

**ESD  
2022**



**iteco**



**English**

## COUNTY EVO

COUNTY EVO is a microcomputer based instrument which counts axial, radial and SMD (with **8301.018** option) components



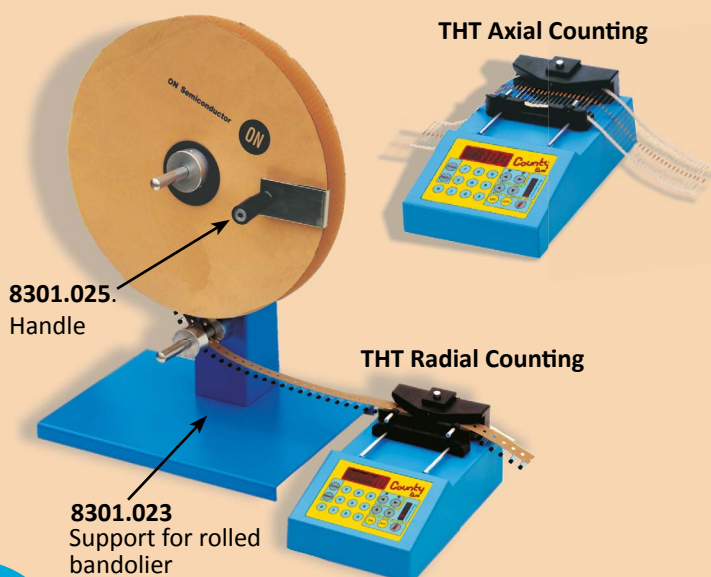
### SMD COMPONENT COUNTING

The County adaptor for counting taped SMD components is an optional accessory (**8301.018**), allows the counting of the SMD components through the holes of the support tape.

The worktop **8301.027** includes two easy insertion pins with adjustable clutch. Furthermore, at least one handle (**8301.030**) is required for rewinding the reels. The aluminum empty reel (**8301.021**) is an available optional to speed up the counting operations and subsequent rewinding of the SMD components

### AXIAL AND RADIAL PTH COUNTING

Before counting it is necessary to select the lead component number by setting the divider. For bandolier counting the **8301.023** support is available, with an easily inserted **8301.025** handle (see figure on right)



### TECHNICAL FEATURES

Counting in both directions (left or right)  
 Divider from: 1/4 - 1/3 - 1/2 - 1 - 2 - ... - 19  
 TOTALIZER mode counting  
 PRESET mode counting (with audible alarm when the desired component number is reached)  
 Calibration test and self diagnostic procedure  
 Last counting value and condition memory  
 Model **8301.088** with rechargeable battery, Barcode reader input, output for printer/PC, Watch, Datalogger with 500 counting record  
 Maximum counting value: 999999 comp.  
 Minimum lead diameter (THT component): 0,4 mm  
 Axial component bandolier width (THT): 55 ÷ 110 mm  
 Radial component bandolier width (THT): max 18 mm  
 Maximum component diameter (THT): 14 mm  
 Maximum tape height (SMD component): 56 mm  
 Display: 4 digits 13 mm height  
 Dimensions: 240 x 130 x 110 mm - Weight 1,8 kg

**8301.087** County EVO 100÷240V/50-60Hz  
**8301.088** County EVO 100÷240V/50-60Hz with accumulator, barcode input, printer output, watch  
**8301.350** ISO9000 traceable certificate

#### Accessories for counting of THT taped component

**8301.023** Complete support for rolled bandolier  
**8301.025** THT Bandolier handle

#### Accessories for counting of SMD taped component

**8301.018** SMD Adaptor  
**8301.027** Worktop with 2 pins for reel  
**8301.030** SMD Reel handle  
**8301.021** Empty Reel aluminium made for County-EVO

#### Barcode e Printer

**8301.155** Barcode with coiled cord <sup>(1)</sup>  
**8301.095** Direct thermal label printer <sup>(1)</sup>  
**8301.096** 57x51mm 1360 labels/roll <sup>(1)</sup>  
 (1) photos and specifications at page 4

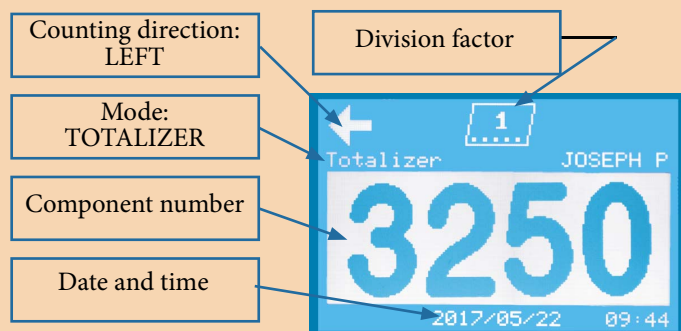
# COUNTY-S EVO



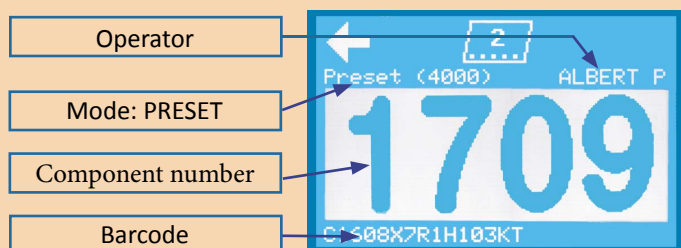
## COUNTY-S EVO

County-s evo is a motorized counting machine for taped SMD component counting. It can operate in two different ways:

**1) TOTALIZER:** components are counted from a zero reference, tape feed is motorized and the counter automatically stops at the tape end, to prevent loss of the total

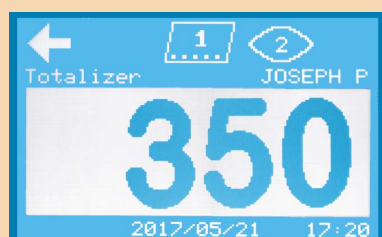


**2) PRESET MODE:** the desired component number is keyed on the keyboard and the counter automatically stops when it reaches the corresponding component



## EMPTY POCKET CHECK

Checks the presence of the component  
Programmable Stop: Never - 1 - 2  
It only works on black plastic tapes



EPC disabled



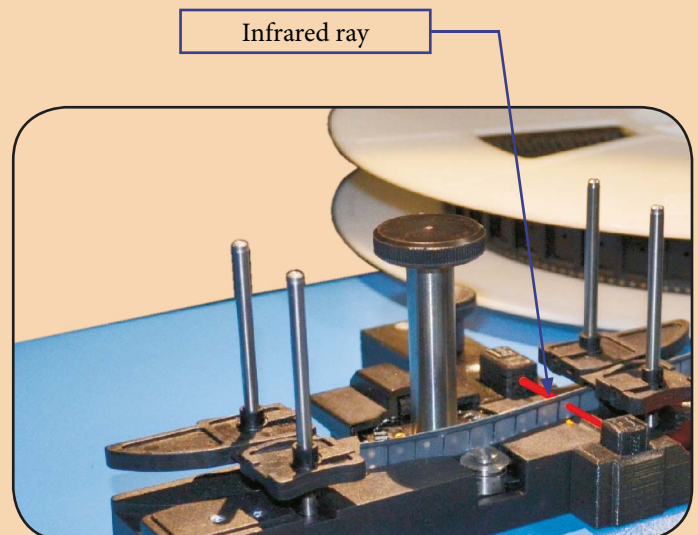
EPC enabled



EPC counting

## TECHNICAL FEATURES

Counting: max 999999 pcs, 6 digits 22mm height  
Maximum counting speed: 220pcs/sec (1 piece for hole)  
Pitch (holes for component): from 1/4 - 1/3 - 1/2 - 1 - 2 - ... - 19  
Maximum tape height: 56mm  
Maximum reel diameter: 400mm (standard configuration)  
650mm (with **8301.150** support)  
Display: blue LCD with led backlight 160x104 pixel  
visible area: 74x46mm  
Adjustable speed control  
Step by step mode (1 component at a time)  
Empty pocket check (optional)  
Barcode reader input  
Serial connection for label printer or PC  
Selection of the operator (10 operators can be memorized with 8 alphanumerical chars everyone)  
Internal clock (1 week backup)  
Datalogger that stores the last 500 counting data  
Memory storage for subtotals  
2 side handles for easy transport.  
Dimensions: 525 x 340 x 250(H) mm  
Weight: 9,5 Kg

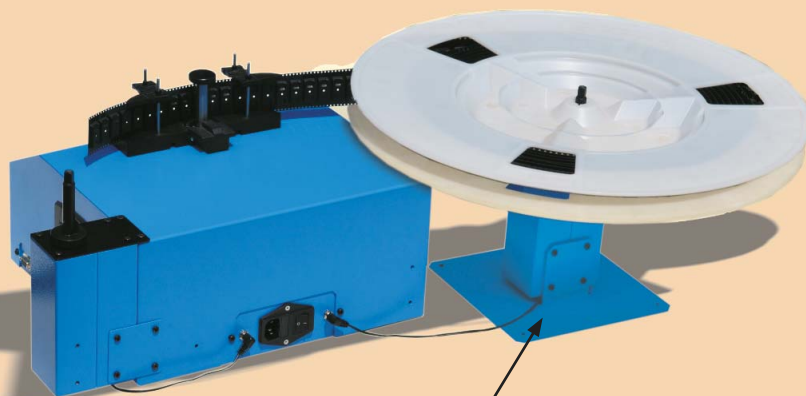


## COUNTY-S EVO

County-S EVO control keyboard



- 8301.131** County-S EVO 230V/50-60Hz
- 8301.133** County-S EVO 230V/50-60Hz with Empty Pocket Check
- 8301.141** County-S EVO 115V/50-60Hz
- 8301.143** County-S EVO 115V/50-60Hz with Empty Pocket Check
- 8301.350** ISO9000 Traceable® Certificate
- 8301.150** Support for reels > 400mm diameter
- 8301.021** Empty Reel, aluminium made, 360mm diameter
- 8301.155** Barcode with coiled cord
- 8301.095** Direct thermal label printer
- 8301.096** 57x51mm, 1360 labels/roll



Support for reels with diameter > 400mm (cod. 8301.150)

## PRINTER

For County EVO and County-S EVO

Direct thermal label printer built for ease-of-use and durability, ac adaptor 110-230Vac and data cable included.

Maximum print width is 104mm however the print is optimized for 57x51mm labels

- 8301.095** Direct thermal label printer
- 8301.096** 57x51mm, 1360 labels/roll



PRINTER

## BARCODE for County EVO and County-S EVO

It's small, lightweight and ergonomic design, coiled cable included, a wider than usual scan angle provides the ability to read a longer bar code from a shorter distance, IP42 protection.

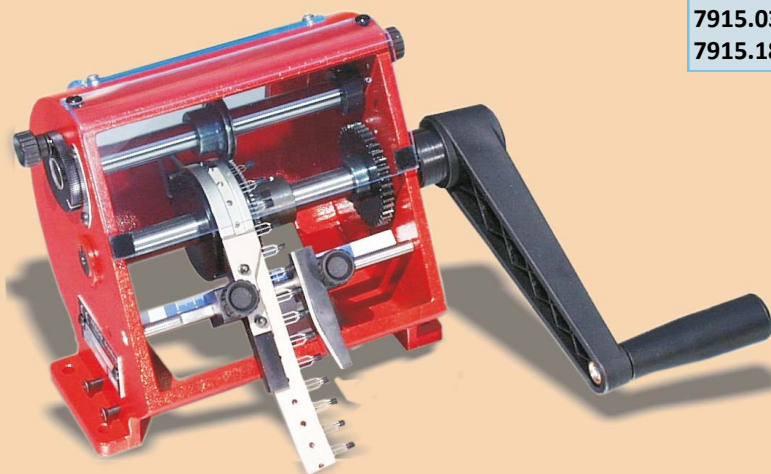
The barcode is connected and powered via a single cable, without the hassle of two separate cables1

- 8301.155** Barcode with coiled cord



SUPERFORM/R is a machine made for cutting radial taped components such as capacitors, transistors and stand-off resistors.

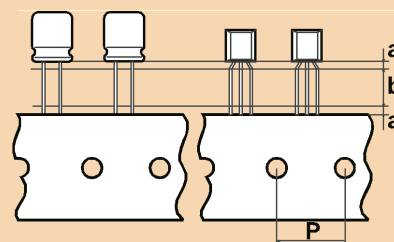
Production rate: up to 20000 pcs/hr



## SUPERFORM-R

<b>7915.113A</b>	SUPERFORM/R P=12.7mm (.5") (standard model)
<b>7915.113B</b>	SUPERFORM/R P=15.0mm (.59")
<b>7915.030</b>	Motor Unit for SUPERFORM, 230V - 50/60Hz
<b>7915.031</b>	Motor Unit for SUPERFORM, 115V - 50/60Hz
<b>7915.185</b>	Tape Reel Holder arm BR6

	a	b	d	D
Min. (mm)	2		0.4	
Max. (mm)		8	1	14



SUPERCUT is a machine made for cutting radial loose components and, with an optional adapter, also taped components. It is extremely compact and sturdy and all mechanical parts have been designed to ensure the highest quality and the longest possible life.

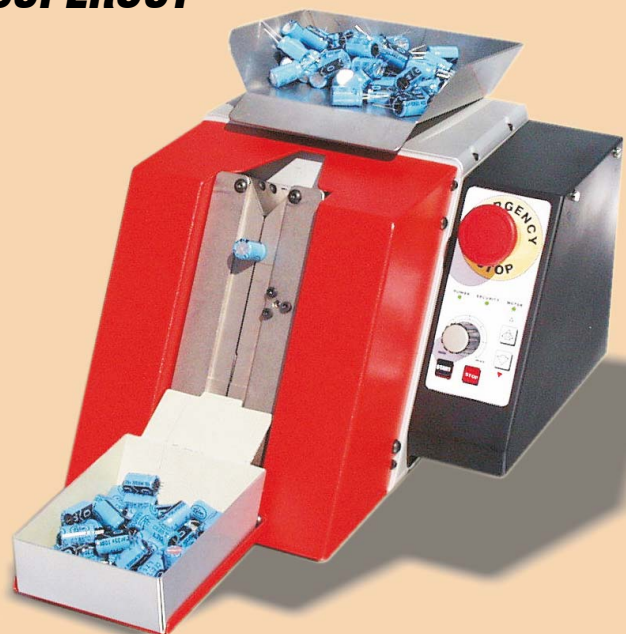
The loading of components is easy and quick, and the production is high because there is no down time due to the automatic transfer and ejection of the components.

The transfer speed is adjustable.

The small sliding door in front allows for lead length adjustments.

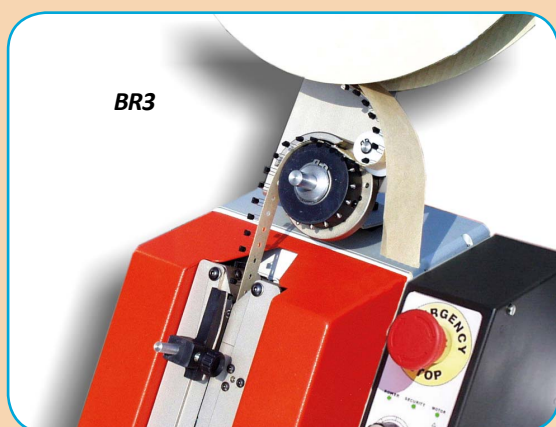
There is an optional adapter for radial taped components.

## SUPERCUT

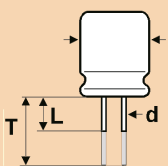


### TECHNICAL FEATURES

Production rate: up to 3000 pcs/hr  
Dimensions: 400 x 270 x 270(H)mm  
Weight: 14Kg



BR3

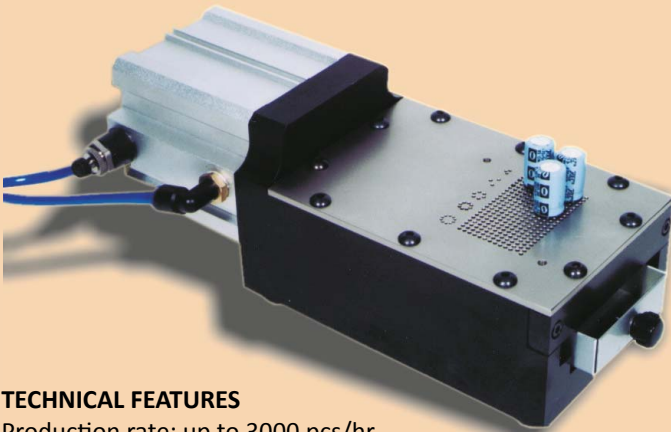


	L	d	D
Min. (mm)	3	0.4	1
Max. (mm)	12	0.8	15

<b>7915.147N</b>	Motorized cutting machine SUPERCUT, 115V - 50/60Hz
<b>7915.148N</b>	Motorized cutting machine SUPERCUT, 230V - 50/60Hz
<b>7915.160</b>	Tape Reel Holder BR3, P=12.7mm
<b>7915.159</b>	Tape Reel Holder BR3, P=15mm

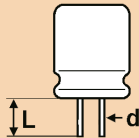
$T \text{ (original length)} > L + 6 \text{ mm}$

## SUPERCUT-LN5



### TECHNICAL FEATURES

Production rate: up to 3000 pcs/hr  
 Dimensions (7915.041): 100 x 250 x 93 mm  
 Dimensions (7915.041L): 100 x 300 x 93 mm  
 Supply: 6 ATM  
 Weight: 4,5/6 Kg

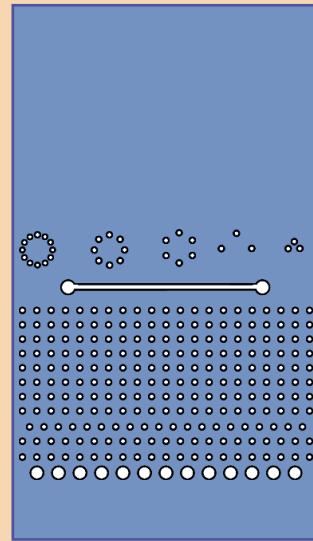


	L	d
Min. (mm)		0.3
Max. (mm)		1.3
Fix.	3.2	

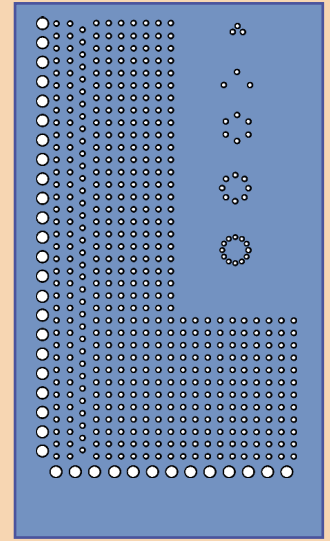
- 7915.041** SUPERCUT/LN5 with foot pedal control
- 7915.041L** SUPERCUT/LN5L long model with foot pedal control
- 340.114** Optional additional plate for SUPERCUT/LN5 (max 3mm)
- 340.214** Optional additional plate for SUPERCUT/LN5L (max 3mm)

This pneumatic machine is designed to cut/trim almost every type radial lead components.  
 The guillotine cutting system, with zero clearance between the plates, guarantees a sharp and precise cut without burrs or damage to the leads.  
 It is possible to cut many components at the same time without any risk of wear of the blades.

The machine can be supplied with special cutting jig.  
 An additional optional plate (thickness to be specified, max 3mm) can be supplied to increase the cutting height of the leads.  
 Two models available, the first with a cutting area 53x43mm, the second with a cutting area 53x93mm.

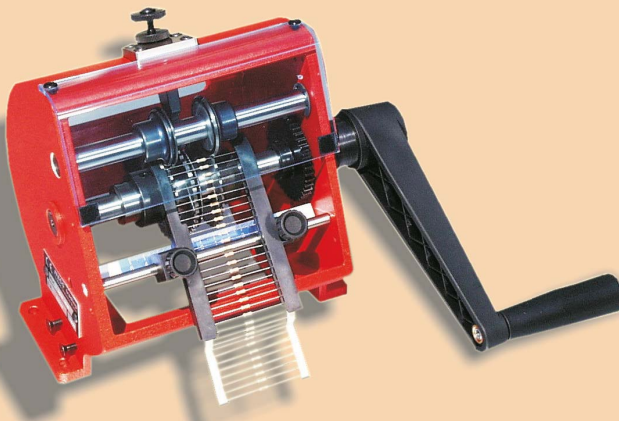
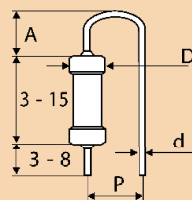


Standard plate hole layout  
SUPERCUT/LN5



Standard plate hole layout  
SUPERCUT/LN5L

## SUPERFORM-V



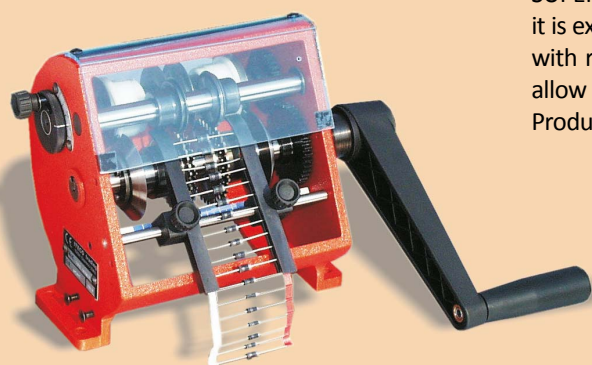
	P	d		A		D
	fix.	min.	max.	min.	max.	max.
<b>7915.101 B standard</b>	2.54	0.5	0.8	2	6	3
<b>7915.101 C</b>	3.8	0.5	0.8	2.5	5	5
<b>7915.101 D</b>	5.08	0.5	0.8	3	7	8
<b>7915.101 E</b>	7.62	0.5	0.8	4	7	10
<b>7915.091 A</b>	3.8	0.8	1.3	4	9	5
<b>7915.091 B</b>	5.08	0.8	1.3	5	9	8
<b>7915.091 C</b>	7.62	0.8	1.3	6	9	10

SUPERFORM/V is a machine made for cutting and bending axial taped components for vertical mounting.

Production rate up to 40000 pcs/hr

- 7915.030** Motor Unit for SUPERFORM, 230V - 50/60Hz
- 7915.031** Motor Unit for SUPERFORM, 115V - 50/60Hz
- 7915.182** Feeder CS30 for loose axial components
- 7915.185** Tape Reel Holder arm BR6

## SUPERFORM-A



SUPERFORM/A is a machine made for cutting and bending axial taped components, it is extremely compact and sturdy and its main characteristic is to form components with rheophore up to 1.4 mm. Its tracking wheels are adjustable independently to allow rapid setup at different forms.  
Production rate: up to 40000 pcs/hr

**7915.030** Motor unit for SUPERFORM, 230V - 50/60Hz

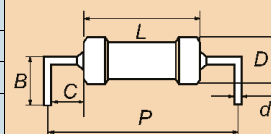
**7915.031** Motor unit for SUPERFORM, 115V - 50/60Hz

**7915.180** CS10 feeder for loose axial components

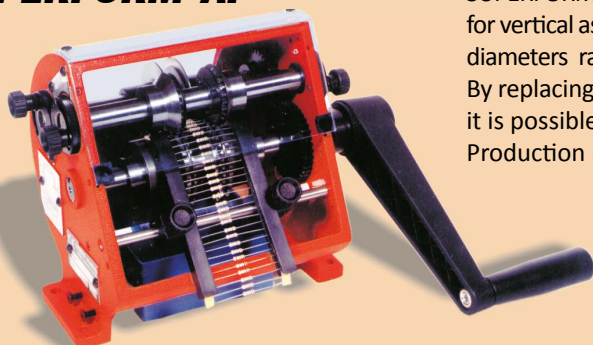
**7915.185** Tape reel holder arm BR6

	version	B		P		C		D		d		L		quick setting
		Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	Min.	Max.	
7915.100 A	standard model	4	13	6.5	60 (40*)	1.2	16	0.4	1.3	50				7915.100AR
7915.100 D	reinforced bending knives	5	13	105	60 (40*)	2.4	16	0.6	1.4	50				7915.100DR
7915.100 F	reduced cutting length reduced bending length	4	13	5	60 (40*)	0.8	10	0.4	0.8	50				7915.100FR
7915.100 G	like "F" + fixed pitch	4	10	5	-	0.5	4	0.4	0.6	3.5				-

(\*) maximum P dimension with quick setting



## SUPERFORM-AP



SUPERFORM/AP is a machine made for cutting and bending axial taped components for vertical assembling, and shaping a little curl on each lead. The machine handles wire diameters ranging from 1 mm to 1.4mm.  
By replacing the 2 "cutting/forming wheels" with 2 "only cutting wheels" (optional) it is possible to obtain an U-shape without curls.  
Production rate: up to 20000 pcs/hr

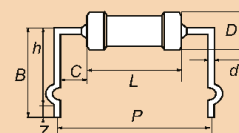
**7915.030** Motor unit for SUPERFORM, 230V - 50/60Hz

**7915.031** Motor unit for SUPERFORM, 115V - 50/60Hz

**7915.180** CS10 feeder for loose axial components

**7915.185** Tape reel holder arm BR6

Mod.	version	Z	P		B		C		L	d		D	h	
		Fix.	Min.	Max.	Min.	Max.	Min.	Max.	Max.	Min.	Max.	Max.	Min.	Max.
7915.102A	standard model	3.1	6.5	60	10	14	1.2	10	50	1	1.3	16	7	11
7915.102B	reinforced bending knives	3.1	10.2	60			2.4				1.4			
7915.102C	standard model	3.9	6.5	60			1.2				1.3			
7915.102D	reinforced bending knives	3.9	10.2	60			2.4				1.4			
7915.102E	standard model	5	6.5	60			1.2				1.3			
7915.102F	reinforced bending knives	5	10.2	60			2.4				1.4			



## OPTIONAL ACCESSORIES

### SUPERFORM MOTOR UNIT

Equipped with manual speed adjustment and automatic torque control for an easy and fast working of the SUPERFORM machine.  
The motor unit is supplied only with the machine assembled.

**7915.030** M230V Motor Unit for SUPERFORM/A-AP-S-V-R-RCP

**7915.031** 115V Motor Unit for SUPERFORM/A-AP-S-V-R-RCP

**7915.032** 230V Motor Unit for SUPERFORM/AF-VP

**7915.033** 115V Motor Unit for SUPERFORM/AF-VP

**600.023** Foot switch for 7915.030/031/032/033 motors

### SUPERFORM Tape Reel Holder BR6

A tape reel holder arm to be fixed on the left side of Superform, to facilitate unwinding of the tape.

**7815.185** BR6 for all SUPERFORM models



## SUPERCUT/RS4

### for loose radials

A pneumatic machine designed to cut loose radial component leads.

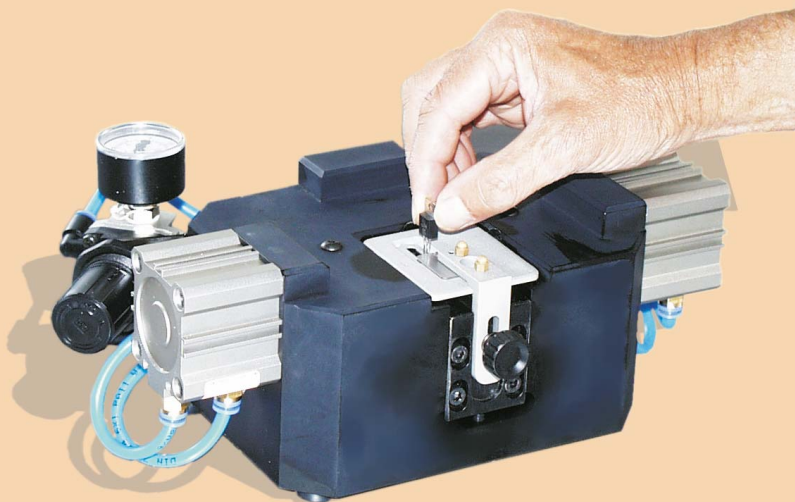
The feed is manual, on the top of the machine.

Pressing the footpedal effects cutting and preforming of the leads in a very quick and precise way.

A large variety of Dies is available, substitution of the Die assembly is extremely quick and simple.

A machine three cylinders equipped, with custom tool, can be supplied for more complex not standard forms.

Production rate: 2000 pcs/hr



**7915.166** SUPERCUT/RS without preforming set  
**16x.xxx** Preforming set

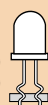
STAND-OFF  
LOCK-IN

**160600** (7915.166)  
**180600** (7915.171)



STAND-OFF  
LOCK-IN LED

**160700** (7915.166)  
**180700** (7915.171)



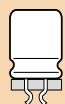
STAND-OFF  
OUTWARD FORM

**160800** (7915.166)  
**180800** (7915.171)



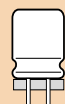
LOCK-IN

**160.900** (7915.166)  
**180.900** (7915.171)



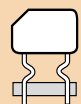
STRAIGHT CUT

**161000** (7915.166)  
**181000** (7915.171)



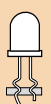
DIODE 4 LEADS

STAND-OFF  
INWARD FORM  
**161100** (7915.166)  
**181100** (7915.171)



STAND-OFF  
LOCK-IN

POLARITY FOR LED  
**161200** (7915.166)  
**181200** (7915.171)



90° BENDING

**161300** (7915.166)  
**181300** (7915.171)



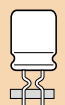
MONTAGGIO IN  
SUPERFICIE

**161400** (7915.166)  
**181400** (7915.171)



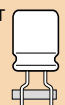
STAND-OFF  
INWARD FORM

**160.900** (7915.166)  
**180.900** (7915.171)



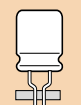
TO SPREAD OUT  
AND CUT

**161700** (7915.166)  
**181700** (7915.171)



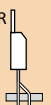
TO REDUCE PITCH  
AND CUT

**161800** (7915.166)  
**181800** (7915.171)



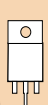
POWER TRANSISTOR  
CENTER LEAD

2.5 mm OUT  
**162100** (7915.166)  
**182100** (7915.171)



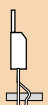
TO220  
90° BENDING

CENTER LEAD  
5mm OUT  
**163100** (7915.166)  
**183100** (7915.171)



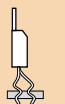
TO220 CENTER  
LEAD SPREAD  
AND LOCK

**162200** (7915.166)  
**182200** (7915.171)



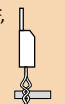
TO220 CENTER  
LEAD SPREAD  
3 LEAD LOCK

**160.900** (7915.166)  
**180.900** (7915.171)



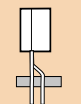
TO220 STAND-OFF,  
LOCK-IN  
3LEAD IN LINE

**162400** (7915.166)  
**182400** (7915.171)



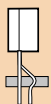
TO92  
CENTER LEAD  
2.5mm OUT

**162500** (7915.166)  
**182500** (7915.171)



TO92  
CENTER LEAD  
SPREAD AND LOCK

**182600** (7915.171)  
**180900** (7915.171)



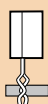
TO92 CENTER LEAD  
SPREAD,  
3 LEAD LOCK

**162700** (7915.166)  
**182700** (7915.171)

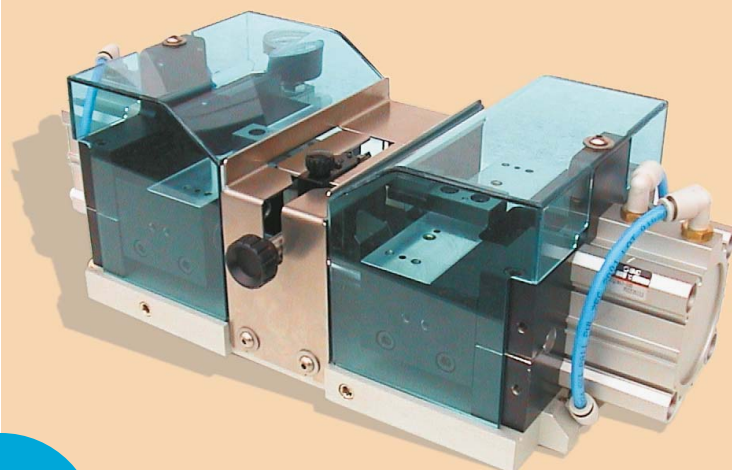


TO92 STAND-OFF  
LOCK-IN  
3 LEAD IN LINE

**162800** (7915.166)  
**182800** (7915.171)



## SUPERCUT/TS1 for loose radials



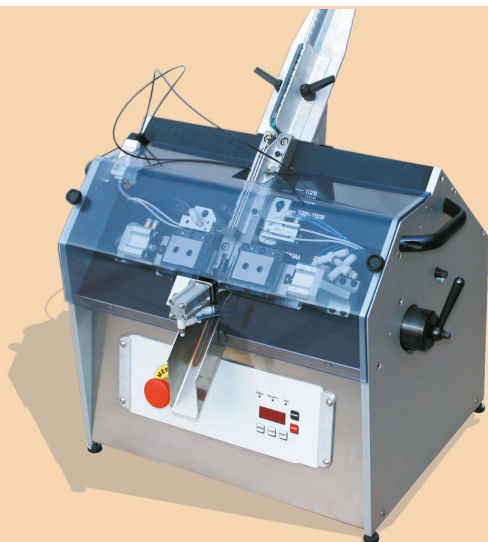
A pneumatic machine designed to cut loose radial component leads, the feed is manual, on the top of the machine.

Pressing the footpedal effects cutting and preforming of the leads in a very quick and precise way.

