

DISPOSABLE ESD CLEANROOM CLOTHING

TYVEK PROTECH® clothing

TYVEK PROTECH® is a complete clothing line of products dedicated to operators working into clean room areas, needing perfect constant non contaminating clothes and ESD protection.

Tyvek is a Dupont brand for spunbonded polyolefin constructed with extra fine filaments thermo-sealed to prevent linting. Filaments are composed of 100% PE without resins or bonders.

The clean Tyvek surface is washable, thin, lightweight, flexible, withstands abrasion and is chemically inert.

Clean Tyvek is transpirant to moisture vapour, creating a barrier against liquids, powder, fibres and submicron particles. Ask for full technical documentation.



Features	Values
Structure	100% PE
Weight	41 g/mq
Particles barrier	0.5 µ: 98,0%
Non dangerous transmission rate	Strong barrier
Solvents acids bases transmission rate	Ask specific bulletin
Surface resistance	10 ⁸ Ohm
Air transmission rate	12 l/m/min - 200 Pa
Cleanliness rate category (particles 0.5 micron x 10 minutes)	Cat. I 50

Art. 9200 Overall/Mao collar, el. wrist + ankles + vita, zip 2 curs.

Art. 9201 Overall/Mao collar, el. wrist + ankles, zip 2 curs.

Art. 9210 Overall/hood, elast. wrist + ankles, zip 2 curs.

Art. 9210/S As above with seals

Art. 9410 LABCOAT, Mao collar, zip, elastic wrist

Art. 9420 LABCOAT, shirt neck, zip, elastic wrist

Art. 9510 Trousers/waist elastic

Art. 9600 Flat hood, elast; face and neck

Art. 9606 Diving suit hood, only eyes opening

Art. 9700/TF Perforated headwear, diam. 50 cm.

Art. 9701/T Headwear, diam. 50 cm.

Art. 9801/T Shoecover

Art. 9900/T Boots, elast. at calf

Note: All above items are available in sterilized Gamma ray packaging.

NON TYVEK® CLOTHING

Art. 9710/50 Headwear TNT perforated-lux, diam. 50 cm.

Art. 9710/60 Headwear TNT perforated-lux, diam. 60 cm.

Art. 9711/50 Headwear TNT perforated-economy, 50 cm.

Art. 9712/60 Headwear TNT perforated-economy, 60 cm.

Art. 9713/P/50 Headwear poliprop. 20 gr. - diam. 50 cm.

Art. 9723/TNT Simple band cap, man, TNT perf., elast. neck

Art. 9722/TNT Universal cap, TNT perforate

Art. 9720/TNT Double band cap, man, TNT perf., elast. neck

Art. 9900/T/PVC Boots, PVC sole, 2 elast. as closure

Art. 9800/T/PVC Shoecover, PVC sole, elast. at ankles

Art. 9802/PVC Blue PVC shoecover - 41 cm.

Art. 9803/PLP Polipropilene 40 gr. shoecover

CONDUCTIVE CLEAN ROOM CHAIRS

Art. CLEAN K

Flame resistant fabric

CLEAN K clean room conductive chairs, especially designed for clean industrial applications, guarantee ESD protection, by dissipating totally and continuously the static charge through the structure to earth.

Featuring a strong metal structure, including gas elevation, 5 points die-casted aluminium basis and special self adjustable backrest (permanent contact with the operator's back), CLEAN K chairs are lined with plastified static dissipative black cover, available either with ESD gliders or castors, the back of the backrest is made with moulded dissipative plastic.

2 heights available, the model CLEAN K2 features metal circular footrest as standard.



GENERAL FEATURES		
Elevation	Gas	
Adjustment	Seat height - Backrest height	
	Backrest depth	
	Backrest/permanent contact	
	Clean K1	Clean K2
Height of the seat	450 - 580 mm	650 - 780 mm
Footrest	None	Fixed, chromed ring
Weight	12 Kg	13.8 Kg

ESD FEATURES		
Resist. surf. fabric	IEC 61340-5-1	R < 8 Mohm
Resist. to ground of the chair	IEC 61340-5-1	R < 8 Mohm
Static decay time fabric	IEC 61340-5-1	< 2 sec



ESD BRUSHES



This is a completed line of ESD conductive brushes designed specifically for the operator's daily work on boards and components. The program includes different sizes and shapes for both abrasion and dust and residues removal. The application does not generate static charges.

