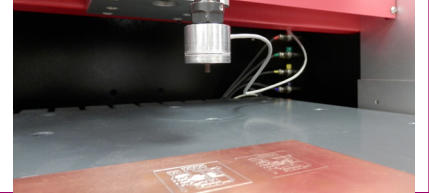
CS60 compressor (oil-free)

F41052



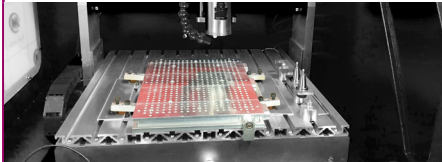
Metallic flatness sensor

U700019



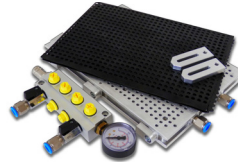
Vacuum professional baseplate for TECHNODRILL 3

U700130



Vacuum professional baseplate martyr plate and vacuum turbine, pro

U700116



Discharge valve for professional vacuum base, pro

U700127



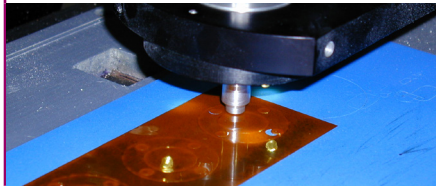
Suction filter for professional vacuum base, pro

U700128



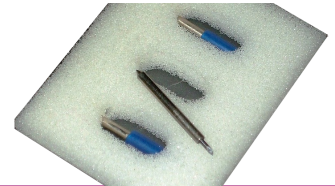
Cutter head for cutting

U700018



Replacement blade for cutter head, set of 3 pieces

U700017



Bottom cabinet with storage space for TECHNODRILL 3

U700009



TECDUST vacuum system with microfilter and adapter

U700126



Micro dust vacuum bag for TECDUST

U800039



Dust shoe for Ø 65 mm spindle

U500269



Set of 10 drilling counter plates 200 x 300 mm

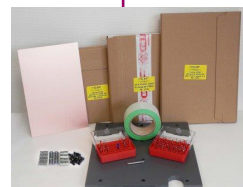
EP116



Starter kit for TECHNODRILL 3

U800122

U800123 XL version



ASSEMBLY FOR LABORATORY



SUMMARY

1. Dispensing..... **p.10**
3. Products and accessories for dispensing.... **p.11**
2. Stencil printer..... **p.12**
3. Dispensing robot..... **p.14**
5. Manual Pick & Place..... **p.16**
6. Automatic Pick & place..... **p.18**
7. Batch reflow ovens..... **p.20**
8. Vapor phase reflow oven..... **p.24**

DISPENSING

DOTTY CMS 450.V2 DISPENSER



Professional device for glues, pastes and low viscosity products dispensing. The DOTTY CMS 450.V2 dispenser can operate independently or in combination with a placement station.

Features and benefits

- Immediate handling
- Light and ergonomic
- 5 programming modes including learning and component
- Versatile, all types of products
- Memorizing 10 programs

Compatible for automatic dispensing on 3-axis 3D machines TECHNODRILL3 & TECHNODRILL 3XL



The DOTTY dispenser can work under many different ways :

Manual: Pushing on the pedal, the product deposit will be done when the control is done. Getting of the pedal will stop the deposit

Semi-automatic: Pushing on the pedal, a x quantity of deposit is done once. You need to push again on the pedal to start a new deposit.

Automatic : Remaining on the pedal, a x quantity deposit is done every x repetitions until the pedal is getting of.

Learning : This programm automatically defines deposit and repetition times according to work to do. You just need to make 10 manual deposits depending on the requested rate and the unit will analyse, making an average of appropriate times. Once learning mode is finished, the unit will get back to automatic mode. It will be saved in component mode.

Component: 10 memories of P0 to P9 are accessible.

Model	DOTTY CMS 450.V2
Reference	F41020.1
Programming modes	5
Max intake pressure	10 bars. max
Operating pressure	0.1 to 10 bars
Sound level	< 40 dB
Power	14 W
Dimensions L x H x W (mm)	260 x 140 x140
Net weight	2.0 Kg
Electrical supply	230 V- 50 Hz

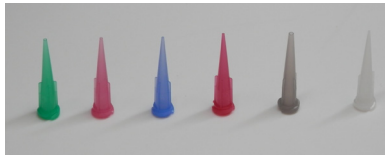
PRODUCTS AND ACCESSORIES FOR DISPENSING

STAINLESS STEEL NEEDLES



- Length 12 mm
- Compatible with all range of METCAL by CIF
- Stainless steel cannula with fitting or polypropylene
- Constant flux without destruction is guaranteed
- Silicone and chloride free

NEEDLES IN TRANSPARENT POLYETHYLENE



- High density polyethylene needle with UV protection
- Recommended for products with high viscosity, such as solder paste, glue, etc.
- Dual security luer-lock
- Length 31 mm

DISPENSING TIP KIT



900-NK

Dosing needle kit containing TE, TE bent and TT needles.

- Stainless steel x55
- Polyethylene needles x35
- Stainless steel needles bent x51
- Distribution nozzle x1

Ø 0.15 mm	F42062	Ø 0.50 mm	F42058
Ø 0.20 mm	F42150	Ø 0.60 mm	F42057
Ø 0.25 mm	F42061	Ø 0.84 mm	F42056
Ø 0.33 mm	F42060	Ø 1.37 mm	F42152
Ø 0.40 mm	F42059	Ø 1.60 mm	F42153

Ø 0.20 mm transparente / bag of 50	F42051
Ø 0.25 mm red / bag of 50	F42052
Ø 0.40 mm blue / bag of 50	F42055
Ø 0.40 mm blue / bag of 100	F42045
Ø 0.60 mm rose / bag of 50	F42054
Ø 0.60 mm rose / bag of 100	F42044

ISOPROPYLIC ALCOHOL PEN



10 ml Pen | V800022

SYRINGE ADAPTER



Polyethylene 10 cc syringe adapter with clear crystal hose.

Syringe adapter 3 cc	903-3RHB
Syringe adapter 5 cc	905-3RHB
Syringe adapter 10 cc	F35039
Syringe adapter 30/55 cc	93055-3RHB

MANUAL SYRINGE GUN



Lightweight barrel applicator gun Provides excellent control for medium/ high viscosity products.

Manual syringe gun, 10cc	910-MSG
Plunger rod	71000ROD

CLEANER FOR STENCILS



V800041

Cleaner especially recommended for stencils. It can also be used to clean circuits after soldering. It is a very good solvent.
Chemical formula: C3H8O
UN code : UN1219

MULTI-USE CLOTHS



F42117

Multi-purpose, lint-free and absorbent cloths.

150 MM STICKS WITH COTTON TIP



V800042

Cotton swab sticks for cleaning hard to reach areas.

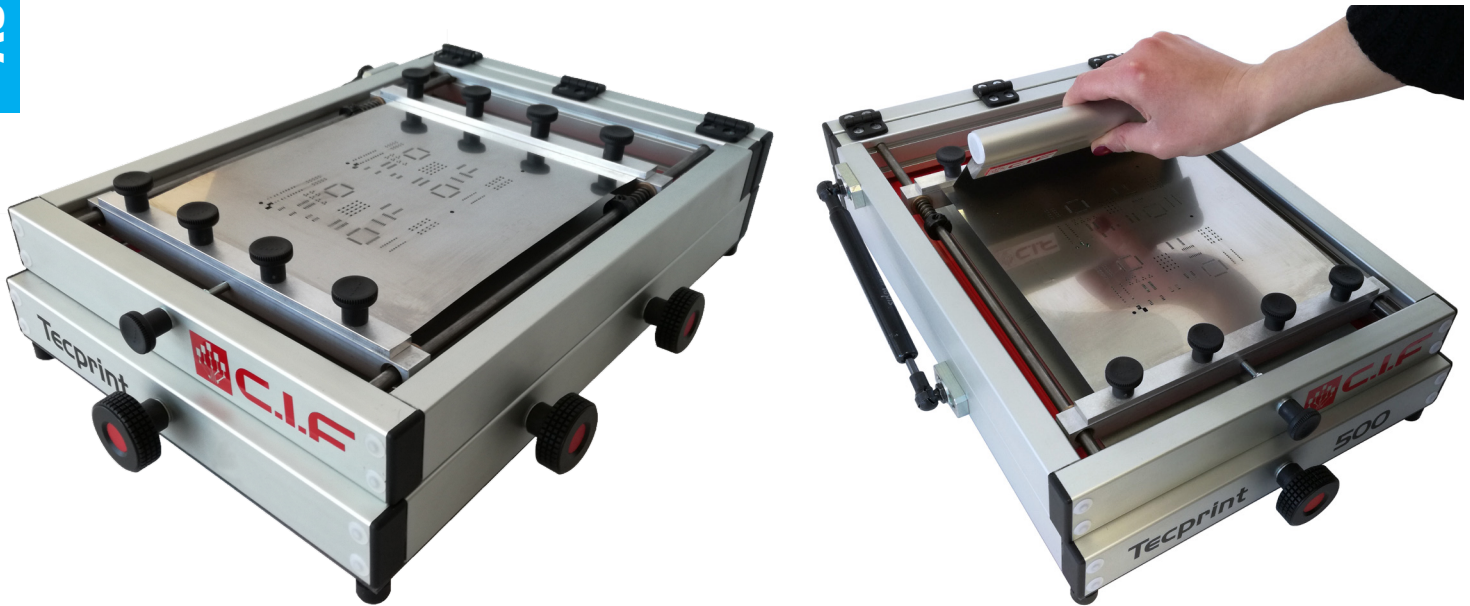
STARTER KIT FOR STENCIL PRINTER

For the implementation and cleaning of TECPRINT 500 & TECPRINT700 stencil printers.

- Cleaner for stencils (250 ml) Ref. V800041
- Bag of 50 multi use rags, Ref. F42117
- Bag of a 100 150mm sticks with cotton tips Ref. V800042
- Manual syringe gun, 10cc Ref. 910-MSG
- Replacement plunger rod for manual 10cc syring gun Ref. 71000ROD

STENCIL PRINTER FOR SMD

TECPRINT STENCIL PRINTERS



Create your printing in a short time and for low price !
Compact model

FLEXIBLE • AUTO-TENSIONER SYSTEM • ACCURATE

The TECPRINT models are compact manual stencil printers that will allow you to make your stencil printings in record time and at a lower cost.

