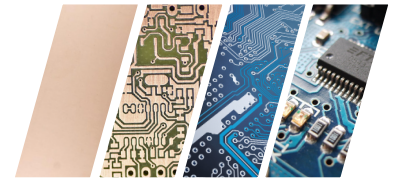


C.I.F



EXpert in Equipments, Products and Services for Electronics



PROTOTYPING & MICRO-SERIES CATALOGUE

ed. 2024.12

WWW.CIF.FR



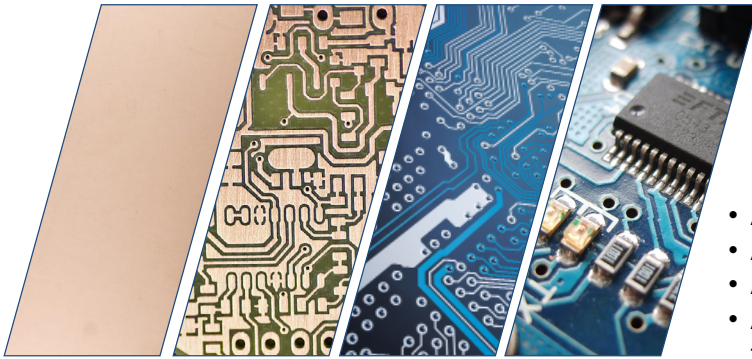
IN THE BEGINNING

Since its creation in 1979, CIF – Circuit Imprimé Français has designed and manufactured equipment and products for the production of printed circuits.

This equipment is intended for design offices, technical education and small series.

In 2000, CIF merged with ATHELEC, which specialises in the marketing of assembly equipment. The customer can now find at CIF a complete range to realize an electronic board from A to Z.

CIF ACTIVITIES TODAY



The range has evolved with the introduction of many new production equipment, products and associated services. This development required a new organisation to be put in place with the creations,

- A division for the laboratory and micro-series – CIF LAB
- A division for small series and production – CIF PROD
- A commercial website for small equipment and products
- Associated services: installation, start-up, maintenance, financial assistance

AN ONLINE SHOP FOR GREATER REACTIVITY



Order on our e-shop a selection of our equipment and products

- Availability and choice
- Real-time stock updates
- Express delivery
- Secure payment
- CIF guarantee

AND SERVICES FOR ELECTRONICS

EQUIPMENT AND SOLUTIONS ADAPTED TO YOUR USE



LABORATORY AND MICRO-SERIES EQUIPMENT

Production of the printed circuit board

- Chemical process
- Mechanical processing of your PCBs
- Laser processing of your PCBs

SMD equipment

- Dispensing and stencil printing
- Placement
- Soldering
- Hand soldering

Visual inspection, filtration of solder fumes and solvents



EQUIPMENT FOR SMALL SERIES AND PRODUCTION

Production of the printed circuit board

- Mechanical processing of your PCBs
- Laser processing of your PCBs
- Routing

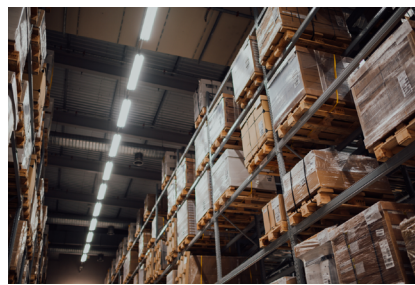
SMD equipment for complete automatic lines

- Stencil printing
- Pick & Place
- Reflow oven
- Loader, unloader, conveyor

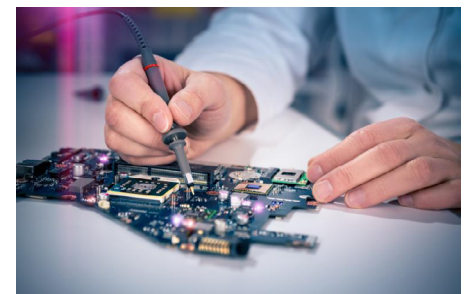
Visual inspection, filtration of solder fumes and solvents



- Technical advice to determine your needs with you and accompany you in the choice of equipment, installation and training.
- Quality technical assistance

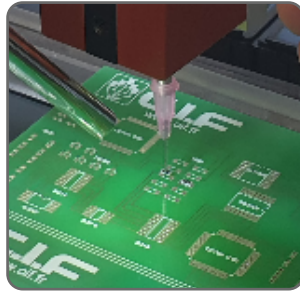
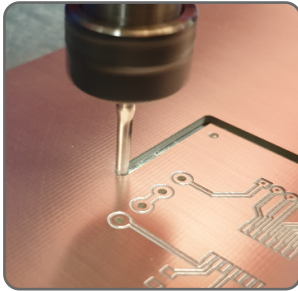


- Commercial and technical teams at your service
- Advice from our know-how and experience
- A complete range of products to offer you "turnkey" solutions
- A rigorous organisation
- CIF is an IPC member



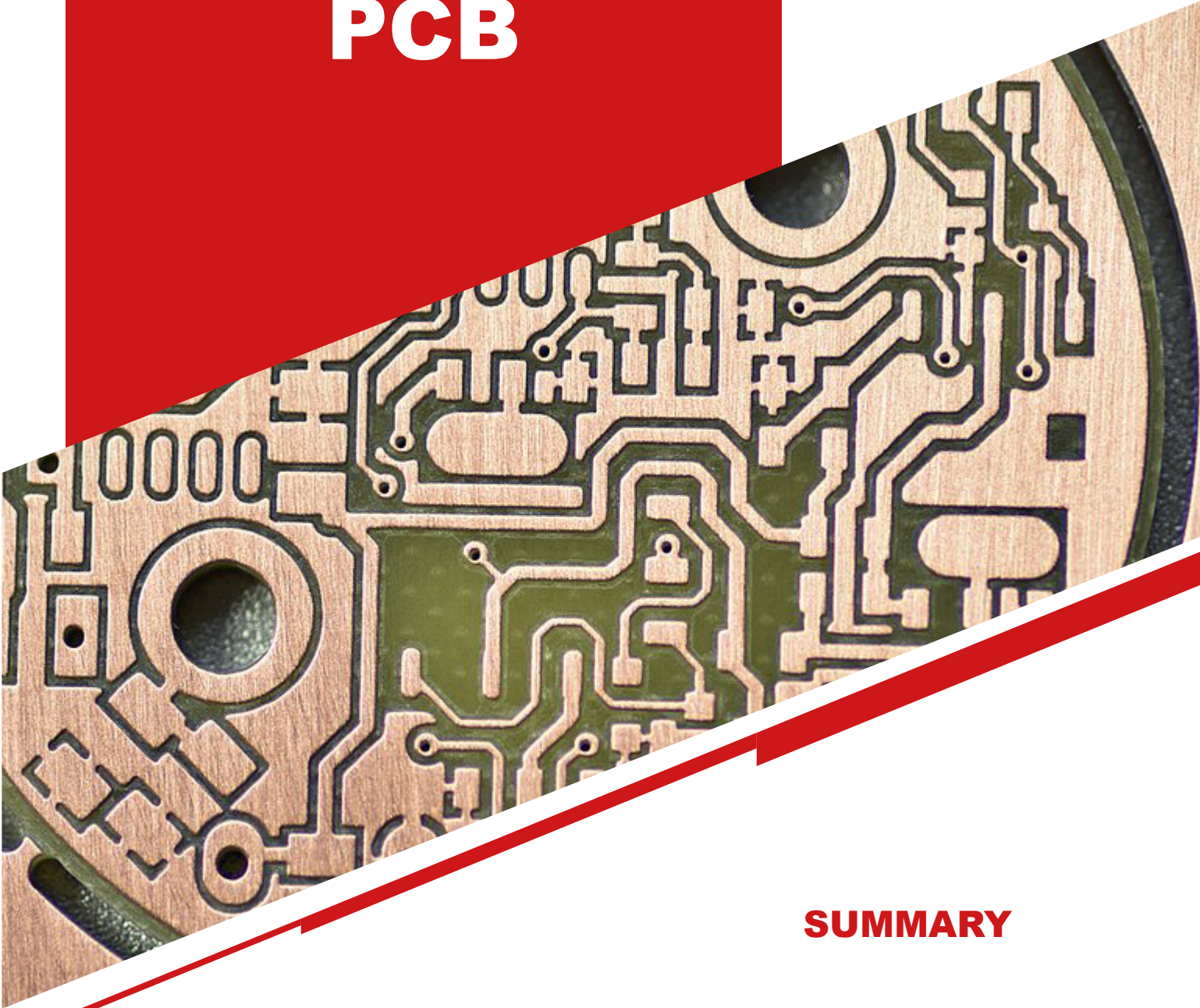
- Drawing up the specifications for your projects
- Technical assistance at start-up (France and international)
- Maintenance of your equipment
- After-sales service
- Assistance in financing your project
- A dedicated space for demonstrations and tests

SUMMARY



1. PCB	p.5
3. Rapid prototyping	p.13
4. Assembly	p.32
5. Depanelization.....	p.60
6. Filtration.....	p.66
7. Technical furniture.....	p.71

PCB



SUMMARY

1. UV Exposure unit	p.6
2. Film tracking	p.7
3. Multi-layer press	p.8
4. Tinning - Plating	p.10

UV EXPOSURE UNIT

UV EXPOSURE UNIT - DFT 3040



The DFT 3040 unit is a professional unit.

Composed of 12 UV tubes (6 on the top, 6 on the bottom), a vacuum pump, an electronic timer with digital display, a drawer including a graphic window and a mylar, the whole mounted on ball-bearing slides.

The drawer conception permits to save space. All those elements mean optimal performance of the machine. Can be used as a single sided version.

Model	DFT 3040
Reference	DP40
Working area	300 x 400 mm
Pressure	Vacuum
Application	Single or double side
U.V. Source	12 x 15 W
Power	250 W
Timer	Electronic
Dimensions	570 x 600 x 210 mm
Electrical supply	230 V - 50/60 Hz
Weight	34 Kg



Options et accessoires

Maintenance kit for exposure unit

U700021

- Screen cleaner, spray 250 ml **V800041**
- Package of 50 rags, multi-purpose lint-free **F42117**
- Replacement Mylar for Exposure unit **DP20**

FILM TRACKING

PCB BRUSHING MACHINE - DCT BR300

Single-sided mechanical brush to clean the circuit board, suitable for :

- Brush roller swing stroke: 10mm
- Brush roller swing frequency: 0-120 times/min
- Brush roller speed: 1400 rpm
- Drying temperature: Max. 100°C.
- With water washing function
- With hot air drying function



Model	DCT BR300
Reference	U900038
Max. PCB width	300 mm
PCB thickness	0,2-4 mm
Transmission speed	0.2-2 mm/min
Brushing speed	1400 rpm
Power	2.2 Kw
Dryer	100°C max.
Electrical supply	230 V - 50/60 Hz
Dimensions	760 mm x 560 mm x 440 mm
Weight	45 Kg

WATER TREATMENT MACHINE - DCT WT400

Model	DCT WT400
Reference	U900045
Water treatment unit	Water pump, honeycomb filter, activated carbon filter, ion exchange resin filter
Added acid-base neutralization function	Yes, optional
Water treatment capacity	≥ 20 L/hour
Power supply	220 VCA/50 Hz
Power	0,2 Kw
Device dimensions (W x H x D)	900 mm x 600 mm x 1 240 mm
Weight	77 Kg



DRY FILM LAMINATOR - DCT LA400

It is suitable for processing hard board and covering film on brittle materials such as silicon wafer, ceramic substrate and quartz glass wafer.

Pressure and speed can be adjusted according to different materials.

Model	DCT LA400
Reference	U900037
Max. Film width	400 mm
Board thickness	0,2 - 3 mm
Film speed	0.2-1.2 mm/min
Temperature	20-200 °C
Pressure adjustment	Double motor electric control
Power Supply	220 VAC / 50 Hz
Rated Power	700 W
Dimension (X/Y/Z)	790 mm x 590 mm x 550 mm
Weight	35 Kg



MULTILAYER PRESS DCT MP300

Multilayer board pressing machine, used for different types, different materials of multilayer circuit boards, solder resist film or graphite and other materials pressed together.

The built-in micro-controller controls the whole process of thermal lamination of multilayer circuit boards; the process adopts efficient heating and heat dissipation design, with short heating and cooling time.



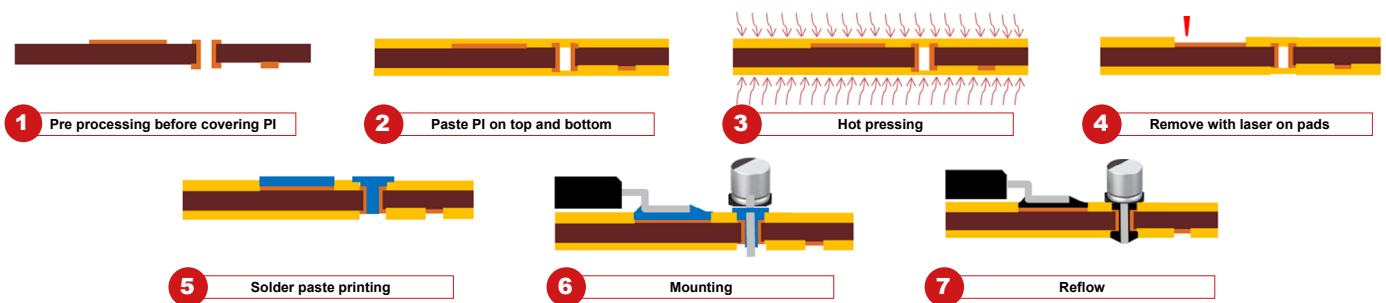
Model	DCT MP300
Reference	U900039
Max. wiring area	305 mm × 230 mm
Max. press area	355 mm × 280 mm
Max. Temperature	250 °C
Max. Layer	8 (depends on material and PCB design)
Max. pressure	300 N/cm²
Pressing time	Approx. 90 min
Automatic hydraulic device	Standard
Power supply	220 VAC/50 Hz, 3Kw
Dimension(LxWxH)	600 mm × 600 mm × 700 mm
Weight	180 Kg

MULTILAYER & SOLDER MASK CHEMICAL FREE PROCESS WITH DCT DLS-SO UNIQUE PROCESS

DLS-SO (Direct Laser Structuring – Solder Mask) is a unique process engineered by DCT to provide solder mask compliant with high quality standard without using any chemicals. It is based on PI (Polyimide) material that is convenient especially in prototyping due to its long shelf life.

Main advantages of this process :

- No need for pre-baking, exposure and development process
- PADs surface do not require anti oxidation treatment, reflow soldering on pads with copper surface
- Reduce processes and chemicals, making the environment more friendly
- The use of laser direct manufacturing has reduced costs
- Components join strength, Complies with MIL-STD-883E : US Military Environmental Testing Standards



Steps	Recommended Equipment
1. Inner Layer Pattern	FREEDO
2. Brushing	BR300
3. Press with Prepreg	MP300
4. Drilling (PTH)	FREEDO
5. Brushing	BR300
6. Plating	COMPACTA MD
7. Out Layer Pattern	FREEDO
8. Brushing	BR300
9. PI Film as Solder Mask Lamination	LA400 + MP300
10. Laser Opening for PI Film	FREEDO
11. Surface Treatment for Finish (Tinning)	COMPACTA MD
12. Routing & Drilling (NON PTH)	FREEDO



HOT AIR LEVEL MACHINE - HAL3040



Introduction

- HAL is now affordable to the small entrepreneurs & institutions
- Needs less space & power, less solder dead weight
- Yet produces consistent high quality level boards.
- Microprocessor LCD Control Unit with following controls of a standard HAL :
 - 10 PCB menu storage
 - Fault monitoring & reporting
- Parameter Settings:
 - Dip Time
 - Air Time
 - Solder Temp.
 - Auto or Maintenance mode.