Features	EB 200	EB 06	EB 1	EB 30	EB WA	EB NAIL	EB SOFT	EB PRO
Handle	Plastic cond.	Metal	Metal	Plastic cond.	Metal cond.	Metal cond.	Plastic cond.	Plastic cond.
Bristle	Synthetic cond.	Synthetic cond.	Synthetic cond.	Synthetic cond.	Synthetic cond.	Synthetic cond.	Synthetic cond.	Synthetic cond.
Brush length	160mm	95mm.	135 mm.	190mm.	142mm.	80mm.	175mm.	100mm.
Bristle area	155x40	2 x 6 mm.	5x11mm.	35 x 8 mm.	22x10 mm.	70x20mm.	60x10mm	80x40mm
Bristle length	18mm	12 mm.	20mm.	13 mm.	12 mm.	12mm.	30mm.	20mm.

FLUX DISPENSING PENS

Refillable barrels and spare felt tips

FLUX PENS have been designed to dispense fluxes (no-clean, RMA etc...), solvents, masking products and water based liquids, meeting current regulations for controlling substances capable of evaporation hazard. The exclusive FLOW SEAL provides superior control of flooding and spattering during cleaning or tips replacement. Available as



metal conductive pens or plastic semi-transparent bottles. Both pens and bottles use the same spare tips. The tips are available with different shapes for each specific application.

Article	Description	Dimensions
FLUX PEN	ESD pen	Length 140mm Barrel 30ml
FLUX BOTTLE	Bottle of plastic	Length 120mm Barrel 60ml

Fluxtip spare universal set		
CHISEL SPARE SET	set 10 tips screwdriver	Length 20mm Diameter 3mm
CIRCLE SPARE SET	set 10 tips rounded	Length 20mm Diameter 3mm
POINTED SPARE SET	set 10 tips pointed	Length 20mm Diameter 3mm

TOOLS

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NO-CLEAN DE-SOLDERING WICK

Art. CW

Designed to clean contacts during component desoldering and board rework operations, it does not leave residues and ensures a fast solder melt absorption, resulting in reduced times and costs.



The used flux is NO-CLEAN organic and non corrosive.

Different wick sizes for any application. Available as reels of 1.6m or spools of 30m.

Article	Size	Length
CW 15-16	1.5mm	1.6m
CW 20-16	2.0mm	1.6m
CW 25-16	2.5mm	1.6m
CW 15-30	1.5mm	30m
CW 20-30	2.0mm	30m
CW 25-30	2.5mm	30m

LEAD STRAIGHTENERS

Art. ICB-3E

Metal construction, suitable for operations with 0,3", 0,4", 0,6" (4 to 64 pins) components, continuous adjustment.



Art. ICB-5E

Conductive plastic construction, different paths for 0,3", 0,4", 0,6", 0,75", 0,9" components.



QFP LEAD STRAIGHTENER

Art. ICB-QFP



Use ICB-QFP to straighten bent fine pitch leads on Quad Flat Packs. Convenient and easy to straighten leads by hand with patented lead templates. Handles fine pitch components from 0.4 mm to 1.0 mm, up to 304 leads. set includes a laboratory grade AA granite surface plate, two lead straightening probes, tweezers and a Vampire vacuum pick-up tool.

QFP Templates	Pitch
QFP 144	0.5 mm
QFP 144	0.65 mm
QFP 160	0.65 mm
QFP 184	0.65 mm
QFP 208	0.5 mm
QFP 240	0.5 mm
QFP 304	0.5 mm



OPTICAL INSPECTION



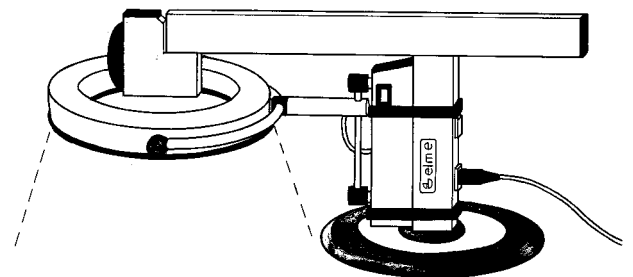
VIDEO MICROSCOPE

Art. EV SCOPE

Full vision system includes a balanced frame arm, incorporating one colour micro-camera with high performance features (high definition and sensitivity). Vertical focus with manual optical adjustment system. Simple to use, can send images both to video monitors and to PC by means of an RCA connection or a data acquisition system. Images can then be stored for design purposes. Added precision with the specially designed double inten-

sity illumination system allowing daylight-like lightning.