A large variety of Dies is available, substitution of the Die assembly is extremely quick and simple.

- wire holder system available on request
- more powerful cylinders
- stronger and more accurate
- less wear
- very large components processing  
(max. length 140mm, max. pitch 45mm)
- production rate 2000 pcs/hr

**7915.171** SUPERCUT/TS1 without preforming set  
**18x.xxx** Preforming set



## SUPERCUT/TOCF for tubed transistors

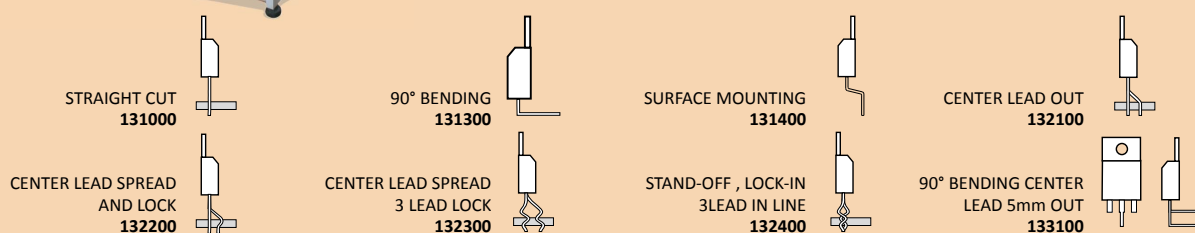
SUPERCUT/TOCF automatic machine is designed to cut and form tubed radial components type TO220, TO218, TO126.

The complete operation is fully automatic and each form needs dedicated die. The full tube is introduced into the upper guide and a pneumatic system allows the component clamping and its positioning in the working point. The leads have before locked by the wire holder and after formed by the sliding die.

Production rate: up to 3000pcs/hr

**7915.176** SUPERCUT/TOCF without tools, 115V

**7915.177** SUPERCUT/TOCF without tools, 230V

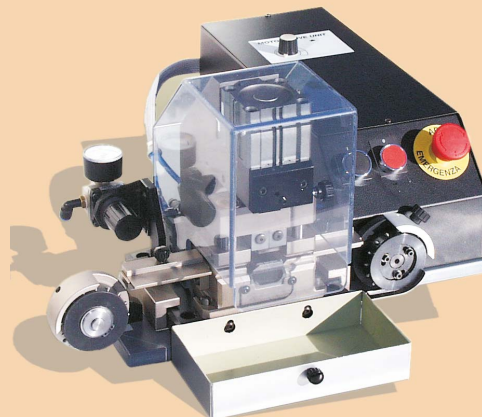


## SUPERCUT/RP for taped radials

SUPERCUT/RP is a machine designed to cut and form taped radial component leads, the curl formed by this model allows the components to remain spaced and locked in the PCB, making assembly operations easier.

The machine can be supplied with preforming curl dies different from the standard ones. It is a pneumatic machine, the leads must be introduced into a slot on the front of the machine. The machine use an motorized automatic feeder system for taped components.

Production rate (with feeder): 7000 pcs/hour



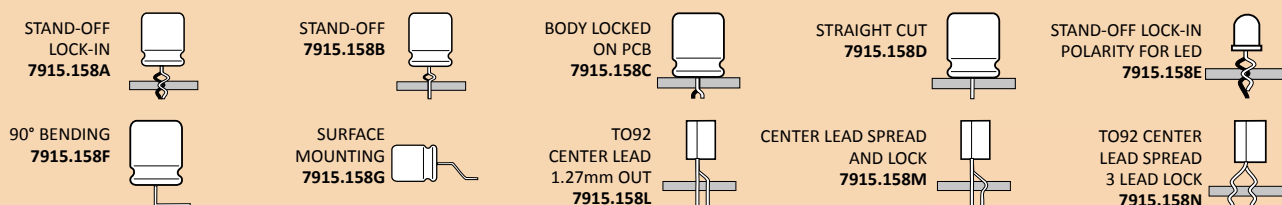
**7915.154** Motorized machine SUPERCUT/RP for taped components. P=12.7, 230V. Without preforming set

**7915.154A** Motorized machine SUPERCUT/RP for taped components. P=12.7, 110V Without preforming set

**7915.155** Motorized machine SUPERCUT/RP for taped components. P=15, 230V Without preforming set

**7915.155A** Motorized machine SUPERCUT/RP for taped components. P=15, 110V Without preforming set

**7915.158[x]** [x=A..N] Die block



## PINS ALIGNER

Pin aligner suitable for integrated circuits MOS and CMOS, from 4 to 64 pins.

Operation is made by sliding the packaging tube between the 4 metal rollers.

Easy adjustment of the pitch by means of the setting knob.

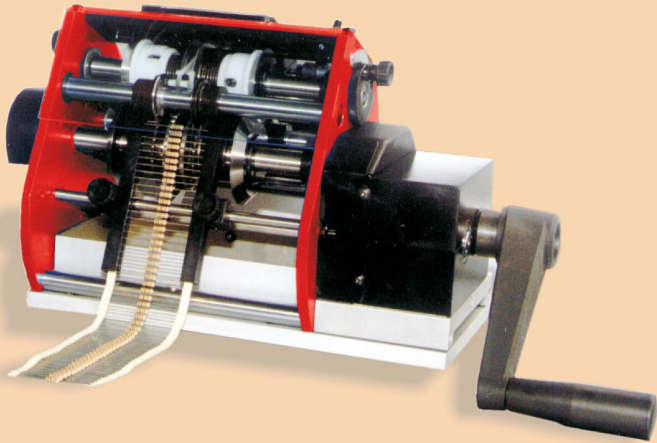
Setting of the pin distance: 7 - 24mm (0.3" - 0.9")

**7804.711** PINS Aligner, 7-24mm with press (P)

**7804.712** PINS Aligner, 7-24mm without press (P)



# SUPERFORM-AF



The SUPERFORM/AF is a machine designed to cut, bend and preform axial components.

An innovatory preforming system, fully mechanic, allows the rotation of the central feed to stop while two preforming assemblies grip the component leads and preform the leads according to the chosen dies.

The components are in this way first cut and "U" bent to the dimensions previously set and then the preforming is made.

The cutting and bending parameters as well of the position of the preform are fully adjustable. Different forms can be obtained with this machine, through the easy substitution of the two preforming dies.

It is also possible to exclude part of the preforming operation to obtain the cutting and "U" bending only.

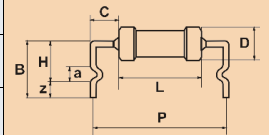
By use of the variable speed Motor Drive Unit working can be automatic and the production rate can be increased.

Production rate: up to 7000 pcs/hour

## STAND OFF

Dimensions in mm (\* can increase, according to the component diameter)

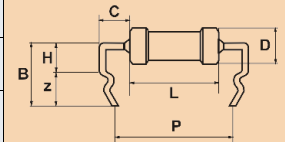
mod. (assembly die)	version	P		L	C	H		B		d		D	a	z	
		min	max	max	min	min	max	min	max	min	max	max		min	max
7915.095 (420.800)	standard	10.5	61	50	1.2	6*	9	8*	11	0.5	0.8	8	2.5	2	4
7915.095 (420.750)	standard	10.5	61	50	1.2	6.5*	9.5	8.5*	11.5	0.6	0.9	8	3	2	4
7915.096 (420.750)	reinforced	10.5	61	50	1.5	7*	12	9*	14	0.8	1	8	3	2	4
7915.097 (430.700)	extra reinforced	13	61	50	2.5	11*	16	13*	18	1	1.3	8	4	2	4



## STAND OFF - LOCK IN

Dimensions in mm (\* can increase, according to the component diameter)

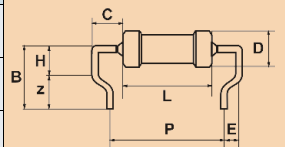
mod. (assembly die)	version	P		L	C	H		B		d		D	z	
		min	max	max	min	min	max	min	max	min	max	max	min	max
7915.095 (420.850)	standard	10.5	61	50	1.2	4.5*	8	7.5*	11	0.5	0.8	8	3	4
7915.095 (420.950)	reinforced	10.5	61	50	1.2	4.5*	8	7.5*	11	0.6	0.9	8	3	4.5
7915.096 (420.950)	reinforced	10.5	61	50	1.5	5.5*	11	8.5*	14	0.8	1	8	3	4.5



## STAND OFF - REDUCED PITCH

Dimensions in mm (\* can increase, according to the component diameter)

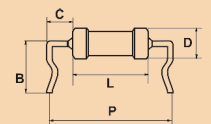
mod. (assembly die)	version	P		L	C	H		B		d		D	z		E
		min	max	max	min	min	max	min	max	min	max	max	min	max	max
7915.095 (420.900)	standard	8	59	50	1.2	5*	9	7*	11	0.5	0.9	8	2	4	1.27
7915.096 (420.900)	reinforced	8	59	50	1.5	6*	12	8*	14	0.8	1	8	2	4	1.27
7915.097 (430.900)	extra reinforced	10.5	59	50	2.5	9*	16	11*	18	1	1.3	8	2	4	1.27



## BODY LOCKED ON PCB

Dimensions in mm (\* can increase, according to the component diameter)

mod. (assembly die)	version	P		L	C	B		d		D
		min	max	max	min	min	max	min	max	max
7915.095 (421.000)	standard	10.5	61	50	1.2	5	8	0.5	0.8	8



7915.095 SUPERFORM/AF standard, without preforming die  
 7915.096 SUPERFORM/AF reinforced, without preforming die  
 7915.097 SUPERFORM/AF extra reinforced without preforming die  
 7915.185 Tape Reel Holder arm BR6 for SUPERFORM  
 7915.032 Motor Unit for SUPERFORM/AF, 230V- 50/60Hz  
 7915.033 Motor Unit for SUPERFORM/AF, 115V- 50/60Hz  
 7915.184 Loose Component Feeder CS40 for SUPERFORM/AF

420750 STAND-OFF preforming die assembly, curl 3mm  
 420800 STAND-OFF preforming die assembly, curl 2.5mm  
 420850 STAND-OFF/LOCK-IN pref. die assembly (d:0.5 - 0.8)  
 420900 STAND-OFF/REDUCED PITCH pref. die assembly  
 420950 STAND-OFF/LOCK-IN pref. die assembly (d:0.6 - 1)  
 421000 BODY LOCKED ON PCB preforming die assembly  
 430700 STAND-OFF preforming die assembly (d:1-1,3mm)  
 430900 STAND-OFF/REDUCED PITCH (d:1-1,3mm)

## LOW-COST PREFORMING MACHINES

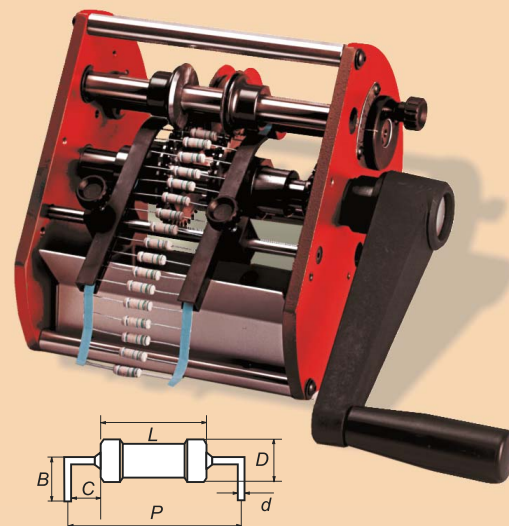
Economic, manual machines, designed for small productions. These machines can not be motorized, the "Tape reel holder" model BR6 (page 7 of the catalog) can be applied

SUPERFORM/A-LC is a machine made for cutting and bending axial taped components, it is extremely compact and sturdy and its main characteristic is to form components with rheophore up to 1.4 mm

Its tracking wheels are adjustable independently to allow rapid setup at different forms.

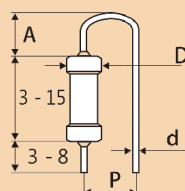
mod.	version	B		P		C	D	d		L
		min	max	min	max			min	max	
7915.200A	standard	4	13	6.5	60	1.2	16	0.4	1.3	50
7915.200D	reinforced bending knives	5	13	10.5	60	2.4	16	0.6	1.4	50
7915.200F	reduced cutting length reduced bending length	4	13	5	60	0.8	10	0.4	0.8	50
7915.200G	like "F" + fixed pitch	4	10	5	-	0.5	4	0.4	0.6	3.5

### SUPERFORM/A-LC

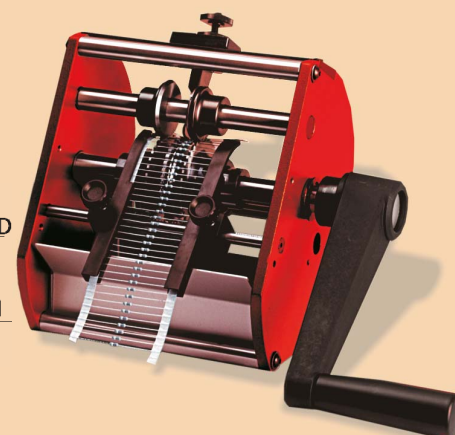


SUPERFORM/V-LC is a machine made for cutting and bending axial taped components for vertical mounting.

Mod.	P	d		A		D
	fix	min	max	min	max	max
7915.201B (standard)	2.54	0.5	0.8	2	6	3
7915.201C	3.8	0.5	0.8	2.5	6	5
7915.201D	5.08	0.5	0.8	3	7	8
7915.201E	7.62	0.5	0.8	4	7	10
7915.209A	3.8	0.8	1.3	4	9	5
7915.209B	5.08	0.8	1.3	5	9	8
7915.209C	7.62	0.8	1.3	6	9	10

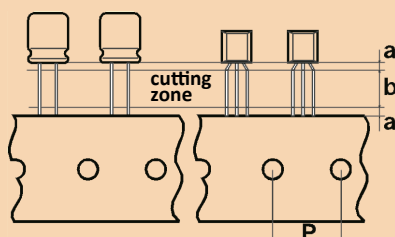


### SUPERFORM/V-LC



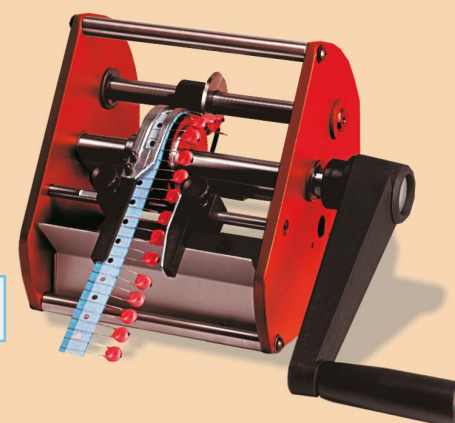
SUPERFORM/R-LC is a machine made for cutting radial taped components such as capacitors, transistors and stand-off resistors.

	a	b	d	D
Min mm	2	-	0.4	-
Max mm	-	8	1	14

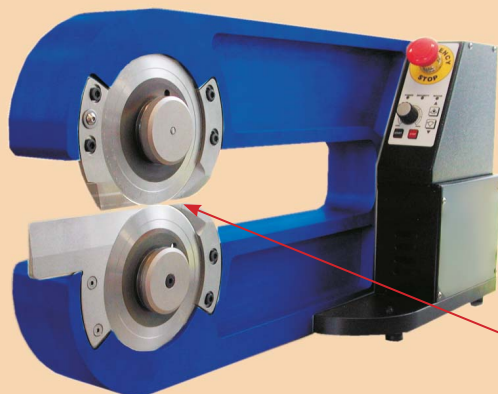


7915.213A (standard) P=12.7mm  
7915.213B P=15mm

### SUPERFORM/R-LC



## TRACTOR



TRACTOR depaneling machine separates the prescored PCB, in a very quick and economic way. The compact and stable aluminium frame requires a minimum space.

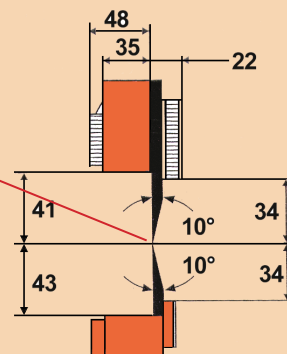
The assembled PCB panel is shoved between the circular blades and is thereby separated.

The circular blades and guides are made of special steel to ensure a long time life.

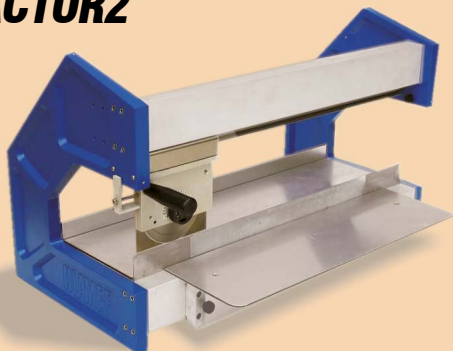
The hand model is suggested only for small productions.

Separation length: up to 350mm  
Thickness of panels: 0.8 ÷ 3.2mm  
Maximum components's height: 34 ÷ 43mm

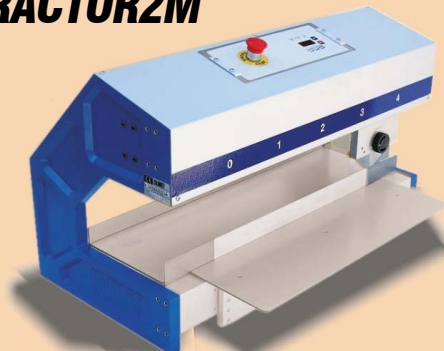
- 7915.580** TRACTOR - PCB Hand depaneling machine
- 7915.582** TRACTOR - PCB Motorized depaneling machine 230V
- 7915.583** TRACTOR - PCB Motorized depaneling machine 230V/Titan blades



## TRACTOR2

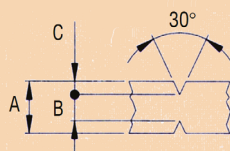


## TRACTOR2M

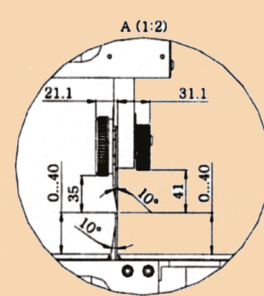
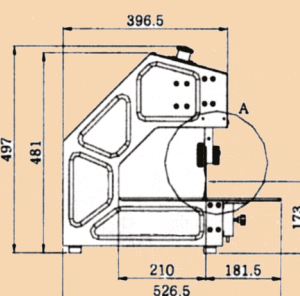
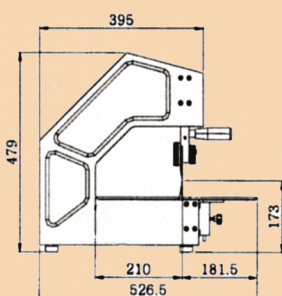
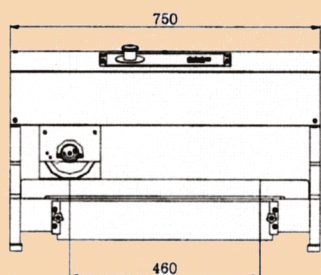


TRACTOR 2 separates both small and large pre-scored PCBs, the maximum separation length is 450mm. The PCB is placed with its pre-scored groove onto the linear blade and the circular blade is then drawn by hand, or by motor, across the PCB. The clearance between the upper circular blade and the lower linear blade is adjustable.

	a	b	c
Min. mm	1	0.3	0.25
Max. mm	3.2	0.8	-



A = 1.0 ÷ 3.2 mm  
B = min. 0.3 mm  
max. 0.8 mm  
C = min. 0.25 mm



- 7915.560** TRACTOR 2 - PCB Hand depaneling machine
- 7915.564** TRACTOR 2M - PCB Motorized depaneling machine 230V

**TRACTOR-MILL 2** The Tractor Mill 2 depaneling machine mills the routed tabs with the same quality of an automatic system at a lower costs. The key feature of this machine is the easy and quick change of the milling cutter and the interchangeable rail (patented).

This rail is useful to assist the operator to place and drag the circuit until the cut is complete. The particular shape of the rail avoids any damages to the assembled circuit: if the operator inserts it incorrectly it will not match the eyelet. This rail gives a total protection against possible accidents under safety rules.

This manual depaneling machine has an integrated electric vacuum cleaner system therefore it's easy to place it in every working area. It has been designed and realized to solve stress problems, break or tearing out of the PCB's fibers that often occur using standard blades or manual tools and that are not tolerated with the increasing complexity and miniaturization.

#### Technical features:

Aspiration: single phase turbine

Weight: 55 Kg

Mains Supply: 230V/50Hz

Power: 900W

Depression: -17 kPa (-170 mBar) / -15 kPa (-150 mBar)

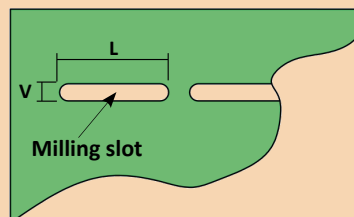
PCB thickness: Max 4mm

Slot length (L): Min 11mm

Slot width (V): Standard 1.0 - 3.175mm

Slots / component distance: min. 1mm

PCB material: FR4, CEN, (Al - with optional cutter).



**7915.591** TRACTOR-MILL2 depaneling machine with pedal

- 1-** Choose the right mill: 1.5 - 2.5mm  
Choose the right rail



- 2-** Move the PCB array towards the mill



- 3-** The mill removes the PCB's tabs



## GOSMOKE

**7820.001**



The GOSMOKE exhaustor is a convenient and economical solution to the fumes associated with soft soldering. Fumes close to the worker are drawn in, filtered and direct towards the ceiling where supplementary ventilation can be eventually provided. The GOSMOKE is equipped with an axial fan and a cellular activated filter, which filters out some of the colophony, tin and lead vapours contained in the fumes. The filter should be replaced every 100 working hours.

#### Table model:

This portable suction unit is light, space saving and quiet, by using the adjustable support the exhaustor can be hung above the work table at different heights and tilted at different angles.

#### Technical features:

Power: 20 W

Air volume: 130 m<sup>3</sup>/h

Noise: 45 dB(A)

The GOSMOKE is supplied with 4 spare filters.

- 7820.001** Exhaustor 230V (table model)  
**7820.003** Set of 4 spare filters  
**7820.004** Adjustable support for table model

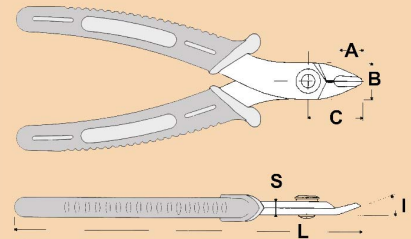











## Cutting nippers

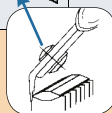
Specially developed for the electronic, these tools are made out a special carbon steel, with elastic, ergonomic PVC handles, in two versions:

- 1) ESD black ( $10^6 - 10^9 \Omega$ )
- 2) INSULATING orange

A patented safety clip to prevent the cut lead to spring out dangerously is available.



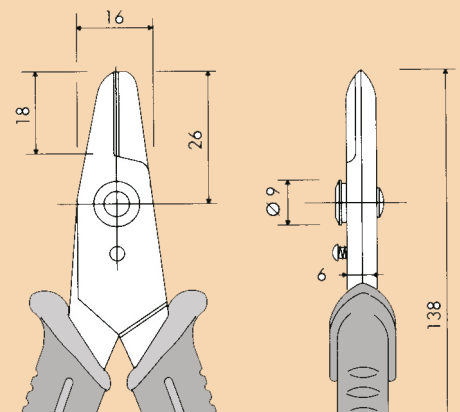
USE	TYPE OF CUT	WT	dia.max Copper wire		DIMENSIONS						CODE	HANDLES		SAFETY CLIP
		gr.	mm	AWG	A	B	C	S	L	I		ESD black	ISOLANT orange	
<b>Normal</b> For lead diameter to 1mm	Clean cut 	60	1,02	18	8	13,5	20	5	138	21°	TRE 03 NB TRE 03 AB TRE 03 NBD TRE 03 ABD	• • • •	• •	• •
<b>Normal</b> For lead diameter to 1,3mm	Clean cut 	65	1,30	16	8	13,5	20	5	128	21°	TR 30 TR 30 A TR 30 D TR 30 AD	• • • •	• •	• •
<b>Normal</b> with 45° bending nose for lead diameter to 1,3mm	Clean cut 	65	1,30	16	8	13,5	20	5	128	45°	TR 2550 TR 2550 D	•	•	
<b>Normal</b> for lead diameter to 2mm	Clean cut 	75	2,05	12	8	13,5	20	6	128	21°	TR 58 R TR 58 RA TR 58 RD TR 58 RAD	• • • •	• •	• •
<b>Heavy</b> for lead diameter to 2,5mm	Blunt cut 	100	2,59	10	12	16,5	25	6	148	21°	TRR 58 TRR 58 A TRR 58 D TRR 58 AD	• • • •	• •	• •
<b>Micro</b> for lead diameter to 0,8mm	Clean cut 	45	0,81	20	8	9,5	18	4	118	21°	TR 20 M TR 20 MA TR 20 MD TR 20 MAD	• • • •	• •	• •
<b>Micro</b> for lead diameter to 1mm	Clean cut 	60	1,02	18	8	10	18	5	128	21°	TR 25 P TR 25 PA TR 25 PD TR 25 PAD	• • • •	• •	• •
<b>Micro</b> with 48° bending nose for lead diameter to 0,6mm	Clean cut 	45	0,64	22	8	9,5	18	4	118	48°	TR 2050 M TR 2050 MD	•	•	
<b>Micro</b> reversed cut with 48° bending nose specially developed for IC leads	Clean back cut 	45	0,64	22	8	9,5	18	4	118	48°	TR 20 TM TR 20 TMD	•	•	



## Shears

An easy-handly shear, designed for the electronic. Copper wire: max. diameter 1,63 mm (14AWG)

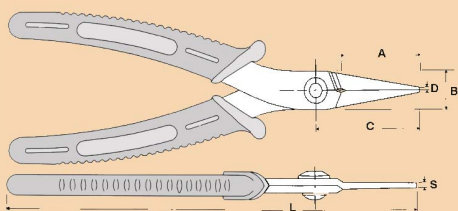
**CS 30** PVC handles  
**CS 30 D** Black dissipative ESD handles ( $10^6 \div 10^9 \Omega$ )



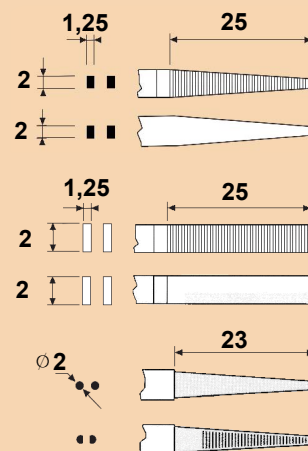


## Pliers

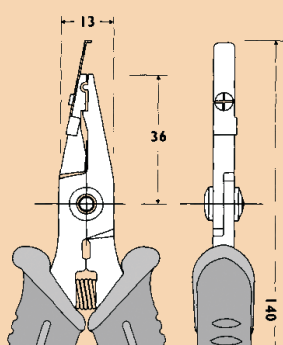
Professional pliers developed for the electronics industry.  
Short, long, rounded pliers, with smooth or serrated nose.  
Extension D is for the Black Dissipative PVC handles ( $10^6$ - $10^9 \Omega$ )



	A	B	C	D	S	L	Peso gr.
PN 5005 PN 5005 D	25	13	36	1,3	2	140	97
PN 5006 PN 5006 D	25	13	36	1,3	2	140	97
PN 5007 PN 5007 D	25	13	39	1,3	5	140	97
PN 5008 PN 5008 D	25	13	39	1,3	5	140	97
PN 5025 PN 5025 D	23	13	32	2	2	138	95
PN 5025 Z PN 5025 ZD	23	13	32	2	2	138	95



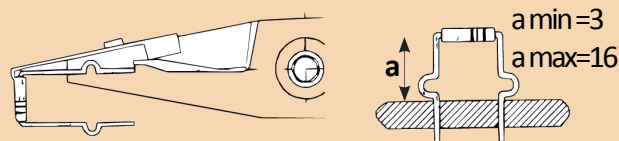
## PREFORMING WITH CURL



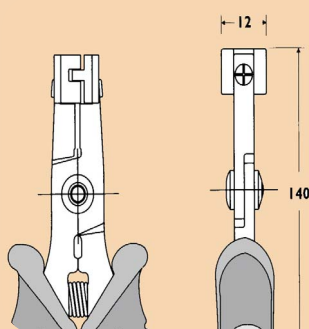
Professional tool specially designed to cut and preform components in a single operation. Variable length by means of an adjustable stop.

Max. diam.: copper lead 1mm/18AWG

**PNR5000D** black dissipative ESD handles ( $10^6$ - $10^9 \Omega$ )

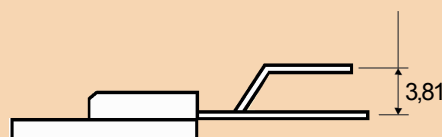


## PREFORMING T0220

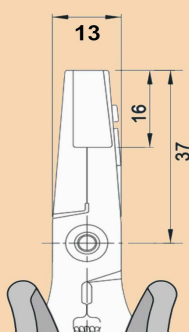


Professional tool specially designed to preform with central lead out of 3.81mm

**PN5050/17D** black dissipative ESD handles ( $10^6$ - $10^9 \Omega$ )



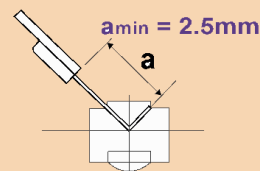
## PREFORMING AT 90°



Professional tool specially designed to preform components at 90°.

Max. diam.: copper lead 1mm/18AWG

**PN5040/7D** black dissipative ESD handles ( $10^6$ - $10^9 \Omega$ )



## PRECISION SCREWDRIVERS

Free cap rotation



Chrome-Molybdenum-Vanadium alloy, with a black tip

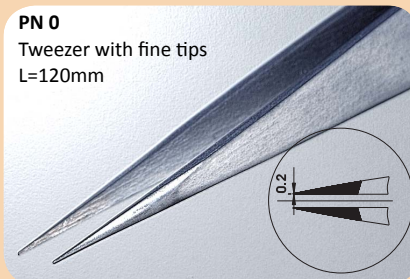
	PVC	Dissipative	Dimensions
<b>SLOT</b> 	PG1-0	PG1-0-D	1,2x60
	PG1-1	PG1-1-D	1,5x60
	PG1-2	PG1-2-D	1,8x60
	PG1-3	PG1-3-D	2,5x75
	PG1-4	PG1-4-D	3,0x100
	PG1-5	PG1-5-D	3,0x150
<b>PHILLIPS</b> 	PG2-0	PG2-0-D	PH000 2,5x60
	PG2-1	PG2-1-D	PH00 2,5x60
	PG2-1/75	PG2-1/75-D	PH00 2,5x75
	PG2-2	PG2-2-D	PH0 3,0x60
	PG2-2/75	PG2-2/75-D	PH0 3,0x75
	PG2-2/100	PG2-2/100-D	PH0 3,0x100
	PG2-2/150	PG2-2/150-D	PH0 3,0x150
<b>TORX</b> 	PG4-0X	PG4-0X-D	Tx5x50
	PG4-0	PG4-0-D	Tx6x50
	PG4-1	PG4-1-D	Tx7x50
	PG4-2	PG4-2-D	Tx8x60
	PG4-3	PG4-3-D	Tx9x60
	PG4-4	PG4-4-D	Tx10x60
	PG4-5	PG4-5-D	Tx15x60
<b>TAMPER RESIST</b> 	PG5-0X	PG5-0X-D	TRx5x50
	PG5-0	PG5-0-D	TRx6x50
	PG5-1	PG5-1-D	TRx7x50
	PG5-2	PG5-2-D	TRx8x60
	PG5-3	PG5-3-D	TRx9x60
	PG5-4	PG5-4-D	TRx10x60
	PG5-5	PG5-5-D	TRx15x60

## TWEEZER

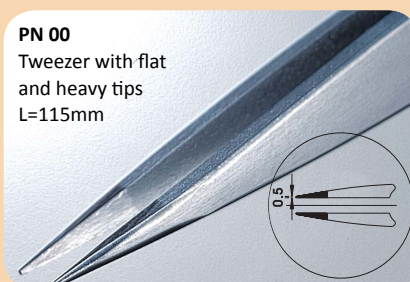
Precision tweezers made out of high quality steels, meet with the standards of the electronic industry. Further models upon request.