- Auto tensioner frame to allow starting your stencils of different formats
- Maximum size of the printed circuit: **200 x 270 mm** for the TECPRINT 500 and **300 x 400 mm** for the TECPRINT 700
- Minimum size of the printed circuit: 30 x 50 mm for both models
- Max stencil size: 210 x 320 mm for the TECPRINT 500 and 310 x 470 mm for the TECPRINT 700
- Mini size of the stencil: 50 x 50 mm for both models
- Positioning of the silk screen card on two adjustable bars with stops
- Provision of three pre-set counters to prevent buckling of the circuit (anti-buckling)
- Double reflow process possible (height available 25 mm)
- Put the stencil in seconds
- Very easy alignment in X, Y and theta ± 7.0 mm
- Delivered complete with accessories: anti-buckling pawns, metal buckle
- Your first engraved stencil is offered when buying a TECPRINT



SPARE METALLIC SQUEEGEE

Model	TECPRINT 500	TECPRINT 700
Reference	V900016	V900017
Max. stencil size	210 x 320 mm	310 X 470 mm
Mini stencil size	50 x 50 mm	50 x 50 mm
Max PCB size	200 x 270 mm	300 x 400 mm
Mini PCB size	30 x 50 mm	30 x 50 mm
Dimensions L x H x W	315 x 550 x 200 mm	415 x 700 x 230 mm
Net weight	5,5 Kg	9.0 Kg

Options and accessories

TECPRINT 500		TECPRINT 700	
Spare squeegee for TECPRINT 500	V700118	Spare squeegee TECPRINT 700	V700119
Set of 4 aluminium PCB support bars for TECPRINT 500	V500086	Stainless stencil 130 µm - 300 x 400 mm for TECPRINT 700 <i>(the first one is free of charge)</i>	V700052
Stainless stencil 127 µm -250 x 250 mm for TECPRINT 500 <i>(the first one is free of charge)</i>	V700053		
Starter kit for the TECPRINT range	content: 1 x Screen printing screen cleaner (250 ml) - ref V800041 1 x Pack of 50 lint-free absorbent cloths - ref F42117 1 x Bag of 100 150 mm sticks with side tip - ref V800042 1 x Manual syringe gun 10 cc - ref 910-MSG 5 x Replacement rod for 10 cc manual syringe gun - ref 71000ROD		V800040

DISPENSING ROBOT

TECHNIDOT



TECHNIDOT is a metering CNC robot for automating the deposition of braze pastes (classes 4, 5 and 6), glues and fine fats both in the laboratory and in industry.

The main advantage of this machine is that it allows very precise deposition of quantities of fluids, while improving the productivity of this operation thanks to the high-quality dispenser MUSASHI®.

Advantages

- The TECHNIDOT is an automated 3-axis CNC solution for precise applications of different viscosities.
- Easy installation and programming via learning box or file import
- Faster card cycles and processing
- Easy integration into any manufacturing process
- Reduces production, material and possession costs
- Robust and reliable structure
- Reduced space requirement



THE MACHINE IS DELIVERED COMPLETE INCLUDING

- 1 KYNON - GALAAD license
- 1 PVC martyr tray
- 1 tool probe
- 1 camera
- 1 set of 4 nozzles from 0.2 to 0.5 mm diameter
- 1 MUSASHI® dosing device
- 1 Syringe Holder
- 1 10cc syringe adapter
- 1 syringe adapter 30 / 50 cc

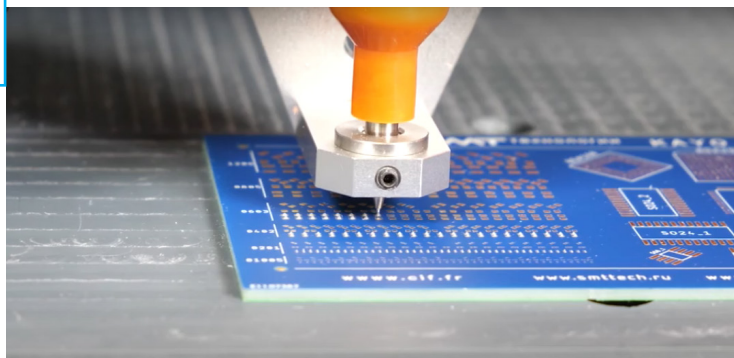


MUSASHI DISPENSER ®

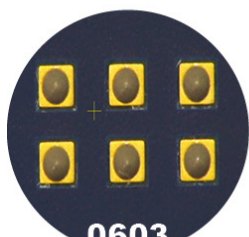


Applications

- Dispensing of solder paste class 6, class 5 or class 4
- Thin glue
- Fine grease

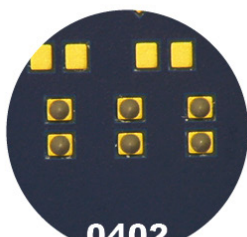


Exemple de dépôts de crème à braser sur des pastilles de différentes tailles
Example of solder paste deposits on pads of different sizes



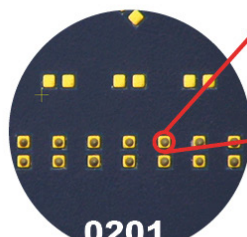
0603

Taille pastille
Pad size
1,6 x 0,8 mm



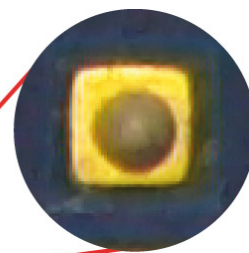
0402

Taille pastille
Pad size
1,0 x 0,5 mm



0201

Taille pastille
Pad size
0,6 x 0,3 mm



Technical spécifications of the robot

Interpolation	3 axis - 3D
Standard working stroke	320 x 310 x 60 mm
Reproductibility	+ or - 0.005 mm (0.2 mil)
Moving speed	100 mm/s maxi
Linear guide	Screw and ball socket (pitch 5 mm)
Motor X. Y. Z	3 stepper motor set at 1/16 pitch (3200 steps / rd)
Frequency	Up to 200 KHz
Table	Grooved aluminium for quick placement
Positioning tool sensor	Included
Power supply	230 V - 50 Hz - 8 A
Net weight	76 Kg
External dim L x l x H	880 x 700 x 590 mm
Safety cover	Included
Lighting	Included
Delivered with	Logiciel GALAAD 3 (Mises à jour gratuites)

Technical characteristics of the dispenser

Model	ML-5000XII
Discharge pressure setting	Electro/pneumatic method
Pneumatic control circuit	Air pulse stabilizing circuit (PAT.)
Dispense pressure setting	5.0 - 700.0kPa
Discharge time setting	0.010 - 9.999sec. (0.001sec. step)
Discharge time control circuit	C-MOS IC control digital circuit
Vacuum pressure setting	0 --20.0kPa
Display section	LED digital display
Input and output signal	Input : With or without contact point Output : Without contact point
Supply air pressure	Up to 0.8 MPa (Discharge pressure +0.1 MPa or more)
Power supply, Power consumption	AC100 - 240V 50/60 Hz, 17W
Exterior dimensions, weight	W188 X D196 X H76mm, 3,4 kg
Vacuum adjustment mechanism for drip prevention	Yes (micrometer specifications)
Stopwatch function	Yes
Shot switch	Yes

SMD MANIPULATOR PRECITEC®.ELITE



The PRECITEC®.Elite is a SMD pick & place station that is characterized by **exceptional ergonomics and functionality**.

The originality of the PRECITEC®.Elite station is to have a gripper head moving only on the Z axis; The X and Y movement is ensured by the displacement of the gantry. This specific device ensures greater robustness and reliability of the assembly.

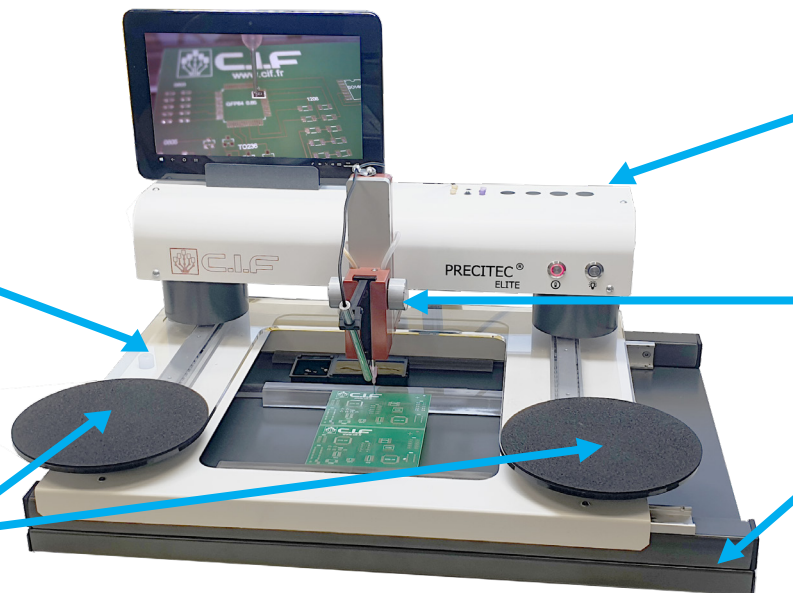
It also makes it possible to optimize the working area of **330 x 400 mm** as much as possible.

Vacuum pump integrated in the gantry. The placement head includes a micro switch which provides the vacuum / vacuum breaker for picking up and removing the component. This function is also available by foot control pedal (option).

PRECITEC®.ELITE Patented model & principle

Mobile upper gantry

Double arm support



Tool holder

Gripper head for right and left handed

Fixe board support base

OPTIONS AND ACCESSORIES

REFERENCE

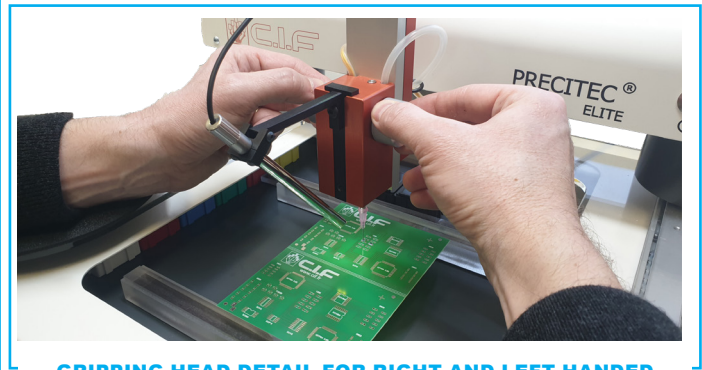
	Color camera	V800029
	Feeder for rest piece of tapes to be mounted on sliding bar	V700375
	Windows® touchscreen display + support	V800055
	Lead-free SMD starter kit	F42310
	Foot pedal for vacuum control	V500199

BENEFITS

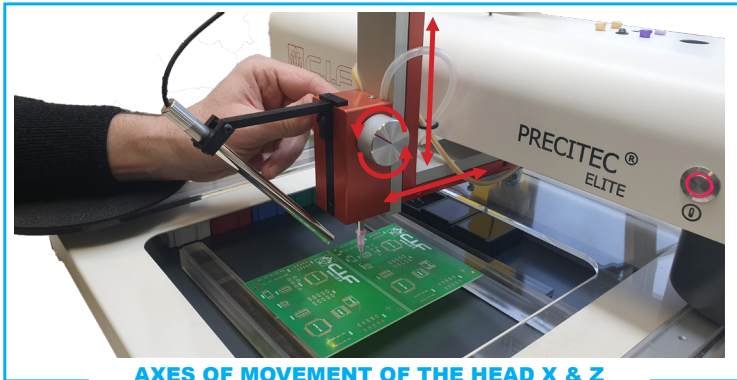
- Compact but with a very large working area : 330 x 400 mm
- Designed for right and left handed users without configuration changes
- Double arm support for a better operating position ensuring optimal comfort for the operator
- Sensitive grip head with 360 ° component rotation
- Vacuum / vacuum breaker via gripping head or foot control pedal
- 10 cc syringe support integrated as standard for connection to any type of dispenser
- Color pencil option; USB connection for connection to PC under Windows® or touch pad
- Vacuum pump integrated in the gantry
- Lighting of the work area by LEDs, on board the gripping head
- Board holding by magnetic base strips
- Supplied complete with set of accessories: 12 valve boxes type B3, set of needles, set of suction cups, 1 set of circuit support strips.