Features	Values
Microcamera	CCD1/3"
Arm	540mm.
Usable surface	300mm.
Magnifications	10x to 25cm., 50x to 10 cm.
Weight	Composite Video Output 5 Kg.
Power	220/240V - 15W



ELECTRONIC VISION LIGHT - Art. EV LIGHT

6000k° electronic light, with circular shape, includes adjustment joints, allows images with no shades or reflexes.

Features	Values
Power	22W
Diam. Est. / Int.	250mm. / 170mm.
Weight	1.5kg
Power	220V

CONTACT SPOT MAGNIFICATION

Art. EV SPOT

Using a special colour microcamera, allows magnification 30X reproduction. Simply place the device over a significant portion of the area to be examined. EV SPOT has its own lighting source, which is activated by a light pressure on the small button.

Easy focusing by means of a simple rotation of the lens.

EV SPOT must be connected to the SCART connection of the monitor or television.



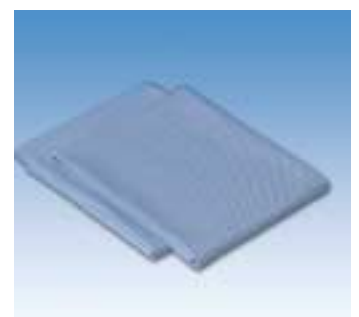
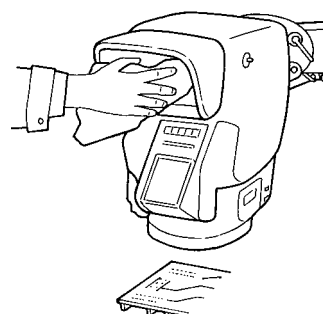
OPTICAL LENSES CLEANING WIPE

Art. GLASSWIPE

Microfibre wiper designed for optical cleaning, glass, plexiglass, laquered surfaces, laminates etc. Usage: dry or lightly wet (water) and no detergents

Material: polyester (70%) and polyamide (30%). Liquid absorption: 289.4% (distilled water). Dimensions 450x400mm.

Maintenance: wash with soap, any temperature water (no bleaching).



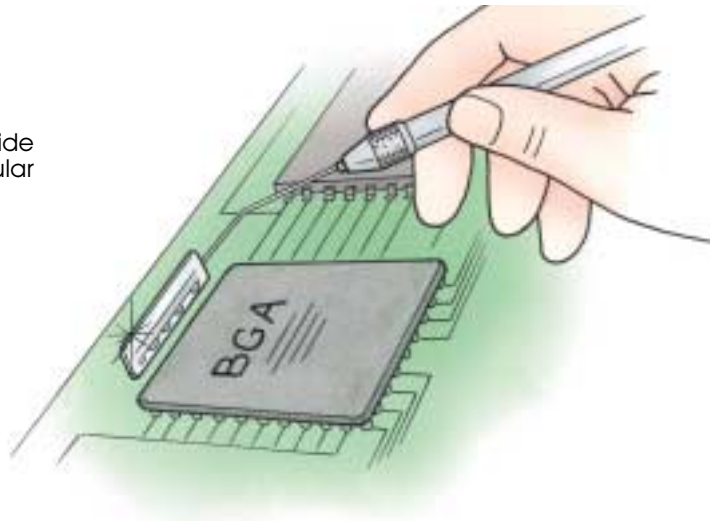
MINI MIRRORS

Art. EMR VISION SET BOX

This set box has been designed to provide you with a kit including the most popular mirrors, packed in a plastic box.

The set box includes:

- 1 EMR HANDLE
- 1 EMR SQUARE
- 1 EMR SIDE LARGE
- 1 EMR T-SMALL



EMR MIRRORS SPARE PARTS AVAILABLE

Art.	Description	Shape
EMR HANDLE	ESD universal metal handle	
EMR SQUARE	Straight needle, square mirror, side 9,44mm., (left & right handed)	
EMR SIDE SMALL	45° angled needle, rectangular, dim. 6,3x1,16mm.	
EMR SIDE LARGE	45° angled needle, rectangular, dim. 9,44x3,05mm.	
EMR T-SMALL	45° angled needle, rectangular, dim. 19,15x4,8mm.	
EMR T-LARGE	45° angled needle, rectangular, dim. 24,07x4,8mm.	