### STANDARD

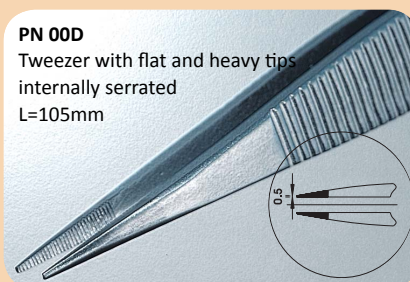
**PN 0**  
Tweezer with fine tips  
L=120mm



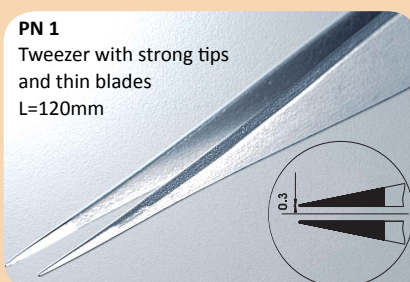
**PN 00**  
Tweezer with flat and heavy tips  
L=115mm



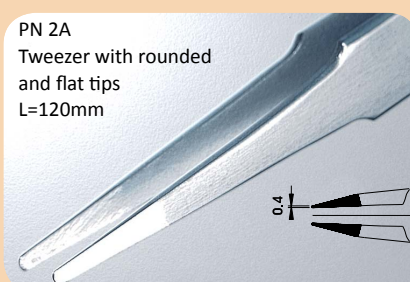
**PN 00D**  
Tweezer with flat and heavy tips internally serrated  
L=105mm



**PN 1**  
Tweezer with strong tips and thin blades  
L=120mm

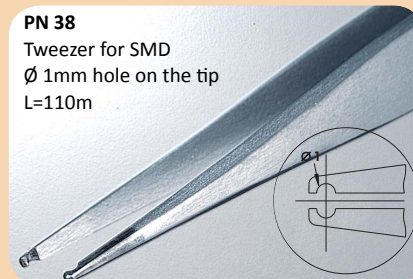


**PN 2A**  
Tweezer with rounded and flat tips  
L=120mm

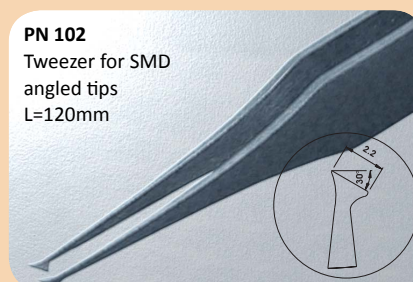


### SMD

**PN 38**  
Tweezer for SMD  
Ø 1mm hole on the tip  
L=110mm



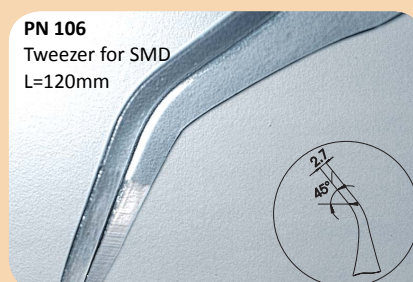
**PN 102**  
Tweezer for SMD angled tips  
L=120mm



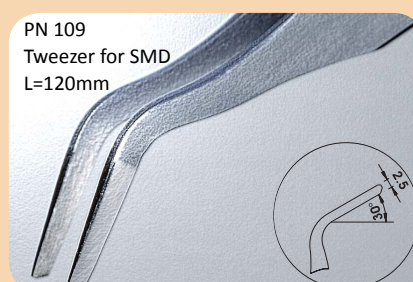
**PN 105**  
Tweezer for SMD  
L=120mm



**PN 106**  
Tweezer for SMD  
L=120mm



**PN 109**  
Tweezer for SMD  
L=120mm



## HIGH TEMPERATURE ADHESIVE TAPES

Polyimide adhesive tape ideal to protect contacts on the boards during the wave soldering, or other high temperature production processes. Silicone adhesive protection without leaving a residue

Length: 33m  
Diameter: 75mm  
Thickness: 0.06mm (2.3mil)  
Temperature: 260°C maximum



- 7807.185** HIGH TEMP. TAPE 6mm x 33m
- 7807.186** HIGH TEMP. TAPE 9mm x 33m
- 7807.187** HIGH TEMP. TAPE 12mm x 33m
- 7807.189** HIGH TEMP. TAPE 19mm x 33m
- 7807.190** HIGH TEMP. TAPE 25mm x 33m
- 7807.191** HIGH TEMP. TAPE 40mm x 33m
- 7807.192** HIGH TEMP. TAPE ESD 6mm x 33m
- 7807.193** HIGH TEMP. TAPE ESD 9mm x 33m
- 7807.194** HIGH TEMP. TAPE ESD 12mm x 33m
- 7807.196** HIGH TEMP. TAPE ESD 19mm x 33m

## SOLDER MASKING PASTE

It is a good quality latex compound, ESD safe, designed to protect parts of the PC boards during the soldering production processes. Once cured, the paste will not lift or separate during soldering, it is exceptionally cohesive, generally peeling off in one piece. It is also suitable for use as a conformal coating.

Mask can be applied using robotic, pneumatic, hand applicators, brush and template screening.

Curing at normal temperature: 40 to 60 min  
Curing at 60°C: 15 to 25 min  
Colour: white  
Smell: light ammonia  
Resistance  $R_s$  &  $R_v$ :  $<10^{10} \Omega$   
Shelf life at 22°C: 6 months



- 7805.915** Solder masking paste - 250g squeeze bottle
- 7805.918** Solder masking paste - 5kg in plastic

## SOLVENT CLEANING



Safe and effective cleaning of electronic and electrical components, screens and stencils, specially designed to remove most flux residues including "no-cleans" after touch-up and rework applications. Safe to use on most plastics and rubber, this solvent dries extremely quickly and leave no residues.

Cleaning: by immersion or with brush  
Composition: hydrocarbon solvent blend, aliphatic alcohol and methylal.  
Flash point: -21°C (highly flammable)

- 7805.929** Electronic cleaning solvent - 1litre can
- 7805.930** Electronic cleaning solvent - 5litre can

## BRUSHES

Conventional brushes can generate high charges in use, they are therefore unsuitable for cleaning ESD sensitive assemblies. Nonetheless it is necessary to remove solder flux and other dirt particularly in SMD assembly where there are high densities of components.

A range of conductive brushes allows thorough cleaning without the risk of generating static charges. The brush consists of a conductive plastic handle and conductive fibres.

Resistance from the tip of the brush to the handle is less than  $1 \times 10^8 \Omega$ .

Brushes should be used by operators who are earthed. Hard brushes are for scrubbing whilst soft ones are for brushing of delicate items such as optics and diskettes.



- 7807.296** Hard brush 20x70mm (open nail type)
- 7807.298** Hard block 40x150mm (closed nail type)
- 7807.301** Hard brush 9x32mm
- 7807.302** Flat hard brush 12mm
- 7807.304** Flat hard brush 25mm
- 7807.308** Flat soft brush 100mm
- 7807.310** Flat soft brush with handle 130mm

## STICKY MAT FOR CLEAN ROOMS

Numbered Multilayer Dissipative Sticky Mats, for progressive removal when dirty.

The special adhesiveness ensures collecting of dust and particles of shoe soles and cartwheels by passing over the mat.

It should be placed where cleanness is required.

**7807.350** Multilayer Dissipative Sticky Mat with 30 layers  
Dimensions: 660x1140mm



## SILICON STICKY ROLLER FOR CONTAMINATION REMOVING

The silicon sticky roller is an hand-held device for cleaning films, panels, work surfaces, walls, glass, and it is useful in cleanroom environments too. It will pick up particles from any flat surface without damaging the surface or leaving anything behind. Once the roller has been applied to the surface it is rolled over a special adhesive pad that removes the debris, leaving the roller ready for the next application.

**7913.151** Single cleaning roller dim.: 150mm, with small handle  
**7913.154** Single cleaning roller dim.: 300mm, with small handle  
**7913.158** Spare cleaning roller dim.: 150mm. no handle  
**7913.160** Spare cleaning roller dim.: 300mm. no handle  
**7913.171** DCR-PAD Block of 50 adhesive paper sheets  
dim.: 240x333mm



## SELF-ADHESIVE POLYESTER FILM

Transparent static dissipative, self adhesive Polyester film. It includes a special abrasion resistant coating on one side and a release film on the other side. It can be applied on flat, insulative surfaces.

Point to point resistance:  $10^9\Omega$

Dissipative Polyester film: 100  $\mu$ m thickness

Dissipative acrylic adhesive: 12  $\mu$ m thickness

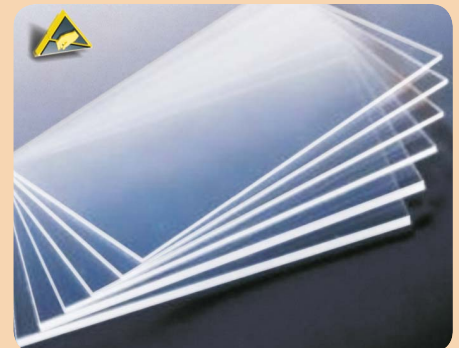
Release Not ESD film: 23  $\mu$ m thickness

**7809.042** Self-adhesive polyester film 1000mm x 100m roll  
Custom size on request



## ESD ACRYLIC PANELS

This clear acrylic sheets are surface coated with an extremely thin and highly abrasion resistant dissipative film which keeps the transparency and the working properties of acrylic sheets unvaried. Equipped with a protection film on both sides to avoid damages during transportation and storage.



**7809.010** ACRYLIC PANEL - Transparent, Dissipative, 1m x 2m x 3mm  
**7809.012** ACRYLIC PANEL - Transparent, Dissipative, 1m x 2m x 5mm  
**7809.014** ACRYLIC PANEL - Transparent, Dissipative, 1m x 2m x 6mm  
**7809.016** ACRYLIC PANEL - Transparent, Dissipative, 1m x 2m x 8mm  
**7809.018** ACRYLIC PANEL - Transparent, Dissipative, 1m x 2m x 10mm  
**7809.022** ACRYLIC PANEL - Transparent, Dissipative, 1.2m x 2.4m x 20mm

Material: Acrylic  
Permanent dissipative coating  
Hardcoated surface,  
resistant to friction damage  
Transparent - Machineable  
Rs:  $10^8$  a  $10^{10}\Omega$

## HAND ESD VACUUM CLEANER

All parts of the fully ESD safe vacuum cleaner are made out of conductive material. It is compact, light and equipped with a carrying belt for easy handling.

It's Fully EPA compliant to IEC61340-5-1 and equipped with thermal cut-out & RFI/EMC filter.

Model **7913.051** is a "BlowVac" = Blower and vacuum cleaner in one.

Dimensions: 31.5 x 12 x 18.5cm

Weight: 2.2kg

Flexible pipe: 1,3m

Power cord length: 6m

Power supply: 220V – 1300W

Dust capacity: 1.2 liter



**7913.050**  
WITH STANDARD ACCESSORIES



**7913.062**



**7913.060**



**7913.066**

- 7913.050** ESD vacuum cleaner
- 7913.051** ESD vacuum cleaner with electronic speed control
- 7913.060** Set of 10 special filterbags
- 7913.062** Micromotorfilter HEPA combined with Electrostatic charged filtermedia.
- 7913.066** Flexible rubber nozzle, 34cm with removable brush

## WASTE PAPER BIN

Waste paper bin made of conductive polypropylene.  $R_s < 10^6 \Omega$

- 7804.406** Waste paper bin, volume 17 litre, ext. dia. 300x330(H)mm
- 7804.405** Waste paper bin, volume 60 litre, ext. 360x360x500(H)mm
- 7804.405C** Cover for waste paper bin 7804.405
- 7804.404** Waste paper bin, volume 120 litre, ext. 400x400x780(H)mm



## ANTISTATIC WASTE BAGS (PACKAGE OF 100PCS)

Made of antistatic polyethylene, 40µm thickness.  $R_s: 10^{11} \Omega$ .

Green colour, printed with black ESD logo

- 7804.408** 30 litre bag (package of 100pcs), to fit **7804.406** bin
- 7804.409** 90 litre bag (package of 100pcs), to fit **7804.405** bin
- 7804.410A** 120 litre bag (package of 100pcs), to fit **7804.404** bin

## RING BINDER AND WALLETS

Static safe Ring Binders and Document Holders made from permanently antistatic materials, an excellent means of storing documents, specifications and drawings in any static sensitive environment.  $R_s: 10^{11} \Omega$  (**7804.400**)

- 7804.413** A4 ESD Opaque Document Pocket with holes (100 pack)
- 7804.414** A4 ESD Crystal Document Pocket with holes (100 pack)
- 7804.423** A3 ESD Document Pocket with holes, portrait (100 pack)
- 7804.400** A4 dissipative Ring Binder - 4 ring 35mm dia., blue



## NEWBOX TOTE-BOX

Conductive polypropylene Tote-Boxes, stackable, in EURO format.  
R<sub>sup</sub> < 10<sup>6</sup> Ω.

CODE	MODEL	EXT. (mm)	INT. (mm)	Vol. (lt)
7804.705	NEWBOX 5	300x200x120	260x160x117	5
7804.706	NEWBOX 6	300x200x147	260x160x144	6
7804.709	NEWBOX 9	300x200x220	260x160x217	9
7804.690	NEWBOX 10	400x300x120	353x260x115	10
7804.687	NEWBOX 14	400x300x170	353x260x165	15
7804.688	NEWBOX 20	400x300x220	353x260x215	20
7804.704	NEWBOX 25	400x300x270	353x260x265	25
7804.689	NEWBOX 31	400x300x320	353x260x317	30
7804.692	NEWBOX 15	600x400x075	553x353x070	14
7804.694	NEWBOX 24	600x400x120	553x353x115	23
7804.693	NEWBOX 33	600x400x150	553x353x145	29
7804.698	NEWBOX 34	600x400x170	553x353x165	33
7804.699	NEWBOX 42	600x400x220	553x353x215	42
7804.696	NEWBOX 50	600x400x236	553x353x231	45
7804.695	NEWBOX 55	600x400x280	553x353x275	54
7804.697	NEWBOX 70	600x400x336	553x353x332	65
7804.685	NEWBOX 80	600x400x420	553x353x415	80
7804.713	NEWBOX 130	800x600x320	756x556x297	130



## ROLLBOX



- 7804.703** 300 x 200 Conductive Cover
- 7804.691** 400 x 300 Conductive Cover
- 7804.700** 600 x 400 Conductive Cover
- 7804.686** Snapping Closure ( 2 /each cover)
- 7804.701** Rollbox - 600x400 Conductive Trolley
- 7804.702** Rollbox (2 wheels with brake)- 600x400 Conductive Trolley

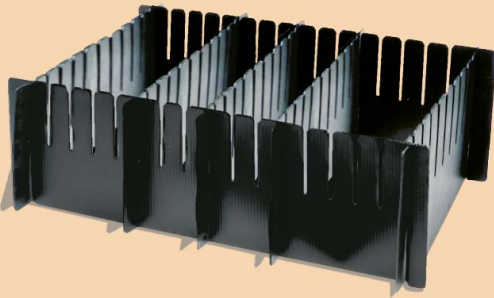
- 7804.923** Spring label holder
- 7804.931** Logo application
- 7806.300** 10mm Conductive Foam FLAT DIVIDER for 600x400 Newbox
- 7806.306** 10mm Conductive Foam FLAT DIVIDER for 300x400 Newbox
- 7806.200** FLAT DIVIDER - Conductive fibreboard 350X550X5 mm for 600x400 Newbox
- 7806.202** FLAT DIVIDER - Conductive fibreboard 350X250X5 mm for 300x400 Newbox
- 7806.201** FLAT DIVIDER - Conductive fluted polypropylene LABEPLAST 350x550x2.5mm for 600x400 Newbox
- 7806.203** FLAT DIVIDER - Conductive fluted polypropylene LABEPLAST 350x250x2.5mm for 300x400 Newbox

**7804.923** Label holder

**7804.931** Any personalized Logo or specific writings can be applied over the boxes, all colours available. A plastic transparent film is thermally impressed over the box side. The result is excellent, long life, at a low cost.

## DIVIPRINT - LABEPLAST DIVIDERS

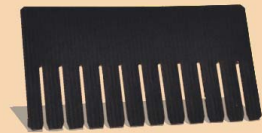
Made from LABEPLAST(extruded conductive polypropylene) sheet, the dividers can be used within CARTONBOX or NEWBOX containers. Other sizes can be made to customer specifications. Our cutting machine cnc knife allows to obtain precise profiles by importing the drawings in cad format (see page 44).



<b>7806.180</b>	LABEPLAST Divider	555 length	100 height	31 pitch , 17 slits
<b>7806.181</b>	LABEPLAST Divider	350 length	100 height	30 pitch , 11 slits
<b>7806.182</b>	LABEPLAST Divider	552 length	155 height	40 pitch , 13 slits
<b>7806.183</b>	LABEPLAST Divider	350 length	155 height	153 pitch , 3 slits
<b>7806.184</b>	LABEPLAST Divider	552 length	182 height	104 pitch , 6 slits
<b>7806.185</b>	LABEPLAST Divider	350 length	182 height	30 pitch , 11 slits
<b>7806.186</b>	LABEPLAST Divider	552 length	200 height	31 pitch , 17 slits
<b>7806.187</b>	LABEPLAST Divider	350 length	200 height	30 pitch , 11 slits
<b>7806.188</b>	LABEPLAST Divider	250 length	200 height	32 pitch , 7 slits
<b>7806.192</b>	LABEPLAST Divider	552 length	300 height	31 pitch , 17 slits
<b>7806.193</b>	LABEPLAST Divider	350 length	300 height	30 pitch , 11 slits

## DIVIPRINT - IN CONDUCTIVE CORRUGATED BOARD

<b>7806.211</b>	Type C DIVIDER	length 555 height 100	pitch 19, 28 slots
<b>7806.215</b>	Type D DIVIDER	length 350 height 100	pitch 19, 17 slots
<b>7806.217</b>	Type C DIVIDER	length 552 height 200	pitch 31 17 slots
<b>7806.216</b>	Type D DIVIDER	length 350 height 200	pitch 30, 11 slots
<b>7806.219</b>	Type C DIVIDER	length 552 height 300	pitch 31, 17 slots
<b>7806.218</b>	Type D DIVIDER	length 350 height 300	pitch 30, 11 slots



Type D



Type C

## DIVIPRINT - PLASTIC DIVIDERS

Economical and versatile way to compartmentalise tote-boxes of various dimensions. Ideal for board transport and storage. Made from conductive polystyrene, DIVIPRINT dividers have one division every 15mm, are easy to cut and modify using ordinary scissors.

Material: black conductive polypropylene

Rs:  $<10^5 \Omega$

Temperature range: from 0 to +55 °C

Slit pitch: 15mm

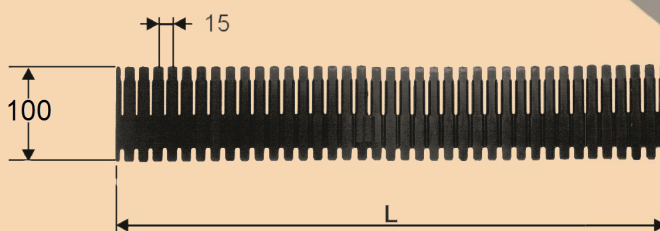
**7806.412** Diviprint L=255mm length

**7806.410** Diviprint L=351mm length

**7806.400** Diviprint L=551mm length



Diviprint L=255mm  
Diviprint L=351mm  
Diviprint L=551mm



## LABERACK - PCBS HANDLING



LABERACK is an adjustable frames that provides a secure method for storage and handling of mounted PCBs or LABEFIX trays.

Material: Static dissipative polypropylene,  $R_s 10^6 \div 10^8 \Omega$

Sidewall dimensions: 480 x 290 x 35 mm.

Intermediate wall dimensions: 470 x 280 x 40 mm.

Connecting rail: section: 30 x 15 mm.

Number of storage channels: 79

Distance between channel centres: 5 mm.

Maximum PCB thickness: 2.3 mm max.

Channel depth: 4 mm.

Stainless-steel stiffening rib.

Bolts and screws included with sidewalls and intermediate walls.

To give the exact length of connecting rail add to the board width 20 mm. for each sidewall and 6 mm for intermediate wall

**7804.007** Sidewall in black dissipative polypropylene +70°C

**7804.017** Intermediate wall in black dissipative polypropylene +70°C

**7804.002** Aluminium connecting rail (length cut to max 3m)

**7804.021** Handle for transport (rail fixing)

**7804.025** Bag of 40 spare screw and bolts

**7804.040** Clips for sidewall (with labels)  
(package of 100)

**7804.041** Clips for intermediate wall (with labels)  
(package of 100)

## MINILABERACK

Safe storage and transport system for PCBs from assembly through testing. Easy snap-together modular system to increase storage capacity. The racks are made from black static dissipative polypropylene

Material: Static dissipative polypropylene,  $R_s 10^5 \div 10^8 \Omega$

Distance between channel centres: 6mm

Maximum PCB thickness: 3.8mm

Channel depth: 3mm

Number of storage channels: 44

Side wall: dimensions: 300 x 170 x 21 mm

Connecting rail: section 37 x 9 mm

Connecting rails cut to length (max. 3m)

To give the exact length of connecting rail add to the board width 18mm for each sidewall

**7804.052** Sidewall black dissipative

**7804.060** Aluminium connecting rail

**7804.072** Flat slide black conductive

**7804.075** Bag of 40 spare nuts and bolts

## DEPOPRINT

Made from black conductive polystyrene, the DEPOPRINT system accommodates various board dimensions throughout storage, production and despatch. Fits plastic containers type Newbox or other 300x400 and 600x400mm standard Euro boxes. Two different sidewall sizes that slide along two parallel aluminium connecting rails 95mm high (length cut to max 3m).

Material: black conductive polystyrene

$R_s < 10^5 \Omega$

Temperature range: from 0 to +55 °C

Number of slots: 32

Distance between slot centres: 10 mm

Maximum thickness of the board: 2.3 mm

Depth of the slots: 2.3 mm

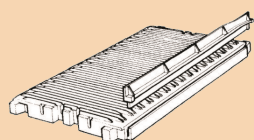
**7804.751** DEPOPRINT Sidewall 209 mm (H)

**7804.760** Aluminium Connecting Rail 95x553 mm

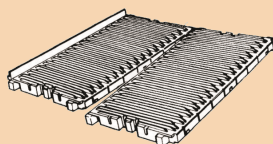
**7804.762** Aluminium Connecting Rail 95x250 mm

**7804.765** Aluminium Connecting Rail 95 mm (H)

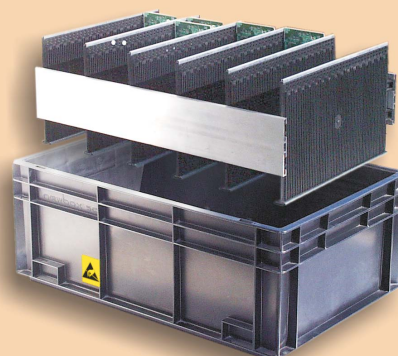
**7804.759** Insertion Stop



Snap-on insertion of back-stop



Snap-on insertion for sidewall



## LABESERT 10

Made in conductive polypropylene, LABESERT racks are suitable for automatic PCB insertion machines. Channel pitch: 10mm  
Walls and terminal plates made by conductive plastic (60°C)  
PCB adjustment: from 40 to 260mm  
Side Guide Slot: depth 3.5mm - width 7mm



**7804.110**

**7804.110** LABESERT 10 Rack dim. 315x355x575(H)mm  
**7804.110R** LABESERT 10R Rack dim. 315x355x575(H)mm  
(with two lateral stiffening metal plate)

## LABEFIX - PCB ASSEMBLY

LABEFIX trays are used for component insertion before wave soldering of the PCBs. A special foam gently holds the leads until the PCB is removed for wave soldering. The foam doesn't crumble, or pollute and has a very long life.

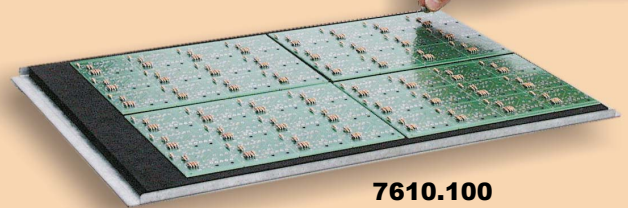
Material: zinc plated material base - conductive polyethylene closed cell (cross linked foam density ISO 845 60Kg/m<sup>3</sup> thickness 7mm )

Weight: 1Kg

Standard tray 530x330x8mm with foam

(other dimensions on request)

Only foam 500x327x7mm

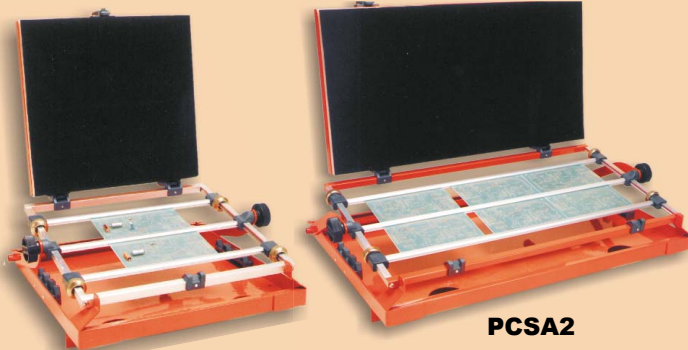


**7610.100**

**7610.100** Standard tray 530x330x8mm with foam  
(other dimensions on request)

**7610.110D** Only foam 515x327x7mm

## PCB ASSEMBLY FIXTURES



**PCSA1**

**PCSA2**

A professional line of assembly jigs for PCB's, designed to simplify placing and soldering of electronic components.

PCSA1,2,4 are supplied with central and two sliding rails as standards. Additional rails may be added to accommodate a larger number of small boards.

The frame and lid assembly may be detached from the mounting base. After mounting the components on the PCB's, the foam back lid is attached and closed, and the whole assembly is lifted and rotated for soldering.

An ingenious design of the base permit an adjustable working angle on both side of the PCB's.

The jig is varnished steel, and the component pressing foam is in conductive material.

**7915.599** PCSA1 PCB's holder, max. working dimensions 270 x 220mm  
**7915.601** PCSA2 PCB's holder, max. working dimensions 500 x 220mm  
**7915.605** PCSA4 PCB's holder, max. working dimensions 500 x 350mm  
**7915.610** Additional sliding rail for PCSA1  
**7915.612** Additional sliding rail for PCSA2 and PCSA4

## LABETRAY - PCB HOLDERS

Made from black conductive polypropylene, LABETRAY have multiple uses in the static free environment, as holding the PCBs during assembly, testing and rework.

**7804.130** Conductive L-shaped LABETRAY dimensions: 208x272x93mm  
**7804.132** Conductive L-shaped LABETRAY dimensions: 355x268x128mm  
**7804.134** Conductive flat LABETRAY - 25 slots dimensions: 490x180x50mm



**7804.134**



**7804.132**

## SMD SPOOL RACKS



**7805.703** ITECO rack for spools dia. 180-330mm external dimensions 395 x 250 x 110(H)mm Movable wire dividers (10 pcs included, 20 pcs capacity) moulded in conductive polypropylene black colour

**7805.704** Movable wire divider for **7805.703**



**7805.692** LICEFA rack for 25 spools max.dia. 220mm external dimensions 450 x 240mm 25 slots with adjustable width ESD vacuum formed, black colour

**7805.696** LICEFA rack for 25 spools max.dia. 330mm external dimensions 450 x 310mm 25 slots with adjustable width ESD vacuum formed, black colour

Zinc plated spool rack, with movable dividers, to lay over tables or inside lockers.

It can house reels from 180 to 330mm diameter



**7805.730** Zinc plated spool rack, 180-330mm reels, 29 slots, length 630mm

**7805.732** Zinc plated spool rack, 180-330mm reels, 49 slots, length 1000mm

**8100.075P** Movable plastic divider for **7805.730** - **7805.732**

It can house reels from 180 to 380mm diameter



**7805.698** TRESTON rack for spools Ø 180 / 220 / 330 / 380mm Dim. 960x426x254(H)mm, made of galvanized steel 15 wire compartments of 60mm width

**F.I.F.O.** Made in LABEPLAST the F.I.F.O.(First-In First-Out) boxes are useful to administrate the smd spools, loading in the higher slot and picking up from the lower.

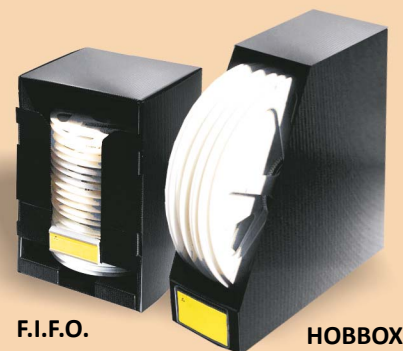
**7805.711** FIFO box for 180mm dia. spools, useful height 160mm

**7805.710** FIFO box for 180mm dia. spools, useful height 280mm

**7805.712** FIFO box for 330mm dia. spools, useful height 280mm

### HOBBOX

The hopper-front conductive boxes, made from LABEPLAST (conductive fluted polypropylene), for a quick and easy removal of the spools, are useful to save space on shelving units. All the models are supplied in flat-pack form for assembly on-site, one label holder in the front side is provided.



F.I.F.O.

HOBBOX

**7805.724** HOBBOX - Hopper front box made from LABEPLAST for 180mm dia. SMD spools, useful width 128mm

**7805.725** HOBBOX - Hopper front box made from LABEPLAST for 220mm dia. SMD spools, useful width 128mm

**7805.728** HOBBOX - Hopper front box made from LABEPLAST For 330mm dia. SMD spools, useful width 128mm

## CONDUCTIVE BOXES

Made of black conductive polypropylene,  $R_s < 10^6 \Omega$ .

- 7804.460 BJ removable lid, 1 hard foam, ins. 34x34x12mm
- 7804.462 BJ removable lid, 1 hard foam, ins. 25x54x14mm
- 7804.464 BJ removable lid, 1 hard foam, ins. 44x56x14mm
- 7804.466 BJ removable lid, 1 hard foam, ins. 32x118x14mm
- 7804.468 BJ removable lid, 1 hard foam, ins. 44x118x14mm
- 7804.470 BJ removable lid, 1 hard foam, ins. 67x117x14mm
- 7804.471 BJ hinged lid, 1hard foam, ins. 34x34x10mm
- 7804.472 BJ hinged lid, 1hard foam, ins. 73x51x16mm
- 7804.474 BJ hinged lid, 1hard foam, ins. 88x63x16mm
- 7804.476 BJ hinged lid, 1hard foam, ins. 108x81x16mm
- 7804.478 BJ hinged lid, 1hard foam, ins. 228x125x20mm
- 7804.480 BJ hinged lid, 1hard foam, ins. 228x125x30mm
- 7804.482 BJ hinged lid, 1hard foam, ins. 228x125x39mm
- 7805.502 Removable lid, without foam ins. 50x30x16mm
- 7805.504 Removable lid, without foam ins. 57x36x17mm
- 7805.508 Removable lid, without foam ins. 80x50x27mm
- 7804.492 MOS1 hinged lid, 1 hard foam, ins. 50x90x16mm
- 7804.496 MOS2 hinged lid, 1 hard foam, ins. 95x160x16mm
- 7805.500 Round with cover ins.diam. 27x13mm, black ESD
- 7805.499 Round with cover ins.diam. 27x13mm, transparent ESD



7805.500

7805.499



7805.502



7804.492

7804.496

## CONDUCTIVE BOXES (with hinges and metal fasteners)



7805.522 int.288x156x16mm



7805.525 with 54 compartments  
each 28x27x15mm

## CASES

A complete range of briefcases made from conductive polypropylene.  $R_s < 10^6 \Omega$



- 8500.200 internal dimensions 170x130x37mm
- 8500.210 internal dimensions 240x170x42mm
- 8500.220 internal dimensions 270x185x76mm
- 8500.240 internal dimensions 375x265x80mm
- 8500.201 with conductive profiled foam int. 170x130x20(about)mm
- 8500.211 with conductive profiled foam int. 240x170x25(about)mm
- 8500.221 with conductive profiled foam int. 270x185x50(about)mm
- 8500.241 with conductive profiled foam int. 375x265x60(about)mm

## CAROUSEL SYSTEM

The basic CAROUSEL system consists of four rotating trays stacked on the top of each other and secured to a stable metal base by a central column. The whole unit can be tilted through 20°.

They can be supplied with diameter 450 or 600mm and are available in black dissipative material ( $R_{\text{sup}} 10^6\text{-}10^9\Omega$ ), or orange non antistatic version. Two different sizes are available: 450mm and 600mm



- 7804.615** Carousel system, 4 trays 450mm dia. Black-ESD
- 7804.620** Carousel system, 4 trays 600mm dia. Black-ESD
- 7804.616** Carousel system, 4 trays 450mm dia. Orange-non ESD
- 7804.621** Carousel system, 4 trays 600mm dia. Orange-non ESD

Standards models have 4 trays, but it is easy to assembly carousels with different heights by means of single trays and of the assembly kit. It is possible to mix different diameter trays on the same kit, because the central hanging part is the same

## CAB - CABINETS

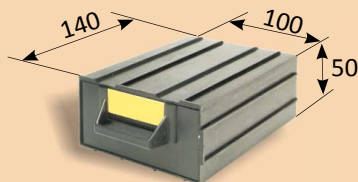
These cabinets provide systematic storage of small parts of components which are ESD sensitive.

Four different bins are combined into one slot-in unit, to make possible various configurations.

External dimension of the unit is 50x100x140mm.