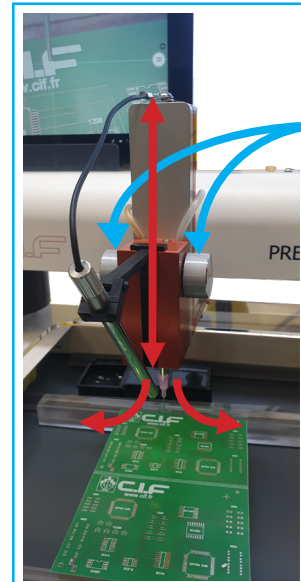
MOVING THE UPPER MOBILE GANTRY IN X & Y.
WIDE CARD HOLDER CLEARANCE



GRIPPING HEAD DETAIL FOR RIGHT AND LEFT HANDED



AXES OF MOVEMENT OF THE HEAD X & Z
COMPONENT ROTATION OVER 360°



Component rotation
Double wheel for
right & left handed (standard)

AXES OF MOVEMENT OF
THE HEAD Z & TETHA

**HIGH QUALITY
PLACEMENT**

TECHNICAL CHARACTERISTICS

Model	PRECITEC.ELITE
Reference	V900018
Working area	330 x 400 mm
Placement accuracy	0402 to QFP with 0,65 mm precision
Dispensing head	Included
Rate	Up to 90 components / hour
Operating temperature	15 to 40° C
Sound level	< 70 dB(A)
Dimensions. L x x H	600 x 500 x 300 mm
Net weight	15.5 Kg
Electrical supply	230 V- 50/60 Hz

AUTOMATIC SMD PICK & PLACE MACHINES

KAYO A2 / A4



The KAYO A4 / A4L are automatic SMD report stations.

Compact they can accommodate 25 feeders for the A2 and 46 tape feeders for the A4 as well as 6 placement and positioning cameras. The placement accuracy is 0.01 mm for a placement capacity of 6000 components per hour(max) for the A2, and 7000 components per hour (max) for the A4.

Quick to set up and easy to handle, the KAYO A2 / A4 Pick & Place is the ideal machine for the assembly of your SMD series.

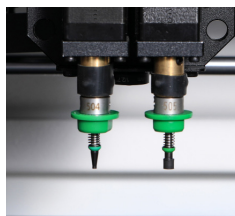
Features

- The KAYO A2 is delivered with 1 HD recognition camera
- The KAYO A4 is delivered with 6 cameras : 1 for the detection of the sights, 4 cameras for the mounting nozzles and 1 high precision camera
- Camera refocusing & detection of rejection marks
- Installation capacity of 6000 CPH or 7000 components / hour (max) with an accuracy of ± 0.01 mm
- Works under Windows® environment
- The drivers have been optimized to guarantee quick component placement while improving precision and a low noise level
- An automatic card transit system within the machine in three sections saves time and efficiency

KAYO A2



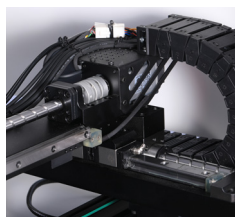
HD recognition camera



4 mounting nozzles

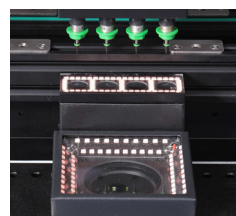


PANASONIC® Motor and servomotor

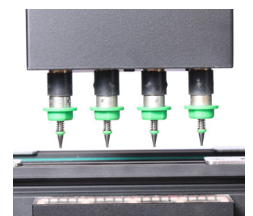


TBI precise linear guide

KAYO A4



4 placement cameras + 1 high precision



4 mounting nozzles



Internal conveyor system



2 control screens

APPLICATIONS

Applicable Mounting Range: Suitable for 0402, 0603, 0805, 1206, LEDs, LED lamp beads, diodes, transistors, SOT, 40mm*40mm range pin pitch ≥ 0.3 mm QFP, BGA ...

OPTIONS AND ACCESSORIES

Yamaha® type tape feeder CL8*2, 8 mm, step 2 mm	V800062
Yamaha® type tape feeder CL8*4, 8 mm, step 4 mm	V800063
Yamaha® type tape feeder CL12, 12 mm	V800064
Yamaha® type tape feeder CL16, 16 mm	V800065
Yamaha® type tape feeder CL24, 24 mm	V800066
Yamaha® type tape feeder CL32, 32 mm	V800067
Stick feeder 3 tubes	V800068
Stick feeder 5 tubes	V800069
Installation and start-up, 3 days with a CIF technician	Y600009

Other models of automatic SMD Pick & Place machines are available, on www.kayosmt.eu

Machine to be connected to compressed air network free from any impurity, please contact us

Model	KAYO A2	KAYO-A4
Reference	V900168	V900031
Feeder no.	25	46 (8 mm)
Mounting nozzles	2	4
Max. mounting speed	6000	7000 CPH
Average mounting speed	2000 - 2500	4000 - 5000CPH
Positioning accuracy	+ - 0.01 mm	
Operating modes	Manual, semi-automatic & automatic	
Caméras	1 High definition	1 Mark recognition camera, 4 high speed recognition cameras, 1 high-precision recognition camera
Driving motor	Panasonic servomotor	
Recognition method	Automatic with conversion	Four heads recognize synchronously
Nozzle vacuum source	High speed ON/OFF vacuum generator	
Max. circuit board area	295 x 420 mm	480 x 300 mm
X/Y Max. movement range	20 mm	
Mounted components	0402 au 45 x 45 mm, LED, QFP, BGA pitch ≥ 0.3 mm	
Max component height	5,5 mm standard, 10 mm on demand	
Feeder type	Tape feeder 6/12/24/32 mm Vibratory feeder	
Screen	None	15 inches
Operating System	Windows® 7	Windows® 7
Programmation	Data conversion, Step by step, visual	
Power	300 W	600 W
Electrical supply	220 V, 50 Hz	
Dimensions	1045 x 850 x 650 mm	1180 x 1080 x 880 mm
Weight	168 Kg	150 Kg



Find all the equipment in the **KAYOSMT** range on www.kayosmt.eu



FORCED AIR CONVECTION REFLOW OVENS FT03



Basic model of batch ovens, the FT03 oven was designed for reflow solder paste and polymerization of glues for prototype cards.

- **Controlled by SMTix 2.0 software for FT03.Advanced**
- Full view of the map through a large window
- Memorization of 10 series programs
- Compact model but offering a working reflow area of **190 x 290 mm**
- Heat distribution by forced convection, **max. T ° 300 ° C**
- Nozzle and suction pipe for connection to filtration unit (optional)
- Temperature control by microprocessor.
- LCD display of the different setpoints: temperature and time.
- Very simple programming for immediate handling
- Security: double glazing with air circulation, locking the access door

This model exists in 2 versions. The FT03.ADVANCED oven is controlled by SMTix 2.0 software, a new version of SMTix

NEW

THE COMPLETE FILTRATION KIT

Ready to use pack including:

- FILTRATEC filtration station with remote control (**I51025.F1**)
- Nozzle and suction pipe for FT03 (**V700079**)



Model	FT03	FT03.ADV
Reference	V900320	V900323
SMTIX 2.0 Software	NO	YES
Working area	190 x 290 mm	
Heating	2 levels	
Heating element	2 x 1 KW	
Temperature control	by microprocessor	
Operating temperature	Up to 300 °C	
Thermal stabilization time	about 3 minutes	
Sound level	Under 50 dBA	
Total power	3.1 KW	
Total weight	19 Kg	
Electrical supply	230 V - 50/60 Hz	
Option: Nozzle and extraction pipe	V700079	
Option: Filtration unit kit	I51025.F1	
Option: K thermocouple	E42127	
Option: Set of 3 thermocouples	E42128	



SMTix 2.0 SOFTWARE

ref V800001

The SMTix-2.0® software is a new version of SMTix allowing to control the reflow ovens FT03.Adv (option on this model) and FT05.Adv (included as standard)

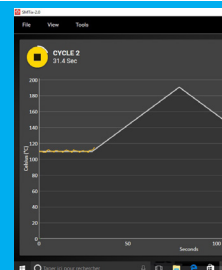
Very simple to use the SMTix-2.0® software is a precious help to pilot your oven and find the correct profile. You can save all your data and programs.

Connected to the oven by a USB link, SMTix-2.0® automatically detects the presence or not of the external probes connected to the oven (3 on the FT05.ADV and 1 on the FT03.ADV). The software also allows you to configure temperature probes.

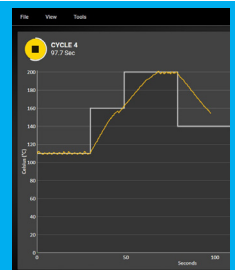
It is possible to create and store an infinite number of profiles. For each one, the date, time, file name and comments can be set; it can extract data in jpeg, pdf and csv formats.

In production mode 2 display modes are available: by increment or linear.

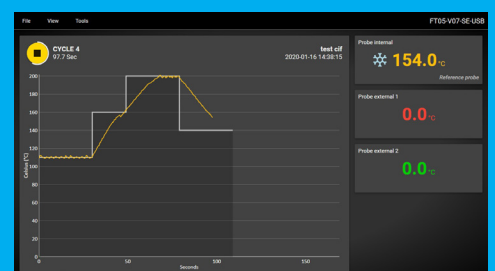
With SMTix-2.0®, different temperature increments can be created (10 max). The license is single-user and requires an Internet connection only at installation.