REQUIRED FACILITIES

- Power : Single / Three Phase, 6 Kw, 220v/440v
- Air : 6 to 8 bar 150 NL/ cycle
- Exhaust : 100 mm duct, 1000 m3/h
- Working Area : Minimum 2000 x 1250 mm

Specifications

- Référence: **EP66**
- PCB Size processed : **300 mm x 400 mm**
- Enclosure : **Stainless Steel**
- PCB Holding : **Titanium Clamp Holds Boards upto 3 mm Thick**
- Solder tank Capacity : **75 Kg**
- Heating time approx : **1 hour**
- Size : **L 800mm X W 600mm X H 1550 mm**
- Shipping Weight: **Without solder 175 kg**

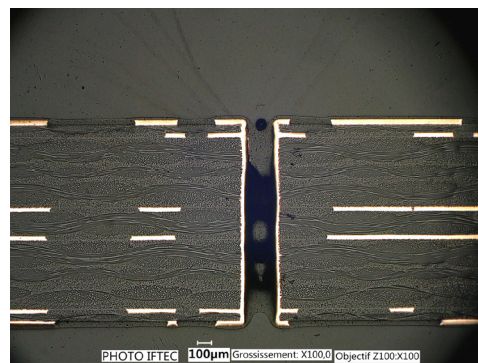
THROUGH HOLE COPPER PLATING MACHINE COMPACTA MD



The design criterias of the COMPACTA® have been studied according to the needs of design offices, research centers, industry, ... for the realization of prototypes and small series.

COMPACTA® is characterized by :

- The simplicity of the operating mode
- The use of stable products
- A minimum number of steps
- An integrated frame mounted on self-locking castors
- Minimum cost of use



Metallographic section, Source IFTEC

Model	COMPACTA MD
Reference	U900050
Working area	200 x 300 mm
Construction	100% PVC mounted on an underframe made of metal
Electroplating tank	30 L
Power supply	230 V - 50 Hz
Dimensions L x l x H	1490 x 1000 x 1270 mm
Power	400 W

Complete starter Kit (chemistry + accessories) **U800040**

- 2 l Comp.A cleaner
- 1 l Cleaner comp.B
- 2 l Carbon Solution
- 2.0 kg sodium persulfate
- 0.1 Hydrochloric acid 31 - 33%
- 4.0 ltr. Sulfuric acid
- 2.4 kg Copper salt
- 0.5 ltr. Activator CU 510, 5 ltr. Additive CU52

Electrode set for COMPACTA MD - 200x150x10mm **U500049**

Demineralised water, 1 L **U800007**

Holding clamp for circuit. Device finger. Titanium and brass materials **U700050**

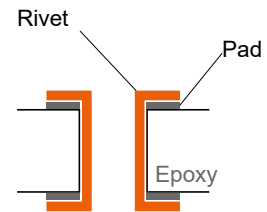
Safety tank for COMPACTA MD **U700052**

RIVETS FOR METALLIZATION



RIVETS AND EYELETS FOR METALLIZATION

- For the metallization of your double-sided circuits
- Simplicity
- Speed
- Very good mechanical resistance
- Packaged in boxes of 100 pieces
- Passivated copper material or tinned copper



	Length	Ø drilled hole	Reference
100 inner rivet Ø 0.8 mm, copper passivated	3 mm	1.3 mm	BG9.S
100 inner rivet Ø 1,1 mm, copper passivated	3 mm	1.6 mm	BG10.S
100 inner rivet Ø 0.8 mm, tinned copper	3 mm	1.3 mm	BG9

INSTALLATION TOOL FOR RIVETS AND EYELETS FOR METALLIZATION



Installation tool for rivets and eyelets Ø 0.8 mm and Ø 1.1 for plating

Reference

BG11

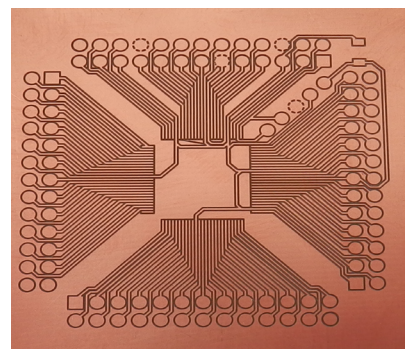
RAPID PROTOTYPING



SUMMARY

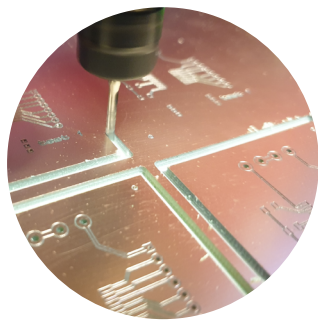
1. 3 axis-3D Rapid Prototyping - TECHNODRILL 3 **p.14**
2. PCB drilling and milling machine - DCT DM350 **p.18**
3. PCB laser fabrication machine - DCT DL300 **p.20**
4. Double head machine for PCB Prototyping..... **p.22**
5. Ultimate multifunction System - DCT Freedo UV **p.24**
6. Laser System - DCT S2 / S6 **p.26**
7. Milling and Drilling bits..... **p.28**
8. Raw PCB boards **p.30**

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

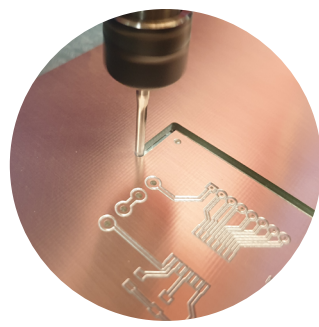


The **TECHNODRILL 3** is the versatile and scalable tool for the electronic laboratory.

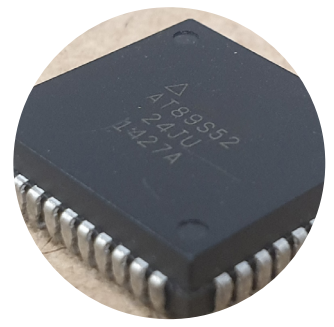
DEPANELING



ROUTING



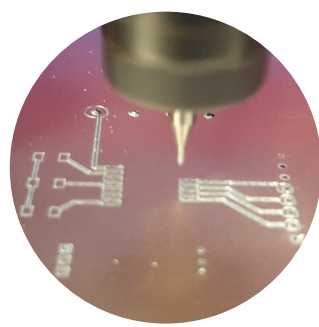
MARKING



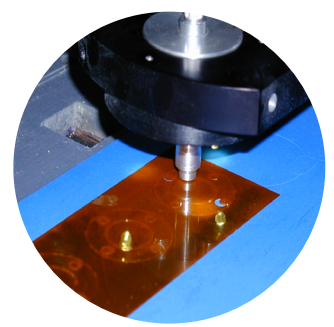
DRILLING



MILLING



CUTTING



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

With TECHNODRILL 3, drill, route, mill, cut, dispense, control, ... Supreme versatility!

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
- Automatic repositioning by optical recognition of fiducials (option U700216)
- Immediate learning
- Versatile: drilling, milling, routing depaneling, cutting, control, dispensing...
- Compatible with all types of files HPGL, ISO, EXCELLON, GERBER, 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 spindle and a protective cover with circuit breaker.

This 3D software includes “English engraving” of printed circuits.

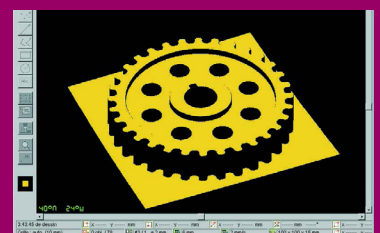
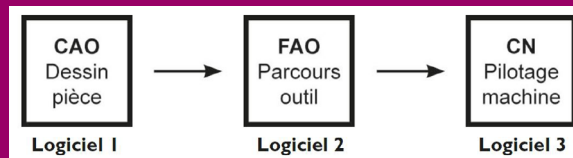
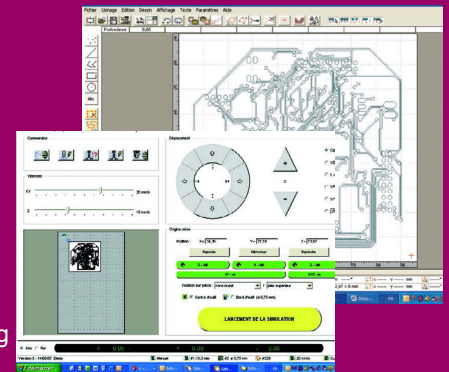
INFORMATION ON TECHNODRILL OPERATING SOFTWARE

GALAAD 3 is a set of Windows® software (XP / 7 / 10 / 11) 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 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 a 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	390 x 580 x 60 mm
Table	480 x 490 mm	480 x 785 mm
Resolution	1,5 µm in micro step (0,059 mil)	
Reproductibility	+ or - 5 µm (0.2 mil)	
Spindle power	800 W.10000 to 24000 rpm	
Tool replacement	Semi-automatic as standard, automatic as option	
Drilling stroke	360 holes/min (ø 0,8)	360 holes/min (ø 0,8)
Minimum track width	150 µm (5.9 mil)	200 µm (7,9 mil)
Minimum isolation	150 µm (5.9 mil)	200 µm (7,9 mil)
Mini drilling Ø	0,3 mm (11.8 mil)	
Motion 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/rotation)	
Frequency	Up to 200 KHz	
Table type	Grooved aluminium for quick placement	
Positioning tool sensor	Included as standard	
Electrical supply	230 V – 50 Hz - 8 A	
Net weight	76 Kg	90 Kg
External dimensions (L x W x H)	950 x 700 x 630 mm	950 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

	Reference	Starter kit for TECHNODRILL 3 (U800122)	Starter kit for TECHNODRILL 3 XL (U800123)
		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
Accurate milling drilling bit, 90° conical, width track 0,2 mm	DW101010	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
Brushing pad for PCB's	U700085	1	1

OPTIONS AND ACCESSORIES FOR TECHNODRILL 3 & XL

Integrated PC Windows 10 PRO OEM

U500058



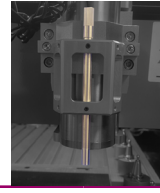
Martyr plate in laminated wood or PVC, thickness 15mm, dimensions 320 x 315 mm

U700030



Embedded camera

U700216



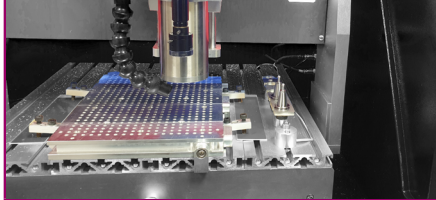
Repositioning tape, 2 sides, 1.50 mm, L 25 mm unit

U800023



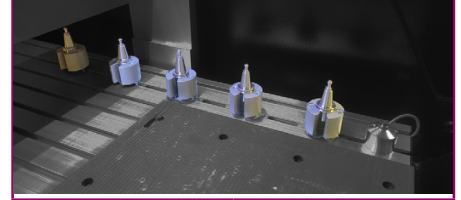
Professional automatic tool change pack with its cooler, intensive use

U700120



Additional tool rack with 5 tool holders ISO-10 for automatic liquid cooled chan

U700210



CS50 compressor

F41043



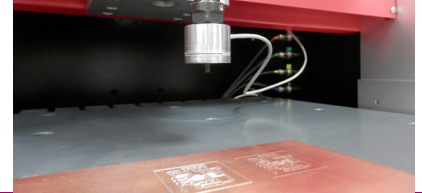
CS60 compressor (oil-free)

F41052



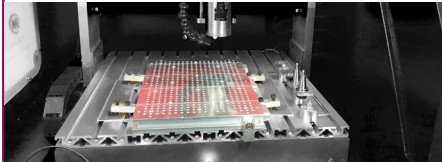
Metallic flatness sensor

U700019



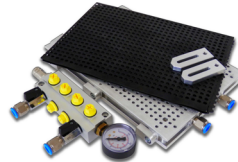
Professional metal vacuum base for TECHNODRILL 3, non intensive use, for laboratory

U700228



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



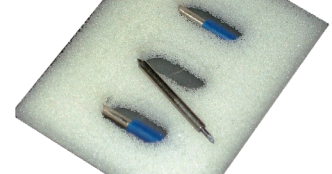
Cutter head for cutting

U700018



Replacement blade for cutter head, set of 3 pieces

U700017



Bottom cabinet with storage space for TECHNODRILL 3

U700009



TECDUST PRO G2 vacuum system with microfilter Grade L and adapter including dust shoe

U700131



Micro dust vacuum bag for TECDUST G2 Pack of 10

U7001732



Dust shoe for Ø 65 mm spindle

U500269



Set of 10 drilling counter plates 200 x 300 mm

EP116



Starter kit

U800122 Standard

U800123 XL version



PCB DRILLING AND MILLING MACHINE - DCT DM350 MODELS



FOR HIGH QUALITY PCB MANUFACTURE

This machine is available in 2 versions according to spindle speed.

Equipment suitable for analogue, digital, RF and microwave applications, as well as for aluminum and plastic front panel engraving, plastic film cutting and engraving, contour-routing, blind slot engraving, assembled PCBs depanelizing with precise depth-control function.

Features

- High speed spindle made in Germany
- Data processing software **CircuitCAM 7**
- Standing machine hood
- Vacuum cleaner
- Industrial control PC and display
- Depth limit function with contact coaxial limiter
- X/Y-axis high precision Servo motor drive
- With W-axis for depth control
- Camera supported automatic fiducial recognition
- Automatic stop function upon opening door
- Automatic Tool exchange, 20 positions, with camera supported calibration

The machine is available in 2 versions

Model	DCT DM350	DCT DM350H
Reference	U900040	U900041
Spindle	80 000 rpm	100 000 rpm
Vacuum base	Option	Standard

TECHNICAL CHARACTERISTICS

Model	DCT DM350	DCT DM350H
Reference	U900040	U900041
High speed spindle	80 000 tr / min	100 000 tr / min
Vacuum base plate (ref U800115)	option	included
Semi-automatic distance ring installer (ref U800114)	option	option
Minimum track size	75 µm / 100 µm (3 mil / 4 mil)	
Minimum hole diameter	0.15 mm	
Working area	305 x 230 mm	
Resolution for motion and control	0.5 µm	
Accuracy of repeatability	≤ ± 2 µm	
Positioning Accuracy	≤ ± 10 µm	
Drilling speed	150 Holes / min	
Travelling speed	250 mm / s	
Power Supply	220 VAC/50Hz	
Power	1,6 kW	
Weight	200 Kg	
Machine diameter (L x W x H)	850 x 900 x 1450 mm	
Machine Hood dimensions with PC Monitor and door open (L x W x H)	900 x 1400 x 1450 mm	

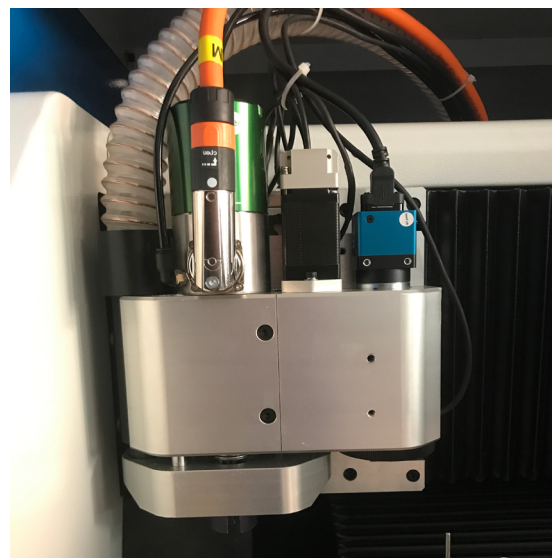
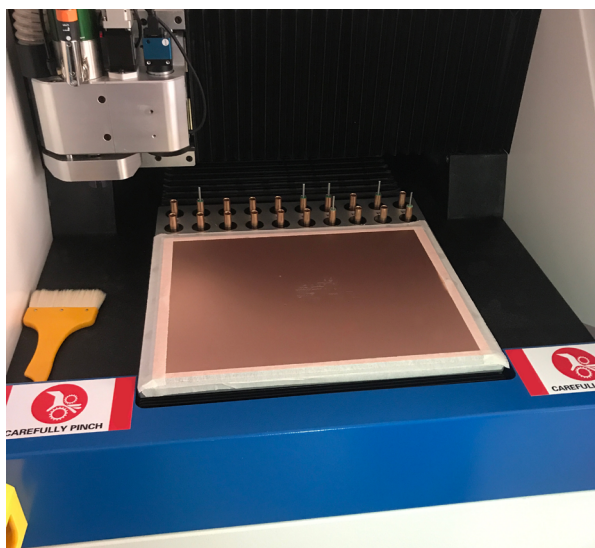
OPTIONS AND ACCESSORIES