LAMPS WITH MAGNIFIERS LENSES

Art. LITE 319

Lens 162 x 105mm - Diopters 3,0
 3 x fluorescent lamp 9 W. Light output controlled with 2-way-switch.
 Arm 430+400mm with table clamp or wall bracket on request.
 Supply voltage 230 V/ 50 Hz. Power cord 3m/Schucko. Weight (net) approx. 4.4 kg.
 Available standard version, electronic switch version or black ESD version.



Art. LITE 122

Dimensions Ø 120 mm lens with 1 fluorescent lamp 22 W. Clip replaceable lens (diopters 3.5, 4, 6, 8) with magnifier cover.
 Lenses are treated anti-scratch, withstand alcohol solvents and chemicals.
 Arm 430+400mm, light grey, table clamp or wall bracket on request.
 Weight (net) approx. 2,8 kg
 Supply voltage 230 V/ 50 Hz.



TOOLS

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BGA RE-BALLING KIT

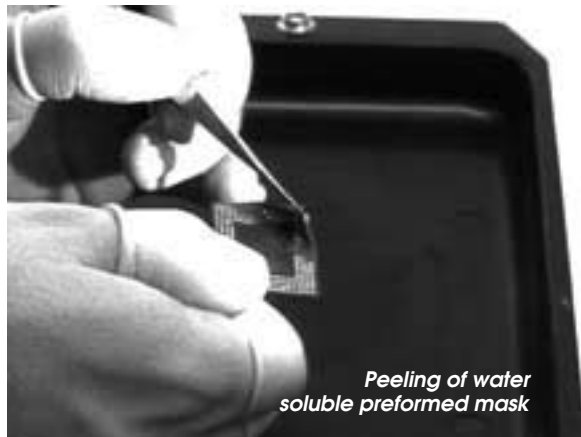
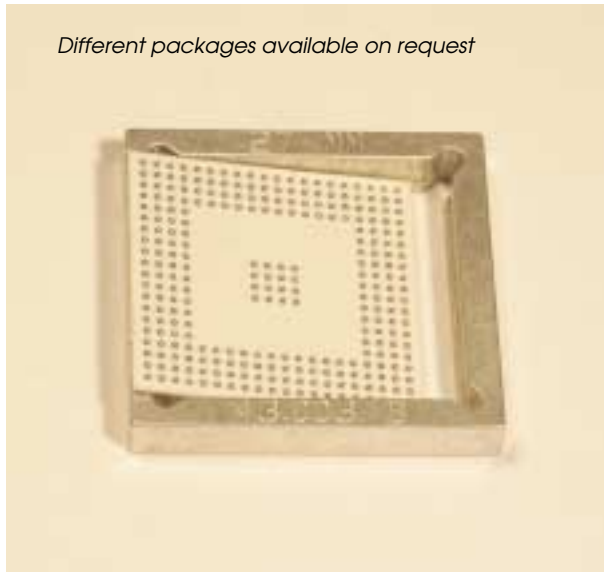
Art. BGA RE-BALLING

A new innovative re-balling system for bga components, allows a simple, fast and effective rework of BGA.

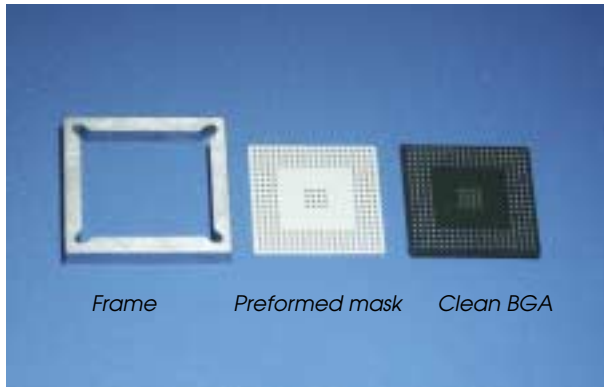
Free from complicate and expensive equipments, this system includes pre-formed masks and frames for the re-balling of each specific size of BGA components on the market.

A simple operation which enables you to save time and money.