Linear display



Increment display



Intuitive and ergonomic software

FORCED AIR CONVECTION REFLOW OVEN FT05.ADV



Forced convection reflow oven for prototypes and small series. The **FT05.ADVANCED** model is controlled by software **SMTix 2.0**. It can be optionally connected to a filtration station.

- Possibility to create up to 10 temperature increments
- Full view of the board through a large window
- Compact model but offering a working reflow area of **350 x 400 mm**
- Display on LCD screen of the different instructions
- Memorization of an infinite amount of programs
- Heat distribution by forced convection.
- Very simple programming for immediate handling



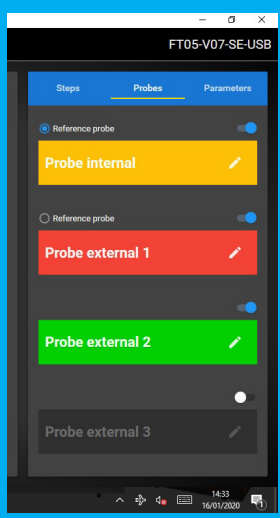
Modèle	FT05.ADV
Reference	V900324
Working area	350 x 400 mm
Heating	2 Levels
Quartz heating element	4 x 1 KW
Operating software SMTix-FT	Included
Temperature control	by microprocessor
Operating temperature	Up to 300°C
Thermal stabilization time	About 5 minutes
Sound level	Under 50 dBA
Dimensions L x H x W	730 x 640 x 380 mm
Net weight	39 Kg
Electrical supply	230 V - 50/60 Hz
Option: Filtration unit kit	I51025.F1
Option: K thermocouple	E42127
Option: Set of 3 thermocouples	E42128

THE COMPLETE FILTRATION KIT

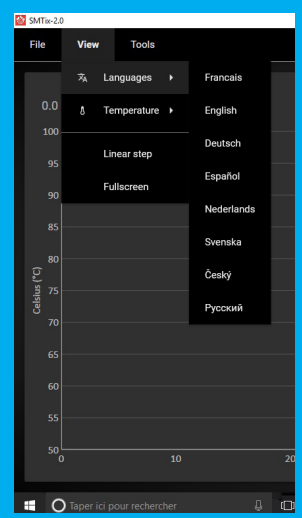
Reference	I51025.F1
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* SMTix 2.0 : compatible version Windows® 10



3 choices of reference probe



8 Languages

Features of the SMTix-2.0® software for CIF series FT ovens

- Possibility to create up to 10 temperature increments
- Ergonomic and intuitive for installation + immediate handling
- Touch interface software
- Oven control via the internal probe or the external probe (position 1)
- Change of reference probe during the process (values retained)
- Visualization of the different probes: 1 internal probe and 3 external probes
- Display in increment or linear mode
- Unlimited profile saving
- Multilanguage: French, English, Russian, Italian, German, ... other languages on request
- Data export in csv, pdf and jpg formats
- Windows® compatible (desktop & tablets)
- Secure software

OPTIONS & ACCESSORIES FOR FT SERIES REFLOW OVENS

					
	SMTix 2.0 software	Option: Nozzle and extraction pipe	Option: Filtration unit kit	Option: K Thermocouple	Option: Set of 3 K thermocouples
Reference	V800001	V700079	I51025.F1	E42127	E42128
FT03 Ref: V900320 	UNAVAILABLE	Option	Option	Option	Option
FT03 PREMIUM Ref: V900036 	UNAVAILABLE	✓ Included	✓ Included	Option	✓ Included
FT03.ADV Ref: V900323 	✓ Included	Option	Option	Option	Option
FT03.ADV PREMIUM Ref: V900037 	✓ Included	✓ Included	✓ Included	Option	✓ Included
FT05.ADV Ref: V900324 	✓ Included	NOZZLE INTEGRATED TO THE FT05	Option	✓ Included	Option
FT05.ADV PREMIUM Ref: V900038 	✓ Included	NOZZLE INTEGRATED TO THE FT05	✓ Included	Option	✓ Included

INLINE CONVECTION REFLOW SOLDERING UNITS ATHOS SERIES



The ovens are delivered with:

- Lead-free reflow oven
- The 4 or 6 upper and lower heating zones are independently controlled
- Stainless steel heating tunnel, corrosion and heat resistant
- PID temperature controls for each zone with an accuracy of $\pm 1^\circ\text{C}$ Air cooling
- Chain and mesh conveyor
- Lubrication of the chain conveyor
- Color touch screen
- One year warranty on parts
- CE models

New range of forced convection reflow ovens with in-line conveyor drive.

These are forced convection reflow ovens with in-line conveyor drive.

They are designed for medium productions.

4 models are available with 1 oven with a 300 mm pcb width in 4 or 6 zones and 1 oven with a 400 mm pcb width also in 4 or 6 zones.

ATHOS ovens are compatible with all types of alloys in a range of room temperature to 350°C; the upper and lower hot air convection zones are individually controlled.

They are equipped with a stainless steel mesh and chain conveyor as standard. The rails have been treated for heat resistance and are equipped with oilers.

Touch screen with PLC controller which can store 50 groups of temperature parameters and provide 2 additional ports for profile testing.

For connection to other equipment, ATHOS ovens include a SMEMA connector.

The unique design of the program allows automatic adjustment of power consumption at start-up and reduction of start-up current.

Their technical specifications meet IPC standards.

Model	ATHOS 300-4	ATHOS 400-4	ATHOS 300-6	ATHOS400-6
Reference	V900170	V900172	V900171	V900173
Heating zones	Upper 4 zones		Upper 6 zones	
	Bottom 4 zones		Bottom 6 zones	
General power	23 KW		33 KW	
Power consumption	3 à 7KW		4 à 8KW	
Rising time	15 mins			
Controlling type	Touch screen and PLC			
Heating method	Fully forced air convection			
Temperature controlling	PID close-loop control, SSR drive			
Conveyor method	Mesh belt and chain conveyor			
Conveyor height	900 ± 20mm			
Mesh belt width	330 mm	430 mm	330 mm	430 mm
Max PCB width	300 mm	400 mm	300 mm	400 mm
PCB clearance	30 mm			
Conveyor direction	Left to right			
Conveyor speed	0-900 mm/min			
Hook lift	Manual			
Power supply	380V, 3ph,50hz			

VAPOR PHASE REFLOW OVEN VS-500-V



Vapor phase reflow oven VS-500-V

The design of the machine allows to solder even the most complex cards with a format of max. **500 x 500 x 60 mm** while ensuring optimal quality thanks to,

- The inert atmosphere resulting from the fluid (medium) used
- An incomparable temperature delta across the entire component
- No possible handling error during the cycle

The main applications relate to lead and lead-free soldering of all types of boards even the most complex, conductive adhesives and repair.

The concept of the vapor phase allows today,

- Reducing fluid consumption (medium) using a unique vapor recovery system; this greatly reduces production costs
- Quick return on investment and high capacity for mixed productions
- Optimum soldering quality in inert atmosphere and vacuum (without void)
- Compensation for pressure fluctuations in the tank
- Minimum temperature delta throughout the working area - not achievable with other technologies
- Reduced energy consumption
- Sub-assembly repair: desoldering and resoldering
- High reliability for all types of soldering
- Precision and repeatability

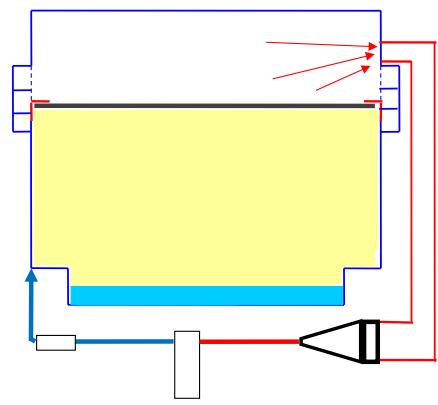


The upgrades since the VS-500-IV,

- A high efficiency chiller included
- It can go up to 10 temperature levels
- ESD paint
- ESD top glass
- Display of the real-time reflow profile integrated into the machine
- Light signal column

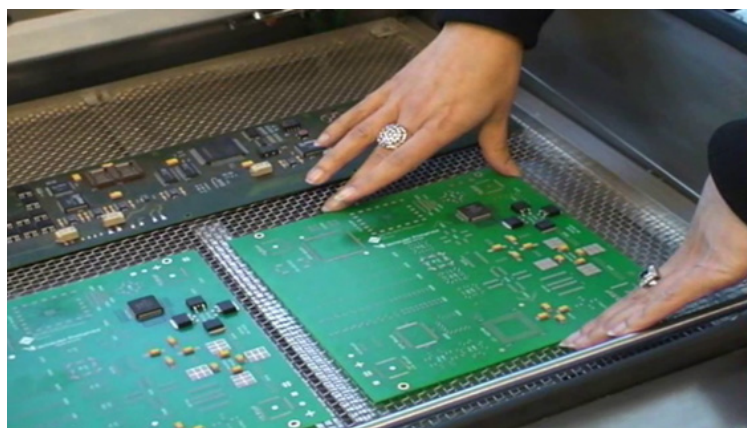


Recover all vapor before opening the door



- BENEFITS**
- Massive reduction in medium consumption
 - Big fume reduction
 - Reduced medium smell
 - Reduced cycle time
 - Reduced downtime

HIGH RETURN ON INVESTMENT !