Vacuum base plate - Ref **U800115**

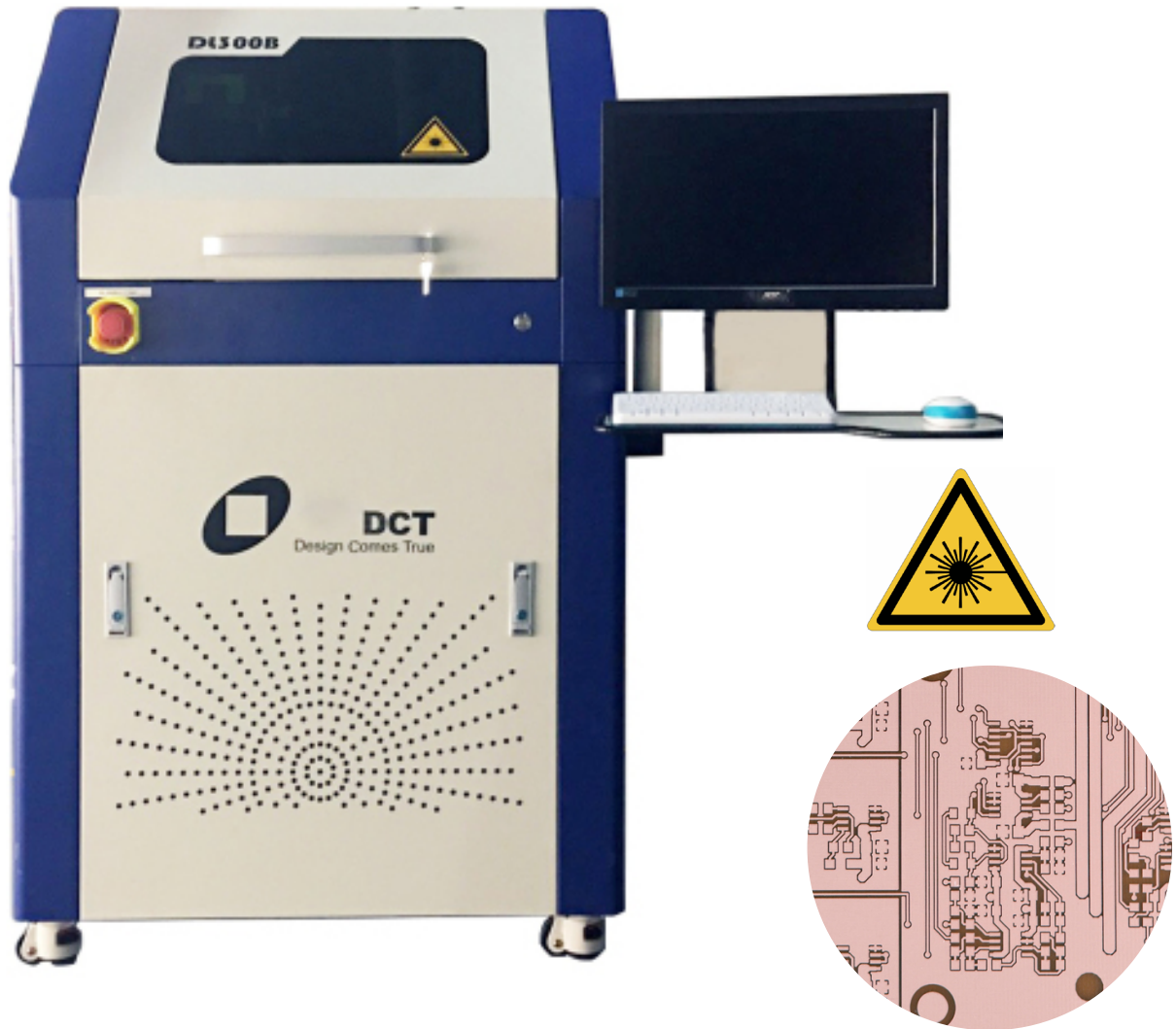
Semi-automatic distance ring installer - Ref **U800114**

Pocket microscope - x40 magnification with metric scale and lighting - ref **U800118**

CAM 7 Circuit - Single user license - ref **U800119** (1 license included with the machine)



PCB LASER PROCESSING SYSTEM DCT DCT DL300 SERIES



This machine is available in 3 versions according to the type and power of the laser.

Suitable for structuring conductive pattern on copper plate, removing solder resist, removing additional line, cover layer(CVL) cutting; also suitable for structuring other metal such as rare metal, electroplating material, film and coating material, plastic and ceramic.

Features

- Fiber laser with laser housing, air cooling,
- Granite X/Y table, bridge construction,
- Data processing software: **CircuitCAM 7 Laser Plus**
- Visionsystem with high resolution camera and reflectance light
- Camera supported positioning system with fiducial recognition
- X/Y/Z axes driven by high precision Servo motor
- Class C5 ball screw for X,Y,Z axes
- Digital scanning galvanometer (made in Germany)
- Telecentric lense
- Movable stand hood
- Industrial control PC and display
- Industrial dust exhaust unit
- Vacuum table for material
- Heat dissipation: inlet air from front and back, bilateral exhaust ventilation
- With lens protection
- Fully sealed optical path

3 Versions

- Laser CAS 30W
- Laser IPG 20W
- Green laser 20W

Machine delivered ready to use with

- Machine
- Software + PC
- Fumes Extraction
- Granite table
- Associated services on demand

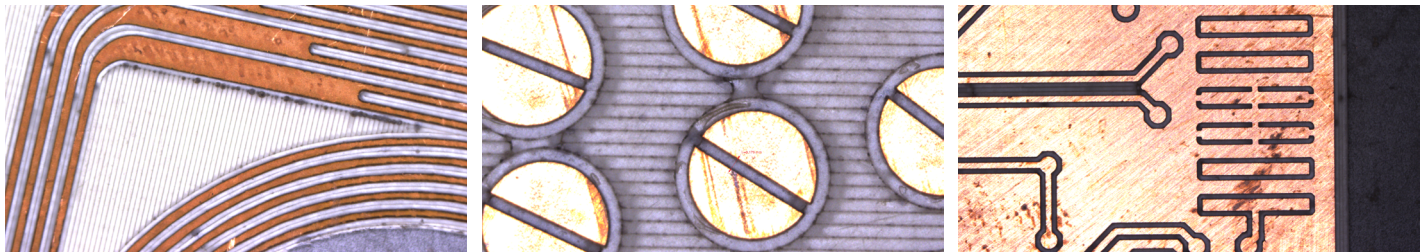
The machine is available in 3 versions:

- DCT DL300B version, equipped with a 30W **CAS® laser (1064 nm)**, ref **U900042**
- DCT DL300B-Adv version, equipped with a 20W **IPG® (1064 nm) laser**, ref **U900044**
- DCT DL300G version, equipped with a 20W **green laser (532 nm)**, ref **U900043**

Technical characteristics

Model	DCT DL300B	DCT DL300B-Adv	DCT DL300G
Reference	U900042	U900044	U900043
Circuit CAM7 Laser Plus Software	Included		
Working area	300 x 300 mm		
Min. line width	20 µm		
Min. Gap width	35 µm	35 µm	25 µm
Processing speed	20 cm ² / min	20 cm ² / min	30 cm ² / min
Accuracy of repeatability	± 2 µm		
Positioning accuracy	± 5 µm		
Resolution of galvanometer	1 µm		
Laser type	Laser CAS®	Laser IPG®	Green Laser
Laser wavelength	1064 nm	1064 nm	532 nm
Laser pulse frequency			
Average output of laser	30 W	20 W	20 W
Travelling Resolution of X/Y table	0.5 µm		
Automatic stop function upon door opening	Yes		
Weight	270 Kg		
Dimensions (L x W x H)	850 x 900 1450 mm		
OPERATING CONDITIONS			
Electricity	220 VAC / 50 Hz		
Main power	1.7 kW		
Peripherals power	1.5 kW		
Ambient temperature	25°C ± 5°C		
Humidity	< 60 %		
APPLICATIONS			
Drilling	✗	✗	✓
Milling	✓	✓	✓
Marking	✓	✓	✓
Routing	✗	✗	✓

DOUBLE HEAD MACHINE FOR PCB PROTOTYPING MECHANICAL ENGRAVING - LASER ENGRAVING DCT HYBRIDO 300



New Age of PCB Inhouse Prototyping

The DCT Hybrido300 started a new way for laboratory PCB prototyping. **The combination of laser and mechanical** advantages makes in house PCB prototyping much easier. Drilling, routing, and PCB line structuring can be finished within minutes with only one machine.

The Hybrido300 is equipped with high performance spindle. All axis servo motor and **full automatic 16 tool changer** guaranteed very fast drilling and routing speed. System build-in vision system can share the very exact position for laser system. Because the drilling and structuring process are shared with the same vision and positioning system, the best accuracy can be guaranteed. it can also produce stencils in brass or stainless steel.

Thanks to DCT's patented chemical-free S&S process, PCB can be produced in just a few minutes without burning the substrate material. **Especially RF and hyperfrequency waves circuits** benefit from exact feature dimensions and straight edges, providing a perfect fit of the circuit to the simulation results. With help of vacuum table, the flexible materials can be freely positioned and held. The Hybrido300 is also suitable for **FPC or multilayer PCBs**.

DCT Hybrido300 with the powerful **data processing software CircuitCAM**, most advanced operation software DreamCreaTor and PCB design software gives the engineers most freedom for PCB design, for Prototyping and makes design comes true!

Features

- **Working area (X x Y x Z) 310 x 230 x 10 mm**
- Longlife Fiber Laser Source
- High accuracy Granite base
- Excellent unibody of laser and mechanic processing
- Fastest and finest PCB structuring with Laser
- High efficient Spindle Drilling and Routing with **80,000 rpm**
- Full automatic tool change with 16 tool boxes
- High advanced Motion System with servo motor, highest mechanical resolution and accuracy
- 1 unique system for the manufacture of stencils and printed circuit boards
- Milling or laser capability

Model	DCT Hybrido
Reference	U900070
Working area (X x Y x Z)	310 x 230 x 10 mm
Min. line width	0.1 mm (depend on material)
Min. space	0.05 mm (depend on material)
Structuring speed	12 cm²/min (depend on material)
Min. hole diameter	0,2 mm
System repeatability	± 2 µm
Motion control resolution	0.5 µm
Tool changer	16 tool bases automatic changer
Traveling speed of X Y axis	150 mm/s
Drilling speed	120 /s
Routing speed	5mm/s (depend on material and thickness)
Spindle speed	80,000 rpm
Laser wavelength	1064 nm Fiber laser
Laser power	0-20 w
Axis drive	X,Y,Z axis with servo motor
Power supply	220 VAC 50 Hz, 1600 W
Compressed air supply	Min. 6 bar; 80 L/min @ 6 bar
Dimension (L x W x H)	800mm x 810 mm x 690 mm (without signal light)
Weight	120 Kg

CONFIGURATION & OPTION

Vision and automatic positioning system	✓ Included
Vacuum table	✓ Included
Metal housing and granite table	✓ Included
Quadratic element measure (basic function)	✓ Included
Data processing software CircuitCAM	✓ Included
Machine operation software DreamCreaTor	✓ Included
PCB design software Edwin	✓ Included
External quiet vacuum cleaner	✓ Included
Air compressor	Option
Laser Goggles	✓ Included
Computer	✓ Included
Support Tables (U800041)	Option

Ultimate Multifunction System for the Electronics Laboratory DCT FreeDo UV



FreeDo is capable of processing a variety of materials in electronic laboratories, thereby liberating the engineering design process. It can handle Flex-Rigid PCBs such as FR4, PTFE, or PI, and effortlessly tackle tasks like drilling and cutting on LTCCs, HTCC, and ceramics.

Coupled with the robust data processing software CircuitCAM, the cutting-edge operating software DreamCreaTor, and advanced PCB design software, FreeDo empowers engineers with highest freedom in PCB design and prototyping, turning design concepts into reality.

Features

- Capable of processing **pcb, micro-machining** as well as **stencils**
- Double head : **Laser & Mechanical**
- Unrivaled precision and efficiency achieved through the integration of Laser Structuring, mechanical drilling/routing, and optical measurement and inspection in a single unit.
- Ideal for handling diverse materials such as **Flex and Rigid PCBs**, as well as **thin, sensitive materials**, making it the perfect processing tool.
- High-advanced Motion System featuring a linear motor for the highest mechanical resolution and accuracy.
- Granite base for highest stability and robustness
- Compact and powerful

Model	DCT Freedo
Reference	U900212
Working area (X x Y x Z)	305 mm x 230 mm x 20 mm
Laser wavelength	355 nm
Max. Laser Power	15 w/opt. up to 20 w
Laser Wave frequency	0 - 500 kHz
Laser Beam diameter	Typical 20 µm
Max. Spindle speed	100,000 rpm
Min. line/space width	50 µm/20 µm
Structuring speed	12cm²/min on FR4 18 µm Cu
Min. hole diameter	0.2mm with spindle drilling/ 20µm Laser drilling on thin material
System repeatability	In the scan field ± 2 µm
Positioning accuracy	in the scan field ± 5 µm
Tool exchange	12 tool holder full automatic changer
Drilling speed	120 holes /s with spindle
Routing speed	10mm/s (depend on material and thickness)
Power supply	220 VAC 50 Hz, 2200 w
Compressed air supply	130 L/min @ 6 bar
Dimension (D x W x H)	850mm x 900 mm x 1450 mm (without signal light)
Weight	750 Kg

CONFIGURATION & OPTIONS	INCLUDED	OPTION
Microscopic Camera	✓	
Quadratic element measure (Basic)	✓	
Data Processing software CircuitCAM	✓	
Operation software DreamCreaTor	✓	
PCB EDA software Edwin	✓	
Granite Plattform	✓	
Vacuum Table	✓	
Measurement tool package	✓	
X, Y axis driven by linear motor	✓	
Control PC	✓	
Dust exhaust unit		✓
Air compressor		✓

MICRO PROCESSING LASER SYSTEMS

DCT S2 / DCT S6

RAPID PROTOTYPING

Systems for micro processing variety of material, including LTCC/HTCC drilling, FPC depaneling, thin and tough PCBs (including assembled PCBs) contour cutting, coverlayer cutting, decap of rigid-flex PCBs, cutting complex shapes, direct structuring conductive pattern, ablating solder resist, removing additional line, drilling of ceramics, through holes or blind vias drilling on FPC.