**CAB 3**



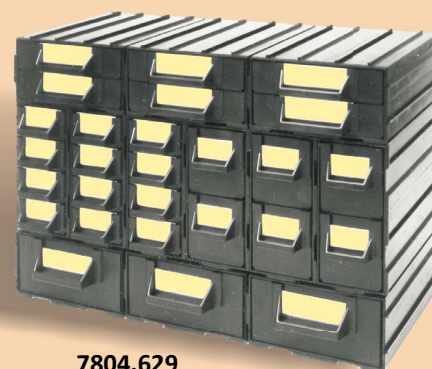
**CAB 4**



**CAB 2**



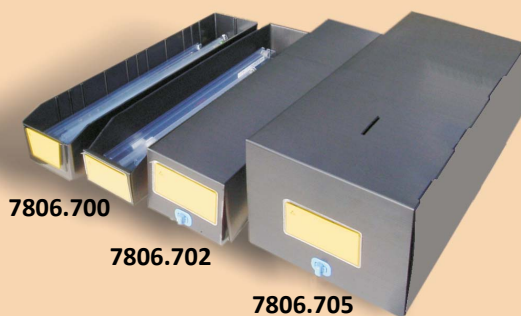
**CAB 1**



**7804.629**

- 7804.625** CAB1 with 4 bins (4 x int.40x20x120mm) Combinable with CAB2
- 7804.626** CAB2 with 2 bins (2 x int.40x42x120mm) Combinable with CAB1
- 7804.627** CAB3 with 2 bins (2 x int.87x20x120mm) Combinable with CAB4
- 7804.628** CAB4 with 1 bin (1 x int.87x42x120mm) Combinable with CAB3
- 7804.629** Complete cabinet with 27 bins (see picture) (12 CAB1 + 6 CAB2 + 6 CAB3 + 3 CAB4)

## DIP TUBES BIN BOXES



**7806.700**

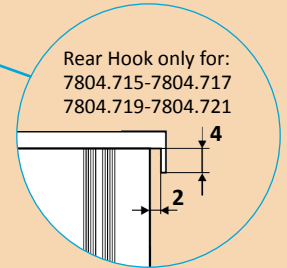
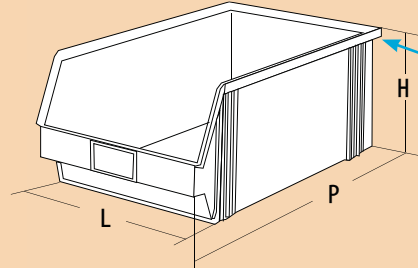
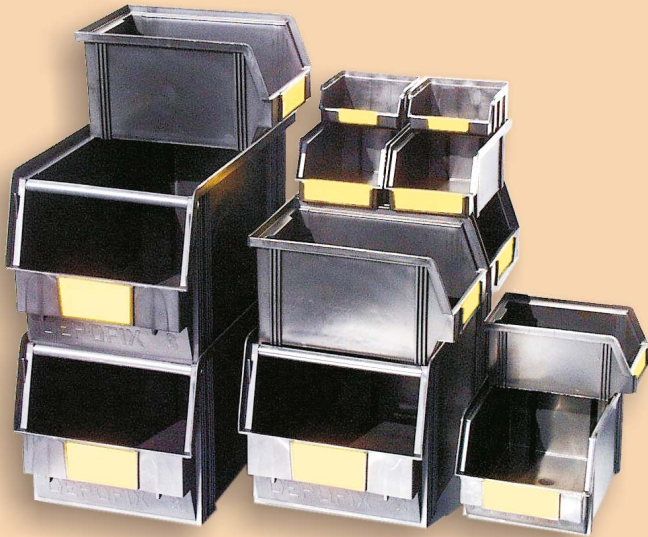
**7806.702**

**7806.705**

- 7806.700** Open stick-container made from LABEPLAST, supplied in flat-pack form ext. 620x112x90(H)mm int. 600x106x87(H)mm
- 7806.702** Closed stick-container made from LABEPLAST, supplied in flat-pack form ext. 630x125x100(H)mm int. 620x120x95(H)mm
- 7806.705** Closed stick-container with divider, made from LABEPLAST, supplied in flat-pack form, ext. 630x230x170(H)mm

## TECOFIX - STACKING BINS

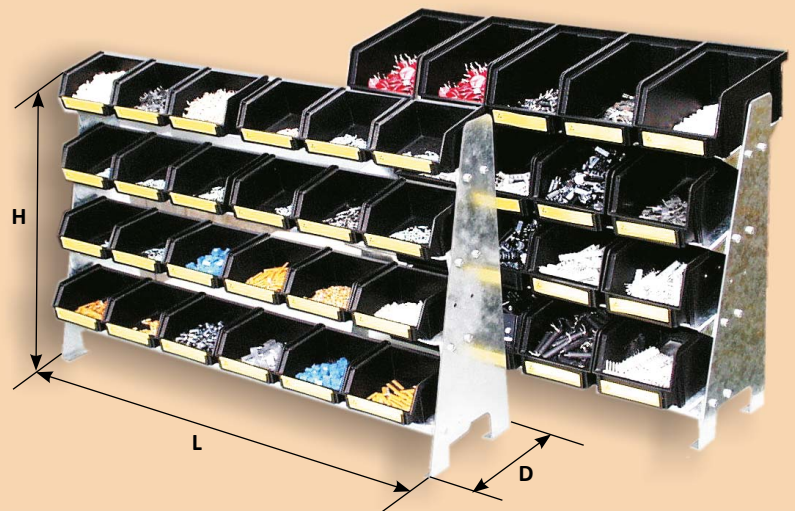
Conductive polypropylene hopper-front containers for storage and distribution of small parts. They are suitable for all known wall rail and for our VISTAFIX assembly stand.



<b>7804.715</b>	Container TECOFIX 6	Dim.: 95(P)x100(L)x50(H)mm ext.
<b>7804.717</b>	Container TECOFIX 6D	Dim.: 95x100x50(H)mm ext. with internal partition
<b>7804.719</b>	Container TECOFIX 5	Dim.: 175x100x75(H)mm ext.
<b>7804.721</b>	Container TECOFIX 4	Dim.: 235x145x125(H)mm ext.
<b>7804.723</b>	Container TECOFIX 3Z	Dim.: 350x200x145(H)mm ext.
<b>7804.725</b>	Container TECOFIX 3	Dim.: 350x200x200(H)mm ext.
<b>7804.727</b>	Container TECOFIX 2	Dim.: 500x300x200(H)mm ext.
<b>7804.728</b>	Yellow label for TECOFIX 6, 6D	Dim.: 79.5 x 15mm
<b>7804.731</b>	Yellow label for TECOFIX 5	Dim.: 79 x 22mm
<b>7804.729</b>	Yellow label for TECOFIX 4,3Z	Dim.: 80 x 31mm
<b>7804.730</b>	Yellow label for TECOFIX 3, 2	Dim.: 81 x 40mm

## VISTAFIX - ASSEMBLY STAND

VISTAFIX zinc plated assembly stands are supplied complete of conductive TECOFIX bins. They are especially suited for PCBs assembly and take a little space on the work table.



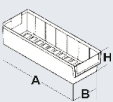
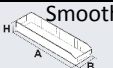
<b>7804.735</b>	Assembly VISTAFIX 4 12 bins size 4	Dim.: L = 630mm, D = 260mm, H = 490mm
<b>7804.737</b>	Assembly VISTAFIX 5 20 bins size 5	Dim.: L = 540mm, D = 230mm, H = 430mm
<b>7804.738</b>	Assembly VISTAFIX 5/L 24 bins size 5	Dim.: L = 650mm, D = 230mm, H = 430mm
<b>7804.739</b>	Assembly VISTAFIX 6 20 bins size 6	Dim.: L = 540mm, D = 160mm, H = 400mm
<b>7804.740</b>	Assembly VISTAFIX 6/L 24 bins size 6	Dim.: L = 650mm, D = 160mm, H = 400mm
<b>7804.741</b>	Assembly VISTAFIX 6D 20 bins size 6D	Dim.: L = 540mm, D = 160mm, H = 400mm

## TRESTON BINS

TRESTON bins made from conductive polypropylene fit all standard shelves with a depth 300,400, 500 and 600mm, some models are also used in the visible storage cabinets.

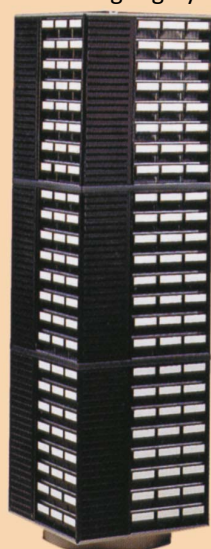
The storage bins have a corrugated base making it easier to pick very small items.



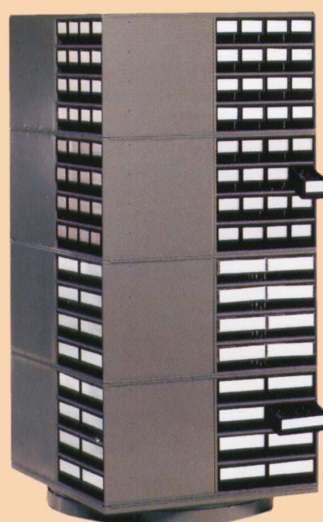
Bin					Dividers (optional)		
Code	Type	Bottom	Outer dim. mm A x B x H	Inner dim. mm A x B x H	Code	Type	Quantity per bin
7804.676	3010	 Corrugated	300x92x82	257x75x70	7804.682	D-10	4
7804.678	3020		300x186x82	257x167x70	7804.684	D-20	4
7804.675	4010		400x92x82	357x75x70	7804.682	D-10	6
7804.677	4020		400x186x82	357x167x70	7804.684	D-20	6
7804.665	4015		400x132x100	357x110x90	7804.683	D-15	6
7804.666	5010		500x92x82	457x75x70	7804.682	D-10	8
7804.668	5020		500x186x82	457x167x70	7804.684	D-20	8
7804.667	5015		500x132x100	457x110x90	7804.683	D-15	8
7804.671	6020		600x186x82	557x167x70	7804.684	D-20	10
7804.669	6015		600x132x100	557x110x90	7804.683	D-15	10
7804.660	L61	 Smooth	170x68x36	150x65x34	7804.662	V-1	5
7804.661	L64		170x90x59	150x86x55	7804.664	V-4	3

## TRESTON STORAGE CARTS AND TURNTABLE ASSEMBLIES

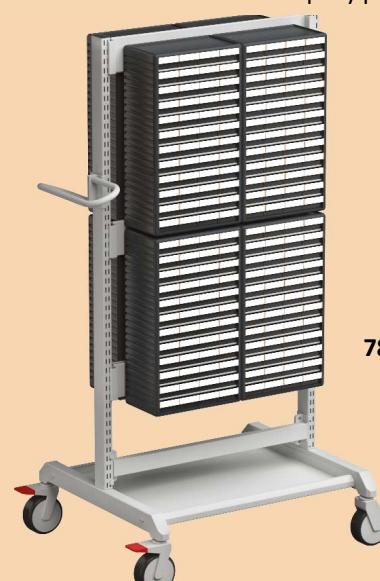
Turntables and carts are supplied empty, the cabinets are ordered separately. Steel parts are of semiconductive epoxy powder coated steel in light gray colour.



7804.648



7804.649



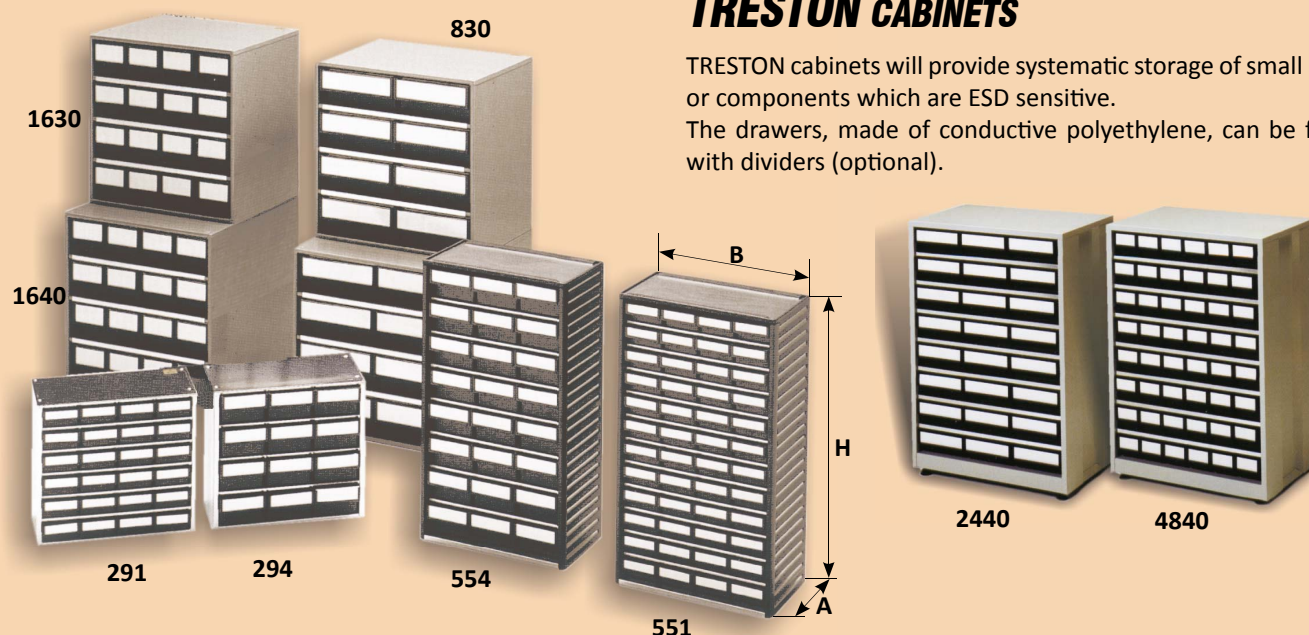
7804.651

7804.648 (12-550)	Turntable 3 layers holds 12 cabinets 551/554.	Dim.500x500x1730(H)mm. Load capacity max. 400kg
7804.649 (16-300)	Turntable 4 layers holds 16 cabinets 0830/1630.	Dim.700x700x1680(H)mm. Load capacity max. 800kg
7804.650 (16-400)	Turntable 4 layers holds 16 cabinets 0840/1640.	Dim.800x800x1680(H)mm. Load capacity max. 800kg
7804.651 (BT-550B)	Double stand trolley holds 8 cabinets 551/554.	Dim.715x780x1600(H)mm. Load capacity max. 150kg

## TRESTON CABINETS

TRESTON cabinets will provide systematic storage of small parts or components which are ESD sensitive.

The drawers, made of conductive polyethylene, can be fitted with dividers (optional).



Code	Type	Frame	Outer dim. A x B x Hmm	Conductive polypropylene bins	Dividers (optional)	
					Code	Type
7804.636	291	Moulded conductive polypropylene	180x300x280	24 x L61	7804.662	V-1
7804.638	294	Moulded conductive polypropylene	180x300x280	12 x L64	7804.664	V-4
7804.640	551	Moulded conductive polypropylene	180x310x550	48 x L61	7804.662	V-1
7804.642	554	Moulded conductive polypropylene	180x310x550	24 x L64	7804.664	V-4
7804.643	0830	Epoxy powder coated steel	300x400x395	8 x 3020	7804.684	D-20
7804.644	1630	Epoxy powder coated steel	300x400x395	16 x 3010	7804.682	D-10
7804.645	0840	Epoxy powder coated steel	400x400x395	8 x 4020	7804.684	D-20
7804.646	1640	Epoxy powder coated steel	400x400x395	16 x 4010	7804.682	D-10
7804.652	2440	Epoxy powder coated steel	410x605x870	24 x 4020	7804.684	D-20
7804.654	4840	Epoxy powder coated steel	410x605x870	48 x 4010	7804.682	D-10

## TRESTON MOVEABLE BENCHES



8104.074



8104.736



8104.730

- 8104.074** ESD Castor set for cabinets 2440 / 4840. 4 castors Ø 100mm, 2 with brakes Load capacity 150kg
- 8104.736** ESD Movable bench CONCEPT H: 650-900mm Worktop 500x700mm 4 castors Ø 100mm, 2 with brakes Load capacity 150kg
- 8104.730** (SAP507+LT507) ESD Moveable bench H:650-900mm Worktop 500x700mm 4 castors Ø 100mm, 2 with brakes, max. 150kg
- 8104.731** (SAP710+LT710) ESD Moveable bench H:650-900mm Worktop 700x1000mm 4 castors Ø 100mm, 2 with brakes, max. 150kg
- PUSH50** Push 50 ESD mobile table handle (8104.730) depth 500
- PUSH70** Push 70 ESD mobile table handle (8104.731) depth 700

## Storage cabinets

LICEFA Cabinets, made of conductive polypropylene, will provide systematic storage of loose SMD components and other small parts. Drawers can be fitted with Vacuum-formed inserts or with cups to give more compartments.

The cabinets, four different sizes, are normally supplied with the following assemblies: mod. **7805.210** with 6 drawers MOD20, mod. **7805.150** with 9 drawers MOD22, mod. **7805.153** with 3 drawers MOD22, mod. **7805.305** with 4 drawers MOD40, mod. **7805.405** with 4 drawers MOD62.

To assemble cabinets with another number of drawers, it is needed one rim-frame for each drawer and one base-foundation for each cabinet. Transparent adhesive labels with exchangeable yellow paper are available in three different size.



**7805.210**

**7805.210** Storage cabinet with 6 drawers MOD20 ext.275 x 250 x 190(H)mm

### Accessories / Spare Parts

**7805.221** Drawer MOD20, internal 261 x 238 x 20(H)mm

**7805.230** Rim-frame MOD20

**7805.236** Base-foundation (1 each cabinet), MOD.20

**7805.240** Label holder with exchangeable yellow label 15 x 55mm

**7805.150** Storage cabinet with 9 drawers MOD22 ext.267 x 355 x 305(H)mm

### Accessories / Spare Parts

**7805.160** Drawer MOD22, internal 340 x 250 x 22(H)mm

**7805.170** Rim-frame, MOD22

**7805.340** Base external 355 x 267mm (1 each cabinet)

**7805.350** Set of 6 inserts for closing the holes on the top-frame

**7805.240** Label holder with exchangeable yellow label 15 x 55mm

**7805.153** Storage cabinet with 3 drawers MOD22 ext.267 x 355 x 105(H)mm

### Accessories / Spare Parts

**7805.160** Drawer MOD22, internal 340 x 250 x 22(H)mm

**7805.170** Rim-frame, MOD.22

**7805.340** Base external 355 x 267mm (1 each cabinet)

**7805.350** Set of 6 inserts for closing the holes on the top-frame

**7805.240** Label holder with exchangeable yellow label 15 x 55mm



**7805.305**

**7805.305** Storage cabinet with 6 drawers MOD40 ext. 267 x 355 x 305(H)mm

### Accessories / Spare Parts

**7805.310** Drawer MOD40, internal 340 x 250 x 40(H)mm

**7805.330** Rim-frame, MOD.40

**7805.340** Base external 355 x 267mm (1 each cabinet)

**7805.350** Set of 6 inserts for closing the holes on the top-frame

**7805.360** Label holder with exchangeable yellow label 15 x 94mm

**7805.405** Storage cabinet with 4 drawers MOD62 ext. 267 x 355 x 310(H)mm

### Accessories / Spare Parts

**7805.410** Drawer MOD62, internal 340 x 250 x 62(H)mm

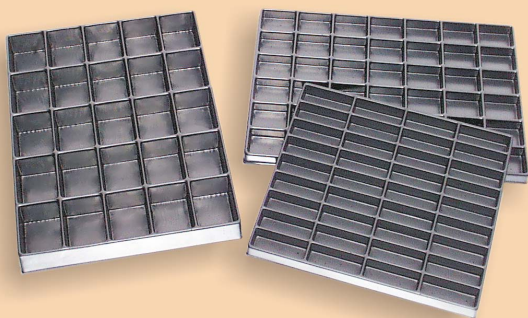
**7805.430** Rim-frame, MOD.62

**7805.340** Base external 355 x 267mm (1 each cabinet)

**7805.350** Set of 6 inserts for closing the holes on the top-frame

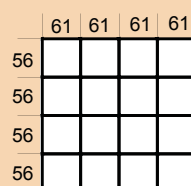
**7805.358** Label holder with exchangeable yellow label 31 x 94mm

# STORAGE CABINETS

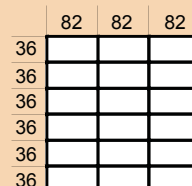


## Inserts for drawers 20mm height (storage cabinet mod. 20)

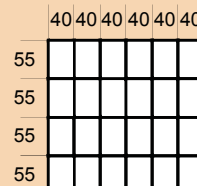
- 7805.252** 16 compartments 61x56 mm
- 7805.254** 18 compartments 82x36 mm
- 7805.256** 24 compartments 40x55 mm
- 7805.258** 36 compartments 60x23 mm
- 7805.260** 42 compartments 34x36 mm
- 7805.262** 42 round compartments Ø 27 mm



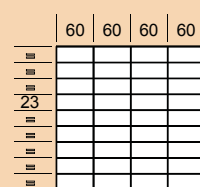
**7805.252**



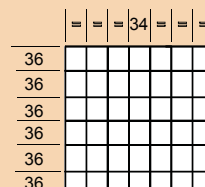
**7805.254**



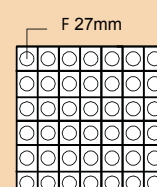
**7805.256**



**7805.258**



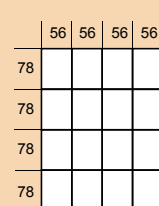
**7805.260**



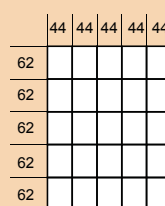
**7805.262**

## Inserts for drawers 22mm height (storage cabinet mod. 22)

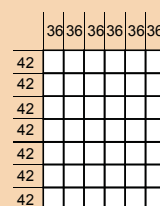
- 7805.180** 16 compartments 56x78 mm
- 7805.184** 25 compartments 44x62 mm
- 7805.188** 42 compartments 36x42 mm
- 7805.179** 12 compartments 75x77 mm



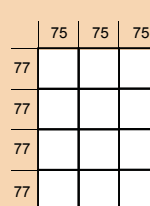
**7805.180**



**7805.184**



**7805.188**

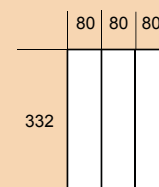


**7805.179**

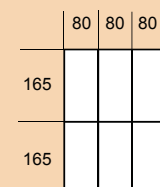
## Inserts for drawers 40mm height (storage cabinet mod. 40)

They also can be used in drawers 62mm height

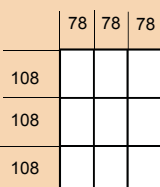
- 7805.362** 3 compartments 80x332 mm
- 7805.364** 6 compartments 80x165 mm
- 7805.366** 9 compartments 78x108 mm
- 7805.368** 12 compartments 78x78 mm
- 7805.370** 16 compartments 57x81 mm
- 7805.372** 19 compartments 50x44 mm + 1 compartment 92x50 mm + 1 compartment 188x50 mm + 1 compartment 237x50 mm
- 7805.374** 25 compartments 46x63 mm
- 7805.376** 30 compartments 44x50 mm



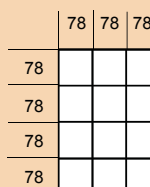
**7805.362**



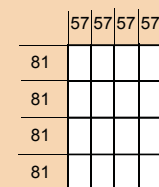
**7805.364**



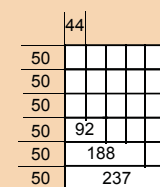
**7805.366**



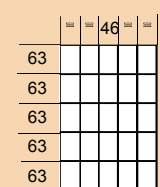
**7805.368**



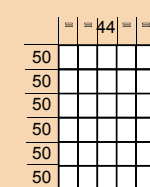
**7805.370**



**7805.372**



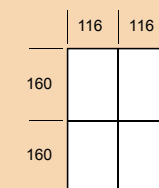
**7805.374**



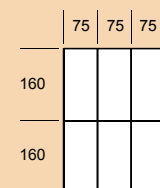
**7805.376**

## Inserts for drawers 62mm height (storage cabinet mod. 62)

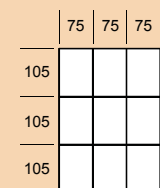
- 7805.440** 4 compartments 116x160 mm
- 7805.442** 6 compartments 75x160 mm
- 7805.444** 9 compartments 75x105 mm
- 7805.445** 12 compartments 71x75 mm



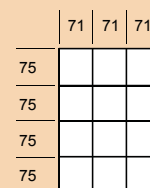
**7805.440**



**7805.442**



**7805.444**



**7805.445**

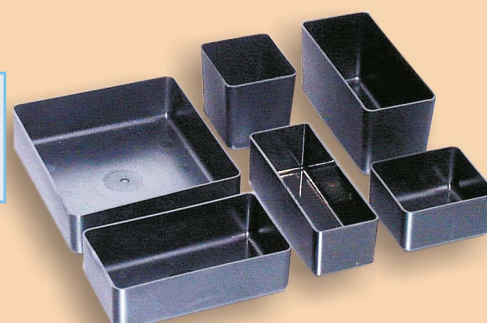
## CUPS

Standard Cups for drawers 40mm height (storage cabinet mod. 40)

- 7805.471** Cup 62 x 56 x 36 mm black conductive 24 cups for drawer
- 7805.474** Cup 110 x 42 x 36 mm black conductive 18 cups for drawer
- 7805.473** Cup 112 x 62 x 33 mm black conductive 12 cups for drawer
- 7805.480** Cup 125 x 113 x 33 mm black conductive 6 cups for drawer

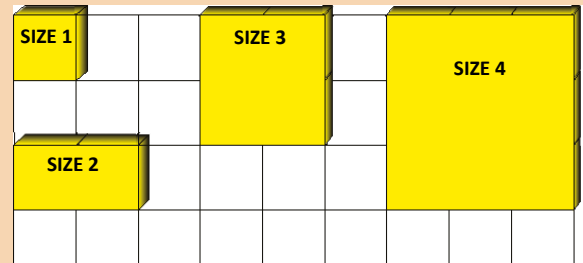
Standard cups for drawers 62mm height (storage cabinet mod. 62)

- 7805.477** Cup 59 x 23 x 60 mm black conductive 58 cups for drawer
- 7805.472** Cup 56 x 50 x 55 mm black conductive 30 cups for drawer
- 7805.478** Cup 113 x 50 x 55 mm black conductive 15 cups for drawer
- 7805.482** Cup 125 x 113 x 55 mm black conductive 6 cups for drawer



## SNAPBOX

Boxes for SMD components with sprung lid, four different sizes available, can be joined to each other by means of a dovetail assembly system. The lid is provided with a finger point for easy and quick opening, can remain in open position and closes automatically thanks to spring loading. Black conductive version is normally available from stock, on request (minimum 100 pcs) the colours: red, white, blue, yellow and green. All boxes can be supplied with the transparent cover.



<b>7808.620</b>	SNAPBOX1 ESD black	SIZE 1 int.16x12x15mm est.20x28x20mm
<b>7808.621</b>	SNAPBOX1 ESD black, transparent cover	
<b>7808.622</b>	SNAPBOX1 not ESD various colours	
<b>7808.627</b>	SNAPBOX1 not ESD various colours, transparent cover	
<b>7808.632</b>	SNAPBOX2 ESD black	SIZE 2 int.37x12x15mm est.40x28x20mm
<b>7808.633</b>	SNAPBOX2 ESD black, transparent cover	
<b>7808.634</b>	SNAPBOX2 not ESD various colours	
<b>7808.635</b>	SNAPBOX2 not ESD various colours, transparent cover	
<b>7808.644</b>	SNAPBOX3 ESD black	SIZE 3 int.37x41x15mm est.40x56x20mm
<b>7808.645</b>	SNAPBOX3 ESD black, transparent cover	
<b>7808.646</b>	SNAPBOX3 not ESD various colours	
<b>7808.651</b>	SNAPBOX3 not ESD various colours, transparent cover	
<b>7808.656</b>	SNAPBOX4 ESD black	SIZE 4 int.57x68x15mm est.60x84x20mm
<b>7808.657</b>	SNAPBOX4 ESD black, transparent cover	
<b>7808.658</b>	SNAPBOX4 not ESD various colours	
<b>7808.663</b>	SNAPBOX4 not ESD various colours, transparent cover	



SIZE 1



SIZE 2



SIZE 3



SIZE 4

## SNAPBOXSET

<b>7808.686</b>	Storage cabinet with 3 drawers H22 Black ESD With 432 SNAPBOX1 (3 x 144) ESD transparent cover
<b>7808.687</b>	Storage cabinet with 3 drawers H22 Black ESD With 216 SNAPBOX2 (3 x 72) ESD transparent cover
<b>7808.688</b>	Storage cabinet with 3 drawers H22 Black ESD With 108 SNAPBOX3 (3 x 36) ESD transparent cover
<b>7808.689</b>	Storage cabinet with 3 drawers H22 Black ESD With 48 SNAPBOX4 (3 x 16) ESD transparent cover
<b>7805.153</b>	Storage cabinet with 3 drawers MOD22 ext.267x355x105(H)mm customizable with the choice of SNAPBOX1-2-3-4



7808.687

## SMD - VISTABOX

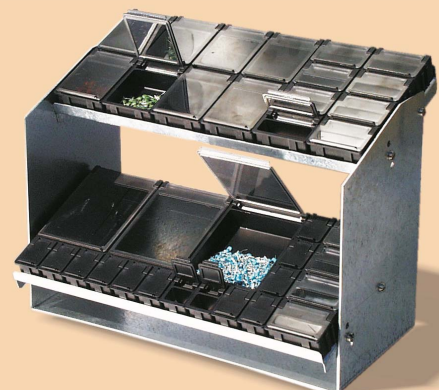
VISTABOX zinc plated assembly stand can house in two shelves an assortment of SNAPBOX containers with different sizes. The VISTABOX is especially suited for assembly and maintenance tables

Material: zinc plated steel

Dimensions: 180 x 260 x 200mm

Capacity: 48 base units (size 1) for shelf

**7808.690** Assembly-stand, 2 trays for SNAPBOX (containers excluded)



## LABEL HOLDER

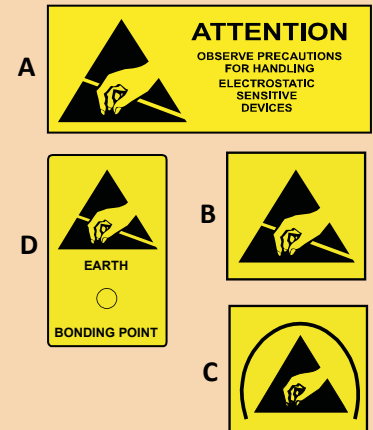
Transparent adhesive label holder with and ESD symbol.



- 7805.240** Label Holder, with label 15 x 55mm
- 7805.360** Label Holder, with label 15 x 94mm
- 7805.358** Label Holder, with label 31 x 94mm
- 7804.918** Label Holder, with label 47x100mm
- 7804.920** Label Holder, with label 60 x 140mm

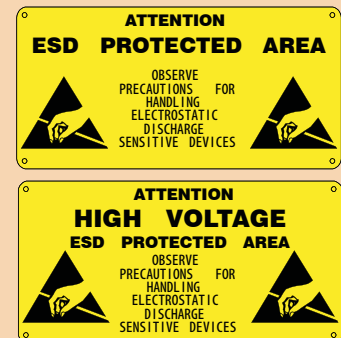
## LABELS

- 7807.100** "ATTENTION" Adhesive label, ESD (A) 38x16mm(1000pcs.)
- 7807.102** "ATTENTION" Adhesive label, ESD (A) 50x25mm(1000pcs.)
- 7807.104** "ATTENTION" Adhesive label, ESD (A) 76x38mm(1000pcs.)
- 7807.110** ESD "SUSCEPTIBLE" symbol only, Adhesive label (C) 5x5mm(1000pcs.)
- 7807.112** ESD "SUSCEPTIBLE" symbol only, Adhesive label (C) 13x13mm(1000pcs.)
- 7807.114** ESD "SUSCEPTIBLE" symbol only, Adhesive label (C) 50x50mm(1000pcs.)
- 7807.115** ESD "PROTECTIVE" symbol only, Adhesive label (D) 12.5x12.5mm(1000pcs.)
- 7807.116** ESD "PROTECTIVE" symbol only, Adhesive label (D) 50x50mm(1000pcs.)
- 7807.158** "EARTH BONDING POINT" Adhesive label (E) 25x45mm(10pcs.)



## SIGNS

- 7807.150** "AREA PROTETTA ESD" TARGA PVC adesivo 300x150mm
- 7807.152** "AREA PROTETTA ESD" TARGA PVC adesivo rigido 300x150mm
- 7807.154** "ESD PROTECTED AREA" Inglese PVC rigido 600x300mm
- 7807.154H** "H.V. ESD PROTECTED AREA" Inglese PVC rigido 600x300mm
- 7807.155** "AREA PROTETTA ESD" Italiano PVC rigido 600x300mm
- 7807.155H** "A.T. AREA PROTETTA ESD" Italiano PVC rigido 600x300mm
- 7807.156** "ZONE PROTEGEE CONTRE LES ESD" Francese PVC rigido 600x300mm
- 7807.157** "ESD GESCHÜTZTER BEREICH" Tedesco PVC rigido 600x300mm



Use where there are potentials > 250Vac

## EPA RETRACTABLE BELT BARRIER

System to delimit an EPA area in an easy and safe way.  
The belts are printed on both sides with the indication:  
"ESD PROTECTED AREA"

### Belt barrier post

Powder coated steel post, colour: yellow  
Plastic coated steel base colour: black  
Base diameter: 350mm  
Post height: 1020mm  
Weight: 10.3 Kg

- 7807.953** Belt barrier post, single belt, belt length 3m



## PROTECTIVE CLOTHING

Style 3/4 length, unisex, with two side pockets and one breast pocket.

### Features

- Fabric Composition:  
70% Cotton , 24% polyester,  
6% Conductive carbon fibre
- Lightweight (120g/m2)
- Washable without losing  
conductive properties.
- Charge decay < 2 Sec.