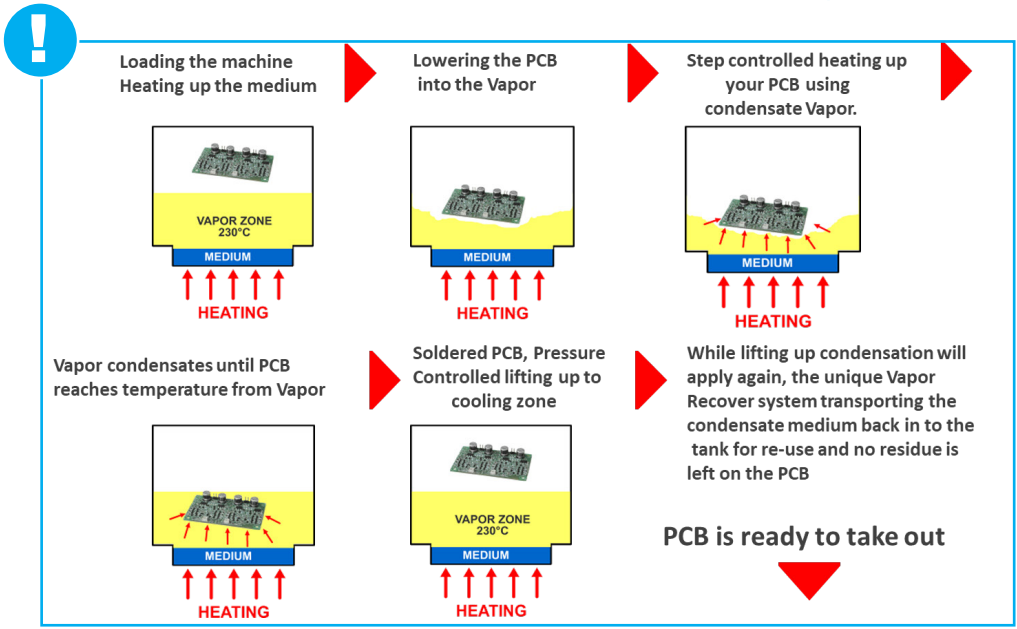


TECHNICAL CHARACTERISTICS

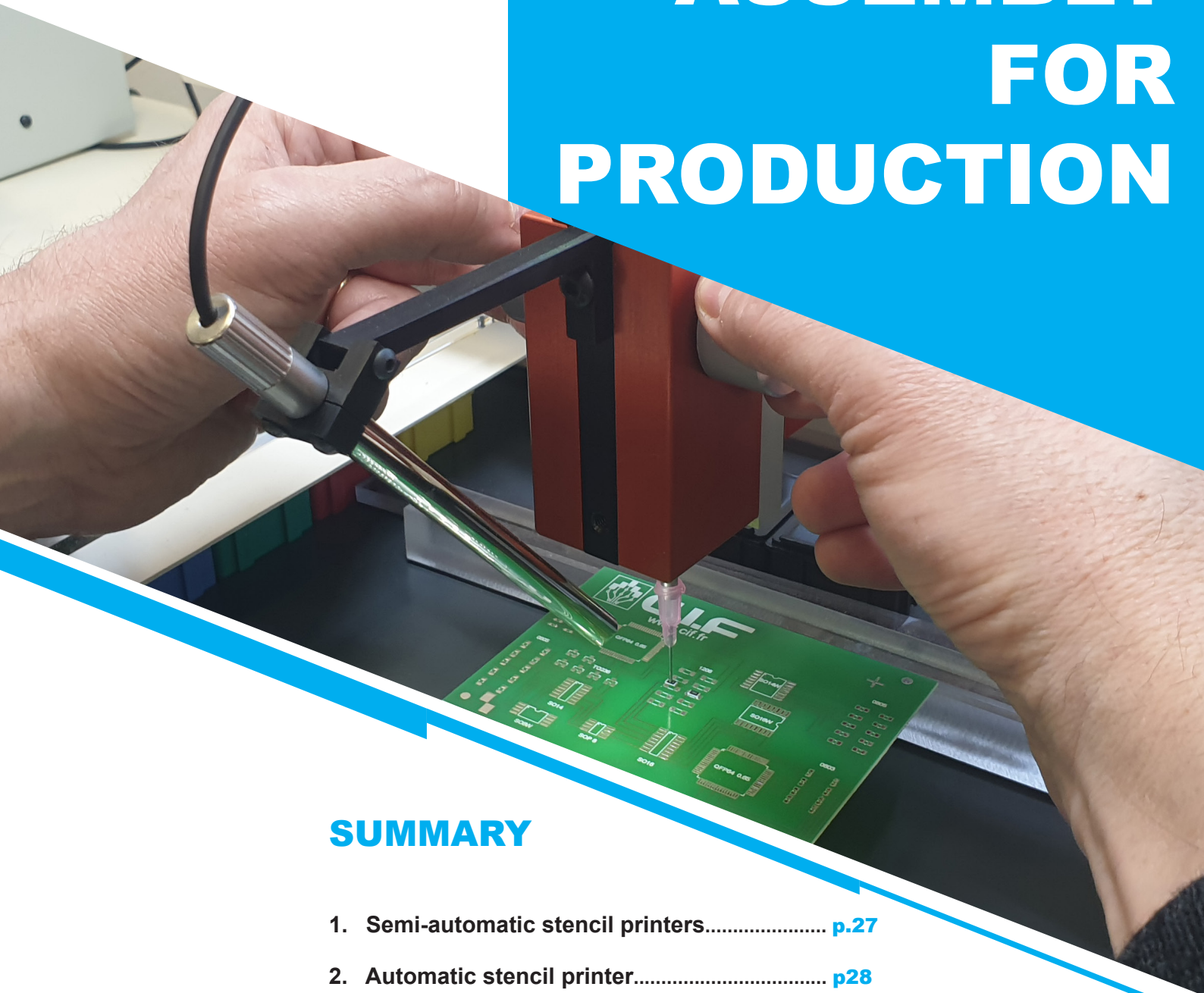
Référence	V900330
Max PCB dimensions	500 x 500 x 60 mm
Max. Load capacity	2 Kg
Medium capacity	5 Kg
Dimensions (L x W x H)	830 x 775 x 1140 mm
Installed power	7,5 KW / H
Power supply	3 x 400 V + N / 50 Hz

OPTIONS AND ACCESSORIES

Medium (fluid) HS260 - 5 kg	V800093
Medium (fluid) HS240 - 5 kg	V800094
Medium (fluid) XS 235 - 5 kg	V800095
Medium (fluid) LS 230 - 5 kg	V800096
Medium (fluid) LS 200 - 5 kg	V800108
Universal carrier (frame) for VS-500 HD	V800100
AGS - Automatic Golden® setpoint detection for VS-500	V800105
Software update - per update with travel expenses - for VS-500	V800106



ASSEMBLY FOR PRODUCTION



SUMMARY

1. Semi-automatic stencil printers..... **p.27**
2. Automatic stencil printer..... **p.28**
3. Pick and place Machines..... **p.29**
4. Vapor phase reflow oven..... **p.34**
5. Inline reflow ovens..... **p.36**
6. Board handling..... **p.39**

SEMI-AUTOMATIC SCREEN PRINTERS



Semi-automatic printer for applying solder paste to the pads of printed circuit boards of various sizes

Features

- Microcomputer control, touch screen
- Automatic height adjustment of squeegees relative to the stencil
- Pressure adjustment squeegee
- Adjust the speed of the squeegee
- Safe start of the printing process with two buttons
- Positioning of the PCB on the reference holes, or along the edges
- Printing modes: single pass, double pass
- Starting the printing process: semi-automatic, automatic

KAYO SMT
Europe

The machine is available in 3 versions according to the size of the board

- The **KAYO 5088** can handle **400 x 320 mm** boards
- The **KAYO 5088C** can handle **600 x 320 mm** board
- The **KAYO 5088L** can handle **1200 x 320 mm** boards

Model	KAYO 5088	KAYO 5088C	KAYO 5088L
Reference	V900139	V900138	V900141
Option squeegee set 400 mm	V800083	V800084	V800085
Max. PCB size	400 x 320 mm	600 X 320 mm	1200 x 320 mm
Print table size	500 x 320 mm	700 x 320 mm	1250 x 320 mm
Min. stencil size	370 x 270 mm	370 x 270 mm	370 x 270 mm
Max. Stencil size	600 x 320 mm	800 x 320 mm	1400 x 320 mm
Printing speed	0 - 100 mm/sec		
Squeegee length	200 mm standard (could be lengthen on request)	250 mm standard (Could be lengthen on request)	
PCB thickness	110 mm		
Accuracy	± 0.02 mm		
Repeating accuracy	± 0.02 mm		
Print table stroke	Front / Back ± 10 mm Left / Right ± 10 mm		
PCB positioning system	Manual		
Pneumatic pressure	4-7 kg/cm ²		
Power	100 W		
Power supply	220 V 50/60 Hz		
Machine dimensions (L x W x H)	900 x 1100 x 1680 mm		1800 x 900 x 1680 mm

AUTOMATIC SCREEN PRINTERS



Automatic inline screen printer for applying solder paste to the pads of printed circuit boards

Features

- Servo drive cam
- Servo drive Y axis raquel movement
- Monitoring and adjustment of pressure squeegee in real time
- Increased stencil cleaning system
- Print quality inspection and SPC analysis
- Stencil aperture inspection (optional)
- Camera with a larger field of view (optional)

KAYO SMT
Europe

The machine is available in 2 versions according to the size of the board

- The **KAYO 450** which can handle **450 x 350 mm** boards
- The **KAYO 600** which can handle **610 x 350 mm** board

Model	KAYO 450	KAYO 600
Reference	V900143	V900144
Max. PCB size	450 x 350 mm	610 x 350 mm
Min. PCB size	50 x 50 mm	
PCB thickness	0,4 - 6 mm	
Print repeat accuracy	20 micron (6 sigma)	25 microns (6 sigma)
Imaging horizon (FOV)	6,4 x 4,8 mm	10,24 x 6,4 mm
Table adjustment range	7 mm en X/Y, +/- 2 grade	
Cycle time	less than 7 secondes	
Printing speed	0 to 200 mm / sec	
Transport speed	0 to 1500 mm / sec	
Printing pressure	0,5 to 10 Kg / cm ²	
Compressed air requirement	4 - 6 Kg / cm ²	
Transport height	900 +/- 40 mm	
Dimensions	1140 x 1400 x 1480 mm	
Weight	1000 Kg	1200 Kg
Power	3,3 KW	
Power supply	220 V, 50/60 Hz	

AUTOMATIC PICK & PLACE KAYO-A4L



The KAYO A4L is an automatic SMD report stations.

Compact it can accommodate **46** tape feeders as well as 6 placement and positioning cameras. The placement accuracy is **0.01 mm** for a placement capacity of **8000** components per hour (max) for the A4L.

Quick to set up and easy to handle, the KAYO A4L Pick & Place is the ideal machine for the assembly of your SMD series.

Features

- The machine is delivered with 6 cameras : 1 for the detection of the sights, 4 cameras for the mounting nozzles and 1 high precision camera
- Camera refocusing & detection of rejection marks
- Installation capacity of 8000 components / hour (max) with an accuracy of ± 0.01 mm
- Works under Windows® environment
- The drivers have been optimized to guarantee quick component placement while improving precision and a low noise level
- An automatic card transit system within the machine in three sections saves time and efficiency

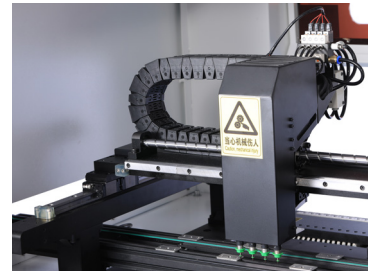
KAYO SMT
Europe



4 placement cameras
+ 1 high precision



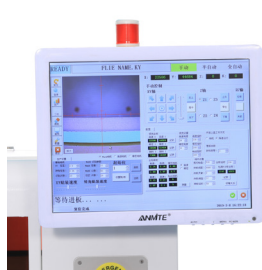
4 mounting Nozzles



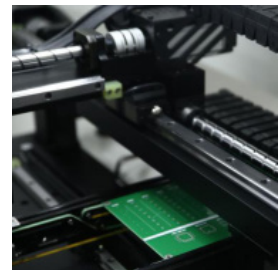
Internal conveyor system



PANASONIC®
Motor & servomotor



2 control screens



TBI precise linear guide

Components type	0201	0402	0603	0805	1206	LED	Diodes	Transistors	SOT	45 x 45 mm range pin pitch >0.3 mm	QFP	BGA	And more
Compatibility	✗	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

AUTOMATIC PICK & PLACE KAYO-A6L

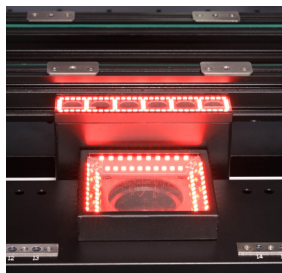
The KAYO A6L is an automatic SMD report station.