Laser system for PCB and Micro-processing - DCT S2

Consisting of

- Nano-second laser
- Granite X/Y table
- Visionsystem with high resolution camera and reflectance light source
- Camera supported positioning system with fiducial recognition
- X/Y axes driven by Linear motor
- Industrial control PC, display, keyboard and mouse
- Water-cooling unit
- Vacuum table for material
- Machine driven software: DreamCreator 3
- Data processing software: CircuitCAM 7 Standard
- Double safety light curtain
- Digital scanning galvanometer
- TelecentricLens



Laser source specifications can be customized

Technical Data

Modele	DCT S2
Reference	U900058
Working area (X x Yx Z)	300 mm × 350 mm x 10mm
Accuracy of repeatability	±2 µm
Laser wavelength	355 nm
Average output of laser	15 W
Resolution of galvanometer	1 µm
Travelling resolution of X/Y/Z Axis	1 µm
Weight	approx. 750 Kg
Machine Hood dimensions (L/W/H)	1210 mm × 920 mm × 1630 mm

OPERATING CONDITIONS

Power supply	400 / 16A or 230V / 32A 50 Hz
Main power	3 kW
Peripherals power	1,5 kW
Ambient temperature	22 ° C ± 2 ° C
Ambient Humidity	<60%
Input pressure	6 - 8 bar
Air throughput	> 120 L / min

DCT Laser System DirectLaser S6 NS 20W Coherent®

System consisting of

- UV laser and laser housing
- Granite X/Y table
- Data processing software: CircuitCAM 7.3 Standard
- Vision system with high resolution camera and reflectance light source
- Camera supported positioning system with fiducial recognition 160M pixel
- X.Y. axes driven by high precision Linear motor
- Z axis driven by high precision Servo motor
- Online Laser Power meter
- Digital scanning galvanometer
- TelecentricLens
- Industrial control PC and display
- Vacuum table for material
- With water-cooling unit
- Fully sealed optical path



Laser source specifications can be customized

Technical Data

Modele	DCT S6
Reference	U900147
Working area (X x Y)	610 mm × 533 mm
Travelling resolution of X/Y axes	1 µm
Z-axis travel	50 mm
Accuracy of repeatability	±2 µm
Laser Wavelength	355 nm
Average output of laser	20 W
Typical pulse width	< 15 ns
Resolution of galvanometer	1 µm
Weigh	Approx. 1700 Kg
Dimensions (H/W/L)	1 605 mm × 1 400 mm × 1 760 mm

OPERATING CONDITIONS

Electricity	380 VAC/50 Hz
Main machine power	3 kw
Peripherals power	1,5 kw
Ambient temperature	22° C ± 2° C
Ambient Humidity	<60%

CARBIDE DRILL BITS

Especially recommended for drilling PCBs.
 Packaged individually or in a box of 10 pieces (more economical)
 Material: **tungsten carbide**

- Monobloc. Reinforced tail 3.17 mm.
- On stock from 0.4 mm to 3.00 mm.
- Minimum drilling speed 20,000 rpm.
- The smaller the diameter of the drill, the faster the speed will be.
- Descent speed of 1.6 to 4 m / min.
- Option: drill ring on request



Reference

Ring for drill bit or milling bit - distance to cut to be confirmed when ordering, 1 pc

U600002

3TG Compliance

Ø (mm)	Reference per unit	Reference per box of 10	Ø (mm)	Reference per unit	Reference per box of 10
0,3 mm	DU63	DU63.10	1,8 mm	DU78	DU78.10
0,4 mm	DU64	DU64.10	1,9 mm	DU79	DU79.10
0,5 mm	DU65	DU65.10	2 mm	DU80	DU80.10
0,6 mm	DU66	DU66.10	2,1 mm	DU81	DU81.10
0,7 mm	DU67	DU67.10	2,2 mm	DU82	-
0,8 mm	DU68	DU68.10	2,3 mm	DU83	-
0,9 mm	DU69	DU69.10	2,4 mm	DU84	-
1 mm	DU70	DU70.10	2,5 mm	DU85	DU85.10
1,1 mm	DU71	DU71.10	2,6 mm	DU86	-
1,2 mm	DU72	DU72.10	2,7 mm	DU87	-
1,3 mm	DU73	DU73.10	2,8 mm	DU88	-
1,4 mm	DU74	DU74.10	2,9 mm	DU89	-
1,5 mm	DU75	DU75.10	3 mm	DU90	DU90.10
1,6 mm	DU76	DU76.10	3,17 mm	DU91	-
1,7 mm	DU77	DU77.10			
Set of 24 drill bits Ø 0,8 to 3,2 mm, step 0,1 mm				DU92	
Set of 38 drill bits Ø 0,6 - 0,7 - 0,8 - 1,0 - 1,2 - 3,17 mm				U800020	

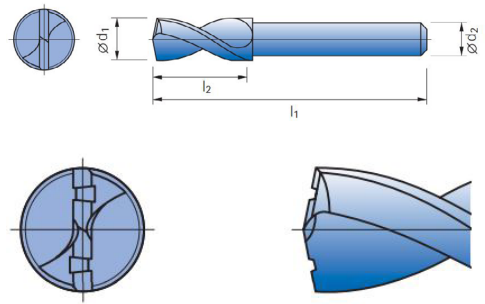
!

To allow the material to be cut without overheating, it is recommended to adjust the feed rate according to the speed of rotation and diameter. Indeed, what is important during drilling is the cutting speed and the advance. It is necessary to maintain the plates perfectly at the time of the descent of the drill.

Cutting speed (m/mn) = $\frac{d \times 3.14 \times \text{rpm}}{1000}$
 (d is in mm)

Rotation speed (rpm) = $\frac{\text{Cutting speed} \times 1000}{d \times 3.14}$

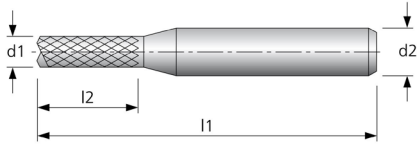
Advance (µ/rotation) = $\frac{\text{Advance (mm)} \times 1000}{\text{Nb de tours / mn}}$



Basic toolset DU592	Standard toolset DU593	Professional toolset DU594	Brushing pad for PCB's U700081 - U700085
<ul style="list-style-type: none"> • 5 Universal cutters • 3 Contour routers • 3 End mills • 14 Drill bits 	<ul style="list-style-type: none"> • 10 Universal cutters • 4 Contour routers • 4 End mills • 32 Drill bits 	<ul style="list-style-type: none"> • 10 Universal cutters • 4 Contour routers • 4 End mills • 32 Drill bits • 10 Copper plates, format A5, 2 sided • 10 Copper plates FR4, format A5, 1 sided • 10 Drill underlay material, format A5 • 10 Cleaning pads 	<ul style="list-style-type: none"> • 1 piece (U700081) • package of 10pcs (U700085) • 230 x 150 mm • Metal wool brushing pad is used for cleaning PCB's after PCB milling. • Metal wool can polish the copper surface and break small chips on edges of milled contours. • Surface of PCB is smooth and shine after cleaning.

MILLING BITS

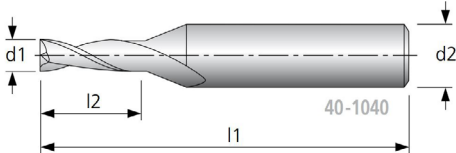
Diamond routing mill bits



Cylindrical	3.17 mm tail	Ø 0.8 mm	DUFD6
Cylindrical	3.17 mm tail	Ø 1.0 mm	DUFD10
Cylindrical	3.17 mm tail	Ø 1.5 mm	DUFD5
Cylindrical	3.17 mm tail	Ø 2 mm	DUFD1
Cylindrical	3.17 mm tail	Ø 2.5 mm	DUFD2

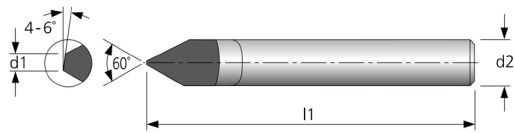
3TG Compliance

End mill bits



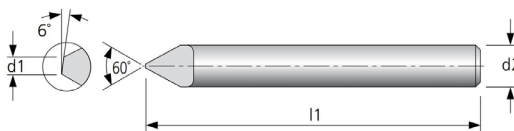
Cylindrical	3.17 mm tail	Ø 1 mm	DU1
Cylindrical	3.17 mm tail	Ø 1.6 mm	DU2
Cylindrical	3.17 mm tail	Ø 2 mm	DU3
Cylindrical	3.17 mm tail	Ø 3 mm	DU5
Cylindrical	6 mm tail	Ø 6 mm (for marmer surface)	DU200
Cylindrical	8 mm tail	Ø 6 mm (for marmer surface)	DU202

Aluminium engraving mill bits



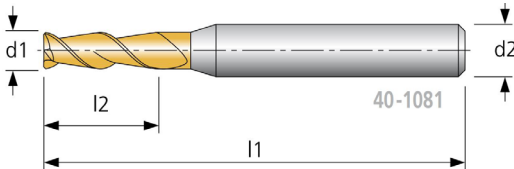
Conical	3.17 mm tail	Solid carbide	Ø 0.2 mm	60°	DU201
Conical	3.17 mm tail	Solid carbide	Ø 0,32 mm	45°	DU20
Conical	3.17 mm tail	Solid carbide	Ø 0,32 mm	45° (x5)	DU21
Cylindrical	6 mm tail	Solid carbide (8mm long)	Ø 3 mm	-	DUFD7
Cylindrical	6 mm tail	Solid carbide (8 mm long)	Ø2 mm	-	DUFD8

Carbide mill bits for plastic



Conical	3.17 mm tail	Ø 0.2 mm (60°)	DU203
Conical	3.17 mm tail	Ø 0.2 mm (45°)	DU204
Cylindrical		Ø 2 mm	DU8
Cylindrical		Ø 3 mm	DU10

Spiral mill bits for stainless steel



Cylindrical	3.17 mm tail	Long 38 mm	Ø 0.3 mm	DU23
Cylindrical	3.17 mm tail	Long 38 mm	Ø 0.3 mm	DU23.10 (Pack of 10)
Cylindrical	3.17 mm tail	Long 38 mm	Ø 0.4 mm	DU24
Cylindrical	3.17 mm tail	Long 38 mm	Ø 0.4 mm	DU24.10 (Pack of 10)

Engraving mill bits for PCB



Conical		Ø 2 mm	30°	DU17
Conical	3.17 mm tail	Ø 0.1 mm	45°	DW050505
Conical	3.17 mm tail	Ø 0,1 mm	60°	DW060606
Conical		Ø 2.4 mm	60°	DU16
Conical	3.17 mm tail	Ø 0,1 mm	90°	DW101010
Conical	3.17 mm tail	Ø 0.1 mm	90° (x5)	DW10.5
Cylindrical	3 mm tail	Ø 0.1 mm	-	DU101

	PCB	Composite	Plastic	Aluminium
Engraving	<ul style="list-style-type: none"> Engraving mill bits for PCB DW101010, DW050505, DW060606 	<ul style="list-style-type: none"> Engraving mill bits for PCB DW101010, DW050505, DW060606 	<ul style="list-style-type: none"> Engraving mill bits for PCB DW101010, DW050505, DW060606 End mill bits for marmer surface DU200, DU202 Carbid mill bits for plastic DU203, DU204, DU8, DU10 	<ul style="list-style-type: none"> Aluminium engraving mill bits DU201, DU20, DU21, DUFD7, DUFD8 End mill bits for marmer surface DU200, DU202
Machining	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 	<ul style="list-style-type: none"> End mill bits DU1, DU2, DU3, DU5, DU200, DU202 Carbid mill bits for plastic DU203, DU204, DU8, DU10 	
Detouring	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 	<ul style="list-style-type: none"> End mill bits DU1, DU2, DU3, DU5, DU200, DU202 Carbid mill bits for plastic DU203, DU204, DU8, DU10 Aluminium engraving mill bits DU201, DU20, DU21, DUFD7, DUFD8 	<ul style="list-style-type: none"> Spiral mill bits for Stainless steel DU23, DU24
Drilling	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 Tungsten carbide drill bits DU63 - DU91 	<ul style="list-style-type: none"> Diamond routing mill bits DUFD1, DUFD2, DUFD5, DUFD6 		<ul style="list-style-type: none"> Spiral mill bits for Stainless steel DU23, DU24

COPPER AND NON-COPPER RAW BOARDS

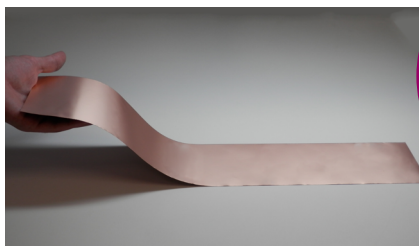
RAW COPPER BOARDS

- High quality laminate
- 8 layers of glass cloth
- MIL 13949 F standard
- UL94V0 flammability class
- Moisture absorption : < 0.05 %.
- Arc resistance : 60 sec
- Loss tangent : 0.035
- Thermal conductivity: 0.3 W/mk



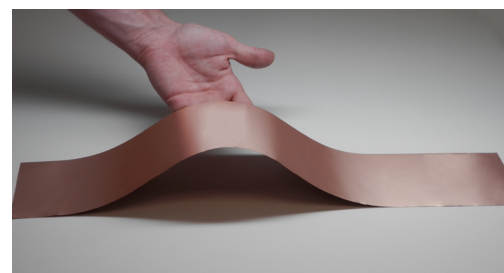
FLEX BOARDS

Polyimide film with copper foil on one or both sides, bonded with a patented modified acrylic adhesive at C stage.



Unpresensitized - Dielectric 50 μ - Copper coated 35 μ

- Dielectric constant 4.7
- Loss tangent 0.02
- Dimensional stability 0.1%.
- Peel strength 10 lb/min (1,8 Kg/cm)

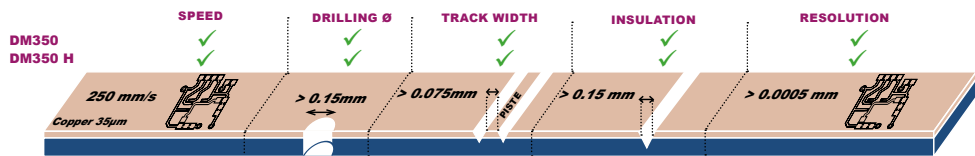
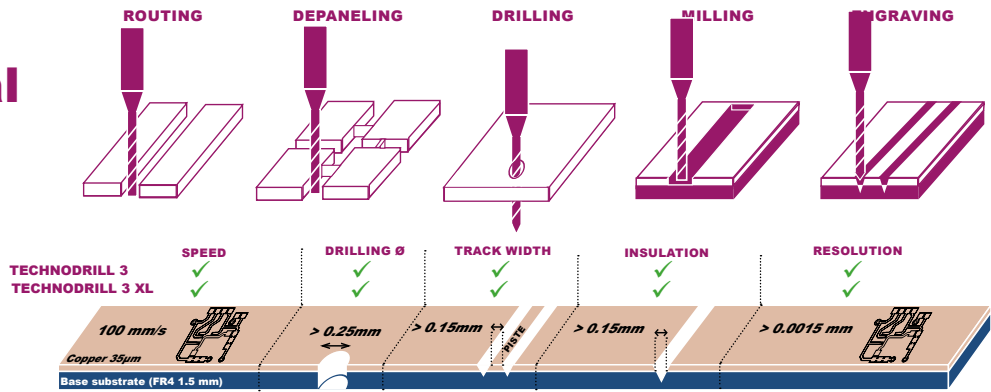


Treatment	Raw								Non-copper epoxy
Support	FR4						Flex board		
Copper	18 μm		35 μm				35 μm		
Sides	2F		1F		2F		1F	2F	
Thickness	8/10e	16/10e	8/10e	16/10e	8/10e	16/10e			16/10
Reference	AEGxx	AFxx	ADBxx	ADxx	AEBxx	AExx	ANxx	AN2xx	AMxx
75 x 100 mm			ADB7	AD7					
100 x 150 mm			ADB10	AD10	AEB10	AE10			
100 x 160 mm			ADB16	AD16	AEB16	AE16			
148 x 210 mm	AEG14	AF14		AD14		AE14			
100 X 600 mm							AN10	AN210	
150 x 200 mm			ADB15	AD15	AEB15	AE15			
200 x 300 mm	AEG20	AF20	ADB20	AD20	AEB20	AE20			AM20
300 X 300 mm			ADB30	AD30		AE30			
300 x 600 mm			ADB60	AD60	AEB60	AE60	AN30	AN230	AM60

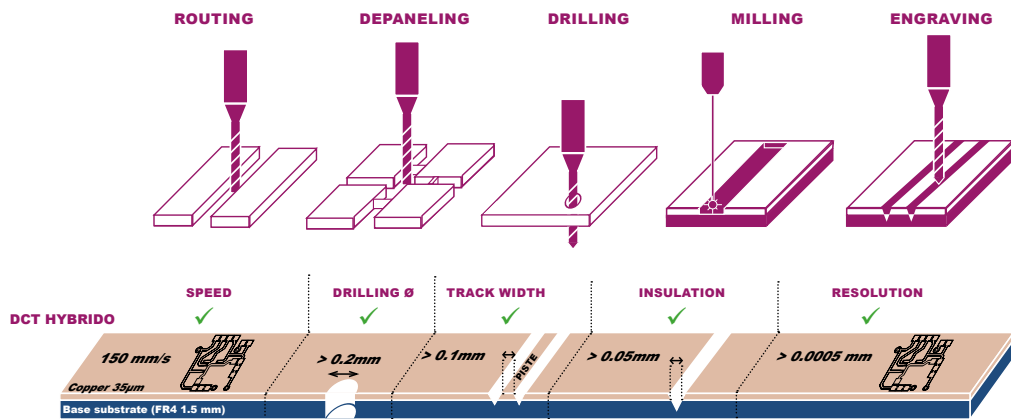
All custom sizes, please contact us.