7807.501	Dissipative Overall, WHITE colour	size XS
7807.502	Dissipative Overall, WHITE colour	size S
7807.503	Dissipative Overall, WHITE colour	size M
7807.504	Dissipative Overall, WHITE colour	size L
7807.505	Dissipative Overall, WHITE colour	size XL
7807.506	Dissipative Overall, WHITE colour	size XXL
7807.511	Dissipative Overall, LIGHT BLUE	size XS
7807.512	Dissipative Overall, LIGHT BLUE	size S
7807.513	Dissipative Overall, LIGHT BLUE	size M
7807.514	Dissipative Overall, LIGHT BLUE	size L
7807.515	Dissipative Overall, LIGHT BLUE	size XL
7807.516	Dissipative Overall, LIGHT BLUE	size XXL

## T-SHIRTS / POLO-SHIRTS (unisex)

### Features

- Colour: light grey
- Symbol: yellow ESD
- Fabric: 96% cotton,  
4% carbon fibre
- Weight: 140g/m2
- Charge decay: < 2 Sec



T-Shirt

T-Shirt	
7807.696	size XS
7807.698	size S
7807.700	size M
7807.702	size L
7807.704	size XL
7807.705	size XXL



Polo T-Shirt

Polo T-Shirt	
7807.708	size S
7807.710	size M
7807.712	size L
7807.714	size XL
7807.716	size XXL

## DISPOSABLE COATS

TNT lab coat with elastic wrists, style 3/4 length, unisex, with two side pockets.

7807.658	Disposable coat ESD, white colour	size M
7807.659	Disposable coat ESD, white colour	size L
7807.660	Disposable coat ESD, white colour	size XL
7807.661	Disposable coat ESD, white colour	size XXL



## ESD FLEECE

Antistatic fleece in soft dissipative static fabric, unisex model with high neck and zip closure. Complete with 2 side pockets and sewed fabric ESD logo. Very warm is perfect for winter season.

### Features:

- Color: gray or blue
- Fabric Composition:  
97% Polyester,  
3% Carbon Fiber
- Fabric weight: 245g/m<sup>2</sup>



7807.736G	Dissipative fleece, LIGHT GREY	size XS
7807.738G	Dissipative fleece, LIGHT GREY	size S
7807.740G	Dissipative fleece, LIGHT GREY	size M
7807.742G	Dissipative fleece, LIGHT GREY	size L
7807.744G	Dissipative fleece, LIGHT GREY	size XL
7807.746G	Dissipative fleece, LIGHT GREY	size XXL
7807.736B	Dissipative fleece, NAVY BLUE	size XS
7807.738B	Dissipative fleece, NAVY BLUE	size S
7807.740B	Dissipative fleece, NAVY BLUE	size M
7807.742B	Dissipative fleece, NAVY BLUE	size L
7807.744B	Dissipative fleece, NAVY BLUE	size XL
7807.746B	Dissipative fleece, NAVY BLUE	size XXL

## DISSIPATIVE BADGE HOLDER

Dissipative badge holders are amine free, colourless transparent and permanent dissipative.  
Maximum size of the badge is 89 x 55mm.

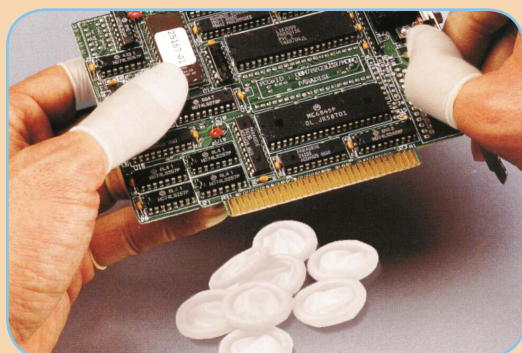


**7807.901**

- 7807.903** Soft Badge holder with clip
- 7807.901** Rigid Badge holder with clip
- 7807.902** Rigid Badge holder with necklace

## DISSIPATIVE FINGER COTS

Dissipative latex finger cots, provide excellent tactile sensitivity for handling of ESD sensitive components.  
Rs:  $< 4 \times 10^{10} \Omega$



- 7805.014** Dissipative finger cots size M, 1440 pcs/packing
- 7805.015** Dissipative finger cots size L, 1440 pcs/packing

## NYLON GLOVES

Seamless knitted dissipative nylon gloves, with Polyurethane wet coating on each top and double sided are PVC dotted.  
Rg:  $\leq 10^8 \Omega$



- 7804.997** Dissipative nylon gloves, small size
- 7804.998** Dissipative nylon gloves, medium size
- 7804.999** Dissipative nylon gloves, large size
- 7805.000** Dissipative nylon gloves, XL size

## VINYL GLOVES

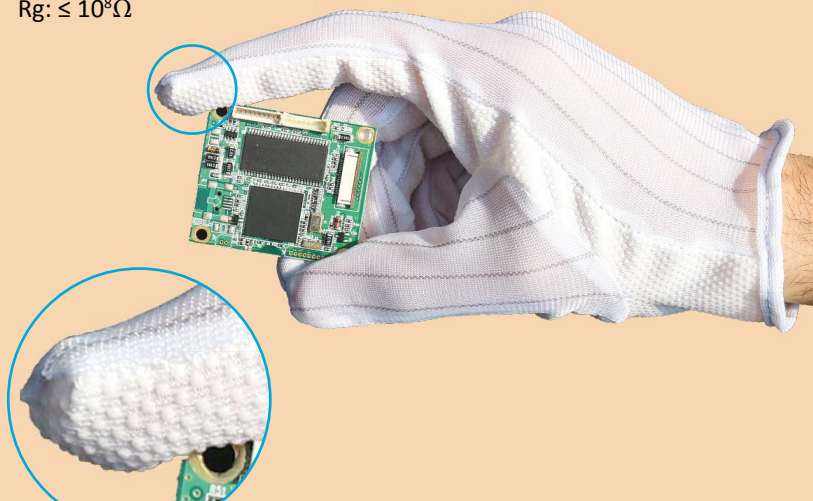
Made in dissipative VINYL are suitable for use in white chambers .  
Electrostatic decay time  $< 2 \text{sec}$ .  
Rg:  $\leq 10^8 \Omega$



- 7805.006** Dissipative VINYL gloves small size (100 pcs).
- 7805.008** Dissipative VINYL gloves medium size (100 pcs).
- 7805.010** Dissipative VINYL gloves large size (100 pcs).

## POLYESTER GLOVES

Fully launderable lightweight white gloves, made from additived polyester fabric and synthetic rubber.  
Rg:  $\leq 10^8 \Omega$



- 7805.001** Dissipative fabric GLOVES small size
- 7805.002** Dissipative fabric GLOVES medium size
- 7805.003** Dissipative fabric GLOVES large size

## DISSIPATIVE FOOTWEARS

Comfortable and aesthetically pleasing shoes and clogs provide a safest, efficient conductive path to ground

### Junior

High comfort, high style - White colour  
Shock absorbent, anti-slip polyurethane sole  
Perforated leather upper shoe  
Removable and washable insole  
RG from  $1 \times 10^6$  to  $3.5 \times 10^7 \Omega$



**7807.427 - 7807.440** Clog, sizes from 35 to 48  
**6807.420 - 6807.433** Spare innersole, sizes from 35 to 48

### M-Clog

White colour  
Non slip polyurethane sole  
"MICROSAFE" Synthetic upper shoe  
RG from  $1 \times 10^6$  to  $3.5 \times 10^7 \Omega$



**8915.935 - 8915.947** White colour, sizes from 35 to 47

### Sprint

#### Safety shoe with toecap

Very attractive price  
Grey colour  
Steel toe cap  
Non-slip polyurethane sole  
Upper with holes in real suede leather, perspiring lining  
Rg from  $1 \times 10^6 \Omega$  to  $1 \times 10^7 \Omega$



EN 20345 S1



**8913.135 - 8913.147** Sizes from 36 to 4

### Worker

#### Safety shoe with toecap

Very attractive price  
Grey colour  
Steel toe cap  
Non-slip polyurethane sole  
Upper with holes in real suede leather, perspiring lining  
RG from  $1 \times 10^6 \Omega$  to  $1 \times 10^7 \Omega$



EN 20345 S1



**8908.036- 8908.047** Sizes from 36 to 47

## HEEL AND TOE GROUNDERS

Made from conductive rubber tape, they are used for earthing personnel where mobility is required such as in storage areas and where static protective flooring or mats have been installed. Floors with a resistance to ground between 1 and 35M $\Omega$  are preferred. A disposable heel grounder is available, ideal for plant visitors or anyone requiring a temporary grounding device. (expected life of 1 day)

- 7804.200** Disposable Heel grounder (pack of 100)
- 7804.201** Disposable Heel grounder Dispenser
- 7804.202** Heel grounder with 2 M $\Omega$  resistance
- 7804.203** Toe grounder with 2 M $\Omega$  resistance



## DISPOSABLE SHOE COVERS

Shoe Covers are used in hospital, clean rooms, and other industrial facilities. Are made by disposable blue TNT material, includes carbon conductive cord, cannot be washed. Rg: 10<sup>5</sup> - 10<sup>7</sup> $\Omega$

- 7807.850** Light blue ESD shoe cover, 100 pcs packing

## FOOTWEAR AND FLOOR REQUIREMENTS IN EPA AREA

According to the IEC 61340-5-1 regulation all operators shall be connected to ground when operating in contact with ESDs. In case of personnel seated at an ESD protective workstation, they shall be connected to ground via a wrist strap system (Rg between 750k $\Omega$  -35M $\Omega$ ) . Standing operators may be grounded via a flooring / footwear system. When only the flooring / footwear system is used to ground it is necessary to wear ESD footwear on both feet and satisfy these 3 conditions:

### Person/Footwear system

- 1) Total resistance of of the person / Footwear system:  
Rgp < 1,0 x 10<sup>8</sup> $\Omega$

### Person/Footwear/Flooring system

- 2) Total resistance of the system (person, footwear and flooring) to ground: Rg < 1,0 x 10<sup>9</sup> $\Omega$
- 3) Maximum HBV (Human Body Voltage) generation:  
HBV < 100V



Rg shall be measured during the product qualification according to IEC 61340-4-5 and HBV shall be checked periodically (note "d" Table 2 of the standard)

## FLOORS

### DISSIPATIVE FLOOR COATING

It gives dissipative characteristics to a standard floor, and it is excellent in maintaining the conductive floor in operating rooms, clean rooms and data processing centres. It may also be used to maintain the table mat's dissipative surfaces.

#### First treatment:

- well wash the floor with the stripper -rinse with clean water.
- when dry apply two thin coats on the floor.  
(Yield: 1lt. for approx. 25m<sup>2</sup> per 2 coats)

#### Ordinary Maintenance:

- sweep the floor with a wet broom, then wash it with the detergent diluted in water at 1-5% ratio.

#### Maintenance with spray:

- Dilute the coat in water at 30% ratio, spray it on the floor and then polish by a one-brush machine, provided with a suitable scotch-bride. (Yield: 1lt. for approx. 100m<sup>2</sup>)
- Rs: < 10<sup>11</sup> Ω

**7805.876** LIQUID COAT, 5 Kilos unit

### STRIPPER (Specific for 7805.876)

Dewaxing alkaline detergent have to be used the first time, before applying the coating on the floor. It removes quickly multiple coats of wax and embedded dirt. It is suitable on PVC, Rubber and Hard floors. Biodegradable up to over 90%. Dilution in water 5-10% machine stripping 12-16% manual stripping Lay off the solution and let it act for 5 minutes, then wash with water.

**7805.870** FLOOR STRIPPER, 5 Kilos unit



### FLOOR MARKING TAPE

- Self-adhesive
- 75mm wide, 33m long roll
- PVC laminated with clear PP for durability and washability

**7807.172** PVC adhesive tape, ESD Protected Area floor marking

**DETERGENT** Low foaming-agent detergent with highly concentrated active substances and alkalinity. It is used for cleaning and maintenance of the waxed surface.

Biodegradable: up to over 90% - Dilution in water 1-5%  
It may be used to wash by hand and with a one-brush polisher or a washing-drying machine.

**7805.873** DETERGENT, 5 Kilos unit

### ELECSTAT-112 Dissipative floor detergent

ELECSTAT-112 is a non-toxic, low foaming, static dissipative agent for cleaning, used to enhance the features of the existing ESD floors or make a non-ESD floor static dissipative.

Rs: < 10<sup>11</sup> Ω

Biodegradability: over 90%

Dilution in water: 10 to 20%:

Application: for manual or mechanical cleaning.



**7805.890** Dissipative agent ELECSTAT-112  
5kg plastic can

### DISSIPATIVE FLOOR PAINT

A ready to use single pack, dissipative water based paint can be easily applied by brush or roller. The paint has an attractive satin finish and is available in mid grey, nearest to RAL7035. Two coats are recommended for best results and should be applied over a sound, sealed floor, free from dirt, oil or any loose particles.

It is strongly recommended that the paint is not applied directly over bare concrete. Where this occurs the Water Based Primer 7805.856 should be first applied.



**7805.854** ELECTROGUARD 40

SINGLE PACK water based static dissipative acrylic paint, 5 litre unit.

Coverage: 10m<sup>2</sup>/litre per coat (we recommend 2 coats).

Typical resistance to ground Rg: 10<sup>6</sup>Ω÷10<sup>8</sup> Ω

**7805.856** FLOORPOX PRIMER

Epoxy primer for bare concrete floor

12 litre unit (6 litres base + 6 litres activator)

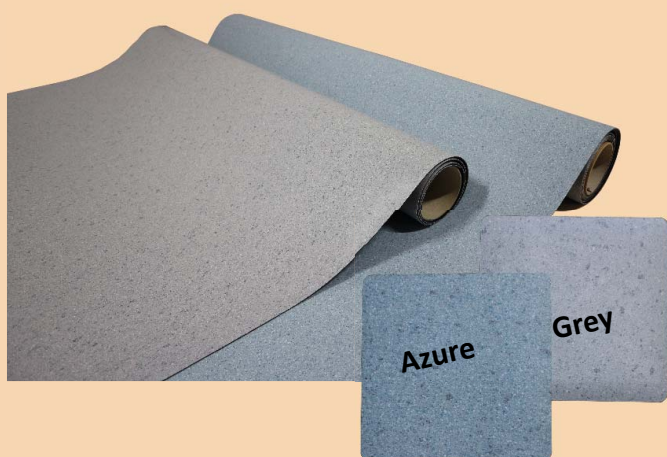
Coverage: 16m<sup>2</sup>/litre per coat (we recommend 2 coats)

## VINYLAB - FLOORS

VINYLAB is a resilient, permanently static-dissipative control flooring developed for facilities where static discharge may cause damage to sensitive electronic devices. The VINYLAB mat meets the requirements for floors in standard IEC61340-5-1, the "Combination Resistance" with appropriate shoes is  $35M\Omega$ . It is made by two vinyl layers, the underside layer is black conductive, the top layer, glare free coloured surface, has a  $10^6\Omega$  typical Rs.

### VINYLAB - MAT

- It is required a perfect, smooth permanently dry and sound subfloor.
- Never use conductive primers, since they reduce the subfloor's absorbency.
- Rubber mats should be dry laid first to reach the floor temperature (acclimatise)
- Use conductive adhesive to apply the rubber mat.
- Water dispersion adhesive type ECO V4, easy to apply, is mostly used on absorbent and moisture-stable subfloors.
- Detailed installation procedures available on demand.



**7805.820** Mat roll, azure colour 140cm x 2.2mm x 10m.

**7805.818** Mat roll, grey colour 140cm x 2.2mm x 10m.

### COPPER EARTHING TAPE

Used to ground ESD matting

Self-adhesive

- 0.04mm thickness

- 30m long roll



**7805.828** COPPER tape 10mm wide

**7805.830** COPPER tape 15mm wide



### FLOOR GROUNDING KIT AND TEST POINT

Supplied with two meters long copper earthing type. Dowels and screws not supplied.

**7805.834** GROUNDING KIT

### VINYLAB - Interlocking floor tile

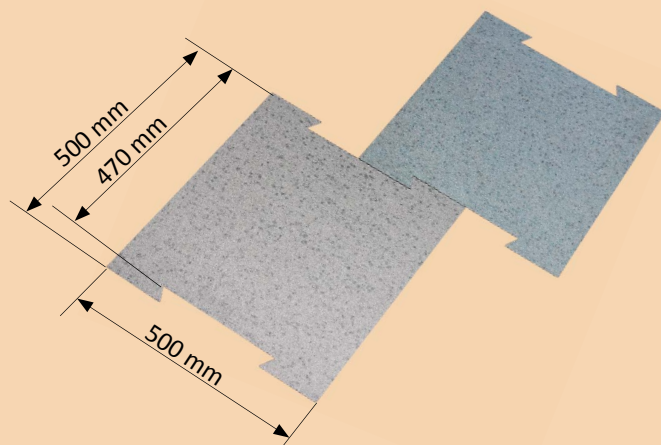
The tiles are clicked together quickly and can be dry laid over any hard and flat base even on damaged, damp or contaminated surfaces.

To have a reliable ground connection create a copper grid under the tiles and ground it.

Dimensions: 500 x 500 x 4 mm

Weight: 6kg/m<sup>2</sup>.

Packages: 20 tiles for package (4.70m<sup>2</sup>)



**7805.800** Interlocking tile, azure colour

**7805.801** Interlocking tile, grey colour

### ECO V4 Glue for mats, one component

Conductive glue for sticking mats on benches or on the floor.

Rs:  $< 3 \times 10^5 \Omega$

One component,

Color: Grey,

16kg pack,

Useful time 10-15 minutes,

consumption about 350g/m<sup>2</sup>.



**7805.840** One component conductive glue

### ANTI-FATIGUE ESD MATS

ESD Anti-Fatigue Floor Mats designed to provide comfort and reduce worker fatigue. Provide ergonomic comfort for your feet and create a healthier more productive work environment.

The mats should be used on ESD floors correctly grounded.

-External side in nitrile conductive rubber ( $10^5 - 10^6\Omega$ )

-Internal in highly elastic Polyurethane foam



**7804.841** Anti-fatigue ESD mat  
60 x 90 x 1,6cm

## WORKSTATION MATS

### Labestat table mats

LABESTAT mats are made from a rugged rubber resistant to hot solder, fluxes and chemicals. The underside layer is black conductive, the top coloured layer, glare free surface, has a Rsurface from  $10^7$  to  $10^9 \Omega$ .



**7804.152**

grey orange peel

**7804.153**

sky-blue orange peel

**7804.154**

beige orange peel

**LABESTAT 2 layers dissipative COLOURED / conductive BLACK**

<b>7804.152</b>	GRAY 122cm x 2mm x 10meters roll
<b>7804.853</b>	GRAY 150cm x 2mm x 10meters roll
<b>7804.153</b>	SKY-BLUE 122cm x 2mm x 10meters roll
<b>7804.154</b>	BEIGE 122cm x 2mm x 10meters roll

### Kostaplan mats

KOSTAPLAN mats are made from a rugged synthetic rubber resistant to hot solder, fluxes and chemicals. The underside layer is black conductive, the top coloured layer, glare free surface, has a Rsurface from  $10^7$  to  $10^9 \Omega$



**7804.140**

Black semigloss

**7804.148**

Grey matt

**KOSTAPLAN 1 layer , conductive BLACK**

<b>7804.140</b>	60cm x 2mm x 10meters roll
<b>7804.139</b>	90cm x 2mm x 10meters roll
<b>7804.145</b>	120cm x 2mm x 10meters roll

**KOSTAPLAN 2 layers , dissipative GRAY / conductive BLACK**

<b>7804.148</b>	60cm x 2mm x 10meters roll
<b>7804.149</b>	90cm x 2mm x 10meters roll
<b>7804.150</b>	120cm x 2mm x 10meters roll

### Esd workstation kit

600 x 1200 x 2mm, includes one adjustable wrist strap, one ground cord 3m, four snap fasteners installed.

<b>7804.830</b>	Two layer KOSTAPLAN mat, GREY / BLACK
<b>7804.831</b>	Two layer LABESTAT mat, GREY / BLACK
<b>7804.833</b>	Two layer LABESTAT mat, SKY-BLUE / BLACK



### Field service kit

The Portable Field Service Kit protects installed electronic components from static damage as a result of normal handling during field maintenance and repair. It has two pockets and one 10mm press stud for Wrist-strap and Grounding cord connection.

- 3 Layer Mat RED/BLACK colour, 600x600mm dim.
- Surface resistance  $R_s \leq 10^9 \Omega$
- Point to ground resistance  $R_g \leq 10^9 \Omega$
- 1 adjustable wrist strap + 1 grounding cord 3m length

**7804.195 PORTABLE FIELD SERVICE KIT**



### ELECSTAT-109 ESD CLEANER

A topical antistatic cleaning solution for use on dissipative and non-ESD surfaces. After it has been applied and the surface dries, an antistatic and protective static dissipative coating is left behind. This enhances existing ESD surfaces and will give electrical properties to insulative surfaces.  $R_s < 10^{11} \Omega$

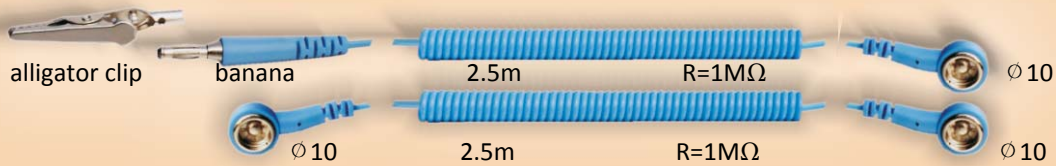
**7805.894** Bottle, 0.5 litre spray

**7805.896** 5 litre Can



## WRISTSTRAP

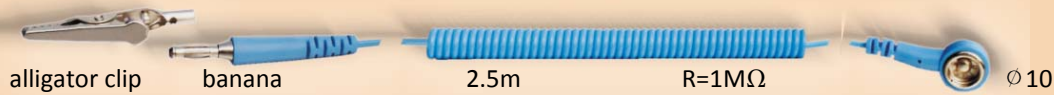
The wrist strap is the most common and effective means of controlling ESD generated from people, it should be worn at all times by anyone at the work station. Our adjustable wrist strap includes an extendible coiled cord fitted with 1MΩ resistor.



- 7804.190** Adjustable wrist strap, blue colour, with coiled cord banana/socket, alligator clip
- 7804.193** Adjustable wrist strap, blue colour, with coiled cord socket/socket
- 6604.804** Spare Wrist-band
- 6604.803** Spare coiled cord, banana/socket
- 7804.885** Spare coiled cord, socket/socket



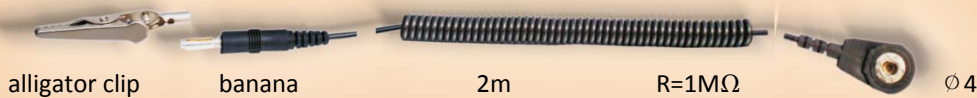
stud 10mm



- 7804.192** ANTI-ALLERGENIC wrist strap with coiled cord
- 6604.805** Spare Wrist-band
- 6604.803** Spare coiled cord



stud 10mm



- 7804.188** Metal wrist strap, with coiled cord
- 6604.808** Spare Wrist-band
- 6604.809** Spare coiled cord



stud 4mm

## EARTH BONDING POINT PLUG

EBP plug provides a safe, effective and simple method of using the ring mains earth as ground. Made of yellow ABS, Earth Bonding Plug fits the European CEE(7) VII Schuko sockets.

- 7804.874** Earth Bonding Plug with two 4mm plug sockets, one 10mm stud



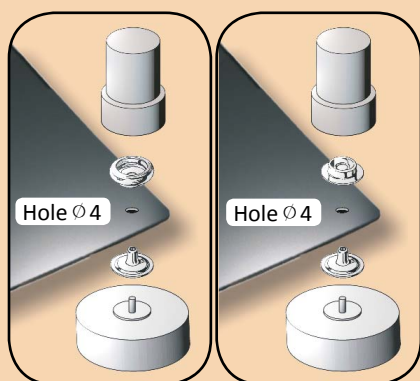
## EARTH BONDING POINT

An Earth Bonding Point (EBP) ties together (via cords) several elements of an EPA such as bench surface, floor mat or wrist strap. Each input is fitted with a 1MΩ resistor. EBP is supplied with a 2 meters grounding cord for connecting to the Earth Facility.

- 7804.896** EBP BOX three 4mm shrouded plug sockets
- 7804.898** EBP BAR three 4mm shrouded plug sockets
- 7804.899** EBP BAR three studs Ø 10mm



## GROUNDING ACCESSORIES



Eyelets manual press  
(Without punch and anvil)  
Dimensions: 80 x 180 x 280mm  
Weight: 3.3 Kg

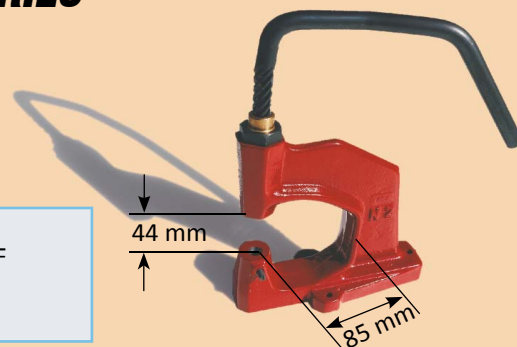
**7804.811** Eyelets manual press

**7804.803** Ø 10mm socket (2 parts)

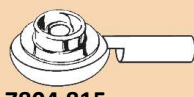
**7804.809** Punch and Anvil for socket F

**7804.804** Ø 10mm stud (2 parts)

**7804.805** Punch and Anvil for stud M



**7804.870**



**7804.815**



**7804.814**



**7804.796**



**7804.817**



**7804.872**



**7804.814**



**7804.818**



**7804.797**



**7804.816**



**7804.873**

<b>7804.870</b>	ADAPTOR socket Ø 10mm + stud Ø 10mm + banana plug Ø 4mm
<b>7804.815</b>	ADAPTOR from socket Ø 10mm to banana plug Ø 4mm
<b>7804.814</b>	ADAPTOR from stud Ø 10mm to banana plug Ø 4mm
<b>7804.818</b>	ADAPTOR from socket Ø 10mm to stud Ø 10mm
<b>7804.819</b>	ADAPTOR from stud Ø 10mm to socket Ø 10mm
<b>7804.796</b>	Clinch SNAP male, Ø 10mm
<b>7804.797</b>	Clinch SNAP female, Ø 10mm
<b>7804.816</b>	Ø 10mm socket crimp terminable on AWG 22-16 wire
<b>7804.817</b>	Ø 10mm plug crimp terminable on AWG 22-16 wire
<b>7804.872</b>	BANANA Ø 4mm
<b>7804.873</b>	Alligator-clip for banana plug Ø 4mm

## GROUNDING CORDS

	1° Plug	Cable	2° Plug
<b>7804.876</b>	(T1) male 10mm	(C1) 1,8m R=1M Ω	(T1) male 10mm
<b>7804.878</b>	(T1) male 10mm	(C1) 0,15m R=0 Ω	(T1) male 10mm
<b>7804.880</b>	(T1) male 10mm	(C1) 4m R=1M Ω	(T4) eyelet Ø 4,2x7mm
<b>7804.882</b>	(T1) male 10mm	(C1) 4m R=1M Ω	(T5) banana/alligator-clip
<b>7804.883</b>	(T2) female 10mm	(C1) 3m R=1M Ω	(T5) banana/alligator-clip
<b>7804.866</b>	(T2) female 10mm	(C1) 3m R=0 Ω	(T5) banana/alligator-clip
<b>7804.884</b>	(T2) female 10mm	(C1) 3m R=1M Ω	(T4) eyelet Ø 4,2x7mm
<b>6604.803</b>	(T3) female 10mm	(C2) 2.5m R=1M Ω	(T6) banana/alligator-clip
<b>7804.885</b>	(T3) female 10mm	(C2) 3m R=1M Ω	(T3) female 10mm
<b>7804.886</b>	(T7) female 10mm	(C1) 3m R=1M Ω	(T4) eyelet Ø 4,2x7mm



Plugs



(T1)



(T2)



(T3)



(T4)



(T5)



(T6)



(T7)

# HARD FOAM CUSTOM CUSHIONING FOR NEWBOX

## FOAM ( CUSTOM CUT )



### ANTISTATIC SOFT PINK FOAM

Use: cushioning purposes

Material: polyurethane with additives, density: 30Kg/m<sup>3</sup>

Rs <10<sup>12</sup>Ω

**7804.161** 1m x 1.5m sheet, thickness 6mm

**7804.162** 1m x 1.5m sheet, thickness 10mm



### CONDUCTIVE SOFT BLACK FOAM

Use: cushioning purposes

Material: polyurethane with additives, density: 30Kg/m<sup>3</sup>

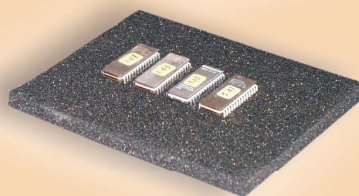
Rs <10<sup>6</sup>Ω

**7804.168** 1m x 1m sheet, thickness 6mm

**7804.170** 1m x 1m sheet, thickness 10mm

**7806.300** 550 x 350mm sheet, thickness 10mm for Euro 600x400 container

**7806.306** 360 x 260mm sheet, thickness 10mm for Euro 300x400 container



### CONDUCTIVE HARD BLACK FOAM

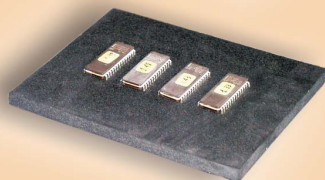
Use: insertion of component leads

Material: polyurethane with additives, density: 65Kg/m<sup>3</sup>

Rs <10<sup>5</sup>Ω

**7804.172** 1m x 1m sheet, thickness 6mm

**7804.174** 1m x 1m sheet, thickness 10mm



### CROSS LINKED CONDUCTIVE BLACK FOAM

Use: insertion of component leads high grade, extended life

Material: polyethylene with additives, density: 60Kg/m<sup>3</sup>

Rs <10<sup>6</sup>Ω

**7804.156** 1m x 1.78m sheet, thickness 2.5mm

**7804.158** 1m x 1.78m sheet, thickness 7.5mm



### ANTISTATIC HARD PINK FOAM

Use: cushioning purposes

Material: polyethylene with additives, density: 27Kg/m<sup>3</sup>

Rs < 10<sup>12</sup>Ω

**7804.165** 1m x 1.5m sheet, thickness 10mm

**7804.166** 1m x 1.5m sheet, thickness 20mm

## NEWBOX TOTE-BOX

Conductive polypropylene Tote-Boxes,  
stackable, Rs < 10<sup>6</sup> Ω.

Available in two EURO format:  
400x300mm and 600x400mm

Newbox



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## **LABEPLAST** *conductive fluted polypropylene*

LABEPLAST is an extruded conductive polypropylene that offers strength, durability and appearance superior to the fiber-board. LABEPLAST sheet has many capabilities such as die-cutting, line bending, riveting and sonic welding.

Rs:  $\leq 10^5 \Omega$

Rv:  $\leq 10^5 \Omega$

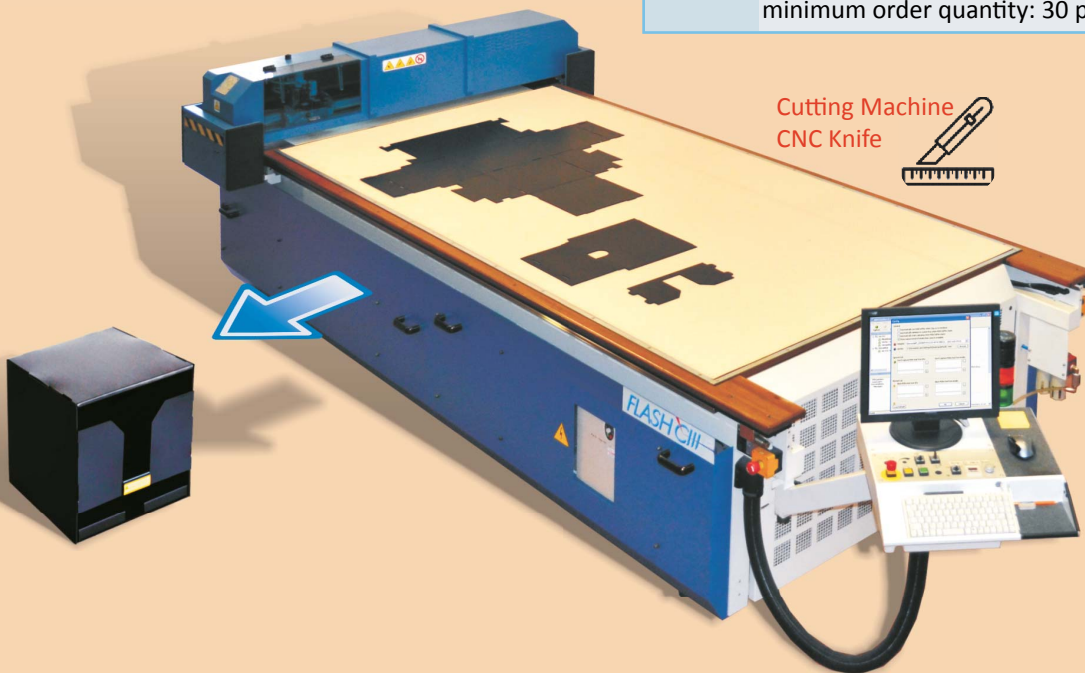
Color: black

**7806.166** LABEPLAST , 1250x1250x2,5mm, 550g/m2 sheets

**7806.156** LABEPLAST , 2000x1250x2,5mm, 550g/m2 sheets  
minimum order quantity: 30 pcs

**CUSTOM  
CUT**

Cutting Machine  
CNC Knife



LABBOX

**CUSTOM BOXES AND DI-  
VIDERS UNDER REQUEST**



LABBOX-S Box with antistatic profiled foam

**7806.245**



**7806.815**



**7806.815** LABBOX-S Dim. est. 350x145x70mm

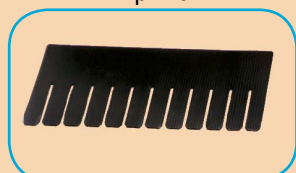
**7806.245** LABBOX-S Dim. est. 400x230x60mm

Fifo



>>> go to page 24

Diviprint



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- 7806.720** LABBOX10 Base container ext.275x400x250(H)mm
- 7806.724** LABBOX14 Base container ext.430x510x200(H)mm
- 7806.725** LABBOXC2 Cover for LABBOX14
- 7806.760** LABBOX30 Base container ext.370x590x140(H)mm
- 7806.763** LABBOX50 Base container ext.370x590x220(H)mm
- 7806.766** LABBOXC1 Cover for LABBOX30/50

## ESD CORRUGATED BOARD

REUSABLE, STURDY CARTONS MADE FROM CONDUCTIVE CORRUGATED BOARD  
 $R_{\text{sup}} \leq 1 \times 10^5 \Omega$

## SLIDING SLEEVE BOXES

Antistatic cushioning FOAM

code	mod.	Esternal dim. mm	Internal Dim. mm
<b>7806.056</b> <sup>(1)</sup>	EUR 2	285 x 180 x 55	260 x 165 x 30
<b>7806.061</b>	LAB 1	325 x 285 x 70	285 x 270 x 35
<b>7806.066</b>	SAB 1	225 x 160 x 100	195 x 130 x 75
<b>7806.078</b>	SAB 3	300 x 200 x 90	260 x 185 x 50
<b>7806.076</b>	SAB 2	350 x 280 x 90	310 x 265 x 50
<b>7806.081</b> <sup>(1)</sup>	LAB 2	390 x 320 x 70	350 x 305 x 35

<sup>(1)</sup> To the end of stok

## SIMM SHIPPERS

Designed to ship SIMM or DIMM modules, the containers are normally assembled with internal antistatic foams. A hard type on the bottom, a middle foam with the cells, and a soft cushioning foam on the top.