Different packages available on request



Peeling of water soluble preformed mask



Frame Preformed mask Clean BGA

CIRCUIT TECH REWORK KIT

The Professional Repair Kit is the most complete and most versatile circuit board repair kit you'll find anywhere. It's the total package. The kit includes dry film, epoxy-backed circuit frames, and unique replacement circuits that require no messy liquid epoxy. There are eyelets and setting tools for plated through hole repair, Circuit Tracks to repair damaged circuits, epoxy and color agents for solder mask or base board repairs, and a comprehensive manual...all packaged in a convenient carrying case. If you need to repair damaged circuit boards, the all-in-one Professional Kit is just what you need. In case of need you can browse on www.circuittechctr.com

FLEXTAC BGA REWORK STENCILS

Art. 201-3120

Stencil kit for BGA components: self adhesive, reusable, for the specific dispensing on BGA.



GOLD CONTACT PLATING SYSTEM 120/230VAC

Art. 115-1702

Complete system for replating solder-contaminated gold edge contacts, contact's thickness. Plating solutions are available separately.

PROFESSIONAL KIT

Art. 201-2102

The most complete and versatile kit for boards rework.



TOOLS

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ELECTRIC SCREWDRIVERS

Art. FAB

Designed for electronic assembly (clean room admissible) the electric screwdrivers FAB use a 30 Vdc engine (low voltage) and a protection electronic circuit, ensuring the maximum security for the operator.

The automatic stop clutch ($\pm 5\%$ repeatability) is coupled with an electronic control to ensure durability to the screwdriver itself.



TORQUE TESTER

Art. E-K2

Electronic torque tester designed for high-precision measurement of the static or dynamic torque on electric and pneumatic screwdrivers

Front display indicates torque, power supply conditions and threshold conditions (2 lines -16 characters).

Keys: ON/OFF, MENU, RESET, SCROLL, CS1 SENSOR, RS232C PORT

.Power supply: 9V battery

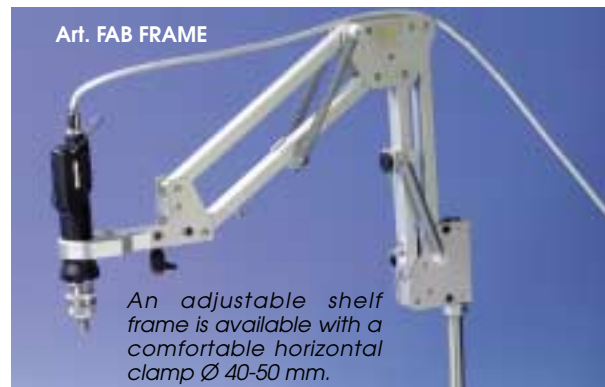


TECHNICAL FEATURES SCREWDRIVERS

Features	FAB 05 SF	FAB 10 RE	FAB 12 RE	FAB 18 RE
Screw size	M 2,5	M3	M3	M4
Torque Nm	0,05-0,8	0,05 -0,8	0,2 -1,4	0,3 - 1,8
Speed Rpm	200	1000	1000	650
Voltage	30V	30V	30V	30V
Diam. body	33mm	33mm	33mm	33mm
Body length	190mm	220mm	220mm	220mm
Start	Lever	Lever	Lever	Lever
Weight Kg.	0.350	0.480	0.480	0.480
Suggested supply	EDU.1NS	EDU.1NS	EDU.1NS	EDU.1NS

For different torques and screws, please ask.

Art. FAB FRAME



An adjustable shelf frame is available with a comfortable horizontal clamp \varnothing 40-50 mm.

POWER SUPPLIES FOR FAB SCREWDRIVERS

Art. EDU

Notes to the following list:

/R (Ramp): torque curve adjustment

/RA (Ramp-Acceleration): speed increase adjustment these adjustments are designed to avoid mechanical stresses risks on delicate parts (glass, metal or plastic).

Torque adjustment is independent from Rampa and Acceleratio adjustments.



POWER SUPPLIES TECHNICAL FEATURES

Article	Features	Weigth and Dimensions	Applications	Screwdrivers types
EDU.1NS	67VA, 1 connector, 1 speed	130x114x75mm 1.650 Kg.	Metrical screws or self tapping screw	LEVA FAB e RAF
EDU.1NS/R	67VA, 1 connector, 1 speed with adjustable ramp	130x114x75mm 1.650 Kg.	Metrical screws or self tapping screw	LEVA FAB e RAF
EDU.1NS/RA	67VA, 1 connettore, 1 speed adjustable, with adjustable ramp	130x114x75mm 1.650 Kg.	Metrical screws or self tapping screw	LEVA FAB e RAF
EDU.2CL	100VA, 2 connectors, 2 speed	180x124x90mm 2.650 Kg.	Metrical screws or self tapping screw	LEVA FAB e RAF
EDU.2CS	100VA, 2 connectors, 2 speed	180x124x90mm 2.650 Kg.	Metrical screws or self tapping screw	LEVA FAB e RAF



NEW SOLDERING, DE-SOLDERING AND HOT AIR SYSTEM

Art. FALCON

The FALCON rework system has been designed to assemble and rework standard and SMT components on boards with a 100% control of all dynamic parameters. The system includes a soldering unit, a de-soldering unit and a hot-air unit PTC cartridge.