Compact it can accommodate **60** tape feeders as well as 8 placement and positioning cameras. The placement accuracy is **0.01 mm** for a placement capacity of **13000** components per hour(max) for the A6L.

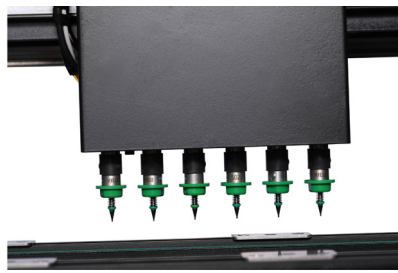
Quick to set up and easy to handle, the KAYO A6L Pick & Place is the ideal machine for the assembly of your SMD series.

Features

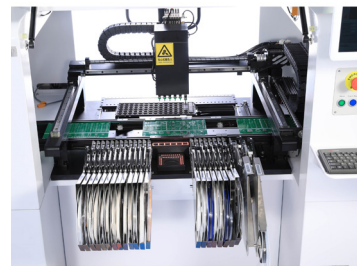
- The machine is delivered with 8 cameras : 1 for the detection of the sights, 6 cameras for the mounting nozzles and 1 high precision camera
- Camera refocusing & detection of rejection marks
- Installation capacity of 13000 components / hour (max)
- Works under Windows® environment
- The drivers have been optimized to guarantee quick component placement while improving precision and a low noise level
- An automatic card transit system within the machine in three sections saves time and efficiency



6 placement cameras + 1 high precision



6 mounting Nozzles



Internal conveyor system



PANASONIC® Motor & servomotor



2 control screens



TBI precise linear guide

Components type	0201 (option)	0402	0603	0805	1206	LED	Diodes	Transistors	SOT	40 x 40 mm range pin pitch >0.3 mm	QFP	BGA	And more
Compatibility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

AUTOMATIC PICK & PLACE KAYO A8L

The KAYO A8L is an automatic SMD report stations.

Compact it can accommodate **70** tape feeders as well as 10 placement and positioning cameras. The placement accuracy is **0.01 mm** for a placement capacity of **15000** components per hour(max) for the A8L.

Quick to set up and easy to handle, the KAYO A8L Pick & Place is the ideal machine for the assembly of your SMD series.

Features

- The machine is delivered with 10 cameras : 1 for the detection of the sights, 8 cameras for the mounting nozzles and 1 high precision camera
- Camera refocusing & detection of rejection marks
- Installation capacity of 15000 components / hour (max)
- Works under Windows® environment
- The drivers have been optimized to guarantee quick component placement while improving precision and a low noise level
- An automatic card transit system within the machine in three sections saves time and efficiency



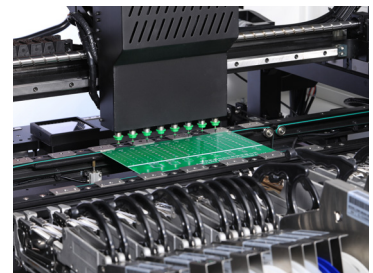
KAYO SMT
Europe



8 placement cameras
+ 1 high precision



8 mounting nozzles



Internal conveyor system



PANASONIC®
Motor & servomotor



2 control screens



TBI precise linear guide

Components type	0201	0402	0603	0805	1206	LED	Diodes	Transistors	SOT	45 x 45 mm range pin pitch >0.3 mm	QFP	BGA	And more
Compatibility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

AUTOMATIC PICK & PLACE KAYO S600

The KAYO S600 is an automatic SMD report station.

Compact it can accommodate **82** feeders as well as 9 placement and positioning cameras. The placement capacity is **16000** components per hour(max) for the S600.

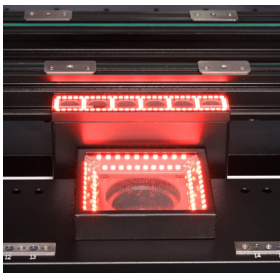
Quick to set up and easy to handle, the **KAYO S600** Pick & Place is the ideal machine for the assembly of your SMD series.

Features

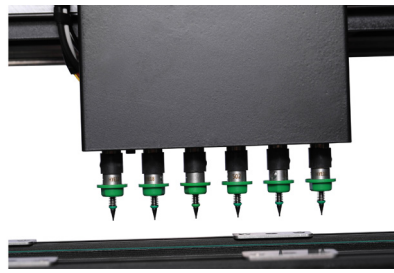
- The machine is delivered with 9 sets of cameras with different functions work together to ensure accuracy
- Camera refocusing & detection of rejection marks
- Installation capacity of 16000 components / hour (max)
- Works under Windows® environment
- The drivers have been optimized to guarantee quick component placement while improving precision and a low noise level
- An automatic card transit system within the machine in three sections saves time and efficiency



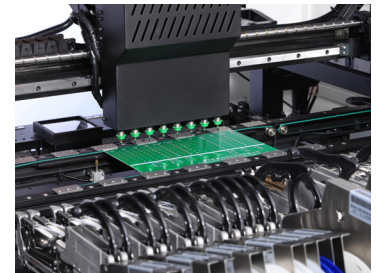
KAYO SMT
Europe



9 sets of cameras



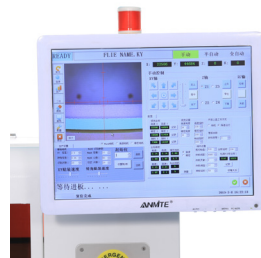
6 mounting Nozzles



Internal conveyor system



PANASONIC®
Motor & servomotor



2 control screens



TBI precise linear guide

Components type	0201	0402	0603	0805	1206	LED	Diodes	Transistors	SOT	45 x 45 mm range pin pitch >0.3 mm	QFP	BGA	And more
Compatibility	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓

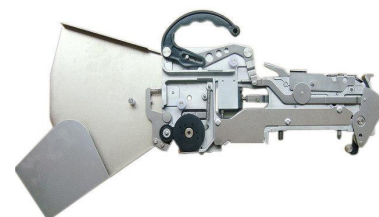
PICK & PLACE MACHINES COMPARATIVE

Model	KAYO A4L	KAYO A6L (1706-3DSG)	KAYO A8L	KAYO S600
Reference	V900032	V900030	V900033	V900169
Feeders No.	46 (20 in front, 26 at back)	60	70 (38 in front, 32 at back)	82 (8mm)
Mounting nozzles	4	6	8	6
Max. mouting speed	8000 CPH	13000 CPH	15000 CPH	16000
Average mounting speed	6000 CPH	10000 CPH	12000 CPH	14000
Cameras	1 Mark recognition camera, 4 high speed recognition cameras, 1 high-precision recognition camera	1 Mark recognition camera, 6 high speed recognition cameras, 1 high-precision recognition camera	1 Mark recognition camera, 8 high speed recognition cameras, 1 high-precision recognition camera	1 visual correction camera, 1 Mark recognition camera, 6 high speed recognition camera, 1 height million high-precision recognition camera
Driving motor	Panasonic servomotor			
Recognition method	Four nozzles recognize synchronously	Six nozzles recognize synchronously	Height nozzles recognize synchronously	Six nozzles recognize synchronously
Nozzle vacuum source	High speed ON/OFF vacuum generator			
Max. circuit board area	480 x 300	650 x 370 mm	650 x 380 mm	650x380 mm
X/Y Max. movement range	556 x 680 mm	700 x 619 mm	750 x 670 mm	750x670 mm
Max component height	5,5 mm standard, 10 mm on demand			
Feeder type	Tape feeder 6/12/24/32 mm Vibratory feeder 3/5 tracks	Tape feeder 6/12/24/32 mm Vibratory feeder 3/5 tracks Electrical feeders (in option)	Tape feeder 6/12/24/32 mm Vibratory feeder 3/5 tracks Electrical feeders (38 in the front)	Tape feeder 8/12/16/24/32 mm Vibratory feeder 3/5 tracks Electrical feeders
Power	600 W	600 W	750 W	750 W
Electrical supply	220 V, 50 Hz			
Dimensions	1095 x 1165 x 1400 mm	1335 x 1230 x 1420 mm	1500 x 1280 x 1410 mm	1500 x 1280 x 1410 mm
Weight	450 Kg	500 Kg	550 Kg	880 Kg

FEEDERS FOR PICK & PLACE MACHINES

TAPE FEEDERS

Tape width	CL8X2MM	CL8X4MM	CL12MM	CL16MM	CL24MM	CL32MM
Reference	V800062	V800063	V800064	V800065	V800066	V800067



VIBRATORY FEEDERS

	3 Tracks vibrant feeders	5 tracks vibrant feeders
Reference	V800068	V800069



ELECTRIC FEEDERS

Tape width	8 mm	12 mm	16 mm	24mm
Reference	V800073	V800074	V800075	V800076



VAPOR PHASE REFLOW OVEN VS-500-V



Vapor phase reflow oven VS-500-V

The design of the machine allows to solder even the most complex cards with a format of max. **500 x 500 x 60 mm** while ensuring optimal quality thanks to,

- The inert atmosphere resulting from the fluid (medium) used
- An incomparable temperature delta across the entire component
- No possible handling error during the cycle

The main applications relate to lead and lead-free soldering of all types of boards even the most complex, conductive adhesives and repair.