<b>7806.030</b>	HYBRID H28 ext 320 x 240 x 28mm - int.294x235x25mm
<b>7806.032</b>	HYBRID H40 ext.320 x 240 x 40mm - int.294x235x37mm
<b>7806.322</b>	Antistatic HARD FOAM 235 x 294 x 6 mm
<b>7806.324</b>	Antistatic HARD FOAM with dividers 81 cells 90x3mm 235x294x6mm
<b>7806.326</b>	Antistatic HARD FOAM with dividers 108 cells 60x3mm - 235x294x6mm
<b>7806.328</b>	Antistatic HARD FOAM with dividers 54 cells 60x3mm - 235X154X20mm
<b>7806.320</b>	Antistatic cushioning FOAM 235 x294 x 6mm

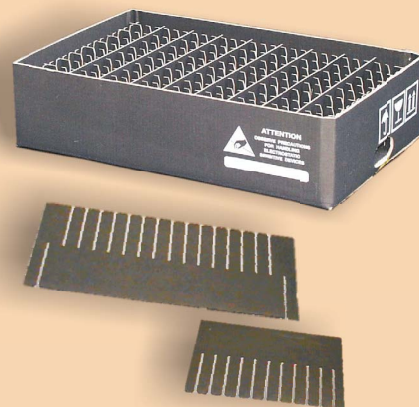
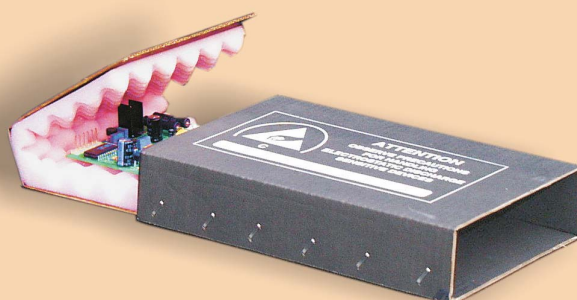
## CARTONBOX

<b>7806.220</b>	CARTONBOX 30 int.352x560x130(H)mm without cover, without dividers
<b>7806.226</b>	CARTONBOX 50 int.352x560x210(H)mm without cover, without dividers
<b>8718.091</b>	CARTONBOX cover
<b>7806.211</b>	Type C DIVIDER lenght 555 heigth100 pitch 19, 28 slots (x CARTONBOX 30)
<b>7806.215</b>	Type D DIVIDER lenght 350 heigth100 pitch 19, 17 slots (x CARTONBOX 30)
<b>7806.217</b>	Type C DIVIDER lenght 552 heigth200 pitch 31, 17 slots (x CARTONBOX 50)
<b>7806.216</b>	Type D DIVIDER lenght 350 heigth200 pitch 30, 11 slots (x CARTONBOX 50)
<b>7806.219</b>	Type C DIVIDER lenght 552 heigth300 pitch 31, 17 slots (x NEWBOX 70)
<b>7806.218</b>	Type D DIVIDER lenght 350 heigth300 pitch 30, 11 slots (x NEWBOX 70)

## PACKING TAPE

<b>7807.121</b>	Antistatic PAPER adhesive tape - yellow with ESD symbol Paper tape with water-based acrylic adhesive - 50mm wide, 50m long roll
<b>7807.170</b>	PVC adhesive tape yellow with ESD symbol Conventional PVC auto adhesive tape - 50mm wide, 66m long rol

CUSTOM CUT



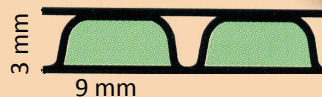
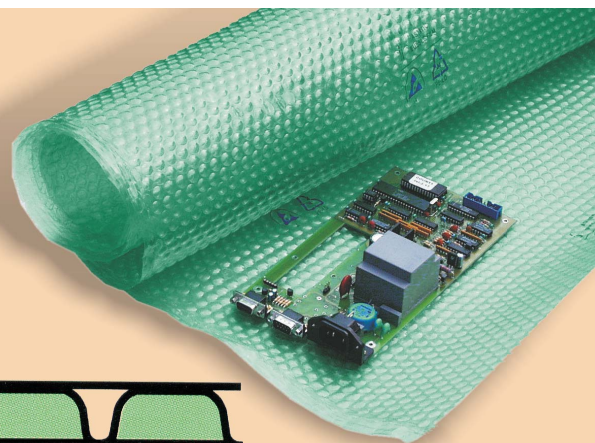
## GREEN POLY ANTISTATIC BUBBLE PACK

Multilayer polyethylene, green colour, amine-free, heat sealable, recyclable. Small strong barrier bubble provides a superior packaging protection with excellent puncture and tear resistance.

Electrostatic decay: < 2 sec

Rs: <  $10^{11} \Omega$

Colour: transparent green

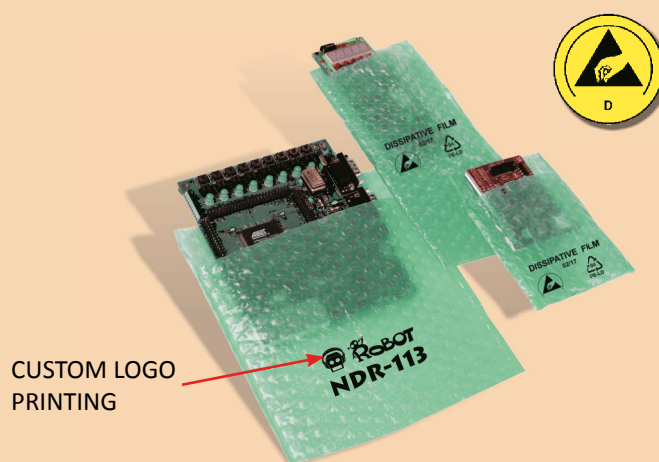


<b>7804.184</b>	Dissipative bubble pack roll 0.5meters x 200meters
<b>7804.185</b>	Dissipative bubble pack roll 1meter x 200meters

## DISSIPATIVE BUBBLE PACK BAGS

Provide superior protection against physical damage during shipping and storage.

	Opening x depth	Closing pad
<b>6604.101</b>	90 x 100mm	30mm
<b>6604.102</b>	100 x 180mm	30mm
<b>6604.105</b>	130 x 185mm	30mm
<b>6604.107</b>	180 x 230mm	30mm
<b>6604.110</b>	250 x 250mm	NO
<b>6604.114</b>	280 x 360mm	30mm



CUSTOM LOGO  
PRINTING

## POLYETHYLENE TUBING

<b>6604.210</b>	Black CONDUCTIVE	75 $\mu$ m - 100mm width - 500m roll
<b>6604.214</b>	Black CONDUCTIVE	75 $\mu$ m - 150mm width - 500m roll
<b>6604.218</b>	Black CONDUCTIVE	75 $\mu$ m - 200mm width - 500m roll
<b>6604.224</b>	Black CONDUCTIVE	75 $\mu$ m - 250mm width - 500m roll
<b>6604.228</b>	Black CONDUCTIVE	75 $\mu$ m - 300mm width - 500m roll
<b>6604.230</b>	Black CONDUCTIVE	75 $\mu$ m - 400mm width - 500m roll
<b>6604.239</b>	Green DISSIPATIVE	100 $\mu$ m - 75mm width - 250m roll
<b>6604.240</b>	Green DISSIPATIVE	100 $\mu$ m - 100mm width - 250m roll
<b>6604.244</b>	Green DISSIPATIVE	100 $\mu$ m - 150mm width - 250m roll
<b>6604.248</b>	Green DISSIPATIVE	100 $\mu$ m - 200mm width - 250m roll
<b>6604.254</b>	Green DISSIPATIVE	100 $\mu$ m - 250mm width - 250m roll
<b>6604.258</b>	Green DISSIPATIVE	100 $\mu$ m - 300mm width - 250m roll
<b>6604.260</b>	Green DISSIPATIVE	100 $\mu$ m - 400mm width - 250m roll
<b>6604.261</b>	Green DISSIPATIVE	100 $\mu$ m - 500mm width - 250m roll
<b>6604.264</b>	SHIELDING	78 $\mu$ m - 100m width - 100m roll
<b>6604.266</b>	SHIELDING	78 $\mu$ m - 150mm width - 100m roll
<b>6604.268</b>	SHIELDING	78 $\mu$ m - 200mm width - 100m roll
<b>6604.270</b>	SHIELDING	78 $\mu$ m - 250mm width - 100m roll
<b>6604.272</b>	SHIELDING	78 $\mu$ m - 300mm width - 100m roll
<b>6604.275</b>	SHIELDING	78 $\mu$ m - 400mm width - 100m roll
<b>6604.280</b>	SHIELDING	78 $\mu$ m - 800mm width - 100m roll



## SHIELDING BAGS (metal-in)

### LABESTAT S85 (packages of 100pcs)

Semi-transparent, heat sealable, the metallised shielding bags offer excellent protection for ESD sensitive devices.

A buried layer of metallic film sandwiched between an inner layer of polyethylene and an outer layer of polyester to provide protection against all static damage without exposing metal surfaces.

Thickness of the film: 78  $\mu\text{m}$

Transparency: 40%

Surface Resistivity:

-inner layer (polyethylene):  $< 10^{11} \Omega$

-intermediate layer (metal):  $< 10^2 \Omega$

-outer layer (polyester):  $< 10^{11} \Omega$

### ZIPLOCK (zippered recloseable bags)

<b>7804.290</b>	100 x 150 mm (4" x 6")
<b>7804.296</b>	150 x 250 mm (6" x 10")
<b>7804.304</b>	250 x 300 mm (10" x 12")
<b>7804.306</b>	300 x 400 mm (12" x 16")



### opening x depth

<b>7804.268</b>	76 x 127 mm (3" x 5")
<b>7804.270</b>	100 x 150 mm (4" x 6")
<b>7804.272</b>	125 x 200 mm (5" x 8")
<b>7804.274</b>	150 x 200 mm (6" x 8")
<b>7804.276</b>	150 x 250 mm (6" x 10")
<b>7804.278</b>	200 x 250 mm (8" x 10")
<b>7804.280</b>	200 x 300 mm (8" x 12")
<b>7804.284</b>	250 x 300 mm (10" x 12")
<b>7804.285</b>	250 x 350 mm (10" x 14")
<b>7804.286</b>	300 x 400 mm (12" x 16")
<b>7804.287</b>	400 x 500 mm (16" x 20")
<b>7804.288</b>	450 x 450 mm (18" x 18")
<b>7804.310</b>	400 x 450 mm (16" x 18")
<b>7804.312</b>	450 x 680 mm (18" x 27")

## CONDUCTIVE BAGS

### LABESTAT C75 (package of 100pcs)

Made from black multilayer polyethylene layflat tubing are available in many sizes. All bags are printed with the ESD logo and text in conformity to IEC61340-5-1. Don't use for packaging PCBs with on-board batteries.

Thickness of the film: 75  $\mu\text{m}$

Surface Resistivity:  $\leq 10^5 \Omega$



### opening x depth

<b>7804.210</b>	100 x 150 mm (4" x 6")
<b>7804.212</b>	100 x 200 mm (4" x 8")
<b>7804.214</b>	150 x 200 mm (6" x 8")
<b>7804.216</b>	150 x 250 mm (6" x 10")
<b>7804.218</b>	200 x 250 mm (8" x 10")
<b>7804.220</b>	200 x 300 mm (8" x 12")
<b>7804.222</b>	200 x 350 mm (8" x 14")
<b>7804.224</b>	250 x 300 mm (10" x 12")
<b>7804.226</b>	250 x 350 mm (10" x 14")
<b>7804.228</b>	300 x 400 mm (12" x 16")
<b>7804.230</b>	400 x 450 mm (16" x 18")

## DISSIPATIVE BAGS

### LABESTAT A100 (package of 100pcs)

Material: Polyethylene, green colour amine-free, heat sealable, recyclable

Print: ESD and Recycle logos, production batch

Thickness: 100  $\mu\text{m}$

Rs:  $< 10^{11} \Omega$



### opening x depth

<b>7804.239</b>	76 x 127 mm (3" x 5")
<b>7804.240</b>	100 x 150 mm (4" x 6")
<b>7804.242</b>	100 x 200 mm (4" x 8")
<b>7804.237</b>	100 x 460 mm (4" x 18")
<b>7804.244</b>	150 x 200 mm (6" x 8")
<b>7804.246</b>	150 x 250 mm (6" x 10")

### opening x depth

<b>7804.247</b>	150 x 300 mm (6" x 12")
<b>7804.248</b>	200 x 250 mm (8" x 10")
<b>7804.250</b>	200 x 300 mm (8" x 12")
<b>7804.252</b>	200 x 350 mm (8" x 14")
<b>7804.254</b>	250 x 300 mm (10" x 12")
<b>7804.256</b>	250 x 350 mm (10" x 14")
<b>7804.257</b>	300 x 350 mm (12" x 14")
<b>7804.258</b>	300 x 400 mm (12" x 16")
<b>7804.260</b>	400 x 500 mm (16" x 20")
<b>7804.262</b>	400 x 600 mm (16" x 24")
<b>7804.267</b>	450 x 550 mm (18" x 22")

## CLEAR DISSIPATIVE TAPE

Clear Dissipative Tape used to seal shielding bags or boxes.

Generates low electrostatic charge and can be used in EPA.

Material: Cellulose based tape with rubber based adhesive.

Rs:  $10^9 - 10^{11} \Omega$

T1000: 2 sec at 25% rH



**7807.183**

<b>7807.180</b>	Clear Dissipative Tape 12mm x 66m
<b>7807.181</b>	Clear Dissipative Tape 24mm x 36m
<b>7807.183</b>	ESD (Rs: $10^5 - 10^8 \Omega$ ) Tape Dispenser for 25mm wide tapes with 75mm core.



## DRY PACK

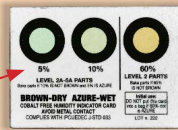
### Moisture absorbing desiccant bags

**7914.002T** Buste Tyvek gr.12 1/3U-DIN (100 pcs)

**7914.005** Buste Tyvek gr.34 1U-DIN (300 pcs)

### Humidity indicator card

**7914.008** 3 spot humidity indicator card  
5-10-60% ( 500pcs)

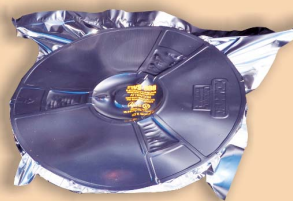


**J-STD-033** doesn't require vacuum for dry-pack. Light air evacuation may be used to reduce the packaging bulk and enhance carton packing. Full evacuation shall not be used as it will impede desiccant and HIC performance and possibly lead to MBB puncture.

VacuWeld heat sealers have digital adjustment of vacuum, controlled by an internal vacuum sensor.



MBB with Recommended  
Light Air Evacuation



MBB with Too Much  
(Full) Evacuation



VacuWeld >>>  
GO TO page 51

## Esd moisture barrier bags (metal-in)

Excellent in EMI/RFI and static field shielding, these bags are water vapor proof and grease proof. Heat sealable, Moisture Barrier Bags are made from a multilayer metallized film.

### MIL-B-81705C class1 TC1 SBM356

Thickness: 85  $\mu\text{m}$

Film complying: MIL-B-81705C class1 TC1 SBM356

Rs: <  $1 \times 10^{11} \Omega$

Electrostatic decay: < 0,1 sec

EMI shielding (MIL 81705-C): 40dB / 1÷10 GHz

Packaging of 100pcs

### JEDEC-STD-033

Thickness: 150  $\mu\text{m}$

Film complying: JEDEC-STD-033

Rs: <  $1 \times 10^{11} \Omega$

Electrostatic decay: < 0,1 sec

EMI shielding (MIL 81705-C): 40dB / 1÷10 GHz

Packaging of 100pcs

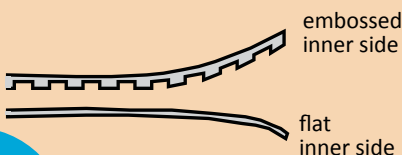
Opening on the short side (mm)	Thickness 85 $\mu\text{m}$
100 x 660	<b>7804.344</b>
150 x 660	<b>7804.347</b>
200 x 250	<b>7804.348</b>
250 x 660	<b>7804.350</b>
400 x 400	<b>7804.354</b>
400 x 660	<b>7804.353</b>
450 x 450	<b>7804.355</b>
450 x 660	<b>7804.356</b>

Opening on the short side (mm)	Thickness 150 $\mu\text{m}$
100 x 660	<b>7804.344P</b>
150 x 660	<b>7804.347P</b>
200 x 250	<b>7804.348P</b>
250 x 660	<b>7804.350P</b>
400 x 400	<b>7804.354P</b>
400 x 660	<b>7804.353P</b>
450 x 450	<b>7804.355P</b>
450 x 660	<b>7804.356P</b>

## Not-esd moisture barrier bags

### SACS BARRIERE GAUFRES (Packaging of 100pcs)

In external aspiration appliances textured bags are the best solution for an easy operation. One of the inner layer is made with small straight rails parallel to the lateral sides that facilitate the output of the air during the aspiration job.



Opening on the short side (mm)	Embossed 85 $\mu\text{m}$	Flat 95 $\mu\text{m}$
150 x 200	<b>6604.004</b>	<b>6603.923</b>
150 x 300	<b>6604.006</b>	<b>6603.925</b>
200 x 300	<b>6604.010</b>	<b>6603.928</b>
250 x 350	<b>6604.015</b>	<b>6603.932</b>
250 x 600	<b>6604.020</b>	<b>6603.936</b>
300 x 400	<b>6604.025</b>	<b>6603.940</b>
400 x 600	<b>6604.030</b>	<b>6603.945</b>
200 x 6m Tubing	<b>6604.052</b>	-
300 x 6m Tubing	<b>6604.054</b>	-

## HAND HELD CRIMPER SEALER

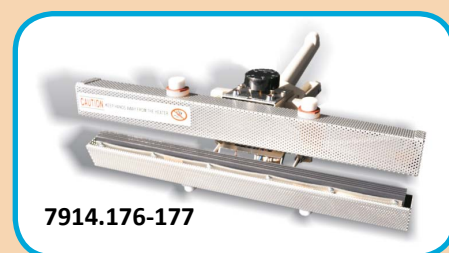
Model	7914.172	7914.175	7914.176	7914.177
Weldable material	polyethylene	cellophane, wax paper, aluminium or moisture barrier bags	cellophane, wax paper, aluminium or moisture barrier bags	cellophane, wax paper, aluminium or moisture barrier bags
Soldering length (mm)	150	150	300	400
Max. soldering thickness (mm)	2x0,15	2x0,15 Aluminium bag	2x0,15 Aluminium bag	2x0,15 Aluminium bag
Seal width (mm)	2	15	12	12
Power (W)	25	50	320	420
Weight (kg)	0,5	1	2,5	3,5
heating jaws	1	2	2	2
Finishing	flat	embossed	embossed	embossed
Temp. Adjustment	50-200°C	50-200°C	50-200°C	50-200°C



7914.172



7914.175



7914.176-177

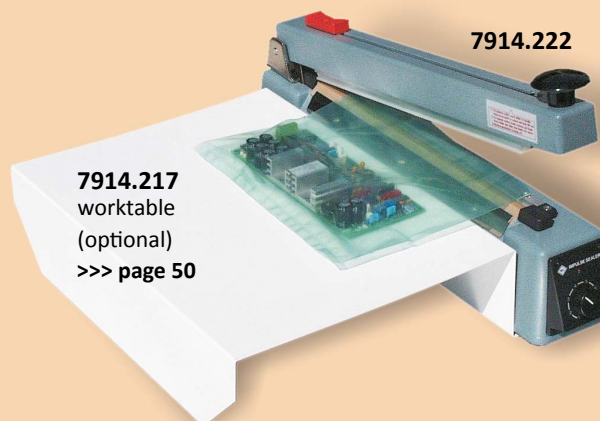
## HAND SEALERS

The welding time is adjustable, to match the type and thickness of material. The models with cutting blade can be used to produce bags from tubing or to seal filled bags and to trim the exceeding material.

Seal width: 2mm

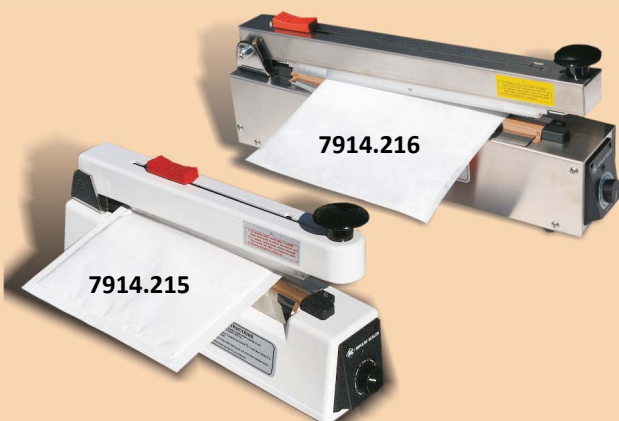
Max.Sealable Thickness: 2x0.125mm.

Model	With cutter blade	Sealing length (mm)	Power (Watts)	Weight (Kg)
7914.201		200	260	4
7914.211	x	200	260	4
7914.221		300	380	5
7914.222	x	300	380	5
7914.231		400	500	6
7914.232	x	400	500	6
7914.233	x	500	550	7



7914.217  
worktable  
(optional)  
>>> page 50

## HAND SEALER (MEDICAL PACKAGING)

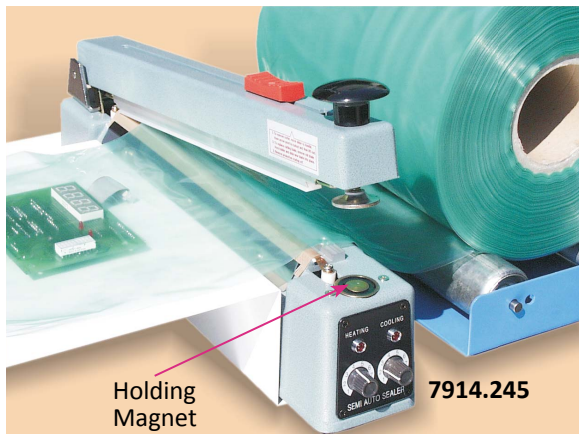


Recommended for the health care industry, creates water-tight seals on sterilisation rolls (paper-plastic) and sterilisation tubing (plastic-plastic) materials. The welding time is adjustable, to match the type and thickness of material, an audible beep advises when the seal is complete. Each seal has a deeply embossed texture.

- Soldering width: 10mm (according DIN58953)

- Max.Sealable Thickness: 2x0.2mm

	Model	Sealing length (mm)	Power (Watts)	Weight (Kg)
7914.215		200	1000	6,5
7914.216	stainless steel	300	1200	8



## WITH HOLDING magnet and cutter

The machine operates quickly and efficiently with magnet hold, offering consistent secure sealing for every package. After the seal cycle the machine re-opens automatically.

- Adjustable welding and cooling time.
- Uniform set contact pressure.
- Welds all types of thermoplastic films.
- Easy and simple to operate.

Seal width: 5mm

Max seal thickness: 2x0.15mm

**7914.245** Hand Sealer with holding magnet and Cutting Blade Max. seal length: 300mm

**7914.246** Hand Sealer with holding magnet and Cutting Blade Max. seal length: 400mm

### CODE ACCESSORIES FOR HAND SEALERS

**7914.217** Worktable for sealing unit 200mm

**7914.227** Worktable for sealing unit 300mm

**7914.237** Worktable for sealing unit 400mm

**7914.226** Holder for tubing roll, maximum width 310mm

**7914.236** Holder for tubing roll, maximum width 510mm



**7914.217**



**7914.226**

## DOUBLE AUTOMATIC HEAT SEALER

Heavy duty, single or double, automatic or manual impulse heat sealer. Seals up to 0.5mm gusseted or regular thermoplastic film.

Separate programmable timers (for sealing, cooling and recycle time when in automatic mode).

Foot switch included for manual operation.

Seal width: 10mm

Max. seal thickness: 2x0.15mm



**7914.247**



**7914.248V**

**7914.247** Automatic heat sealer 300mm ( 2000W - weight 22kg )

**7914.247V** Automatic heat sealer 300mm with floor support

**7914.248** Automatic heat sealer 450mm ( 2500W - weight 24kg )

**7914.248V** Automatic heat sealer 450mm with floor support

**7914.249** Automatic heat sealer 600mm ( 3000W - weight 26kg )

**7914.249V** Automatic heat sealer 600mm with floor support

## AUTOMATIC HEAT SEALER WITH TEMPERATURE CONTROL

Heavy duty, constant temperature, magnet hold, automatic or manual impulse heat sealer. The machine is suitable for heavy bags like poly-cello films, aluminum foil or moisture barrier bags. Each seal has a deeply embossed texture.



**7914.165**

Seal width: 15mm

Max. seal thickness: 2 x 0,25mm

Temperature range: 30 - 199°C

Sealing time: 0,2 - 2,5 sec

Recycle time (automatic mode): 1 - 8 sec

**7914.163** Constant automatic heat sealer 200mm (350W - weight 15kg)

**7914.165** Constant automatic heat sealer 400mm (520W - weight 19kg)

**7914.166** Constant automatic heat sealer 600mm (600W - weight 22kg)

## VACUUM PACKING MACHINES

### VACUWELD - vacuum tank sealers for epa area

The VACUWELD machines have been designed to avoid electrostatic charges, for the use in ESD environments: stainless steel chamber, aluminium cover and conductive wheels. Digital adjustment of vacuum ( Vacuum % ), controlled by an internal vacuum sensor.

#### VACUWELD

##### Venturi pump (compressed air)

The use of a compressed air-driven vacuum pump, minimizes noise, vibration and heat generation.

Maximum vacuum level 90% (measured at the sea level)

Seal bar: 460 x 10mm

Useful chamber size: 500 x 600 x 100(H)mm

Air requirements: 6nl/s at 6 ATM

Power supply: 230V/50Hz 1kW

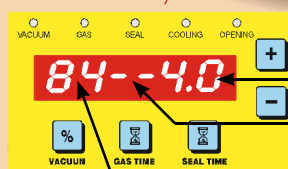
**7914.275** Vacuum tank sealer



**7914.275**

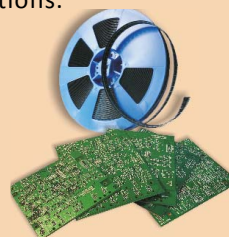


**7914.279**



**NOTE:** Compared to the adjustment of the suction time and the visual control, the adjustment of the vacuum percentage (Vacuum%), which can be set by all VacuWeld heat sealers, guarantees maximum repeatability and precision in packaging.

These are the values we recommend to avoid excessive pressure of the envelopes on the SMD and PCBS coils, which could cause breakage or dangerous deformations.



REEL  
Suggested Vacuum: 75÷85%

PCBs  
Suggested Vacuum: 70÷80%

The VacuWelds allow you to store up to 10 welding programs to quickly set the desired parameters.

### VACUWELD - Oil pump

The use of an oil pump let the sealer to reach a high vacuum level.

Maximum vacuum level 98%  
(measured at the sea level)

Seal length: 450 x 5 mm

Vacuum pump: Oil bath, 20m<sup>3</sup>/h.

Chamber capacity: 450x500x90(H) mm

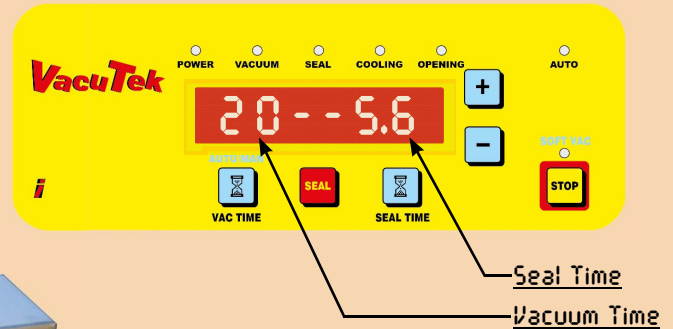
Power supply: 230V/50Hz 2kW

**7914.278** Vacuum tank sealer

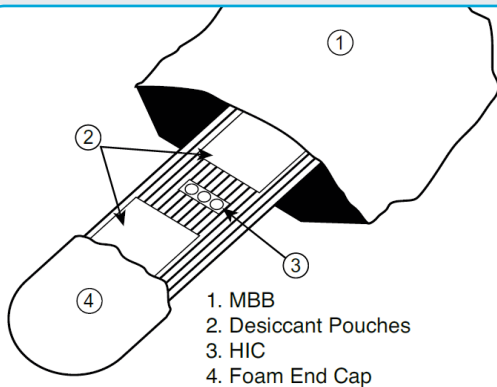
**7914.279** Vacuum tank sealer, with inert gas injection

## VACUTEK - External aspiration for EPA area

Vacuthek is an innovative external suction welding machine, an evolution of the previous model Vaculab which has been produced for over 10 years. With these economic and flexible machines is possible to package every length of bag. The unit is hand operated or motorized and the degree of vacuum is achieved by the operator's evaluation.



The vacuum (Vacuum Time) time can be preset or manually decide when to start the sealing cycle by pressing the SEAL button.

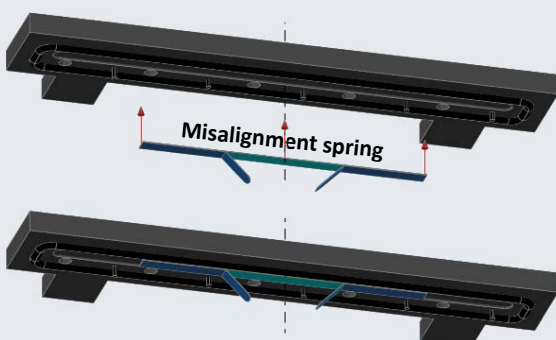


Extract from the  
standard J-STD-033D

J-STD-033D-3-1

**Figure 3-1 Typical Dry-Pack Configuration for Moisture-Sensitive SMD Packages in Shipping Tubes**

Unfortunately, the ESD barrier bags used in Electronics to make the Dry Pack of MSD components according to the Jedec J-STD-033D standard, are not available in the embossed type, ie with internal knurling, useful for air extraction. Therefore they normally require the use of vacuum chamber packaging machines (internal aspiration). For their use with with external aspiration vacuum packaging machines, the misalignment spring was developed. It's a magnetic anchoring tool, which must be inserted in the upper part of the welding bar as shown in the figure.