OUR PCB SOLUTIONS

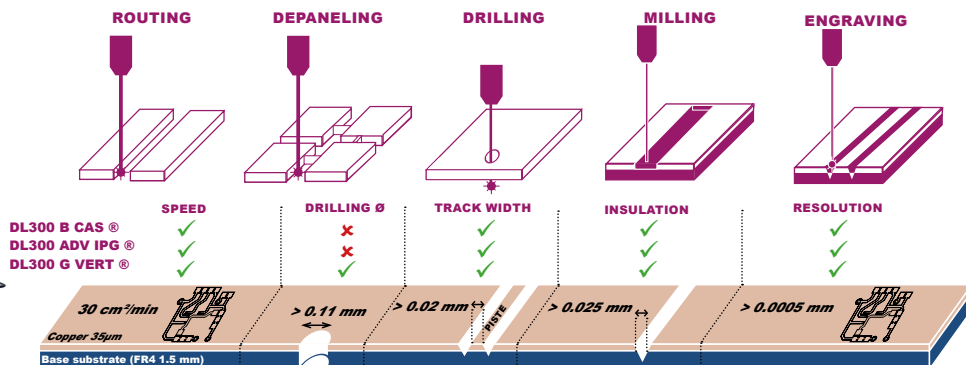
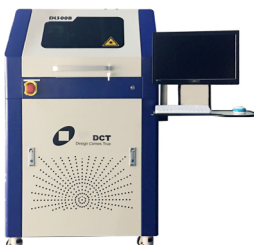
Mechanical Way



Hybrid Way



Laser Way

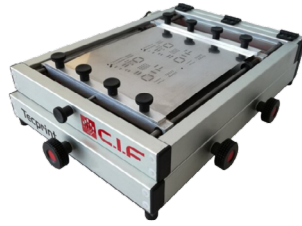


ASSEMBLY

SUMMARY

1. Dispensing..... **p.34**
2. Products and accessories for dispensing..... **p.35**
3. Compressed air and nitrogen generator.....**p.38**
4. Laser system for stencils.....**p.39**
5. Stencil printer..... **p.40**
6. Manual Pick & Place..... **p.42**
7. Pick & Place SMT MS4L/ MS4T..... **p.44**
8. Automatic Pick & Place..... **p.52**
9. Reflow ovens..... **p.54**
10. Vapor phase reflow oven..... **p.58**
11. Depaneling **p.60**
12. Filtration **p.66**

OUR SMD SOLUTIONS



**SOLDER
PRINTING / DISPENSING**



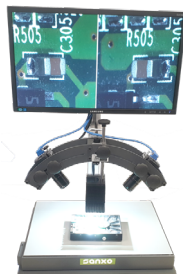
PICK & PLACE



SOLDERING



FILTRATION



CONTROL



REPAIR

DISPENSING

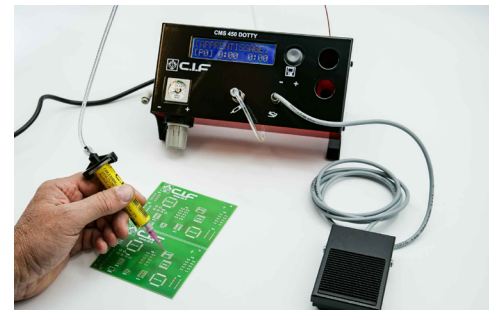
DOTTY CMS 450.V2 DISPENSER



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

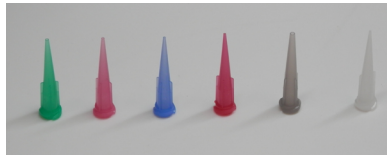
PRODUCTS AND ACCESSORIES FOR DISPENSING

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

STARTER KIT FOR STENCIL PRINTER

For the implementation and cleaning of TECPRINT 500 & TECPRINT 700 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 syringe gun Ref. **71000ROD**

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



1 L Bottle	AR58
20 L Bottle	AR58.2

SOLDER PASTE



**Available
Class 4
Class 5
Class 6**

SMD SOLDER PASTE FOR LEAD-FREE ALLOY

Alloy Sn96.5Ag3Cu0.5 (96.5% tin, 3% silver and 0.5 copper)
Melting temperature 217°C
Packaged in 10cc syringe with or without plunger, or in 170cc cartridge (0.5kg)
No clean flux at 12%.



10 cc lead free syringe - Class 5	F42240
10 cc syringe + plunger, lead free - Class 5	F42241
500 gr pot, lead free - Class 5	F42243
10 cc syringe + plunger, lead free - Class 6	F42245



**HIGH
QUALITY
ALLOY**

SOLDER PASTE FOR LEAD ALLOY CMS

Alloy Sn62Pb36Ag2 (62% tin, 36% lead and 2% silver)
Melting temperature 178°C
Packaged in 10cc syringe with or without plunger
No clean flux at 12%.



Syringe 10 cc alloy with lead, class 5	F42210
Syringe 10 cc alloy with lead + plunger, class 5	F42213
Pot of 500 gr Alloy with lead, class 4	F42212

Other specifications on request

DISPENSING ROBOT

TECHNIDOT



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

The main advantage of this machine is that it allows very precise dispensing 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 (free software updates)
- 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

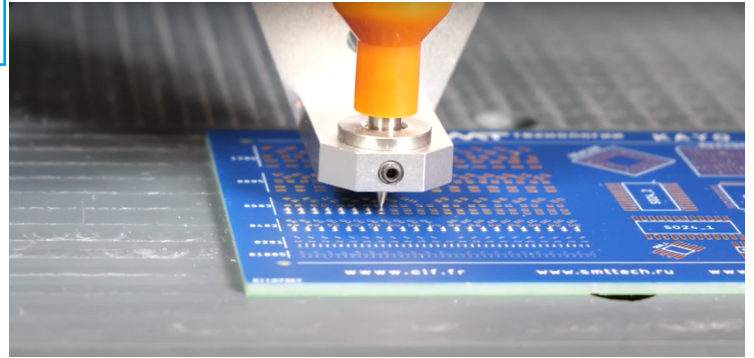


MUSASHI DISPENSER®

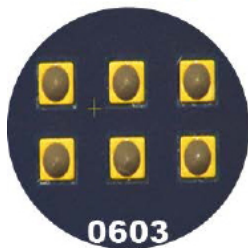


Applications

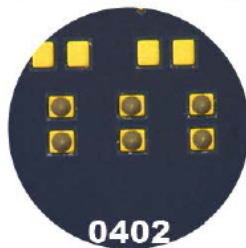
- Dispensing of solder paste class 6, class 5 or class 4
- Thin glue
- Fine grease



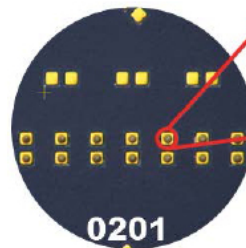
Example of solder paste deposits on pads of different sizes



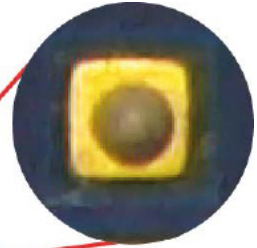
0603
Pad size
1,6 x 0,8 mm



0402
Pad size
1,0 x 0,5 mm



0201
Pad size
0,6 x 0,3 mm



Technical specifications of the robot

Reference	V900151 - Education license V900152 - Industry license
Interpolation	3 axis - 3D
Standard working stroke	320 x 310 x 60 mm
Reproductibility	± 5 µm (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	950 x 700 x 630 mm
Safety cover	Included
Lighting	Included
Delivered with	GALAAD 3 software (Free updates)

Technical characteristics of the dispenser

Reference	V900054
Model	ML-6000
Discharge pressure setting	Electro/pneumatic method
Pneumatic control circuit	Air pulse stabilizing circuit (PAT.)
Dispense pressure setting	0 - 0.7MPa
Discharge time setting	0.010 - 9999sec. (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

ULTRA-SILENT LABORATORY COMPRESSORS

Range of ultra-quiet compressors reaching a very low maximum sound level. Moreover they are very manageable and adapted for the laboratories design offices and teaching classes. These are compressors with silent production of compressed air for needs ranging from 17 to 200 liters per minute. The compressors of the CS range deliver a power from 6 to 16 bars.



	CS25	CS30 & CS50	CS35 (oil free)	CS60 (oil free)	CS70	CS100	CS120
Models	CS25	CS30	CS35 (oil free)	CS60 (oil free)	CS70	CS100	CS120
Reference	F41045	F41044	F41051	F41043	F41052	F41053	V900004
Spare oil, 1 liter	V800002	V800002		V800002		V800002	V800002
Capacity	1 Liter	6 Liters	6 Liters	24 Liters	24 Liters	24 Liters	100 Liters
Sound level	30 dB	40 dB	58 dB	43 dB	49 dB	43 dB	44 dB
Production rate	17 L /min	50 L /min	49 L/min	50 L /min	92 L /min	50 L /min	200 L /min
Max. pressure	6 bars	8 bars	7 bars	8 bars	7 bars	16 bars	8 bars
Mandatory periodic inspection	No	No	No	No	No	Yes	Yes
Net weight	14.5 kg	21 kg	23 kg	29 kg	26 kg	29 kg	105 kg
Power	135 W	340 W	680 W	340 W	680 W	340 W	1360 W
Dimensions L x W x H (mm)	210 x 460 x 530	300 x 310 x 480	240 x 450 x 480	350 x 350 x 500	490 x 460 x 570	420 x 420 x 640	910 x 450 x 670
Electrical supply	230 V - 50/60 Hz						

NITROGEN GENERATOR

Patented modular design.
 Nitrogen purity up to 99.99%.
 Each adsorption tower is equipped with an advanced control system.

	Nitrogen (N2) generator - 4 m3	Nitrogen (N2) generator - 8m3
	V800232	V800236
Flow rate (m3/hr.)	4	8
Purity (%)	99% to 99.99%	
Air inlet flow rate (m3/hr.)	24	46
Inlet temperature (min)	5 °C	
Inlet temperature (max)	25 °C	
Exit pressure N2	0.75 Mpa	
Inlet pressure	0.75~0.8 Mpa	
Dew point of N2 at outlet	-40°C	
Ambient temperature (max.)	≤ 40°C	
Controller type	PLC	
Dimensions(mm)	L800 x W 460 x H140	L1050 x W 650 x H1950
Weight	160 Kg	550 Kg



LASER SYSTEM FOR STENCILS AND PRECISION PARTS - DCT M3



Ref. **V900041**

System composed of

- Fiber laser
- Granite X/Y table, double gantry drive structure
- Vision system with high resolution camera
- Camera assisted positioning system with shot recognition
- X / Y axes driven by a linear motor
- Industrial control PC and monitor
- Data processing software: CircuitCAM 7 Pro
- Machine operating software: DreamCreaTor 3

Technical data

- | | |
|---|--|
| • Working area (X x Y) | 800 × 600 mm |
| • Max. frame size | 740 x 950 x 40 mm |
| • Max. size of steel sheet fixation | 650 x 850 mm |
| • Repeatability accuracy | ± 2 µm |
| • Laser wavelength | 1070 nm |
| • Average laser output | 200W |
| • X / Y / Z axis displacement resolution | ≤ 0.1 µm |
| • Cutting thickness | 20 µm ~ 300 µm depending on the material |
| • Weight approx. | 2000 kg |
| • Dimensions of the machine cover (W / H / D) | 1713 × 1480 × 1585 mm |

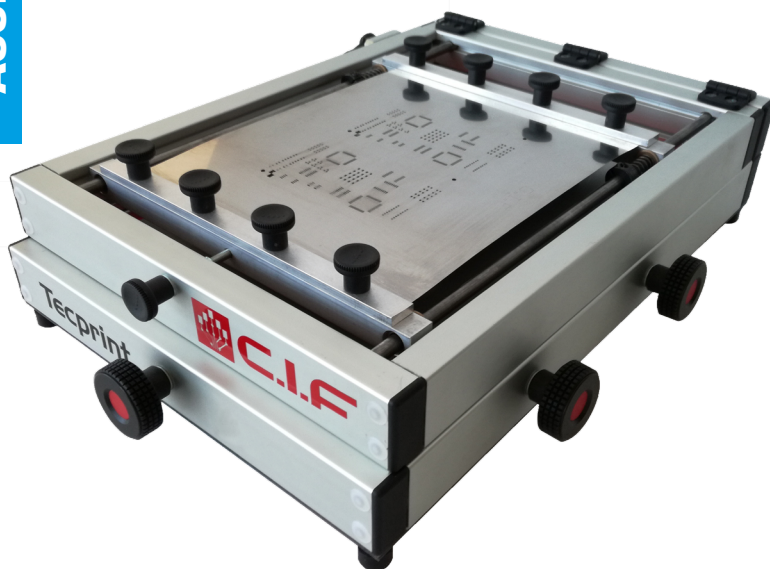
Operating conditions

- | | |
|-----------------------|-----------------|
| • Power supply | 380 VAC / 50 Hz |
| • Main power | 3.0 kW |
| • Ambient temperature | 22 °C ± 2 °C |

A cutting gas (oxygen or compressed air) is required! Inlet pressure ≥ 9bar

STENCIL PRINTER FOR SMD

TECPRINT STENCIL PRINTERS

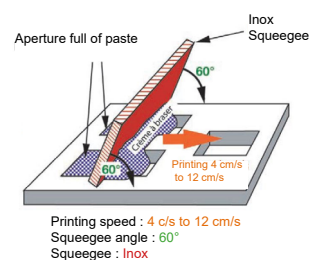


Create your printing in a short time and for low price !
Compact model

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 500 / 700



! BASIC GUIDELINES FOR MANUAL DISPENSING

The choice of the dispenser and its accessories depends first and foremost on the product to be applied.

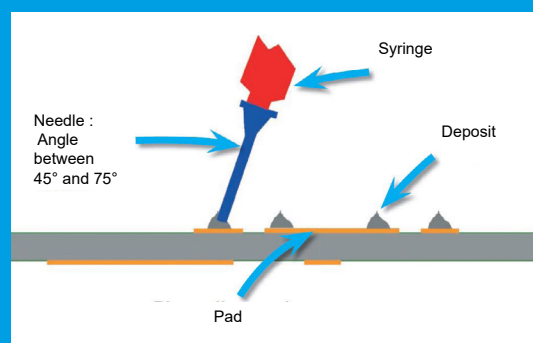
The quality of the deposit depends on 4 factors :

- the pressure of the product
- the time
- needle diameter
- the quality of the needle (metal, polyethylene, PTFE, etc.).

To obtain regular dots, in addition to adjusting these 4 factors, it is necessary to handle the syringe correctly. The standard practice is to hold the syringe at an angle of between 45° and 75° and apply the product in 3 steps :

- contact of the needle with the base
- dispensing the product
- raise the needle vertically to the substrate

Repeating this operation will produce accurate deposits of identical quality.



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



SPARE METALLIC SQUEEGEE

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	Set of 4 aluminium PCB support bars for TECPRINT 700	V700052
Stainless stencil 127 µm -200 x 250 mm for TECPRINT 500 (the first one is free of charge)	V700053	Stainless stencil 130 µm - 250 x 250 mm for TECPRINT 700 (the first one is free of charge)	V500092
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
Manual mini-squeegee - 30 mm			V700098
Manual mini-squeegee - 75 mm			V700099

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 gripping head moving finely on the X, Y and Z axes at the level of the laying area; the X and Y movement is ensured by the displacement of the gantry over the whole working area. This specific device ensures a greater robustness and reliability of the unit.

It also makes it possible to optimize the working area of **300 x 500 mm** as much as possible.

Vacuum pump is integrated in the gantry. The placement head includes a micro switch which provides the vacuum / vacuum breaker for picking up and placing 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

	HD Color camera + mounting bracket	V800029
	Feeder for rest piece of tapes	V700386
	Windows® touchscreen display + support	V800055
	Lead-free SMD starter kit	F42310
	Foot pedal for vacuum control (Recommended for the placement of 0201 SMD)	V500199

BENEFITS

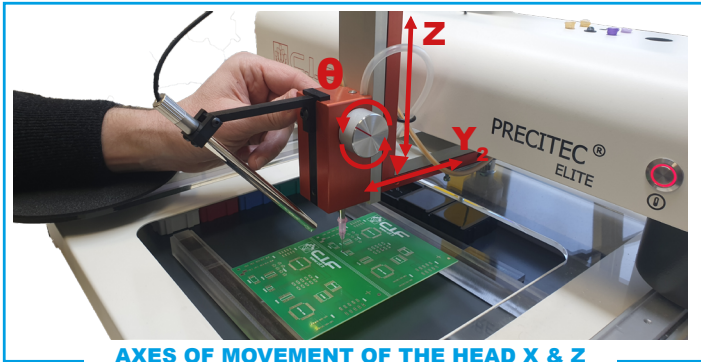
- Compact but with a very large working area : 300 x 500 mm
- Designed for right and left handed users without configuration changes
- Double arm support for a better operating position ensuring optimal comfort for the operator
- Sensitive grip head with 360 ° component rotation
- Vacuum / vacuum breaker via gripping head or foot control pedal
- 10 cc syringe support integrated as standard for connection to any type of dispenser
- Color camera 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.