✓ PTC CARTRIDGE

All FALCON units use a special PTC (Positive Tem Coefficient) heating element which varies the resistance (Ohms) in relation to temperatures, enabling temperature controls each 0.01 secs!

✓ TIPS INCLUDE THE HEATING ELEMENTS

The heating elements of all FALCON units are included into the tips. Therefore the short size of the tips provide several advantages:

- minimizing the thermal excursion due to temperature control
- tuning the right energy consumption from small to larger joints
- reducing the average working temperature
- giving always immediate reactions to temperature and supply of energy adjustments
- increasing the tips lifetime

✓ PC CONNECTION of all units

The FALCON rework system complies ISO 9000 requirements in term of control of operation of all units which may be connected to a PC by means of a dedicated software, via RS 485 serial port, enabling the following controls:

- min/max temperature limits
- preferred temperatures levels lock
- solder supply to automatic feeding stations
- ISO 9000 report temperature calibration
- up to 256 working units serial control



① Art. FALCON SALDA

Soldering unit

- Digital microprocessor tip temperature control with 3 digits readout
- Comfortable min/max button control
- Temp. tolerance: $\pm 2\%$
- Power max: 100W
- Power supply: 230 Vac
- Soldering iron voltage: 24 Vac
- Unit dimensions: 67x137x200 mm

② Art. FALCON D-SALDA

De-soldering unit

- Shortest isothermic path of the solder from the joint to the glass tank
- Long-life desoldering tips with internal stainless steel tube
- Adjustable delay for the pump switch-off
- Higher vacuum capability (500mm Hg approx.)
- Digital microprocessor tip temperature control with 3 digits readout
- Comfortable min/max button control
- Temp. tolerance: $\pm 2\%$
- Power max: 100W
- Power supply: 230 Vac
- Soldering iron voltage: 24 Vac
- Unit dimensions: 67x137x200 mm
- Graphite pump (0-8 Lt)

③ Art. FALCON ARIA - Hot-air unit

The new hot-air unit ARIA is designed to be extremely flexible. Infact it suits well different situations as high density of components, different standards (traditional, J, flat or BGA), microscopes and restricted temperature ranges. This is possible due to the ergonomic design and the available power.

- Digital temperature control with microprocessor
- 3 digits display
- automatic stand-by with de-activated pump
- fine adjustment of air flow (software re-adjustable)
- PTC heating element
- Tolerance on temper. regulation $\pm 5\%$
- Available nitrogen supply version
- Power: 100W
- Power supply: 230 AC
- Pump: 0-8 lt/min
- Dimensions: 67x137x200 mm
- Weight: 2.5 Kg

TOOLS

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Linea di macchine preformatrici per componenti elettronici. Sistemi per lavorazioni speciali disponibili a richiesta.

The full line of standard lead forming equipment. Custom systems are available upon request.

Standardsbearbeitungsmaschinen für elektronische Bauteile. Sonderformungswerkzeuge können auf gewünschte Bedürfnisse gebaut werden.

Gamme de machines de coupe et preformage. Systemes de preformage speciaux sur demande.



TP6/V



Macchina per taglio e piegatura di componenti assiali per montaggio verticale

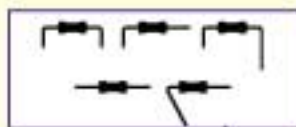
Cutting and bending machine for axial components for vertical mounting

Schneide- und Biegemaschine für axiale Bauteile, stehende Montage

Machine de coupe et cambrage vertical pour composants axiaux



TP6



Macchina per taglio e piegatura di componenti assiali

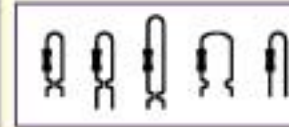
Cutting and bending machine for axial components

Schneide- und Biegemaschine für axiale Bauteile

Machine de coupe et cambrage pour composants axiaux



TP6/V-PR



Macchina per taglio, piegatura e formatura di componenti assiali per montaggio verticale