- 7914.340** Manual vacuum bag sealer, external aspiration.
- 7914.345** Motorized vacuum bag sealer, external aspiration, Foot pedal included.
- 7914.341** Upgrade from manual (**7914.340**) to motorized model (**7914.345**)

Technical features:

Seal length: 450 mm

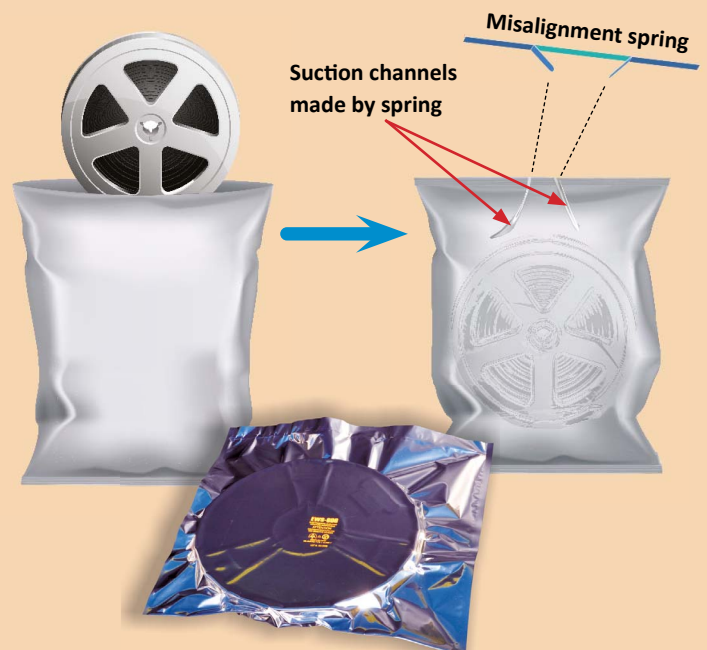
Soldering jaws: 2 x 6mm

Vacuum pump: Dry , 5m<sup>3</sup>/h

Noise: <65dB

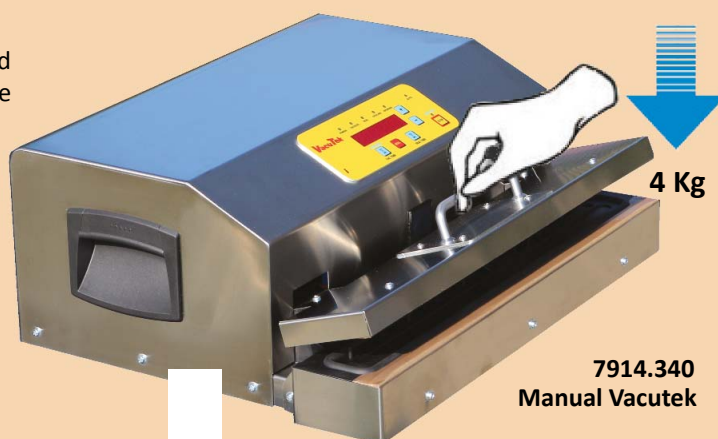
External dimensions: 490x390x220mm

Power supply: 230V/50Hz - 600W



### Manual Vacutek

In the manual model (**7914.340**) the aspiration cycle is started by manually pushing down the handle on the upper jaw. Once the cycle has started, it is not necessary to continue pushing. The force to be applied on the handle to start the cycle is about 4Kg.



#### Do You Want to Upgrade?

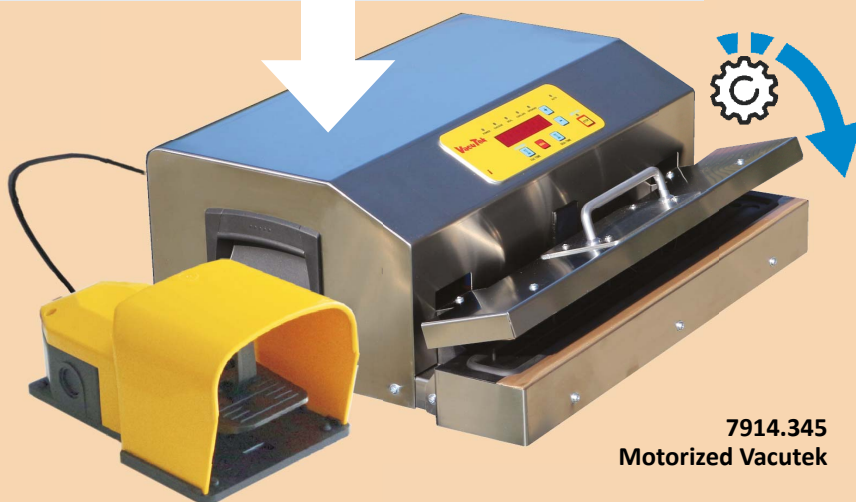
The model **7914.340** also allows the upgrade to the motorized version **7914.345** afterwards

### Motorized Vacutek

In the motorized model (**7914.345**) the cycle is started by pressing the pedal, with the advantage of having your hands totally free.

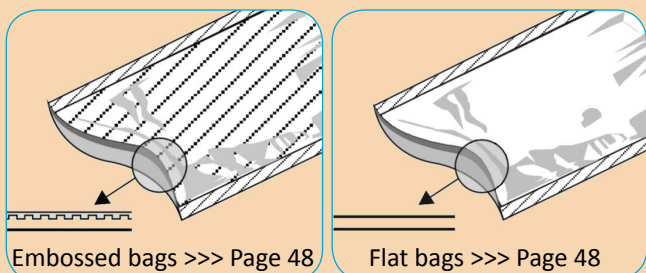
#### No danger for the operator with the motorized model.

Unlike other motorized vacuum packing machines, the pressure exerted by the jaws moving is not sufficient to cause damage to the hands.



## THE ADVANTAGES OF VACUTEK ARE:

### 1) It is possible to use both flat and embossed bags

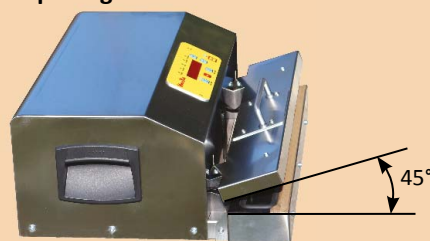


Embossed bags >>> Page 48

Flat bags >>> Page 48

Hook the misalignment spring when using the flat barrier bags, remove it with the embossed barrier bags.

### 2) Wide jaw opening



Excellent visibility when the mouth is open (the jaws open up to 45° in both Vacutek models). This allows the operator to insert the bag quickly and accurately.

### 3) It does not require air extraction nozzles.

Therefore:

- the manual work of inserting them in the bag is not required.
- does not require automatism for their insertion/extraction.



### 4) No maintenance

The vacuum pump is dry therefore it does not require any maintenance.



# Wire shelving



Solid CONDUCTIVE shelving, in chrome plated steel, resistant to rust, bumps and scratches.

This system allows an efficient air circulation, a good light penetration and the maximum accessibility.

Easy to assembly on field, it doesn't require any screws, bolts or tools.

Split sleeve assembly device locks shelves in place in 1" increments along height of post.

Levelling bolt compensate for uneven floors.

Every wire shelf system can be made mobil by using conductive castors.

VINYLAB mat optional cover, 2 layers, grey ESD

Load capacity for single shelf: 150 kgs

Load capacity for shelving unit: 800 kgs

## Composition

The Starter Unit, the first one, is composed by two, three or four shelves by choice, and four posts.

An Add-on Unit, to be attached to the preceding, needs two posts only. This unit connect to the Starter Unit by mean of "S" hooks, two for shelf, easy to fix. In this case two split sleeves for shelf will be enough (For a total of two "S" hooks and two split sleeves for shelf).

(1)



Shelf Dim. (mm)	Shelf	VINYLAB mat
350x910	<b>8103.990</b>	<b>8104.140</b>
350x1220	<b>8103.991</b>	<b>8104.141</b>
455x910	<b>8104.001</b>	<b>8104.142</b>
455x1220	<b>8104.002</b>	<b>8104.143</b>
455x1525	<b>8104.003</b>	<b>8104.144</b>
455x1830	<b>8104.000</b>	<b>8104.145</b>
610x910	<b>8104.004</b>	<b>8104.146</b>
610x1220	<b>8104.005</b>	<b>8104.147</b>
610x1525	<b>8104.006</b>	<b>8104.148</b>
610x1830	<b>8104.007</b>	<b>8104.149</b>



**8104.050**



<b>8104.020</b>	Post H= 864mm
<b>8104.021</b>	Post H=1370mm
<b>8104.022</b>	Post H=1600mm
<b>8104.023</b>	Post H=1890mm
<b>8104.108</b>	Esd Document holder A4 - 2 magnets included
<b>8104.061</b>	Chromed plastic split sleeve (optional)
<b>8104.050</b>	"S" Hooks for Add-on Unit.

(2)



(3)



(4)



<b>8104.101</b>	<b>Fixed Label-holder (1)</b> Fixed Label-holder 80mm
<b>8104.110</b>	<b>Divider (2)</b> Shelf Dividers 455x200(H)mm
<b>8104.111</b>	Shelf Dividers 610x200(H)mm

### Side and back ledges (3)

Side and back ledges 100mm height to avoid dangerous falls.

<b>8104.130</b>	Ledge 100mm x 455mm
<b>8104.131</b>	Ledge 100mm x 610mm
<b>8104.135</b>	Ledge 100mm x 762mm
	<b>SMD reel shelf (4)</b>
<b>8104.012</b>	SMD reel shelf 455 x 910mm Reel capacity: 80, DIA.180mm x width. max.17mm
<b>8104.013</b>	SMD reel shelf 455 x 910mm Reel capacity: 13, DIA.330mm x width. max.50mm



Plastic split sleeve  
included withshelves

**8104.061** (optional)  
Chromed plastic  
ESD split sleeve



## Wire trolley

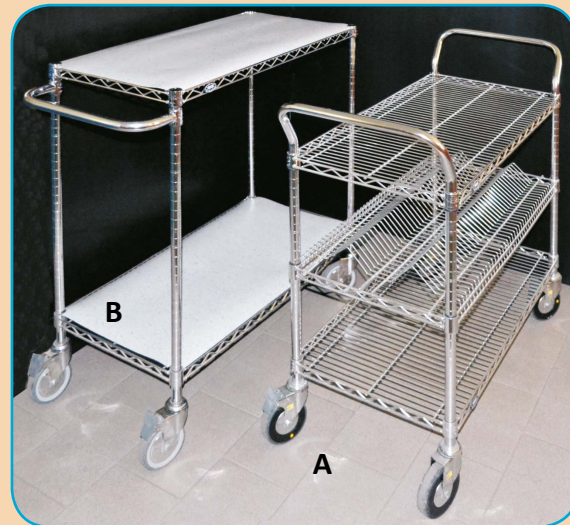
Two version of it: with 2 U-handles or 4 posts. The shelves are the same used in the shelving unit, easy to assembly with split sleeve devices to avoid any tools, screws and bolts. Load capacity: 200 kgs.

### Composition A:

2 U-handles, 1 set of castors,  
3 shelves and 12 split sleeves

### Composition B:

1 handle, 4 posts,  
1 set of castors  
2 shelves, 12 split sleeves  
and 2 VINYL mats



- 8104.041** U-handle 455mm width, 1000mm height
- 8104.042** U-handle 610mm width, 1000mm height
- 8104.046** 8104.046 Handle 455mm
- 8104.047** 8104.047 Handle 610mm
- 8104.070** Set of 4 conductive castors Ø125mm ( 2 with brake)
- 8104.071** Set of 4 NON-ESD castors Ø125mm ( 2 with brake)

## Stainless steel trolley

Stainless steel carts - AISI304 with solid conductive wheels Ø125mm, 2 with brake.

### TWO/THREE SHELF TROLLEY (A)

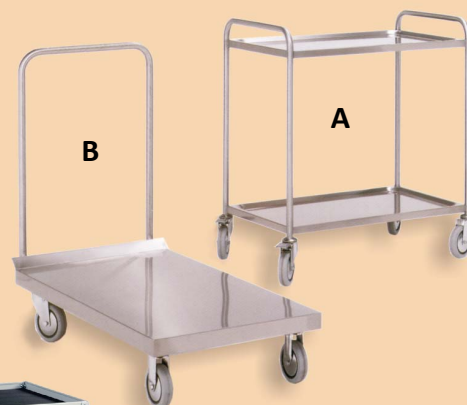
Load capacity for single shelf: 50kg

- 8104.700** 2 U-handle KIT, with conductive wheels
- 8104.706** Shelf - dim. 800 x 500mm
- 8104.708** Shelf - dim. 1000 x 500mm

### CART FOR STUFF (B)

Load capacity: 200kg

- 8104.720** Trolley - dim. 1000 x 550mm



## TRESTON trolley

### TRESTON TROLLEY ESD (C)

Storage trolley is an easy solution for mobile storage, it has an adjustable middle shelf and all shelves are fitted with standard rubber mats.

Set of 4 ESD castors diam. 100mm (2 with brake)

Max load 30 kg per shelf.

- S852773-49** TRESTON TROLLEY ESD 650x450x775mm (C)

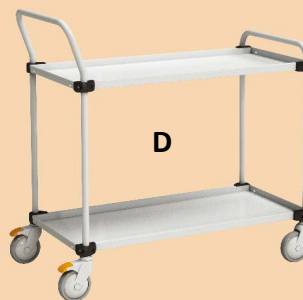
### TRTA TROLLEY ESD

The Trolley can be equipped with several accessories to transport and store tools and electronic components.

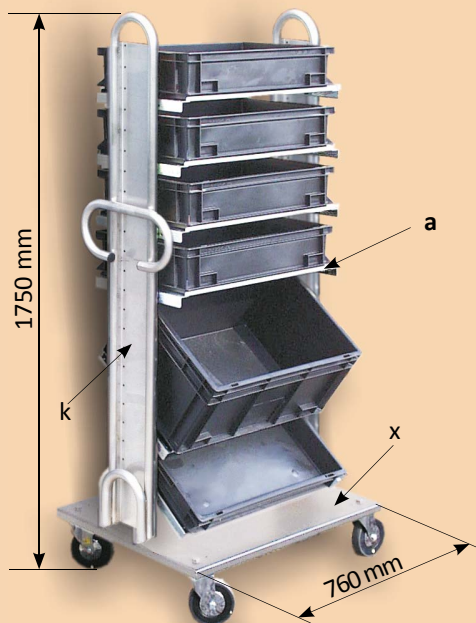
Set of 4 ESD castors Ø125mm (2 with brake).

The Trolley is available in 2 versions:

- The TRTA / 2 version (figure D) has 2 shelves dim. 800x400. Load max. 150kg.
- The TRTA / 4 version (figure E) has 4 shelves dim. 800x400. Load max. 300kg.



- TRTA4082 ESD** TROLLEY TRTA /2 ESD 890x530x1020mm (D)
- TRTA5104 ESD** TROLLEY TRTA /4 ESD 1090x630x1515mm (E)



Load capacity for single shelf: 50kg

## CHARLOTTE - Trolley per newbox

CHARLOTTE conductive trolleys are ideal for efficient handling of tote boxes, circuit board carriers, cabinets and other parts handling containers.

The basic unit consist of two lateral support posts on a stable, wide based assembly.

Steel shelves are adjustable in height, depth and tilt angle.

P370 shelf, without fittings, can accomodate one EURO 600x400 or two EURO 300x400 boxes.

In the table below are listed the parts forming the trolley shown left.

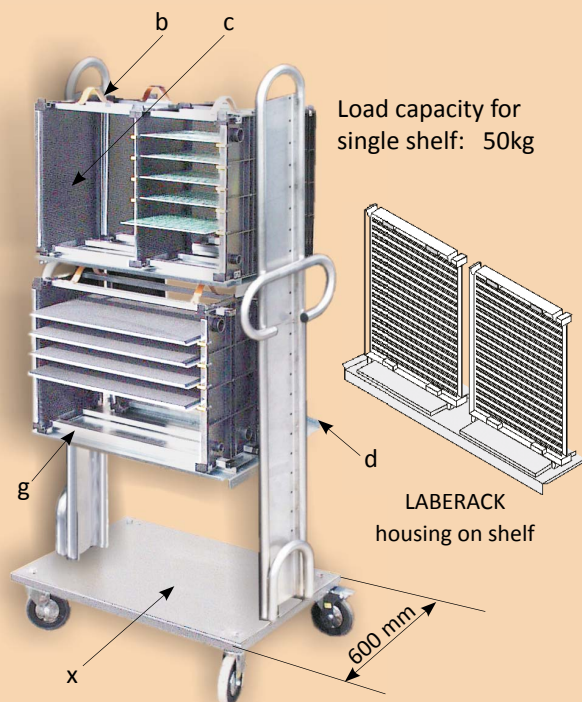
code	description	fig.	Qty.
8100.050	Stainless steel baseplate with castors	x	1
8100.054	Stainless steel lateral support post	H	
8100.055	Stainless steel lateral post with handle	K	2
8100.056	A4 document holder	J	
8100.065	P370 shelf 370x630mm	a	6 in figure
8100.066	P600 shelf 600x630mm NEWBOX tote boxes (cat. page 22)		

## Charlotte - trolley for laberack

CHARLOTTE conductive trolley can be customized to carry Printed Circuit Boards or LABEFIX trays. The trolley shown in figure consists of four LABERACK carriers, securely housed on the two special double support shelves.

In the table below are listed the parts forming the trolley shown right:

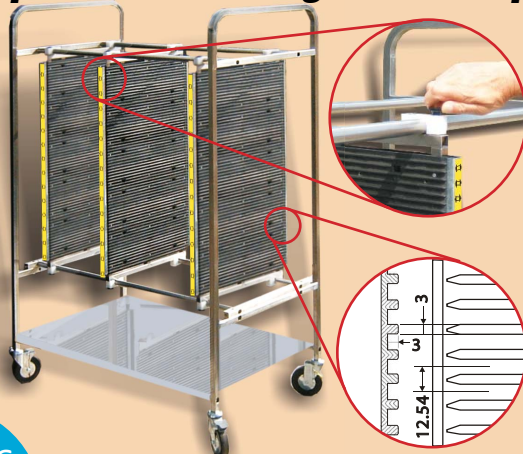
codice	description	fig.	Qty.
8100.050	Stainless steel baseplate with conductive castors	x	1
8100.054	Stainless steel lateral support post	H	
8100.055	Stainless steel lateral post with handle	K	2
8100.056	A4 document holder	J	
8100.068	Double shelf for 2 LABERACK racks	d	2
7804.007	LABERACK wall	c	
7804.017	LABERACK intermediate wall		
7804.002	LABERACK aluminium bar (600mm lenght)	g	
7804.021	LABERACK handle for transport (rail fixing)	b	rack



Load capacity for single shelf: 50kg

LABERACK housing on shelf

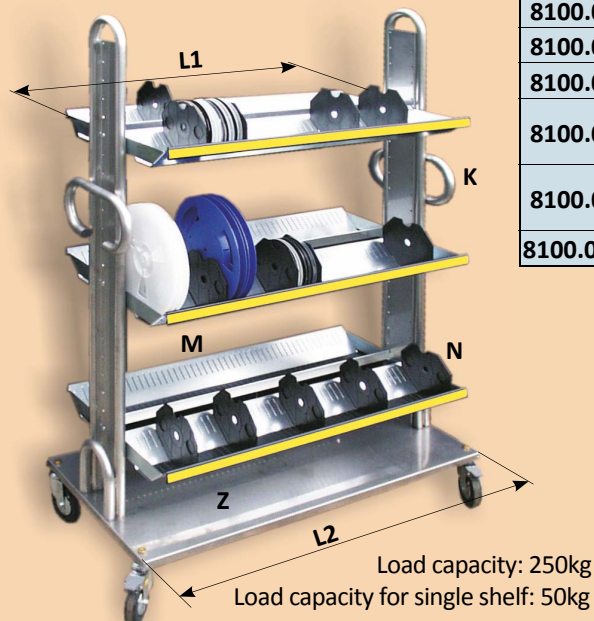
## pc board storage & transport LABECART



A mobile PCBs' store, ideal for transporting work process and storing large quantities of board. Adjustable panels with horizontal slides feature 12,54mm (1/2") spacing. Made by stainless steel structure and conductive plastic panels. 84 slides per side, accepts boards or trays up to 9mm thickness. Load capacity: 250kg

8104.312	Stainless steel lateral support post pair
8104.318	Stainless steel stud $\varnothing$ 25x1000mm (n.6 each cart)
8104.327	Side wall 1120x510mm / 84 rails
8104.325	Intermediate wall 1120x510mm / 84 rails each side
8104.330	Lower stainless steel shelf 660x1000mm
8104.695	ESD wheel kit, $\varnothing$ 125mm ( 2 with brake)
8104.696	NON-ESD wheel kit, $\varnothing$ 125mm ( 2 with brake)

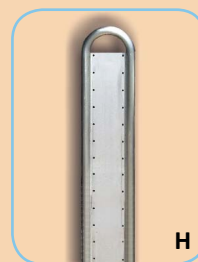
## CHARIOTTE Smd reel holder



	description	ref.	Qty.
8100.050	Stainless steel baseplate with castors, 600x760(L2) mm	x	
8100.049	Stainless steel baseplate with castors, 600x1130(L2) mm	Z	1
8100.054	Stainless steel lateral support post	H	
8100.055	Stainless steel lateral support post with handle	K	2
8100.056	A4 document holder	J	
8100.073	Double shelf for SMD reel support L1 = 630mm 29 slits for side, pitch 20mm		
8100.074	Double shelf for SMD reel support L1 = 1000mm 49 slits for side, pitch 20mm	M	3
8100.075P	Divider for SMD reels	N	



8100.055



8100.054



8100.056

CHARIOTTE reel holder is designed to prepare and transport the SMD reels to the assembly area, and mainly to make the replacement of empty reels on the automatic machines. The capacity of the trolley is 4 shelves for reel size 330mm and 5 shelves for reel size 220mm. Steel shelves are adjustable in height, the mobile dividers help to compartmentalize the reels. Every shelf is provided with labels.

## TRESTON smd reel holder

The adjustable reel holder trolley is compatible with SMD reels, and suitable for transport and stocking of them. The trolley is in powder coated steel, RAL7035 ESD. The reel holder is galvanized.



7805.698

The trolley has four perforated steel shelves depth 460mm. All shelves are individually adjustable.

The load capacity of one shelf is 50kg, and the load capacity of the trolley is 200kg.



8100.020

8100.020	Trolley with four shelves and wheels (reel holders not included)
7805.698	Reel rack Ø 180 / 330 / 380mm - Dim. 960x426x254(H)mm



8104.012



8104.013

## Smd reel holder (wire shelving page 54)

The Wire Reel Holders can be combined with the standard wire shelves and posts. (see page 54)

8104.012	WIRE SHELF for 180mm SMD reels - 455x910x95(H)mm. Slot opening 16mm - Reel capacity /shelf: about 80
8104.013	WIRE SHELF for 330/380mm SMD reels - 455x910x108(H)mm. Slot opening 50mm - Reel capacity /shelf: about 13

## CHARIOTTE tray trolleys



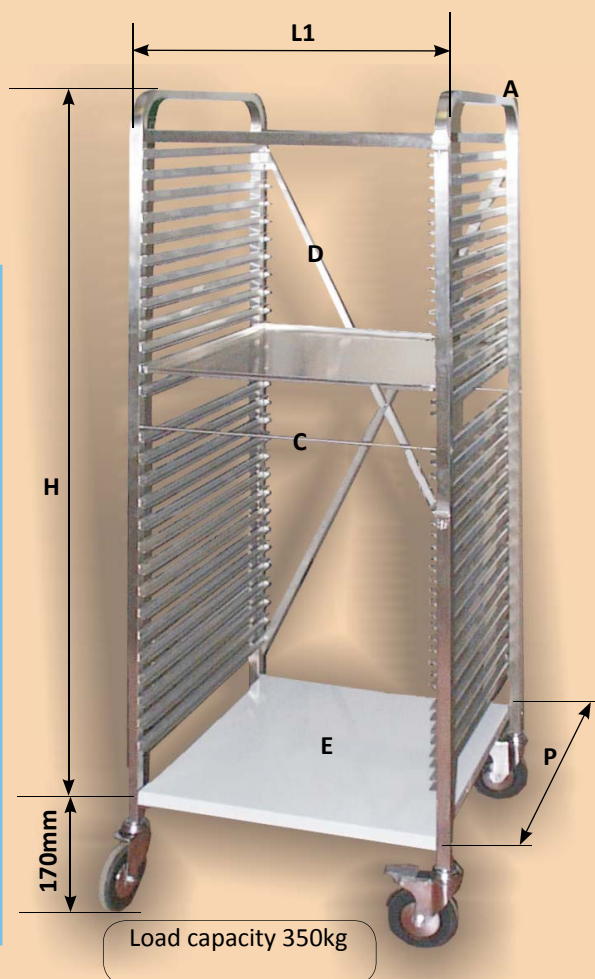
Supporting structure made of tubular AISI 304 stainless steel.

C - shaped tray control guides, made of stainless steel with back stops.

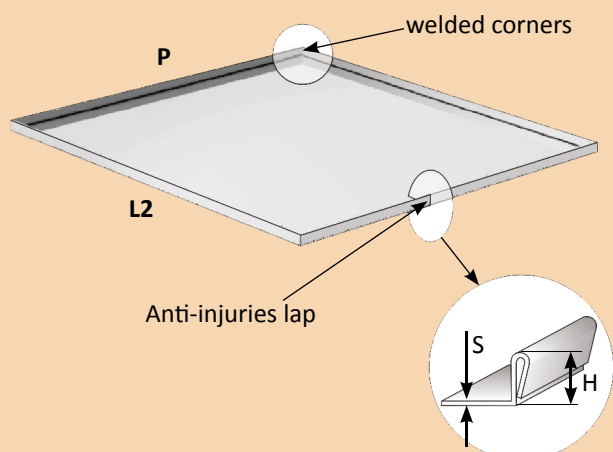
Chariotte trolleys with height of 1520mm shall be equipped with 1 stiffening cross on the back side and 1 central tie rod on front side.

Pivoting conductive wheels, Ø 125mm (2 with brakes)

The optional stainless steel shelf, can be placed on the bottom and on the top.



- 8104.605 (A) Lateral support post pair, 20 rails 825(H)x400( P )mm
- 8104.607 (A) Lateral support post pair, 20 rails 825(H)x660( P )mm
- 8104.610 (A) Lateral support post pair, 38 rails 1520(H)x400(P)mm
- 8104.612 (A) Lateral support post pair, 38 rails 1520(H)x660(P)mm
- 8104.650 (B) STRINGER 25 x 25 x 508( L1 )mm (need 4)
- 8104.651 (B) STRINGER 25 x 25 x 543( L1 )mm (need 4)
- 8104.654 (B) STRINGER 25 x 25 x 808( L1 )mm (need 4)
- 8104.660 (C) Central tie rod Ø 8X 508(L1)mm
- 8104.661 (C) Central tie rod Ø 8X 543(L1)mm
- 8104.664 (C) Central tie rod Ø 8X 808(L1)mm
- 8104.685 (D) Stiffening cross 1520(H)x 508(L1)mm
- 8104.686 (D) Stiffening cross 1520(H)x 543(L1)mm
- 8104.687 (D) Stiffening cross 1520(H)x 808(L1)mm
- 8104.670 (E) Inox SHELF 10/10 400 (P)x 508(L1)mm (optional)
- 8104.674 (E) Inox SHELF 10/10 660 (P)x 508(L1)mm (optional)
- 8104.675 (E) Inox SHELF 10/10 400 (P)x 543(L1)mm (optional)
- 8104.676 (E) Inox SHELF 10/10 660 (P)x 543(L1)mm (optional)
- 8104.678 (E) Inox SHELF 10/10 400 (P)x 808(L1)mm (optional)
- 8104.682 (E) Inox SHELF 10/10 660 (P)x 808(L1)mm (optional)
- 8104.695 Conductive wheels KIT, Ø125mm (2 with brakes)
- 8104.696 Set of 4 NON-ESD castors, Ø125mm, (2 with brakes)



## Aluminium trays

Flat trays, made of aluminium alloy 3003 with anti-injuries laps. Welded on the corners.

Code	S	H	L2xP	L1
8104.580	1.2	12	500x330	508
8104.582	1.2	12	500x390	508
8104.584	1.2	15	500x650	508
8104.587	1.2	12	535x290	543
8104.588	1.2	12	535x600	543
8104.592	1.2	15	800x330	808
8104.594	1.5	15	800x390	808
8104.596	1.5	16	800x650	808

## Workbenches TP

Ergonomic workbench is suitable for light assembly. Frames are of epoxy powder coated steel in grey RAL7035. The worktops are of 25 mm ESD-laminate. Height adjustment with allen-key between 650 to 900 mm.

<b>TP 510 ESD</b>	500 x 1000mm	charge max. 150kg
<b>TP 710 ESD</b>	700 x 1000mm	charge max. 300kg
<b>TP 712 ESD</b>	700 x 1200mm	charge max. 300kg
<b>TP 715 ESD</b>	700 x 1500mm	charge max. 300kg
<b>TP 718 ESD</b>	700 x 1800mm	charge max. 300kg
<b>TP 915 ESD</b>	900 x 1500mm	charge max. 300kg
<b>TP 918 ESD</b>	900 x 1800mm	charge max. 300kg



## Steel cabinet 45

Suitable for TP/TPH/WB/Concept benches of 700 mm depth and over, Centrally locked high quality steel cabinet for storage of tools and small components. Mounted under workbenches with brackets (included). Steel cabinets are semiconductive epoxy powder coated in grey paint, RAL 7035. One model 7804.563 available as an independent tool trolley, with wheels 100 mm diameter, two with brakes. Full width drawer handle in anodised aluminium. The drawers are mounted on silent telescopic guides that allow extraction at 100% of the length.

Load capacity: 60 kg/drawer.

Drawers size: 380 x 500 mm (Width x Depth).



code	7804.533	7804.543	7804.553	7804.563	7804.573
drawer outerheight (mm)	1X100	2X100	3X100 1X200	3X100 1X200 with wheels	3X100 2X150 with base
outer dimensions (mm)	450x520x140	450x520x260	450x520x560	450x520x700	450x520x760

## WORKBENCHES TPH

Workbench with upright profiles and a laminate shelf, depth 310 mm, height adjustment 1080 to 1550mm

Worktop height adjustment with allen-key, between 650 - 900mm

Frames are of epoxy powder coated steel in dark grey RAL 7035.

The worktops are of 26 mm laminated particle board

Load capacity 300 kg equipment static u.d.l.



Tecofix

>>> go to page 27



Movable Benches

>>> go to page 29

**TPH 712 ESD** Workbench top dimensions 700 x 1200mm

**TPH 715 ESD** Workbench top dimensions 700 x 1500mm

**TPH 718 ESD** Workbench top dimensions 700 x 1800mm

**TPH 915 ESD** Workbench top dimensions 900 x 1500mm

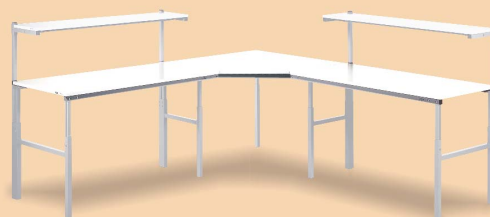
**TPH 918 ESD** Workbench top dimensions 900 x 1800mm



### CORNER WORKBENCH TPH

**TPH 707 KK ESD** Corner Workbench with top dimensions 1100 x 1100mm

**TPH 909 KK ESD** Corner Workbench with top dimensions 1300 x 1300mm



### AUXILIARY SHELF SH

Height adjustable shelf, 25mm ESD laminate

Load capacity 50kg

**SH 120 ESD** dim.310 x 1200 Suitable for TPH712

**SH 150 ESD** Dim.310 x 1500 Suitable for TPH715/915

**SH 180 ESD** dim.310 x 1800 Suitable for TPH718/918



### METAL SHELF TH

For stacking and picking bins Tecofix 5

Adjustment for depth, height and angle

Load capacity 30kg

**TH 120 ESD** dim.145 x 1119 Suitable for TPH712

**TH 150 ESD** dim.145 x 1419 Suitable for TPH715/915

**TH 180 ESD** dim.145 x 1719 Suitable for TPH718/918

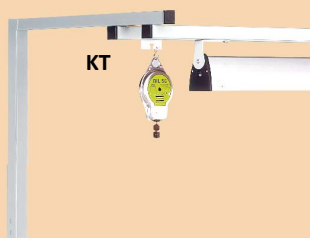


3D DESIGNER



Design your workstation with the 3D Configurator

## TOOL AND LIGHTING SUPPORT KT

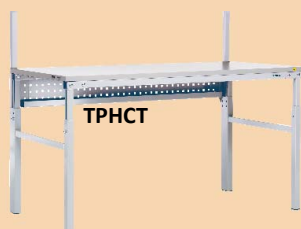


For suspending power tools and lighting units includes one C-profile bar with sliding hook

<b>KT120</b>	C-profile bar, for bench 1200mm
<b>KT150</b>	C-profile bar, for bench 1500mm
<b>KT180</b>	C-profile bar, for bench 1800mm
<b>CC12</b>	Cable clip set (5 pcs)
<b>CKV400ESD</b>	Swivel arm with tray 210 x 460mm, Load 15kg



**CC12**  
Cable clip set  
(5 pcs)



## CABLE TIDY TPHCT

Mounted between C-profiles below worktop  
Perforated epoxy powder coated steel

<b>TPHCT 120</b>	45 x 205 x 1115 Suitable for TPH712
<b>TPHCT 150</b>	45 x 205 x 1415 Suitable for TPH715/915
<b>TPHCT 180</b>	45 x 205 x 1715 Suitable for TPH718/918



**CKV400ESD**

## CABLE CHANNEL



Fixed on table top

<b>TPR4-001</b>	Cable channel with switch, 6 schuko socket and 2 USB
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## FOOTREST ESD

Footrest with an angle adjustment of the padded platform, floor model.

Width: 550 mm  
Depth: 350 mm  
Height: 100 mm  
Max load: kg 30  
RAL code: RAL7035



**860947-49**

<b>S860947-49</b>	Footrest ESD with adjustment
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## TRESTON NATURLITE LED

Lamp with adjustable lighting for work station, with bright and high quality light. The dimming option guarantees that each workstation user gets exactly the amount of light that they need. Adequate lighting even for high-precision technical assembly work. Side lights enable eliminating all shadows from the work area, or creating shadows where they are needed.



**TNL1200**

**TNL500W**

**TNL900**

<b>TNL1200</b>	LED Lamp, 3100 Lux, dimmable, L=1180mm
<b>TNL900</b>	LED Lamp, 2300 Lux, dimmable, L=900mm
<b>TNL500W</b>	LED Lamp, 800 Lux, dimmable, L=430mm



**SC10050200**



## SHELF CABINETS

Designed to store electronic components.  
Delivered pre-assembled.