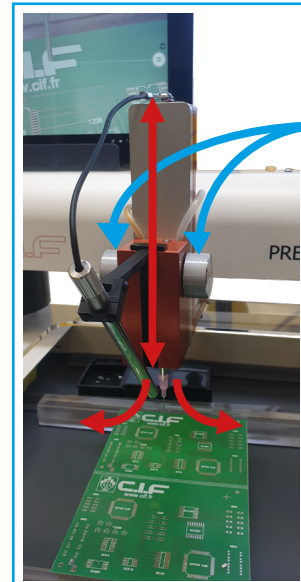
MOVING THE UPPER MOBILE GANTRY IN X & Y
WIDE CARD HOLDER CLEARANCE



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	300 x 500 mm
Tray surface	330 x 600 mm
Placement accuracy	0402 to QFP with 0,65 mm precision 0201 possible with pedal option
Dispensing head	Included
Rate	Up to 90 components / hour
Operating temperature	15 to 40° C
Sound level	< 70 dB(A)
Electrical supply	230 V- 50/60 Hz
Dimensions. L x x H	600 x 500 x 300 mm
Net weight	15.5 Kg

AUTOMATIC SMD PICK & PLACE MACHINE KAYO A4



The KAYO A4 is a automatic SMT placement station. This A4 model is a table model with conveyor.

Compact, it can accommodate 46 8mm feeders, as well as 6 placement and positioning cameras. The placement accuracy is 0.01 mm for a placement capacity 7000 components per hour (max.)

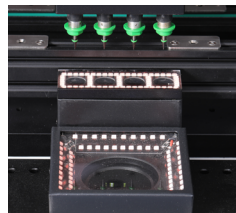
Quick to set up and easy to handle, the A4 pick and place machine is ideal for the assembly of your prototypes / micro-series.

Features

- The KAYO A4 comes with 6 cameras: 1 for pattern detection, 4 fast cameras and 1 high precision camera for component recognition.
- Max. placement capacity of 7000 CPH with an accuracy of ± 0.01 mm (theoretical)
- Runs under Windows® environment
- The drivers have been optimized to ensure fast placement of components while increasing accuracy with a low noise level
- The Pick & Place A4's conveyor system offers time saving and accuracy



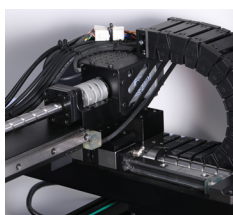
PANASONIC®
SERVO MOTOR



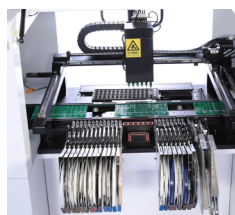
4 caméras de placement
+ 1 high precision



4 nozzles



Linear guide rail TBI



Internal conveyor



1 control screen

APPLICATIONS

Machine suitable for SMD: 0402, 0603, 0805, 1206, LEDs, curved LEDs, diodes, transistors, SOT, QFP 40 x 40 mm pitch >0.3 mm, BGA etc....

OPTIONS AND ACCESSORIES

Pneumatic belt feeder type Yamaha @ C8*2, 8 mm, pitch 2 mm, 7 inches	V800062
Pneumatic belt feeder type Yamaha @ C8*4, 8 mm, pitch 4 mm, 7 inches	V800063
Pneumatic belt feeder type Yamaha @ -CL8*, 8 mm, pitch 2 mm, 15 inches	V800070
Pneumatic belt feeder type Yamaha @ -CL8*, 8 mm, pitch 4 mm, 15 inches	V800071
Pneumatic belt feeder type Yamaha @ C12, 12 mm	V800064
Pneumatic belt feeder type Yamaha @ C16, 16 mm	V800065
Pneumatic belt feeder type Yamaha @ C24, 24 mm	V800066
Pneumatic belt feeder type Yamaha @ C32, 32 mm	V800067
Stick feeder 3 tracks	V800068
Stick feeder 5 tracks	V800069

Machines that must be connected to a compressed air network free of any impurities, consult us

SERVICE

Installation and start-up package	Y600009
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Model	KAYO-A4 (IN LINE - CONVEYOR)
Reference	V900031
Number of feeders (8 mm)	46
Number of nozzles	4
Maximum placement speed (CPH)	7 000
Average mounting speed (CPH)	4 000 - 5 000 cph
Placement accuracy	+/- 0.01 mm
Modes	Manual, semi-automatic & automatic
Cameras	1 pattern recognition camera, 4 cameras for each nozzle, and 1 high precision recognition camera
Vacuum source for nozzle	High speed vacuum generator ON/OFF
Maximum board size	480 x 300 mm
Z-axis displacement amplitude	20 mm
Mounted components	0402 au 45 x 45 mm, LED, QFP, BGA pitch ≥ 0.3 mm
Max. component height (Z)	5.5 mm as standard, 10 mm on request
Type of charger	Band feeders 8/12/16/24/32 mm Vibratory feeders
Screen	15 pouces
Operating System (OS)	Windows®
Programming	Data import, step by step, visual
Power	600 W
PC	Included
Electrical supply	220 V, 50 Hz
Dimensions	1180 x 1080 x 880 mm
Weight	240 Kg

PICK & PLACE MACHINE

SMT MS4T SMTix



The SMT MS4T is a table-top SMT component placement system **with in line conveyor**.

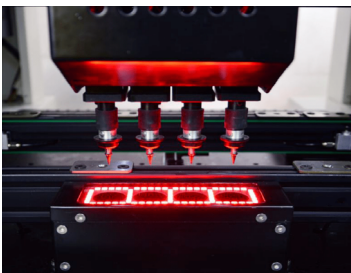
Compact, it comes in two versions, the 44CL and 50CL versions, which can accommodate 44 and 50 Yamaha CL-type magazines respectively.

In the 44-feeder version, the placement area can reach 320 x 260 mm, compared with the 320 x 190 mm of the 50-feeder version.

Placement accuracy is 0.05 mm, with a maximum capacity of 8,000 components per hour, making this machine ideal for small-series card wiring.

Features

- The machine comes with 6 cameras: 1 for test pattern detection, 4 high-speed cameras for placement nozzles and a high-precision camera for chips.
- Runs under Windows® environment
- Software integrates a component library
- Software automatically optimizes loading and routing



4 nozzles



1 control display



Precision ball screws

APPLICATIONS

Compatible with 0201*, 0402, 0603, 0805, 1206 components, LEDs, diodes, transistors, SOT, and BGA up to 30*30 mm.

For components with a pin spacing greater than 0.3mm GFP, (44CL) 320 * 200 mm with tray / 320 * 260 mm without tray - 50 * 50 mm BGA, etc., non-standard component placement is possible with visual customization.

Model	SMT MS4L - 44CL	SMT MS4L - 50CL
Reference	V900196	V900197
Number of feeder (8 mm)	44	50
Number of placement heads	4	
Placement speed	5000 - 8 000cph	
Placement accuracy	0.05 mm	
Repeatability Accuracy	0.05 mm	
Placement area	320*130 mm with tray / 320*190 mm without tray - 50*50 mm	320*200 mm with tray / 320*260 mm without tray - 50*50 mm
Pick-up Mode	Manual/automatic pick-up	
Maximum Z-axis travel	20 mm	
Maximum XY-axis travel (single side)	440 mm × 570 mm	
Maximum component height	≤7 mm	
PCB thickness	≤3 mm; in automatic mode, a 5 mm edge is required	
Feeder type	Electric feeders, pneumatic feeders, vibrating feeders, IC trays, etc.	
Compatible feeder types	YAMAHA CL Type feeders	
Monitor	17-inch industrial control screen	
Number of control display	1	
Operating system	Windows®	
Recognition equipment	1 fiducial positioning camera, 4 high-speed recognition cameras, 1 high-precision camera	
Programming	Pick&place files import, synchronization with components library, automatic sequence and loading optimization	
Power supply	AC 220V 50/60Hz 600W	
Dimensions	L900 × W1140 × H875 mm (after packaging) L1000 × W1240 × H1000 mm	
Weight	Before packaging: 210 Kg / After packaging: 250 Kg	

* Under some conditions

Technical information data subject to change without notice, texts, photos and drawings are non-contractual.

PICK & PLACE MACHINE

SMT MS4L SMTix



The SMT MS4T is a table-top SMT component placement system **with in line conveyor**.

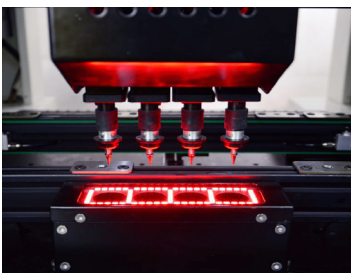
Compact, it comes in two versions, the 44CL and 50CL versions, which can accommodate 44 and 50 Yamaha CL-type magazines respectively.

In the 44-feeder version, the placement area can reach 320 x 260 mm, compared with the 320 x 190 mm of the 50-feeder version.

Placement accuracy is 0.05mm, with a maximum capacity of 8,000 components per hour, making this machine ideal for small-series card wiring.

Features

- The machine comes with 6 cameras: 1 for test pattern detection, 4 high-speed cameras for placement nozzles and a high-precision camera for chips.
- Runs under Windows® environment
- Software integrates a component library
- Software automatically optimizes loading and routing



4 nozzles



1 control display



Precision ball screws

APPLICATIONS

Compatible with 0201* , 0402, 0603, 0805, 1206 components, LEDs, diodes, transistors, SOT, and BGA up to 30*30 mm.

For components with a pin spacing greater than 0.3mm GFP, (44CL) 320 * 200 mm with tray / 320 * 260 mm without tray - 50 * 50 mm BGA, etc., non-standard component placement is possible with visual customization.

Model	SMT MS4T - 44CL	SMT MS4T - 50CL
Reference	V900198	V900199
Number of feeder (8 mm)	44	50
Number of placement heads	4	
Placement speed	5 000 - 8 000 cph	
Placement accuracy	0.05 mm	
Repeatability Accuracy	0.05 mm	
Placement area	320*130 mm with tray / 320*190 mm without tray - 50*50 mm	320*200 mm with tray / 320*260 mm without tray - 50*50 mm
Maximum Z-axis travel	20 mm	
Maximum XY-axis travel (single side)	440 mm × 570 mm	
Maximum component height	≤7 mm	
PCB thickness	≤3 mm; in automatic mode, a 5 mm edge is required	
Feeder type	Electric feeders, pneumatic feeders, vibrating feeders, IC trays, etc.	
Compatible feeder types	YAMAHA CL Type feeders	
Pick-up Mode	Manual/automatic pick-up	
Operating system	Windows®	
Recognition equipment	1 fiducial positioning camera, 4 high-speed recognition cameras, 1 high-precision camera	
Monitor	17-inch industrial control screen	
Number of control display	1	
Programming	Pick&place files import, synchronization with components library, automatic sequence and loading optimization	
Power supply	AC 220V 50/60Hz 600W	
Dimensions	L900 × W1145 × H1280 mm (after packaging) L1000 × W1245 × H1450 mm	
Weight	Before packaging: 280 Kg / After packaging: 345 Kg	

* Under some conditions

Technical information data subject to change without notice, texts, photos and drawings are non-contractual.

PICK&PLACE SYSTEM SMT MS4L 64 NX - SMTix

The SMT MS4T 64 NX is an in-line SMD Pick & Place system **with in line conveyor.**

It is the most efficient in its category in placement, programming speed and feeder capacity.

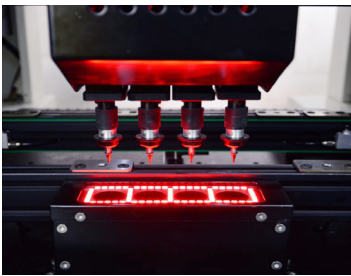
It can accommodate up to 64 NXT feeders.

The placement accuracy is 0.05 mm with a maximum capacity of 11,000 components per hour, making it an ideal machine for producing small series.

2 reels support trolleys are supplied with the machine

Highlights

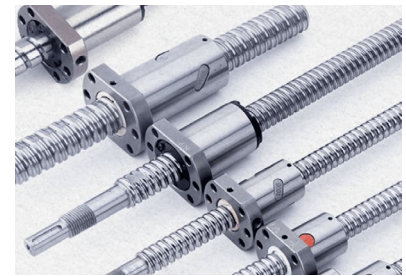
- Placement speed and feeder capacity
- The machine is supplied with 6 cameras: 1 for target detection, 4 high-speed cameras for placement nozzles and a high-precision camera for chips
- Works under Windows® environment
- The software integrates a component library
- The software optimizes loading and routing automatically



4 nozzles



2 control displays



Precision ball screws

Model	MS4T		MS4L		MS4L-64NX
Variant	MS4T-44CL	MS4T-50CL	MS4L-44CL	MS4L-50CL	-
Item	V900196	V900197	V900198	V900199	V900204
Number of JUKI type Nozzles	4				
Type of feeder	Yamaha CL				FUJI NXT
Number of feeders	44	50	44	50	64
Max. PCB size	320 x 260 mm	320 x 190 mm	320 x 260 mm	320 x 190 mm	410 x 360 mm
Placement speed	5 000 - 8 000 cph				8 000 - 11 000 cph
Control display	1 side				2 sides

APPLICATIONS

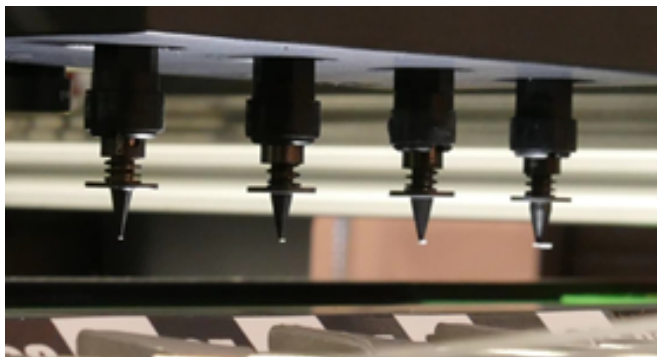
Compatible with components of type 0201*, 0402, 0603, 0805, 1206, LEDs, diodes, transistors, SOT, and BGA up to 30*30 mm.

For components with a pin pitch greater than 0.3 mm, such as GFP, BGA, etc., placement of non-standard components is possible with visual customization.