The concept of the vapor phase allows today,

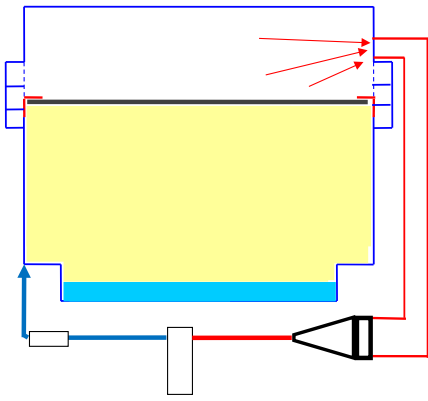
- Reducing fluid consumption (medium) using a unique vapor recovery system; this greatly reduces production costs
- Quick return on investment and high capacity for mixed productions
- Optimum soldering quality in inert atmosphere
- Compensation for pressure fluctuations in the tank
- Minimum temperature delta throughout the working area - not achievable with other technologies
- Reduced energy consumption
- Sub-assembly repair: desoldering and resoldering
- High reliability for all types of soldering
- Precision and repeatability



The upgrades since the VS-500-IV,

- A high efficiency chiller included
- It can go up to 10 temperature levels
- ESD paint
- ESD top glass
- Display of the real-time reflow profile integrated into the machine
- Light signal column

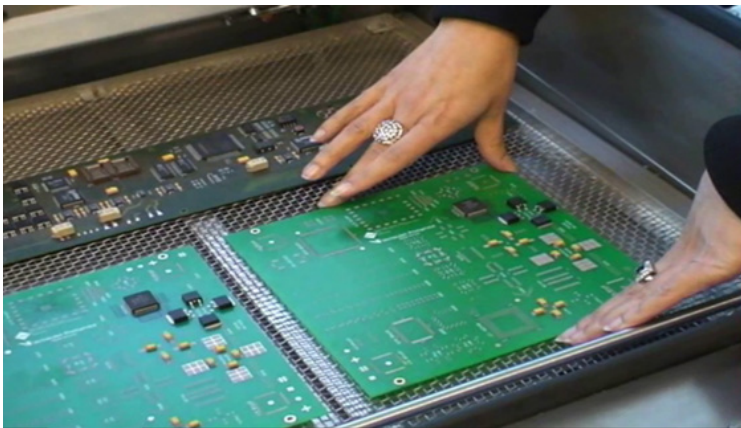
Recover all vapor before opening the door



BENEFITS

- Massive reduction in medium consumption
- Big fume reduction
- Reduced medium smell
- Reduced cycle time
- Reduced downtime

HIGH RETURN ON INVESTMENT !

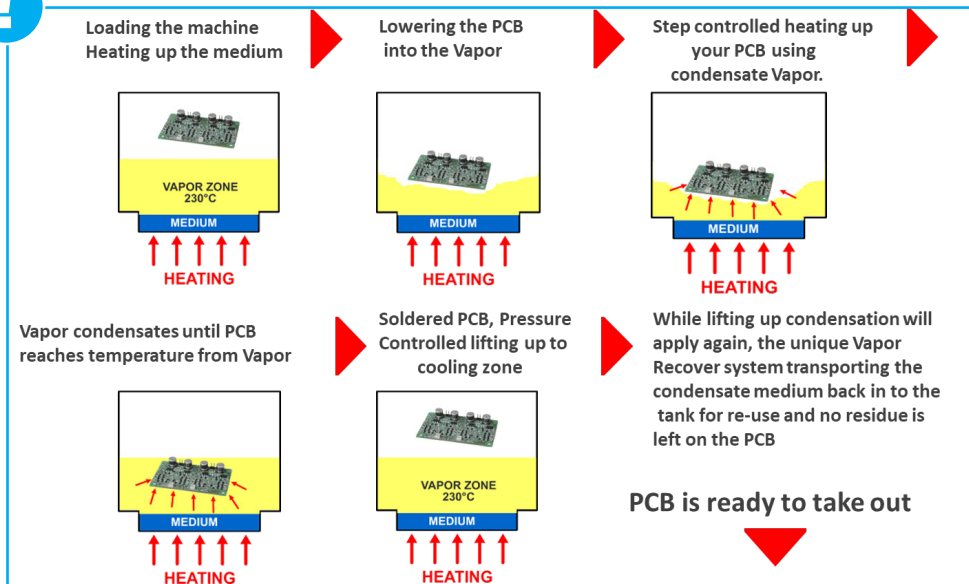


TECHNICAL CHARACTERISTICS

Reference	V900330
Max PCB dimensions	500 x 500 x 60 mm
Max. Load capacity	2 Kg
Medium capacity	5 Kg
Dimensions (L x W x H)	830 x 775 x 1140 mm
Installed power	7,5 KW / H
Power supply	3 x 400 V + N / 50 Hz

OPTIONS AND ACCESSORIES

Medium (fluid) HS260 - 5 kg	V800093
Medium (fluid) HS240 - 5 kg	V800094
Medium (fluid) XS 235 - 5 kg	V800095
Medium (fluid) LS 230 - 5 kg	V800096
Medium (fluid) LS 200 - 5 kg	V800108
Universal carrier (frame) for VS-500 HD	V800100
AGS - Automatic Galden® setpoint detection for VS-500	V800105
Software update - per update with travel expenses - for VS-500	V800106



REFLOW OVENS

4 ZONES CONVEYOR REFLOW OVEN - KAYO RF430



The RF430 is a 4 zones convection reflow oven for SMD components soldering on PCBs. It has a total heating length of 1400 mm as well as a maximal PCB width of 300 mm.

System features:

- High-efficiency heating system that provides uniform heat transfer ($\pm 2^{\circ}\text{C}$)
- Industrial PC or PID controller
- Modular design (ease of maintenance and repair)
- Low noise engines with low vibration
- Self-diagnostic system with display of errors in the work and sound-light indication
- Rapid heating from room temperature to necessary (about 15 minutes)
- Highly reliable solid-state relays



6 ZONES CONVEYOR REFLOW OVEN - KAYO RF630



The RF630 is a 6 zones convection reflow oven for SMD components soldering on PCBs. It has a total heating length of 2200 mm as well as a maximal PCB width of 350 mm.

System features:

- High-efficiency heating system that provides uniform heat transfer ($\pm 2^{\circ}\text{C}$)
- Industrial PC or PID controller
- Modular design (simplicity of maintenance and repair)
- Low noise engines with low vibration
- Self-diagnostic system with display of errors in the work and sound-light indication
- Rapid heating from room temperature to necessary (about 15 min)
- Highly reliable solid-state relays



REFLOW OVENS

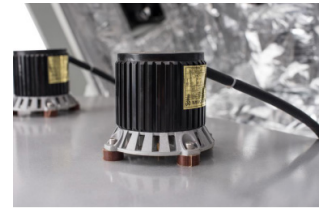
8 ZONES CONVEYOR REFLOW OVEN - KAYO RF835



The RF835 is a 8 zones convection reflow oven for SMD components soldering on PCBs. It has a total heating length of 3200 mm as well as a maximal PCB width of 350 mm.

System features:

- High-efficiency heating system that provides uniform heat transfer ($\pm 2^{\circ}\text{C}$)
- Industrial PC or PID controller
- Modular design (simplicity of maintenance and repair)
- Low noise engines with low vibration
- Self-diagnostic system with display of errors in the work and sound-light indication
- Rapid heating from room temperature to necessary (about 15 min)
- Highly reliable solid-state relays



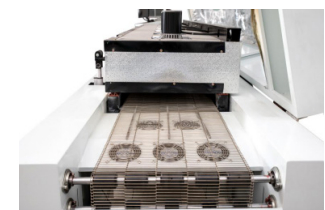
8 ZONES CONVEYOR REFLOW OVEN - KAYO RF8845



The RF8845 is a 8 zones convection reflow oven for SMD components soldering on PCBs. It has a total heating length of 3150 mm as well as a maximal PCB width of 450 mm and is delivered with an industrial PC. It has 2 cooling zones.

System features:

- High-efficiency heating system that provides uniform heat transfer ($\pm 2^{\circ}\text{C}$)
- Industrial PC
- Modular design (simplicity of maintenance and repair)
- Low noise engines with low vibration
- Self-diagnostic system with display of errors in the work and sound-light indication
- Rapid heating from room temperature to necessary (about 15 min)
- Highly reliable solid-state relays



REFLOW OVENS COMPARATIVE



Model	KAYO RF430	KAYO RF630	KAYO RF835	KAYO RF8845
Reference	V900126	V900127	V900129	V900142
Option additional chain rail conveyor	V800087	V800087	V800092	V800092
Option PC control	V800088	V800088	V800091	inclus
Heating zones (up/down)	4/4	6/6	8 / 8	8 / 8
Length of heating zone	1400 mm	2200 mm	3200 mm	3150 mm
Heating method	Closed circuit circulation of hot air			
Cooling zones	1	1	1	2 zones
Cooling methode	Forced air flow			
Max PCB width	300 mm	350 mm	350 mm	450 mm
PCB transportation height	880 +/- 20 mm			
Conveyor speed	0 - 2000 mm / min			
Conveyor type	Meshy			
PCB Transmission Direction	Left to right (right to left in option)			
Max heating temperature	400 °C	350 °C	400 °C	400°C
Heating time	About 15 minutes		About 10 minutes	About 15-20 minutes
Temperature control accuracy	+/- 1°C		+/- 2°C	+/- 2 °C
Average temperature deviation	+/- 2°C		+/- 2C	+/- 2°C
Temperature adjustment	PID closed-loop control, SSR driver			PC industriel + PLC
Pneumatic pressure	0.5 MPa ou plus			
Power	3 KW	5 KW	5 KW	5 KW
Alarm	Temperature abnormal (ultra-high or ultra-low temperature)			
Dimensions	2500 x 612 x 1220 mm	3600 x 700 x 1220 mm	4200 x 800 x 1320 mm	4600 x 1000 x 1420 mm
Weight	300 Kg	500 Kg	900 Kg	1100 Kg
Electrical supply	3-phase 380V (220V optional) 50/60Hz		3-phases 380V - 50 /60 Hz	

BOARD HANDLING

AUTOMATIC LOADER - KAYO 50S



- The body of the system is made of aluminum
- The design of the lift ensures the stability of the store's delivery step
- Control via Panasonic PLC / user-friendly interface
- A choice of 4 steps for receiving / transmitting a printed circuit board
- Signal interface SMEMA
- Adjustable PCB transfer rate
- Reliable fixation of the store on the platform by 3 points

Model	KAYO-50S
Reference	V900133
PCB size	350 x 50-220 mm
Rack specifications	355 x 320 x 563 mm
Transmission height	900 +/- 20 mm
PCB Transmission Direction	Left to right (right to left optional)
Telecommunication type	SMEMA port
Main motor power	295 W
Power supply	220V 50/60 Hz
Air pressure supply	5 bars
Weight	200 Kg
Dimensions	1300 x 740 x 1170 mm

AUTOMATIC UNLOADER - KAYO 50P



- The body of the system is made of aluminum
- The design of the lift ensures the stability of the store's delivery step
- Control via Panasonic PLC / user-friendly interface
- A choice of 4 steps for receiving / transmitting a printed circuit board
- Signal interface SMEMA
- Adjustable PCB transfer rate
- Reliable fixation of the store on the platform by 3 points

Model	KAYO-50P
Reference	V900134
PCB size	350 x 50-220 mm
Rack specifications	355 x 320 x 563 mm
Transmission height	900 +/- 20 mm
PCB Transmission Direction	Left to right (right to left optional)
Telecommunication type	SMEMA port
Main motor power	295 W
Power supply	220V 50/60 Hz
Air pressure supply	5 bars
Weight	220 Kg
Dimensions	1430 x 800 x 1600 mm

KAYO SMT
Europe

INSPECTION CONVEYORS - KAYO IC06 - IC12



- 2 Versions available
- Used to connect SMT and AL production line, as well as PCB buffering, inspection, testing and inserting.
- Two screws adjust rails' width, convenient and accurate.
- Convey stably, stuck board will not happen.
- Adjustable Speed control.
- Standard ESD platen and lighting device (Optional).