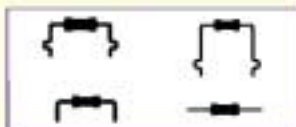
Cutting, bending and forming machine for axial components for vertical mounting

Schneide- und Biegemaschine für axiale Bauteile, stehende Montage, mit Sickenrichtung

Machine de coupe, cambrage et clipsage vertical, pour composants axiaux



TP6/PR-B



Macchina per taglio, piegatura e formatura di componenti assiali

Cutting, bending and forming machine for axial components

Schneide- und Biegemaschine für axiale Bauteile mit Sickenrichtung

Machine de coupe, cambrage et clipsage pour composants axiaux



CS10-CS20-CS30-CS40

Caricatori per componenti assiali sfusi per le macchine TP

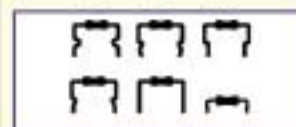
Loose axial component feeders for all TP machines

Zuführeinheit für lose axiale Bauteile für alle TP Maschinen

Système pour composants axiaux en vrac pour les machines TP



TP6/PR-F



Macchina per taglio, piegatura e formatura di componenti assiali

Cutting, bending and forming machine for axial components

Schneide- und Biegemaschine für axiale Bauteile mit Sickenrichtung

Machine de coupe, cambrage et clipsage pour composants axiaux



TP6/R



Macchina per taglio dei componenti radiali nastriati

Cutting machine for taped radial components

Schneidemaschine für gegurtete radiale Bauteile

Machine de coupe pour composants radiaux en bande



Macchina per formare componenti integrati

Dip lead forming machine

TP/IC-F

IC-Richtgerät



Machine à cambrer les composants DIP



Macchina pneumatica per il taglio di componenti radiali sfusi

Pneumatic cutting machine for loose radial components

TP/LN-500

Pneumatisches Schneidegerät für lose radiale Bauteile



Machine pneumatique de coupe pour composants radiaux en vrac



Macchina per taglio, piegatura e formatura di componenti assiali

Cutting, bending and forming machine for axial components

**TP6/97
TP6 PR-B/97**

Schneide- und Biegemaschine für axiale Bauteile mit Sickenrichtung

Machine de coupe, cambrage et clipsage vertical, pour composants axiaux



Macchina pneumatica per taglio e formatura di componenti radiali sfusi

Pneumatic cutting and forming machine for loose radial components

TP/SC4

Pneumatische Schneide- und Sickenmaschine für lose radiale Bauteile



Machine pneumatique de coupe et clipsage pour composants radiaux en vrac



Gruppo di motorizzazione per tutte le macchine TP manuali

Motor drive unit for all TP handcrank machines

MOT-98 MOT-98/A

Motor für alle TP handbetriebenen Maschinen

Machine de coupe, cambrage et clipsage pour composants axiaux



Macchina pneumatica per taglio e formatura di componenti radiali sfusi

Pneumatic cutting and forming machine for loose radial components

TP/TS1

Pneumatische Schneide- und Sickenmaschine für lose radiale Bauteile



Machine pneumatique de coupe et clipsage pour composants radiaux en vrac

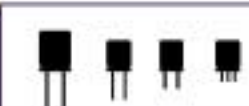


Macchina automatica per il taglio di componenti radiali sfusi

Motorized cutting machine for loose radial components

TP/TC4

Motorbetriebene Schneidemaschine für lose radiale Bauteile



Machine automatique de coupe pour composants radiaux en vrac



Macchina automatica pneumatica per taglio e formatura di componenti radiali nastriati

Automatic pneumatic cutting and forming machine for taped radial components

TP/R-PR-AS1

Automatische Pneumatische Schneide- und Biegemaschine für gegurtete radiale Bauteile, mit Sickenrichtung



Machine pneumatique automatique de coupe et clipsage pour composants radiaux en bande



Macchina per tagliare componenti radiali in stecca

Cutting machine for radial components in stick

TP/TC5

Schneidemaschine für Radiale Bauteile



Machine de coupe pour composant radiaux en stick



Macchina automatica per taglio e formatura di componenti radiali in stecca

Automatic cutting-forming machine for radial components in stick

TP/TO-CF

Automatische Schneide- und Sickenmaschine für radiale Bauteile von stange



Machine automatique de coupe et clipsage pour composants radiaux en stick