Model	SMT MS4L 64NX
Reference	V900204
Number of feeder (8 mm)	68
Number of placement heads	4
Placement speed	8 000 - 11 000 cph
Placement accuracy	0.05 mm
Repeatability Accuracy	0.05 mm
Placement area	50 x 50 - 410 x 360 mm
Maximum component height	≤20 mm
PCB thickness	≤3 mm; in automatic mode, a processing border of 3-5 mm is required
Feeder type	Electric feeders, vibrating feeders, IC trays, etc.
Compatible feeder types	NXT feeders
Pick-up Mode	Piano type
Operating system	Windows®
Recognition equipment	1 fiducial positioning camera, 4 high-speed recognition cameras, 1 high-precision camera
Monitor	17-inch industrial control display
Number of control display	2
Programming	Pick&place files import, synchronization with components library, automatic sequence and loading optimization
Fiducial Recognition	Manual/automatic positioning
Power supply	AC 220V 50/60Hz 1000W
Dimensions	With packaging L1260 × W1450 × H1640 mm / Machine itself L1160 × W1340 × H1450 mm
Weight	With packaging 780 Kg / Machine itself 690 Kg

* Under some conditions

AUTOMATIC SMD PICK&PLACE MACHINE - OPTIMA P4



Focus

- Automatic nozzle charger (option)
- Solder paste dispenser (option)
- Each of the 4 placement heads is equipped with a camera for component recognition, centering and orientation, 1 IC camera and 1 camera for pattern recognition and alignment
- Possibility to pick up 4 components simultaneously
- Integrated PCB conveyor
- Possibility of mounting components on single and double sided pcb
- Control of component adhesion

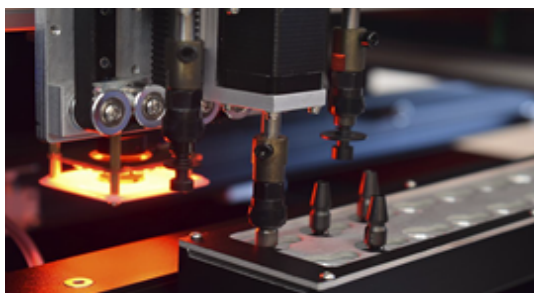
TECHNICAL CHARACTERISTICS

Model	OPTIMA-P4
Reference	V900191
Speed	4 000 to 5 000 comp/h
Controlled motorization of the axes	Servomotor, belts with linear encoders
Number of placement heads	4 heads
Max. dimensions of pcb	570 x 250 mm
Minimum width of pcb	50 mm
Maximum height of components	15 mm
Maximum number of feeders (8 mm)	44 pcs
Type of feeders	Yamaha, 8, 12, 16, 24, 32 mm
Types of components	from 0201 to 40 x 40 mm
Accuracy of placement	±35 µm
Angular accuracy of placement	± 0,15°
Control	by PC OS under Linux
Compressed air requirement	6-8 bar, 60 liters/minute
Electrical supply	220 V, 50 Hz, single phase + ground, 800 W
Dimensions of the machine (L x W x H)	1120 x 745 x 1415 mm
Weight	200 Kg

OPTIONS AND ACCESSORIES

Solder paste dispenser **V800266**

Automatic change of nozzles **V800267**



FORCED AIR CONVECTION REFLOW OVEN FT03

ASSEMBLY



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

- **Controlled by SMTix 2.0 software for FT03.Advanced**
- Full view of the board 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

This model exists in 2 versions. The FT03.ADVANCED oven is controlled by SMTix 2.0 software

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	Option	Included
Working area	190 x 290 mm	
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.

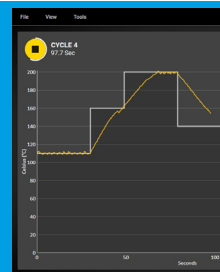
It is possible to create and store an infinite number of profiles. For each one, the date, time, file name and comments can be set; It can extract data in jpeg, pdf and csv formats.

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



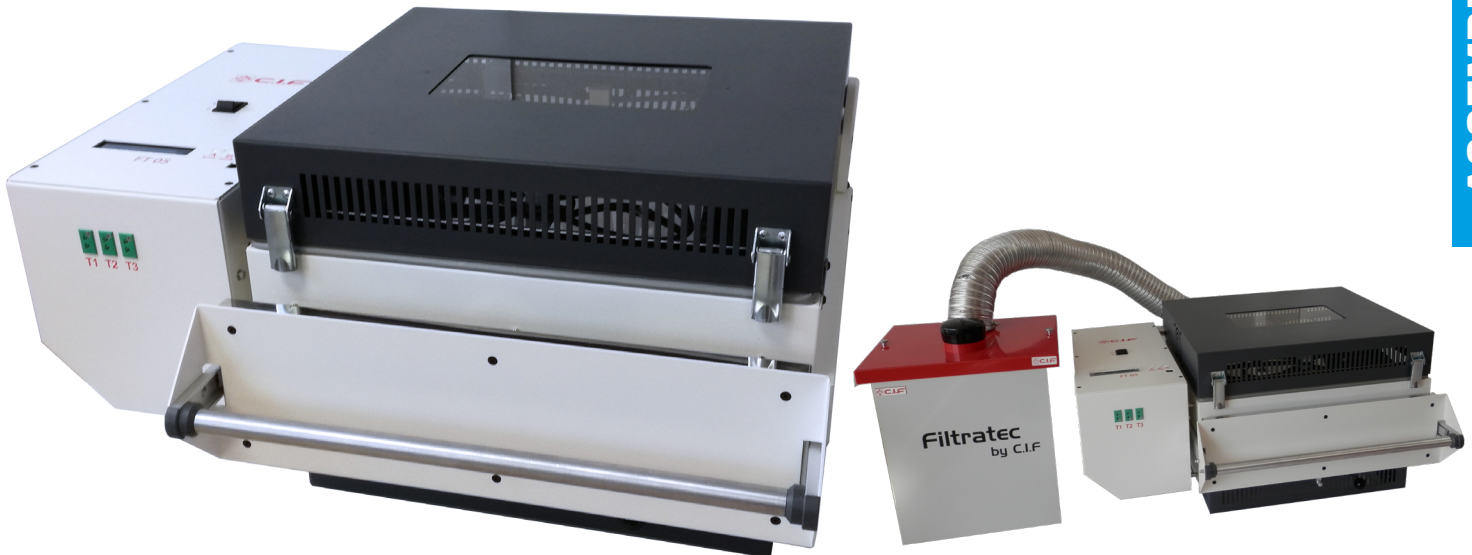
Increment display



Intuitive and ergonomic software

FORCED AIR CONVECTION REFLOW OVEN FT05.ADV

ASSEMBLY



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

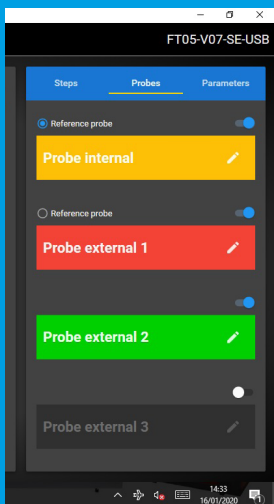
THE COMPLETE FILTRATION KIT

Reference **I51025.F1**



Model	FT05.ADV	FT05.ADV AUTO
Reference	V900324	V900332
SMTix 2.0 Software	✓ Included	
Working area	350 x 400 mm	
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	
Extraction hatch management	Manual	Automatic

* 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 screen 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)
- Secured 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 	Option	Option	Option	Option	Option
FT03 PREMIUM Ref: V900036 	Option	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
FT05.ADV AUTO Ref: V900332 	Included	NOZZLE INTEGRATED TO THE FT05	Option	Included	Option

IN-LINE CONVEYOR REFLOW OVEN - SMTIX



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

They are designed for medium productions.

2 models of ovens are available: **4 zones in width of 300 or 400 mm.**

SMTix ovens are suitable for all types of alloys in the temperature **range up 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, equipped with oilers, are treated to resist heat.

Touch screen with PLC controller that can store 50 thermal profiles and possibility of 2 additional ports for testing the profiles.

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

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

TECHNICAL SPECIFICATIONS

Model	RF300-4	RF400-4
Reference	V900170	V900172
Heating zones	4 upper zones 4 lower zones	
General power	23 Kw	
Energy consumption	3 à 7 Kw	
Initial heating time	15 minutes	
Type of control	Touch screen and PLC	
Heating method	Fully forced air convection	
Temperature control	Closed loop PID control, SSR drive	
Temperature range	From room temperature to 350°C	
Method of transport	Mesh and chain conveyor	
Conveyor height	900 ± 20 mm	
Width of the mesh band	330 mm	430 mm
Maximum width of the PCB	300 mm	400 mm
Hauteur Max. des PCB	30 mm	
Conveyor direction	From left to right	
Conveyor speed	From left to right	
Opening of the cover	Manual, protected by cylinder	
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 boards 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
- Incomparable temperature homogeneity over the entire components
- 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
- Homogeneity of temperature incomparable to other technologies over the entire work area
- Reduced energy consumption
- Sub-assembly repair: desoldering and resoldering
- High reliability for all types of soldering
- Precision and repeatability



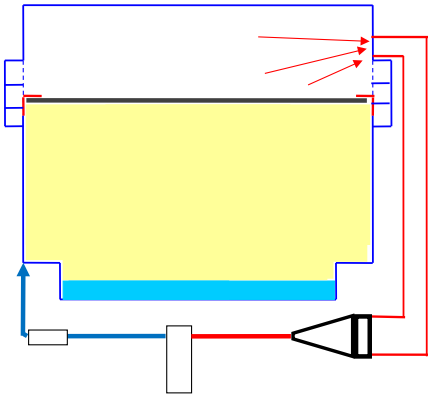
Focus

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

Recover all vapor before opening the door

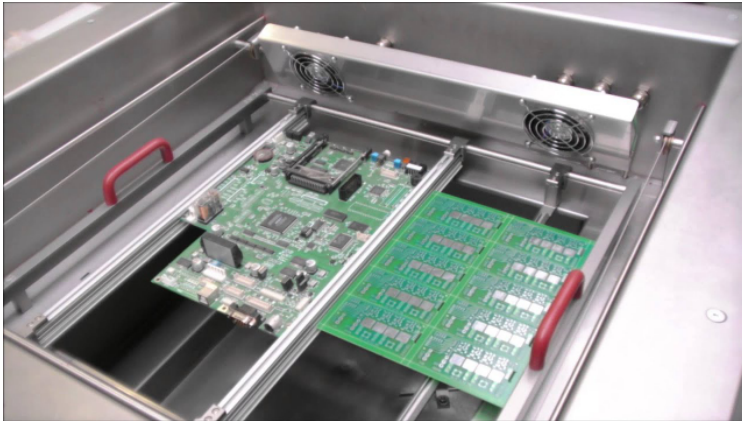


ASSEMBLY



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

HIGH RETURN ON INVESTMENT !

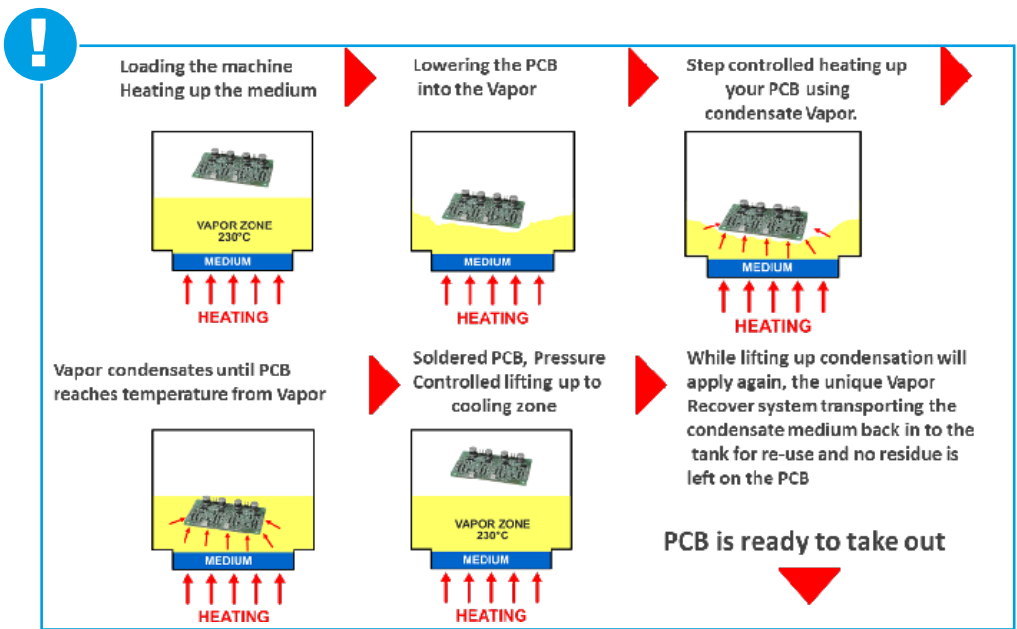


TECHNICAL CHARACTERISTICS

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) LS 230 - 5 Kg	V800096
Medium (fluid) LS 215 - 5 Kg	V800117
Medium (fluid) LS 200 - 5 Kg	V800108
Universal carrier (frame) for VS-500 HD	V800100
Set of 4 feet with wheels	V800099
Cleaning kit	V700092
Data connection via Ethernet	V800103



DEPANELING



1. PCB V cut Separator SMTix S30..... **p.61**
2. 3 Axes-3D Technorout 3 / 3XL..... **p.62-63**

PCB VCUT SEPERATOR - S30 SMTIX

Features

- Suitable for cutting PCB, LED aluminum and copper with V-groove.
- Can cut PCB components of which the distance from the edge of the V-groove is greater than 0.2 mm.
- It adopts cylinder pulling method for cutting, counting, automatic start and stop function safety.
- The operator is safe to operate the machine, especially putting the PCB in the right direction to avoid damaging it.
- The cutter adopts the plane of the cutting position, the cutting stress is less than 400, which will not cause the PCB component damage



TECHNICAL SPECIFICATIONS

Model	V-CUT-S30	V-CUT-S40	V-CUT-S50
Reference	V900201	V900202	V900203
Shear-board thickness	0,3 - 3,5 mm		
Working area	0.5-0.7 MPA		
Cutting PCB thickness range	0,1 mm ~ 2,0 mm (avec V-groove) 0.1 mm ~ 1.0 mm (sans V-groove)		
Use scope	All SMD PCB with V-groove		
Valid cutting length	310 mm	430 mm	530 mm
Use voltage	AC 110-220 V		
Machine dimension	750*450*1200 mm	980*500*1250 mm	1200*810*1300 mm
Machine weight	160 Kg	300 Kg	450 Kg

CUTTING PCB MACHINE - CNC 3 AXIS TECHNOROUT - INDUSTRY LICENCE

The system consists of :

- **Technodril 3** or **Technodril 3 XL (large format)** chassis
- On-board **camera** for **manual** or **automatic** repositioning
- A dust extraction and filtration system - ESD safe nozzle and brush
- A pilot software (**GALAAD**) allowing to exploit the depaneling files in DXF format



Options

- A Starter Kit including cutting tools and martyr plate and tape for single sided boards. - [U800124](#)
- Universal tool for CNC depaneling - 370 *320 mm base plate with pins to hold PCB panel. - [V800275](#)

Key features

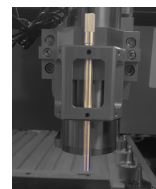
- Suitable for small budgets
- Adapted to all forms of pcb panels: **straight edges or not**
- Depanelization possible before or after assembly of components, depending on tools
- Machining of tools by the machine itself
- Maximum board formats (X / Y): 390 x 315 or 385 x 580 mm (large format)
- Depanelization by **milling**

Service (on request)

- Possibility to rent over 12 or 24 months
- Maintenance contract
- Installation and start-up
- Assistance in the manufacture of tools

Including

- CNC Technodrill 3
- Industrial **GALAAD** licence
- **HD positioning camera** with semi-automatic fiducials recognition
- **Dust extraction system** with ESD brush and vacuum unit included



HD Camera

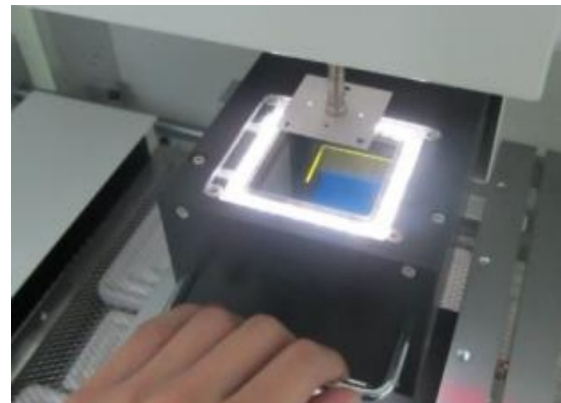
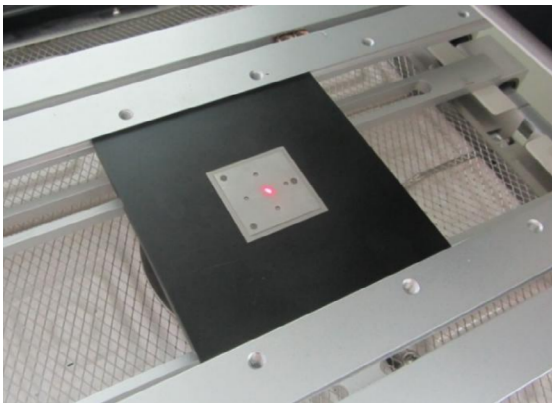


Dust extraction system

TECHNICAL SPECIFICATIONS

Reference	U900124	U900125
Interpolation	3 axis – 3D	
Free passage under Z axis	90 mm	
Axes X, Y, Z	390 x 315 x 60 mm (real under the tool with options)	390 x 580 x 60 mm (real under the tool with options)
Table size	480 x 490 mm	785 x 480 mm
Table type	Grooved aluminium for quick placement	
Resolution	1.5 µm in micro step (0,059 mil)	
Reproducibility	+ / - 5 µm (0,2 mil)	
Spindle power	800 W	
Spindle speed	10 000 à 24 000 rpm	
Chuck	3,17 – 6 mm ER11 type	
Tool replacement	Semi-automatic as standard, automatic as option	
Drilling rate	360 holes/min (ø 0,8)	
Ø drilling mini	0,3 mm (11.8 mil)	
Moving speed	100 mm/s maxi	
Linear guide	Screw and ball socket (pitch 5 mm)	
Motor X, Y, Z	3 stepper motors set at 1/16 pitch (3200 steps/rd). The control by micro does not allow mecanical resonances	
Frequency	Up to 200 KHz	
Positioning tool sensor	Included as standard	
Noise level	< 65 dBA	
Safety cover	as standard with circuit breaker	
Safety	Interlock + Software Safety guard	
Lighting	as standard	
Software	GALAAD 3 Software (FREE UPDATES)	
Power supply	230 V - 50 Hz - 8 A	
External dim L x l x H	950 x 700 x 630 mm	950 x 1000 x 670 mm
Net weight	76 Kg	90 Kg

BGA REWORK STATION RS-1000 - SMTix



Overview

- Independent temperature control system
- Three temperature zones to heat up independently
- IR PCB Preheater
- 415*360 mm IR Bottom Heater
- Micrometer adjuster
- Micrometer is used to realize accurate X/Yaxis and R-angle alignment with a precision of $\pm 0.02\text{mm}$.
- Fast cooling system
- High-power cross-current fan can cool PCBs and the bottom IR preheating zone rapidly
- Vision Alignment
- High-definition optical alignment system (1080p)
- Self-defined temperature curve unit
- 6 zones' temperatures are controlled. Excellent temperature controlling system can guarantee better soldering effect.
- Control system
- Touch Screen and PLC control, temperatures are displayed on touch screen in curves for instant curve analysis. Allowed 2 working methods which are auto operation and manual operation, for more flexibility.