Model	KAYO-IC06	KAYO-IC12
Reference	V900135	V900137
Rail length	600 mm	1200 mm
Transmission speed	0.5 - 400 mm/min	
Transmission height	900 +/- 20 mm	
Transmission type	Antistatic flat belt	
Telecommunication type	SMEMA port	
Power supply	220V 50/60 Hz 100 W	

PCB Output KAYO-300



- Speed can be adjusted, uniform, smooth, easy operation and low noise.
- Standard equipped with 2 axial flow fan, cool the heat boards out from wave soldering adequately.
- Thickened aluminum, firm structure.
- PVC conveyor belt, anti-static, wear-resistance.

Modèle	KAYO-300
Référence	V900145
Belt Width	300 mm
Transfer Speed	600 - 2200 / min
PCB Transmission Direction	Left to right
Control Method	Speed Adjusting Motor
Cooling Fan	2pcs
Track Material	Aluminum Alloy
Power supply	220 V 50/60 Hz, 60W
Weight	50 Kg
Dimensions	1200 x 380 x 1000 mm

NOTES

NOTES

GENERAL SALES CONDITIONS

1. APPLICABILITY OF CONDITIONS

1.1. The hereunder conditions constitute the whole contract between the parties save where varied in writing and signed by the director of the company. The buyer acknowledges that he has not entered into the contract as the result of any other representation made by or on behalf of the company whether or in writing.

2. QUOTATIONS & DRAWINGS

2.1. All estimates and quotations remain valid for thirty days unless otherwise stated at the time of the quotation. Quotations do not constitute any offer by the company and no order shall result in a binding contract until accepted by the company.

2.2. The acceptance of the company's quotation must be accompanied by sufficient information to enable the company to proceed forthwith (including without limitation Buyer's drawings if appropriate) and as appropriate information concerning any specific testing of the goods which may be required by the buyer. Otherwise the company shall be at liberty to amend the prices quoted to cover any increase in cost which has taken place after acceptance.

2.3. Unless otherwise specified in the company's quotation, all specifications, drawings, photographs, diagrams and particulars of weight and dimensions submitted with the quotation are approximate only.

3. DELIVERY

3.1. Save as otherwise expressly agreed in writing delivery shall be to the destination specified in the buyer's order or such other place as the parties may agree.

3.2. The company reserves the right to deliver goods by instalments and in such event each instalment shall be treated as a separate contract provided the deliveries of further instalments may be withheld until the goods comprised in earlier instalments have been paid for in full.

3.3. Any periods of time quoted or accepted by the company for dispatch delivery or completion of the order are to commence from dispatch of the company's acceptance of the buyer's order and receipt of all necessary information and drawings to enable the company to commence the work. Any such periods are to be treated as estimates only, not involving the company in any liability to the buyer in respect of loss suffered as a result of failure to dispatch, deliver or complete within such a period of time, and no delay shall entitle the buyer to cancel the order or refuse to accept delivery at any time.

3.4. The company shall not be liable to the buyer for any delay or failure to meet its obligation under the contract as a direct result of any force majeure including but not limited to strike, war or act of war, insurrection, riot or civil commotion, act of public enemy, fire, flood or other case caused beyond the control of the company.

4. CLAIMS

4.1. Notice of any claim relating to shortage or damage to the goods shall be made to the company and the carrier of the goods in writing within 8 days of receipt of the goods or such time period as may be required by the carrier's conditions is less.

4.2. Notice of any claim related to loss or non-delivery of goods shall be made to the company and the carrier of the goods in writing within 7 days in receiving the advice note in respect thereof or such other time period as may be required by the carrier's conditions is less.

4.3. The company will consider claims only if the above conditions are met and the claim is signed by the customer and accompanied by full particulars giving the invoice and buyer's order number, and as the case may be, the case number, the condition of the case or packing and the copy of the delivery note in respect of the goods.

4.4. The company's liability hereunder in respect of any shortage loss or damage to the goods shall be limited to the proportion of the price attributable to the goods undelivered lost or damaged.

5. SALES CONDITIONS

5.1. Unless otherwise stated, the prices in any quotations by the company is based on the current cost of material, labour, duties, taxes, exchange rates, and of conforming to statutory obligations ruling at the date of such quotation is subject to adjustment.

5.2. Prices contained in a quotation are subject to revision if the buyer shall have omitted to give instructions in sufficient details, or his requirements are for quantity or delivery schedules or other terms different from those against which the prices are quoted, including without limitation changes in local or national site working practices.

5.3. Minimum amount of the order is 380.00 €, otherwise administrative fee of 8.00 € will be invoiced.

5.4. For first order, payment must be before the delivery. For following orders and unless otherwise agreed in writing, payment shall be due in full thirty days from the date of delivery note or invoice issue.

5.5. Where only parts of the goods are dispatched, payment shall be made of the contract price attributable to that part.

5.6. In the event of any delay or delays in manufacture, dispatch or delivery which are attributable to the buyer's actions or failure to act, the buyer shall at the discretion of the company either make payment to the company in accordance with the above as if the goods have been delivered at the time at which but for such delay or delays would have taken place or make a partial payment to the company in accordance with the above based upon the proportion of the order completed at the date of and due from the date of which delay was notified.

6. LATE PAYMENT

6.1. The company reserves the right to charge interest on late payment of 2% per annum above the base rate quoted by "European bank" from time to time on the daily balance from the due date until payment is made.

6.2. If any payment falls into arrears the company shall have the right to cancel or postpone performance of any contract with the buyer wholly or in part and to be paid immediately for performance of such contract to date.

GENERAL SALES CONDITIONS

7. RISK AND TITLE

7.1. Risk passes to the buyer on delivery of the goods.

7.2. Whilst risk in goods supplied to the buyer under the contract shall pass on delivery, legal and beneficial ownership of the goods shall remain with the company until such time as the company has received payment in full for all goods supplied to the buyer or until such time as the goods are sold to the buyer's customers by way of bona fide sale at full market (whichever shall be the earlier) and until such time the buyer shall keep such goods separate from its property and clearly identified as the property of the company.

7.3. Notwithstanding terms of payment specified herein or elsewhere payment for all goods supplied to the buyer shall become due immediately upon the commencement of any act or proceeding in which the buyer's solvency is involved or upon the appointment of a receiver over the whole of any part of the buyer's assets or undertaking and upon such occurrence the power of sale granted to the buyer shall automatically determine.

7.4. If payment for any goods is overdue whether in whole or in part and any goods have been delivered to the buyer, the company may without prejudice to any of its other rights enter upon the buyer's premises to recover the goods and/or resell the goods or such of them as the company in its absolute discretion may designate

7.5. Until the company is paid in full for all goods supplied, the buyer is and shall remain a fiduciary for the company in respect of the goods and if the buyer sells or allows to be sold the goods, the proceeds of sales shall be held in a separate clearly identifiable and the beneficial interest shall attach to the proceeds of sale and the company shall have the right to trace such proceeds of sale.

7.6. If any of the goods are incorporated or used in other products before full payment for all goods supplied under the contract has been made, title in such product shall be and remain with the company until full payment has been made or such products have been sold and all of the above provisions of this clause shall extend to such products.

8. INDUSTRIAL PROPERTY RIGHTS

8.1. The buyer shall indemnify the company in respect of, any infringement which is due to the company having followed a design or instruction furnished or given by the buyer, or the use of such goods in a manner or for a purpose or in a foreign country not specified by or disclosed to the company, or any infringement which is due of such goods in association or combination with any other goods not supplied by the company AND PROVIDED ALSO that this indemnity is conditional on the buyer giving to the company the earliest possible notice in writing of any claim being made or action threatened or brought against the buyer and on the buyer permitting the company at its own exclusive conduct of any litigation that may ensue and all negotiations for a settlement of claim. The buyer on its parts warrants that any design or instruction furnished or given by it shall not be such as will cause the company to infringe any Letter Patent, Registered Design, Trade or Service Mark, copyright or any other industrial property right of whatsoever nature owners or enjoyed by any third in the execution of the contract.

8.2. Any design and/or tooling charges charged to the customer does not constitute the transfer of ownership which at all times remains with C.I.F., unless agreed in writing between the parties concerned. ANY CONDITIONS on the customer in contrary to the above are not accepted.

9. CANCELLATION

9.1. The buyer may not vary or cancel the contract or any part thereof without the written consent of the company which, if given, shall be deemed to be on the express condition that the buyer shall indemnify the company against all loss, damage claims actions and loss of profit arising out of such cancellation unless otherwise agreed in writing.

9.2. The company may at its option cancel/suspend all further deliveries under the contract in the event of default by the buyer in making any payments due hereunder or and any other contract between the buyer and the company or shall die or become bankrupt or enter into liquidation or have a receiver appointed to all or any part of its undertaking or assets or shall offer to or enter into arrangement with his or its creditors or any of them or fail to comply with any statutory demand or do or suffer any similar act which evidences insolvency.

10. LAW

10.1. The contract shall be deemed to be a contract made in FRANCE and shall be construed according to the law of FRANCE. Any dispute shall be referred to the Tribunal of Commerce of Yvelines in Versailles (F-78).

OUR SERVICES



- **Turnkey solutions** to all your projects
- CIF brings you all of its knowledge and experience
- **Installation and machine test** on site by our technicians in France and abroad
- **Specification requirements of your projects**
- **Technical support (France and International)**
- **Equipment maintenance**
- **After sale service**
- **Demonstration and test room**
- **Stock of machines**
- **Stock of spare parts**
- **Hotline on request (contract)**

TEST / DEMONSTRATION ROOM



Since January 2019, discover our equipment in our demonstration room set up within CIF in Buc (78).

Real center of technical resources we have gathered all means for you to evaluate or test our equipment.

Equipment in display:

- LASER rapid prototyping machine
- CNC 3 axes-3D rapid prototyping machines TECHNODRILL 3 and 4MILL300
- Repair with soldering and desoldering machines from METCAL brand
- Solder paste deposit by dispensing or stencil printing
- SMD Pick and Place machines : manual, semi-automatic, automatic with conveyer
- Reflow oven within one conveyor model
- Full HD precision Videomicroscope with 3D imaging
- Filtration

WHERE TO FIND US



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