Available options

- Reball fixture
- BGA Preheating table
- Calibration block for Alignment system
- Side visual inspection system for solder joint viewing

TECHNICAL SPECIFICATIONS

Model	BGA RS-1000
Ref.	V900044
Power	6 800 W
Up heater power	1 200 W
Down heater power	1 200 W
IR heater power	4 200 W (2 400 W area is independently control)
Optics	HD Split-vision system
PCB Size	Min: 50 × 50 mm Max: 500 × 450 mm
Component size	0.6 mm - 80 mm (Optional Special designed picking nozzle for small chips)
Thermo-couple Ports	4 pcs
PCB thickness	1.0 - 5 mm
Mounting precision	± 0.01 mm
Power supply (Single Phase)	AC 230 V 50/60 Hz
Size	L670 × W780 × H850 mm
Weight	About 90 Kg

FILTRATION



SOMMAIRE

1. FILTRATEC filtration by CIF..... **p.66**

WHY FILTER?

The gases and fumes produced during the various manufacturing phases are often harmful to health, so it is important to protect against this danger. The longer the operator and the people around him are exposed, the more necessary this protection will be.

During the bonding or soldering process, the air is charged with isocyanates, a hazardous substance known to cause cancer. Solvent gases and soldering fluxes can cause asthma, bronchitis, reduced lung function, eye, skin and respiratory system irritation and eczema.

Many other fields of activity are concerned: laboratories, chemical, mechanical and pharmaceutical industries...

Extracting and filtering exhaust air is a Protection for :

- The operator and those around him,
- The environment.

Extracting and filtering exhaust air is a profitable investment:

- Because it is the guarantee of a better production by a considerable reduction of the absenteeism due to the professional diseases.

Filtratec® or «state of the art» in the field of APC (Air Pollution Control) are products :

- Of very high quality
- Silent
- Efficient
- Handy
- Easy to use
- Reliable



FILTRATEC FILTRATION by CIF

FILTRATION



Standard remote control

HACCP

REACH

THE AUTONOMOUS STATIONS OF THE FILTRATEC RANGE

Discover the Filtratec® range, a range of high performance stations for the extraction and filtration of soldering fumes, acid and solvent vapors.

It has been developed for all applications in the field of electronic wiring as well as for etching machines using iron perchloride (Acids).

Each station includes a standard HEPA filter + Neutrafil 2 speeds and a powerful and very quiet turbine (<52 dbA).

A wireless remote on/off control is standard on all models.



Classe HEPA: ≥ H13*

* Selon la norme UNE-EN 1822-1 : 2020
Filtre 99,98% des particules MPPS comprises entre 0,12 et 0,25 µm



**ACIDES
ACIDS**



**FUMES
FUMES**

TECHNICAL SPECIFICATIONS

Powerful turbine	255 m3/h
Microfilter efficiency (HEPA)	> 99.98 %
Gas filter efficiency (Neutrafil)	> 95 %
Standard on/off remote control	Oui
2 suction speeds	de série
2 speeds of aspiration	< 52 dbA
External dimensions L x W x H	307 x 307 x 410 mm
Net weight	10 Kg
Power	140 W
Power supply	230 V - 50/60 Hz

APPLICATIONS :

- Welding fumes
- Bacteria
- Pollen
- Tobacco fumes
- Asbestos dusts
- Household dusts
- Acids
- Solvents
- Deodorization
- Mechaptans
- NOX
- H2S
- SOx
- VOCs

SERIES

Application	A-SERIES					F-SERIES			
	ACID & SOLVENT VAPORS					FOR WELDING FUMES & SOLVENTS			
Reference	I51065.1	I51023.1	I51062.1	I51024.1	I51024.2	I51024.2	I51061.2	I51101.2	I51102.1
Type of filter	A					F			
Variant	1 outlet (delivered without arm)	2 outlets (delivered without arm)	Station delivered with 1 connection kit for chemical etching machine	Station delivered with 1 arm	Station delivered with 2 arms	1 outlet (delivered without arm)	2 outlets (delivered without arm)	Station delivered with 1 arm	Station delivered with 2 arms
Pre-filter reference	X500013					X500013			
Main filter reference	I54060					I54061			
Cover reference	I51033 (Ø 75 mm)			I51036		I51036			



FILTRATION UNIT ACID VAPORS 1 OUTLET
I51065.1



FILTRATION UNIT ACID VAPORS 2 OUTLETS
I51023.1



STATION WITH 1 CONNECTION KIT FOR CHEMICAL ETCHING MACHINE
I51062.1



FILTRATION UNIT SOLDERING FUMES 1 OR 2 OUTLETS
I51024.2
I51061.2



FILTRATION UNIT ACID VAPORS, SOLDERING FUMES AND SOLVENTS WITH 1 ARM
I51024.1
I51101.2



FILTRATION UNIT ACID VAPORS, SOLDERING FUMES AND SOLVENTS WITH 2 ARMS
I51024.2
I51102.1

FT SERIES

Application	DESIGNED FOR BENCHTOP REFLOW OVENS		
	Reference	I51060.1	I51025.1
Type de filtre	F		
Variant	1 outlet (delivered without arm)	2 outlets (delivered without arm)	1 outlet including FT oven connection kit
Pre-filter reference	X500013		
Main filter HEPA reference	I54061		
Cover reference	I51033 (Ø 75 mm)		



THE FILTRATEC FILTER



**HEPA*
H13
FILTER**

* According to UNE-EN 1822-1: 2020
Filters 99.98% of MPPS particles between 0.12 and 0.25 µm

- HEPA filter, filters 99.98% of MPPS particles (between 0.12 and 0.25 µm)
- Very quiet < 52 dbA
- Quick change filter
- Versatile; fumes, solvents & acids
- For the treatment of 70 to 250 m3/h

SIZE OF THE PARTICLES IN THE AIR

Welding fumes	0.3 - 0.001 µm
Bacteria	20 - 0.2 µm
Pollen	100 - 10 µm
Tobacco smoke	1.0 - 0.01 µm
Asbestos dust	10 - 0.3 µm
Household dust	20 - 0.001 µm

Note: the human eye only perceives particles whose size is between 2.0 and 100 µm

Filter	Reference
Pre-filter	X500013
Aids and solvents vapors filter - type A	I54060
Filtre fumées de soudure et solvants - type F	I54061

Section A

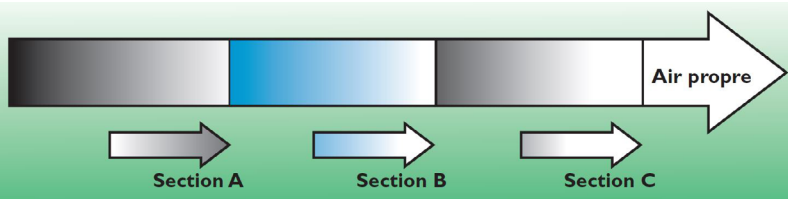
The pre-filter cleans the polluted air of the largest particles

Section B

HEPA filter for fine particles such as soldering fumes (0.3 - 0.001 µm)

Section C

Filter composed of Neutrafil which is a mixture of activated carbon (50%) and potassium permanganate (50%). This mixture allows to capture and neutralize quickly even the finest chemical substances.



BOOTH / CABIN



Extraction booth CAB 8050

Great visibility of the chamber, removable transparent top visor. Connects with 1 outlet filtration stations.

Ref. I43510

CONNECTION KITS



Kit, standard nozzle + self-supporting arm

Ref. X700010



Standard diamond-shaped nozzle

Ref. X700009



Self-supporting arm

Ref. X700006

ARMS AND NOZZLES



Filtratec connection kit for ovens FT03 / FT05 (without filtration)

Ref. I43316



Special acid connection kit for CIF etching machines (without filtration)

Ref. I43213

LASER EXTRACTION / FILTRATION STATION HPREMI 220-SMART

Laser extraction / filtration station unit for absorbing the laser emission with successful deposition of dust and smoke as well as absorption of gases and smells.

- PWM frequency conversion, precisely control the air volume
- LCD display
- Electronic control, remote start and stop



CARACTERISTIQUES TECHNIQUES

Ref.	X900024
Main filter	HEPA-storage filter H13+ class
Filtration	multiple filtration
Turbine	continuously running
Motor	1.3 kW, 220 V, 50/60 Hz
Maximum air volume	220 m³/h
Pressure	27 kPa
Filter efficient	99,9 %
Power consumption	6,8 A
Noise level	<68 dB (A)
Dimension	365 x 510 x 805 mm
Weight	approx. 50 Kg

Various models on request

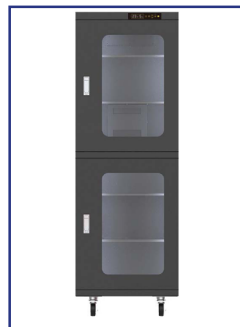
ESD DRY CABINET WITH LCD DISPLAY



Ref. M900004

Overview

- Humidity Range: 1-10% RH
- External Size: W1200 x D710 x H1920 mm
- Inner Size: W1198 x D680 x H1738 mm
- Max Capacity: 1428 Liter
- Power Consumption (W/H): 0.5-47W/H (MAX370 W) (AC 220 V)
- Power Source AC110 - 115 V (50/60 HZ) or AC220 - 240 V (50/60 HZ)
- Removal Shelves: 5 (material: steel or stainless)
- Door Key Locks: 4
- Hygrometer
- Swivel Caster



Various models on request

MODULAR WORK STATIONS - REECO



The REECO range offers the possibility to configure modular work stations adapted to all applications: wiring stations, repair, visual inspection, test and measurement, logistics (packaging reception), etc.

Installation and assembly services available.



PREMIUM

ELECTRIC

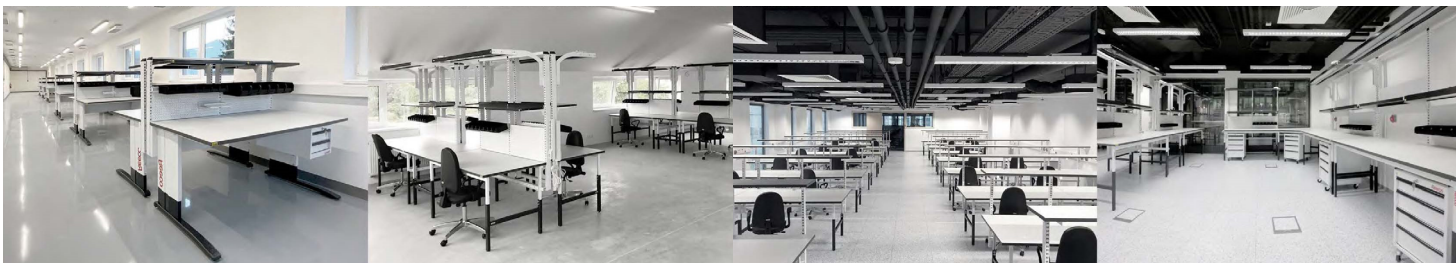
CLASSIC

MOBILE

MODULAR

RACKS

Configure your own station with our 3D online configurator !



<https://cif.reeco.info/>

NOTES

GENERAL SALES CONDITIONS

11. 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 no entered into the contract as the result of any other representation made by or on behalf of the company whether or in writing. Buyers terms of purchase can not be enforced except with prior explicit acceptance in writing by director of CIF.

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.

3.5. If the customer arranges his own transport (especially in Ex-works), the goods must be collected within 10 days of their being made available. After this period, storage costs may be charged. It is the customer's responsibility to dispose of the packaging waste in accordance with the applicable legal regulation, even if the installation services are included, unless a packaging/waste collecting service is expressly agreed.

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 not 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:

- 250.00 € without taxes for France metropolitan area
- 380.00 € without taxes for export sales

Otherwise administrative fee of 20.00 € will be invoiced.

5.4. For first order, payment must be done before the delivery unless otherwise agreed in writing. For further orders a 30 days payment from the date of shipment or date of invoice can be granted if agreed in writing by our company.

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.

5.7. For materials or products imported our prices will be indexed on the current exchange rate with a tolerance of +/- 2.5%. In case the exchange rate varies over this tolerance at the time of the import (custom documents as a proof) price will be revised accordingly.

5.8. CIF-RETAIL online web-shop has its own general sales conditions for purchases made on this web-site; this terms are available on the web-site www.cif-retail.fr/en.

5.9. General terms of rentals applicable to rental activities and General terms of maintenance contracts applicable to maintenance contracts are part of the General sales conditions and can't be dissociated.

5.10. Customer guarantees our company CIF to purchase the goods and/or services in compliance with the legal provisions and restrictions, especially international restrictions such as dual-use goods. The customer undertakes to observe the same rules with respect to a potential future buyer. In the event of the necessity to obtain a license or other certificates, inspections... for the realization of the sale, the possible cost of the formalities remains with the customer. If formalities are requested after the sale has been completed, the costs associated with them are to be borne by the customer. In the event that the sale is forbidden or impossible or the sale has to be terminated due to compliance with the regulations, the formalities carried out and the costs incurred by the company for the completion of the order shall be borne by customer and CIF shall not be liable or responsible for any compensation.

GENERAL SALES CONDITIONS

6. LATE PAYMENT

6.1. The company reserves the right to charge interest on late payment of 3 times the base rate quoted by "European bank" for main refinancing plus ten points, from time to time on the daily balance from the due date until payment is made. Any late payment raises in addition a compensation fee of 40.00€.

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.

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.

7.7. If the customer organizes the transport himself (especially in Ex-works), the goods must be picked up within 10 days after the goods have been made available. After this period, the goods are stored at the customer's risk.

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

Installation



Handling of the equipment



Maintenance



Rental



Financing assistance



Test and demonstration



Council Specifications



Technical assistance



EQUIPMENT AND SOLUTIONS ADAPTED TO YOUR USE



SOLUTIONS FOR LABORATORY AND MICRO SERIES



SOLUTIONS FOR SMALL SERIES AND PRODUCTION



DEMONSTRATION BY VISO ON REQUEST

WHERE TO FIND US



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