The metal frame is epoxy powder coated with a light grey ESD paint. Shelves can be installed in different position at 80mm pitch distance. There are leveling screws under the cabinet for adjusting the cabinet straight, and the door are key lockable. The empty cabinet can be lift up with forks. Maximum load capacity 150 kg./shelf

<b>SC10050100</b>	ESD SHELF CABINET with 2 shelves, 1030x530x1010 mm
<b>SC10050200</b>	ESD SHELF CABINET with 4 shelves, 1030x530x2010 mm
<b>S852185-49</b>	Extra shelf with brackets

# CONCEPT WORKBENCHES

- Suitable for use in demanding assembly environments.
- Adaptable to a large variety of tasks.
- Offering a wide range of accessories to meet any need.

Select the height adjustment method: allen-key, electric or hand-crank. Stepless height adjustment between: allen key 700-1100mm, hand crank 675-1025mm, motor 670-1100mm. The frame is strong and rigid. Steel frame parts are epoxy coated light grey paint, RAL 7035. Worktops are of 25 mm ESD laminate particle board, adjustable feet are provided for fine levelling. Cable tidy is standard with hand-crank and electric adjustable benches.

Load capacity from 200 kg to 500 kg depending on the version.

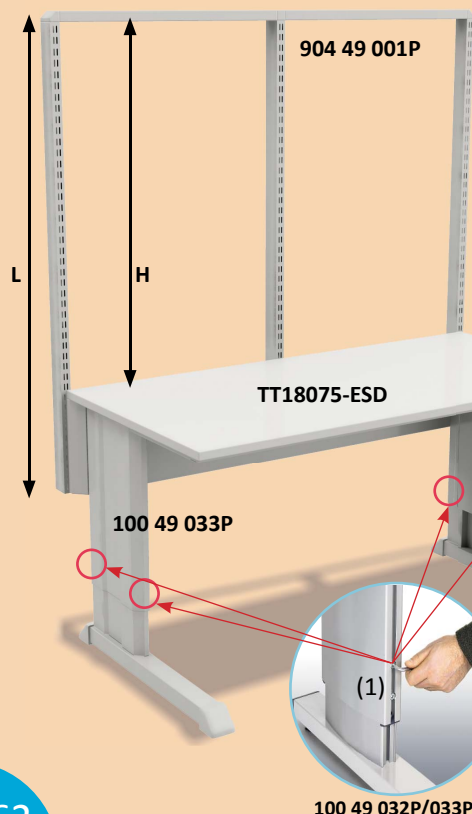


Design your workstation with the 3D Configurator

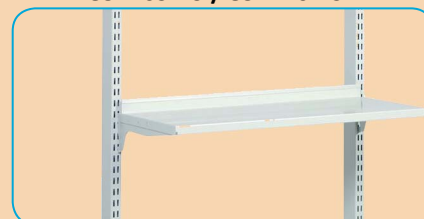


- S100 49 032P** Concept workbench frame, allen key adjustable (1).  
**S100 49 033P** Concept workbench frame, allen key adjustable (1).  
**S101 49 032** Concept workbench frame ESD, hand crank adjustable (2).  
**S101 49 033** Concept workbench frame ESD, hand crank adjustable (2).  
**S103 49 032P** Concept workbench frame ESD, motor adjustable (3).  
**103 49 033P** Concept workbench frame ESD, motor adjustable (3).  
**TT15075-ESD** Top for ESD bench frame.  
**TT18075-ESD** Top for ESD bench frame.  
**S903 49 001P** Upright tube module ESD (for bench frame Dim 1500 x 750)  
**S904 49 001P** Upright tube module ESD (for bench frame Dim 1800 x 750)

- Dim 1500 x 750 mm Max. Load 500 Kg  
 Dim 1800 x 750 mm Max. Load 500 Kg  
 Dim 1500 x 750 mm. Max. Load 200 Kg  
 Dim 1800 x 750 mm Max. Load. 200 Kg  
 Dim 1500 x 750 mm Max. Load 400 Kg  
 Dim 1800 x 750 mm Max. Load 400 Kg  
 Dim 1500 x 750. Color Light grey  
 Dim 1800 x 750. Color Light grey  
 (2xM750) L=1359mm, H=1075mm  
 (2xM900) L=1359mm, H=1075mm



**836028-49 / 852283-49**  
**852769-49 / 852770-49**

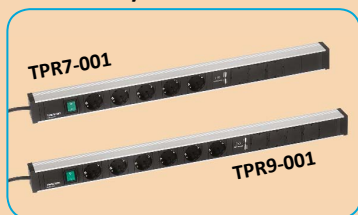


Epoxy powder-coated steel the shelf that can be used either as tilted 20° or in a horizontal position. The shelf has an integrated edge, which can be used either in the front or back of the shelf.

**859151-49 / 859152 -49**



Space saving bin rails ensure an ergonomic working position

**TPR7-001 / TPR9-001**

Cable channel with switch,  
5/6 schuko socket and 2 USB socket

**93049002P**

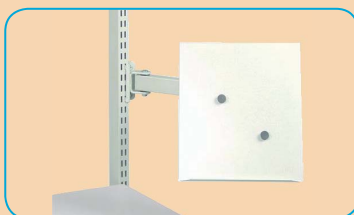
LCD screen holder, suitable for VESA  
75 and 100 standards.

**CPU**

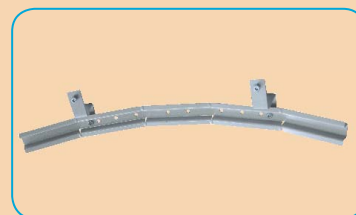
Adjustable support for CPU

**91849006P / 91849008P**

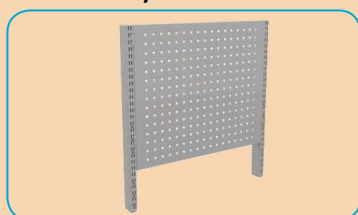
Adjustable rails to mount on the  
upright tubes. To be used to suspend  
lighting units and electric tools

**92849008P**

Document holder A4 ESD. Dim.  
290x330mm.  
Max load kg 5.

**860911-49P**

Extension for curved bin rail ESD  
770x54 with arm (Space saving bin  
excluded)

**861511-49 / 861516-49**

Perforated panels, besides being  
practical storage supports for instru-  
ments and equipment, are efficient  
space dividers.

**860941-49**

Holder Keyboard ESD Width mm 480  
Depth mm 260 Max load kg 5.

**92949002P**

Curved bin rail ESD with arm (Space  
saving bin excluded) Width 770mm,  
depth 54mm, height 54mm. Max  
load kg 15

**Optional accessories**

<b>S836028-49</b>	Steel shelf ESD Width mm 740 Depth mm 300 Max load kg 50 (for 903 49 001P)
<b>S852283-49</b>	Steel shelf ESD Width mm 890 Depth mm 300 Max load kg 50 (for 904 49 001P)
<b>S852769-49</b>	Steel shelf ESD Width mm 890 Depth mm 400 Max load kg 50 (for 904 49 001P)
<b>S852770-49</b>	Steel shelf ESD Width mm 740 Depth mm 400 Max load kg 50 (for 903 49 001P)
<b>S859151-49</b>	Bin rail ESD M750 742x100 (Space saving bin excluded)
<b>S859152-49</b>	Bin rail ESD M900 895x100 (Space saving bin excluded)
<b>S860941-49</b>	Keyboard tray ESD 480x260 for LCD holder Width mm 480 Depth mm 260 Max load kg 5
<b>S861511-49</b>	Perforated back panel Width mm 718 Depth mm 16 Height mm 389
<b>S861516-49</b>	Perforated back panel Width mm 878 Depth mm 16 Height mm 389
<b>S91849006P</b>	Adjustable rails to mount on the upright tubes (for frame 90349001P)
<b>S91849008P</b>	Adjustable rails to mount on the upright tubes (for frame 90449001P)
<b>S92849008P</b>	Document holder A4 ESD dim. 290x330mm, with a double arm of lenght 200+200 mm. Max load kg 5
<b>S92949002P</b>	Curved bin rail ESD 770x54 with arm (Space saving bin excluded)
<b>S860911-49P</b>	Extension for curved bin rail ESD 770x54 with arm (Space saving bin excluded)
<b>S93049002P</b>	LCD screen holder ESD with double arm. Max load kg 15. Suitable for VESA 75 and 100 standards
<b>CPU</b>	Adjustable support for PC
<b>TPR7-001</b>	Power supply channel with switch, 5 schuko socket and 2 USB socket. 4,5 m cable is included Dim 684x44x(H)52 mm (for module M750)
<b>TPR9-001</b>	Power supply channel with switch, 6 schuko socket and 2 USB socket. 4,5 m cable is included Dim 836x44x(H)52 mm (for module M900)

## CHAIRS

Comfortable static safe chairs designed to improve job efficiency and productivity  
 Chrome -plated metal parts - Pneumatic seat height adjustment  
 Standard self-braking conductive castors  
 Rg to ground < 1x10<sup>10</sup>Ω



### COMFORT

ESD chairs with durable dissipative fabric, anthracite color. Synchronized seat and backrest mechanism lockable in different positions, anti-return system of the backrest, adjustment of intensity based on the weight of the person.

code	back rest dimensions (mm)	backrest adjustment	seat dimensions (mm)	seat height (mm)
7804.209A	580 x 400	synchronous movement	510 x 480	420 ÷ 550

### CLASSIC / standard

ESD chair with long wearing dissipative upholstery, antracite colour

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7804.204S	380 x 240	fix.	390 x 460	480 ÷ 580
7804.208	390 x 360	adj.		



7804.204S

7804.208



7804.204

7804.204R

### CLASSIC / high with foot-plate

ESD chair with long wearing dissipative upholstery, antracite colour

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7804.204	380 x 240	fix.	390 x 460	500 ÷ 700
7804.204R	390 x 360	adj.		

### PU / standard

ESD chair in black dissipative PU foam

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7807.338	400 x 250	fix.	450 x 460	450 ÷ 580
7807.345	400 x 380	adj.		



7807.338

7807.345



7807.336

7807.341

## PU / high with foot-plate

ESD chair in black dissipative PU foam

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7807.336	400 x 250	fix	450 x 460	500 ÷ 680
7807.341	400 x 380	adj		

## YOUNG / standard

ESD chair with long wearing dissipative upholstery, antracite colour

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7807.315	380 x 230	fix	450 x 460	490 ÷ 590
7807.317	420 x 480	adj		



7807.315

7807.317



7807.320

7807.322

## YOUNG / high with foot-plate

ESD chair with long wearing dissipative upholstery, antracite colour

code	back rest dimensions (mm)	back rest angle	seat dimensions (mm)	seat height (mm)
7807.320	380 x 230	fix	450 x 460	560 ÷ 720
7807.322	420 x 480	adj		

## OPTIONS

On request, other versions of chairs can be done by mounting the options described below, simply add the suffix letter to the code of the chair.

Suffix	Option
A	Armrest
G	Conductive rubber castor(replacing standard castor)
P	Glide(replacing standard castor)

(does not leave marks on the floor)



## DISSIPATIVE CHAIR COVER SET

Backrest (max.40x40) - Seat (max.40x45)

Made of grey conductive woven fabric, the dissipative chair covers are designed to make a conventional padded factory chair more suitable for use in an EPA.

The covers easily fitted on all chair types, are supplied with the cables to connect the back rest to the seat and the seat to the earth (by means of a 1MΩ series resistor)

7804.197 Dissipative CHAIR COVER SET, 2 cables included

## SIMCO - ION IONIZING

- low decay time
- reduced airflow
- clean room compatible
- balanced
- IEC 61340-5-1

### ACTIVE PROTECTION SYSTEM

Where grounding of some equipment or parts of equipment through traditional earthing techniques is impractical, where it is impossible to exclude all charging materials from the area, the use of suitable ionizers is highly recommended. Air ionization systems work by flooding the atmosphere with positive and negative ions. When the ionized air comes in contact with a charged surface, the surface attracts ions of the opposite polarity. As a result the static electricity that has built up on products and equipment is neutralized. Ions do remove small particles or smoke and pollens from the air, and subjective research suggest that people working in ionized area are happier. The generated ozone is lower than 0.002 ppm after 24 hours accumulation, conform to OSHA requirements.

### 6422/E point of use ionizing blower

The smallest and most versatile blower available for equipment or local area ionization. It is ideal for use inside or on top of production equipment. Battery operated model is very useful on field service call.

Discharge time: from  $\pm 1000V$  to  $100V \leq 10s$  at 60cm

Emitter points: Tungsten alloy, internally shielded, 5 year life  
Air flow:  $15m^3/h$

Power requirement: 24Vac 5W

Dimensions: 11.4 x 8.4 x 5.1 cm



**9265.560** Point-of-use ionizing blower, 24Vac  
**9265.577** Wall transformer 230Vac/24Vac 32W

### 6432/E local area ionizing blower

Controls static discharge in mid-sized areas, it is indicated for general workbenches applications, conveyors, equipment.

Discharge time: from  $\pm 1000V$  to  $100V \leq 7s$  at 60cm

Emitter points: Tungsten alloy, internally shielded, 5 year life

Air flow:  $80m^3/h$

Coverage area: 122x46cm

Power requirement: 230Vac / 6W



**9265.576** Local area ionizing blower

### local area ionizing blower AEROSTAT PC2

High performance compact ionizing blower, features an adjustable air flow speed and integrated heater. Suitable for workbenches, conveyors, robotics, packaging.

Decay Time:  $\pm 1000V$  to  $100V \leq 2s$  at 60cm

Emitter: Patented emitter point cleaner

Air Flow:  $220 m^3/h$  at high speed

Coverage Area: 150x30cm

Power requirement: 230Vac

Auto-balance:  $0 \pm 10 V$



**9265.582** Local Area Ionizing Blower AEROSTAT PC2, 230V

### Turbo ionizing blower XC2

The Turbo Blower is designed to achieve full control in any environment, it is ideal to cover large areas. The fan can work at 3 different speed and has heater incorporated to grant a good comfort (heater can be turned on or off). Easy cleaning of the emitters with the "Emitter Clear Button". The decay time is minimum due to the high performance of this ionizer.

Decay Time:  $\pm 1000V$  to  $100V \leq 3.5s$  at 60cm

Emitter cleaning: "Emitter Clear Button"

Air Flow:  $250 m^3/h$  at high speed

Power requirement: 230Vac

Auto-balance:  $0 \pm 10 V$



**9265.602** Turbo Ionizing Blower XC2, 230V

### Overhead ionizing blower GUARDIAN

It is a 3 fan smart ionizer that provides reliable, adaptable performance in the most static-sensitive environment. Designed for mounting over the benches, conveyors, it allows a complete 3D neutralization of the static charges, without compromising space over the table, and in the most comfortable environment. Equipped with 3 fan, adjustable air flow, heater, 13W twin tube fluorescent light, and emitter cleaning system.

Decay Time:  $\pm 1000V$  to  $100V \leq 6s$  at 45cm

Emitter: Patented emitter point cleaner

Air Flow:  $500 m^3/h$  at high speed

Coverage Area: 120x60cm

Power requirement: 230Vac

Auto-balance:  $0 \pm 5 V$



**9265.610** Overhead Ionizing Blower GUARDIAN, 230V

## IONIZING GUNS

Ionizing guns neutralize static charges and clean surfaces using compressed air that is ionized. Like all the ionizers they find application in the electronic industry, but they can be useful in many other context like mechanical industry, painting works, packing areas, displays cover removing, etc... This because the neutralization of static charges simplifies the cleaning works and prevents the risk that airborne particles and dust will be attracted again.

### 6115 Light anatomic gun

Usable also in clean room, ergonomically designed, light, it is used to blow off charged dust particles from electronic cards and other equipment or materials. Extremely light, anatomic, and with a flexible soft cable (no HIGH voltage passing through this cable)

Gun ergonomic, low-noise, weight 0.34kg  
 Discharge time: from 1000 to 100V  $\leq$  0.5seconds at 6", 30psi  
 Emitter points: Machined Titanium, field-replaceable  
 Gas input: 20-87psi(1.4-6 bar), Clean dry air or Nitrogen  
 Ozone: 0.005ppm (24 hour accumulation)  
 Noise: 70dbA at 1m, 30psi  
 Power: requirement 24Vac - 10W

**9265.530** Complete kit including hand unit, console, air filter and transformer 220/24Vac

**9265.532** Additional Filter pack,(Pack of 3) - 0.1mm 99,99%EFF



### Heavy duty TOP GUN

Designed for heavy duty jobs, due to its high performance, reliability and durability.

There is a flow control valve to adjust airflows for the specific application. It is completely ESD and can be used even in clean rooms.

The version with sidekick allows "hands free" operation.

Discharge time: from 1000 to 100V  $\leq$  0.5seconds at 5cm at 60 psi  
 Air Input: adjustable to 100 psi (7 bar) max.  
 Power requirement: 230Vac  
 Noise: 76 dBA at 60cm, 30 psi

**9265.520** Ionizing Gun TOP-GUN, 230Vac

**9265.523** Ionizing Gun TOP-GUN, 230Vac with flexible support and Sidekick (foot pedal switch)



### 6110A AIR CARTRIDGE

The cartridge can be used either for in-line ionization or as ionizing blow-off gun, adapts to compressed air lines. Two models available, one turns off ionizer when air is not flowing.

Weight: 170g  
 Power:: 24Vac, 1W, from 9265.544 wall transformer

**9265.542** Ionizing cartridge, air flow triggered - 24Vac

**9265.544** Transformer 230/24Vac



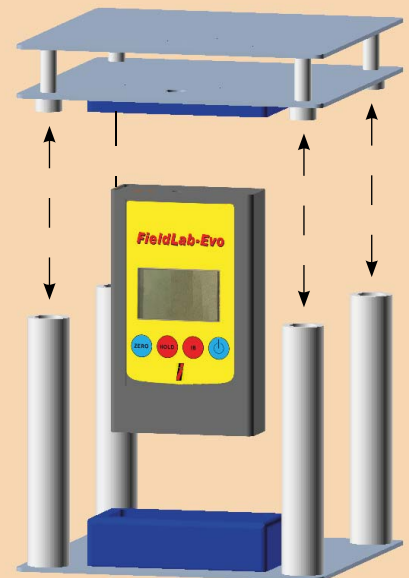
**ATTENTION:** the cartridge don't withstand high air pressure. It should be installed downstream from any system valves or shutoffs

## FIELDLAB EVO - ELECTROSTATIC FIELDMETER

The FieldLab Evo instrument detects and measures intensity and polarity of electrostatic fields. It's useful for checking packaging materials, circuit assemblies, ionized areas. Maximum range is 20KV at 1" (25.4mm) distance.



- Converging LED beams to help in distancing accuracy.
- Range:  $\pm 20\text{KV}$  (Resolution 100V)  
 $\pm 1,5\text{KV}$  (Resolution 10V)  
 $\pm 200\text{V}$  (Resolution 1V)
- Accuracy  $\pm 10\%$ .
- Checking Ion Balance performance of ionizers with detachable isolated plate included
- Digital output to connect directly to a PC via USB (sample rate 200Hz)



FieldLab Evo with option 9265.705 (Charge Plate Monitor)

### Software FL Manager (included)

The program, compatible with Windows XP/./11, acquires the voltage values measured by the instrument at the sampling frequency of 200Hz.

It is used for:

- The visualization and printing of the graphs of the collected data. In particular, it allows to measure the Decay Time from  $\pm 1000\text{V}$  to  $\pm 100\text{V}$  according to the IEC 61340-4-7 standard (use the option 9265.705 and the 9265.401 Charger EVO)
- Remote use (1.5m away) of the instrument. For example, you can place the instrument inside a Pick & Place or other difficult-to-access piece of equipment, and view or record over time the potential of the electrostatic charges present during processing.



**9265.701** Electrostatic fieldmeter FieldLab Evo, with battery, software and cables included

**9265.708** ISO9000 Traceable Recalibration Certificate

**9265.705** Charge Plate Monitor option.

## CHARGER EVO

The Charger Evo is used to charge insulated plates at a desired voltage.

Settable output: 100V to 1100V (step 1V)

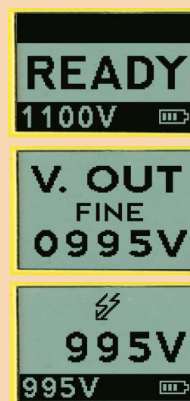
Resolution: 1 Volt

Accuracy: 5%

Dimensions: 124x72x28mm

The additional benefits compared to other chargers are:

- Settable output voltage (step 1V)
- The output voltage is clearly indicated on the LCD and the internal accuracy (5%) allows a roughly check of other ESD instrumentation equipments.
- Low battery and overload are clearly indicated.



**9265.401** Charger Evo with batterie, case, and grounding cord

**9265.410** Instrument recalibration ISO9000 Traceable Certificate is supplied



## IONIZER VERIFICATION KIT

The 9265.710 kit includes a FieldLab Evo fieldmeter and a Charger Evo. It can be used to verify ionizer operation and check ion balance and discharge time



**9265.710** Ionizer verification kit (FieldLab Evo and Charger Evo)

# WALKING TEST EVO

The Walking Test Evo is a portable measuring system that allows analysis of charge levels accumulated on the human body according to IEC 61340-5-1 standard.

It's fully portable and doesn't require a PC for data acquisition because all data are measured and logged in the internal memory. The operator can perform all necessary operations without any collaborator, and while he is walking the instrument is attached only with a single cable to a fixed position for the reference to the ground. The graphs of the tests can be displayed on the graphic LCD for a quick evaluation. Then they can be easily exported and analyzed on a PC for a professional documentation.

A program to manage the tests recorded in the instrument is included in the Walking Test EVO.

Range:  $\pm 1050V$

Resolution: 1 Volt

Accuracy: 5%  $\pm 5V$

Input resistance:  $10^{14} \Omega$

Humidity: 1 to 95%RH (accuracy:  $\pm 2\%RH$ )

Temperature:  $-20^{\circ}C$  to  $+60^{\circ}C$  (accuracy:  $\pm 1^{\circ}C$ )

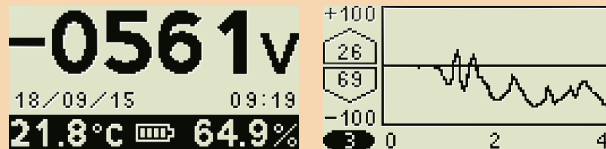
Display: graphicLCD 128 x 64 pixel, 68x51mm

Power supply: 6 alkaline batteries, LR6 1, 5V

Dimensioni: 243x130x60mm (instrument)  $\varnothing 35 \times 130$ mm (probe)

Weight: 650g (instrument) - 250g (probe)

Humidity, Temperature, Date and Time of every test are memorized



**MONITOR**  
(Datalogger OFF)

**DATALOGGER**  
Graph n.3  
+Peak=26V  
-Peak=-69V

## Datalogger

In the internal memory of the instrument can be logged till to 10 graphs.

Sample rate: 200Hz

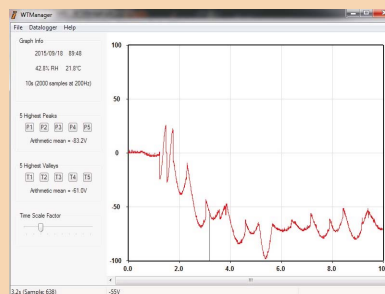
Max total graphs duration: 2minutes and 30 sec

Interface: USB

## Software WT Manager (included)

Program to manage the tests recorded in the instrument, compatibile with Windows XP/./11.

For each walking measurement, the five highest peaks (P1-P5) and the five highest valleys (T1-T5) are indicated with their arithmetic means.



**FREEWARE**

**9265.080** Walking Test Evo Meter with batteries and case

**9265.082** Instrument recalibration ISO9000 Traceable Certificate is supplied

## Wristlab-II Test Station

Test station for checking personnel grounding connection of wrist straps and footwear, according to the IEC 61340-5-1. Separate testing of left and right shoe; the test is executed at 50V or 100V to provide more accuracy.

A relay output allows access to ESD Protected Area.

Internal battery supplied 9V or external 9Vdc.

ISO9000 traceable certificate is included.

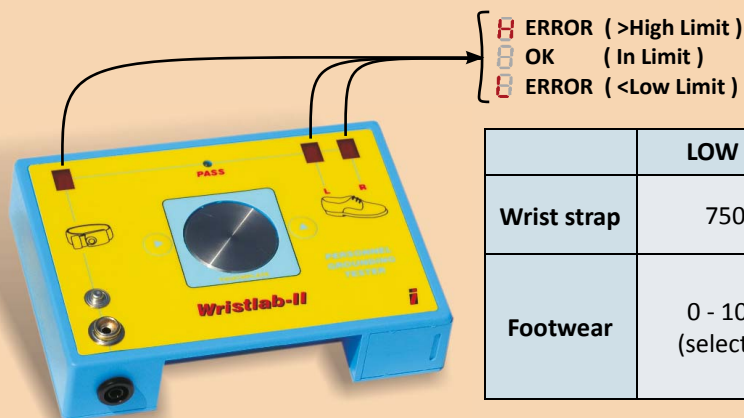
The personnel grounding test station can work in 4 modes:

- 1) Simultaneous measurement of wrist straps and footwears.
- 2) Wrist straps only measurement
- 3) Footwears only measurement
- 4) HandsFree mode (if the serial measure of the two footwears pass the test then the internal relay enables the gate to the EPA area)



9264.950

9264.952



	LOW limit	HIGH limit
Wrist strap	750KΩ	35MΩ
Footwear	0 - 100KΩ (selectable)	10MΩ – 35MΩ – 70MΩ – 100MΩ – 200MΩ (selectable) or: 1GΩ for the Atex compliant version



9264.950*	Personnel Grounding Test Station wall mounting including: Wristlab-II instrument, footplate and yellow panel.
9264.952*	Personnel Grounding Test Station on Stand-up support including: Wristlab-II instrument, footplate, yellow panel and stand-up support
9264.960	Wristlab-II instrument
9264.950.1G*	ATEX version for code 9264.950* (Footwear High Limit = 1GΩ)
9264.952.1G*	ATEX version for code 9264.952* (Footwear High Limit = 1GΩ)
9264.960.1G	ATEX version for code 9264.960 (Footwear High Limit = 1GΩ)
9264.955	Instrument recalibration (ISO9000 Traceable certificate is supplied)

\* Aggiungere al codice: I (Italiano), F (Francese), E (Inglese), D (Tedesco), H (Ungherese), S (Spagnolo)

## CONTINUOUS MONITOR

This instrument continuously monitors the integrity of the operator and one ESD worksurface. It uses the "wave distortion" technology to avoid false alarms caused by voltage offset, 50Hz fields and other electro-magnetic and electrostatic interference. Screw Terminal to monitor the worksurface's path-to-ground (required  $R < 10^7 \Omega$ ) with cord included.

Wriststrap input: 10mm banana plug / 10mm snap adaptor

Supply: 24Vdc.

Dimensions: 98x53x23mm

**9263.652** Continuous Monitor with power 230/24Vac adapter included



## Test Station EVO Test Station

The test station EVO records and documents the parameters of the ESD protection of the personnel (wriststrap and footwears).

It can be used both wall-mounted or in a console configuration to make measurements at the workstations.

### Technical features

- Measurement of bracelets and footwears according to IEC61340-5-1
- Up to 1000 different users identified through fingerprint recognition or manual recognition (entering the ID number)
- Fingerprint recognition 1,5 sec
- Datalogger can store data for the last 10000 access (date and time, user name and ID, the resistance values of the bracelet and shoes, etc ...)
- Control footwear separate (left and right)

- Relay output for controlling the opening of the access door to the EPA
- LCD display with blue backlight 160 x 104 pixels, 74 x 46mm viewable area
- Beep to indicate clearly PASS or FAIL test of the protections
- Voltage Test selectable to 50V or 100V.
- Programmable thresholds
- Wriststrap measuring range: 50kΩ - 2GΩ
- Footwear measuring range: 50kΩ - 2GΩ
- Footwear measuring range (2 in series): 50kΩ - 2GΩ
- Precision misura: 10%
- ISO9000 Traceable Calibration Certificate included
- Freeware program to manage the data included in the Test Station EVO (compatible with Windows XP/..11)

A common USB flash drive can be inserted in the Test Station EVO to:

- import/export all the configuration data (users name and ID number, personnel thresholds values, etc...)
- save a log report of the EPA accesses (date and time, ID and user name, resistance values of wriststrap and shoes, etc...)



The fingerprint sensor capture a digital image of the fingerprint pattern.

The captured image it's not stored inside the Test Station EVO, therefore the biometrical data of the users are safe and can't be duplicated.

Only a biometric template (a collection of extracted features) is memorized.

The template size is very small: about 400 byte.

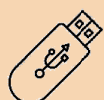
The templates are used for a smart and secure identification of the operator.

### 9264.922

Test Station EVO  
Stand-up version



LAN



USB Pendrive



**FREEWARE**



- 9264.920** Test Station EVO USB wall mounting with footplate
- 9264.921** Test Station EVO ETHERNET wall mounting with footplate
- 9264.922** Test Station EVO USB, stand-up version with footplate
- 9264.923** Test Station EVO ETHERNET, stand-up version with footplate
- 9264.925** Test Station EVO USB
- 9264.926** Test Station EVO ETHERNET
- 9264.927** Instrument recalibration (ISO9000 Traceable Calibration Certificate is supplied)

## Wristlab-Pro Test Station

Innovative test station, available in 2 versions with identical functionality and technical characteristics. They differ only in the interface: the Covid Free model (9264.970) has 5 separate entrances for 5 users

9264.990 Wristlab Pro Standard



**1 x** Wriststrap input:  
1 x (4mm) button  
1 x (4mm) banana socket  
1 x (10mm) button

9264.970 Wristlab Pro Covid Free



**5 x** Wriststrap input:  
5 x (4mm) button  
5 x (4mm) banana socket  
5 x (10mm) button

**5 x Touch Plate**

**Expansion module interface**

Test station for checking personnel grounding connection of wrist straps and footwear, according to the IEC 61340-5-1 / Atex.



	LOW limit e HIGH limit
Wrist strap	Settable in the X.X•10 <sup>x</sup> format from 50KΩ to 2GΩ
Footwear	Settable in the X.X•10 <sup>x</sup> format from 50KΩ to 2GΩ

Separate testing of left and right shoe; the test is executed at 50V or 100V to provide more accuracy. A relay output allows access to ESD Protected Area. Internal battery supplied 9V or external 12Vdc.

ISO9000 traceable certificate is included.

The personnel grounding test station can work in 5 modes:

- 1) Simultaneous measurement of wrist straps and footwears.
- 2) Wrist straps only measurement
- 3) Footwears only measurement
- 4) HandsFree mode (if the serial measure of the two footwears pass the test then the internal relay enables the gate to the EPA area)
- 5) HandsFree+ mode (as above but with the ability to switch quickly to the simultaneous measurement mode of the wrist strap and footwears)

**Measuring modes:**

**WRISTSTRAP**

**FOOTWEAR**

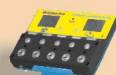
**WRISTSTRAP & FOOTWEAR**

**HANDS-FREE (HF) & THE NEW HANDS-FREE PLUS (HF+)**



9264.990

9264.965



9264.970

6500.516

9264.990	Wristlab-Pro Standard model
9264.970	Wristlab-Pro Covid Free model
9264.965	Footplate
6500.516	Stand-up support with footplate
9264.974	Expansion Module option (only for Wristlab-Pro Covid-Free model)
<b>Access Log options</b>	
9264.976	Access Log option with Facial Recognition and RFID Card Reader
9264.984	Access Log option with Fingerprint Reader and RFID Card Reader

## ACCESS LOG OPTIONS

It is possible to add operator recognition and the EPA area access data logger to the Wristlab-Pro using one of these 2 options:

- **9264.976** Access Log option with Facial Recognition and RFID Card Reader
- **9264.984** Access Log option with Fingerprint Reader and RFID Card Reader



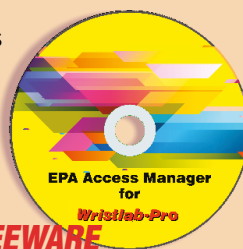
9264.976

### Features common to the two options:

- Settable individual profiles: 10
- Max number of users: 3000 (max 300 for each profile)
- Internal datalogger: able to store the last 10000 EPA accesses
- Profile Data: Type of Measurement, LOW limit and HIGH limit that can be set between 50KΩ and 2GΩ, relay command options, etc ...
- Access Record Data: date and time, RH/T, ID and username, measured values, etc ...
- Identification time: <0.5s
- Biometric data encrypted non-reversibly with BioNANO algorithm according to the General Data Protection Regulation (EU), which can be saved for backup purposes
- LAN interfaces: RJ45 and WiFi connections



- EPA Access Manager software for Win XP /../ 11 included



9264.984



**COVID-19**  
**FREE**

In ESD Test Stations the main "access routes" through which viruses, bacteria or other pathogens can infect operators are:

- the Touch Plate
- the input connectors of the wrist strap.

So all these items, if used, should be disinfected after each operator passes.

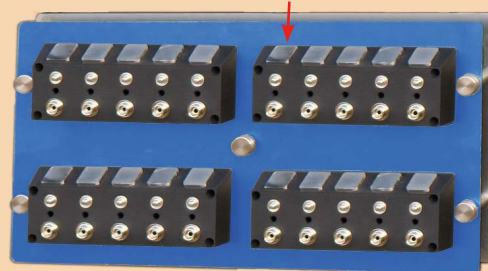
To avoid this work, you can use the Wristlab-Pro Covid Free version connected to the Expansion Modules. The **9264.974** Expansion Modules are used to increase the available wrist strap entrances by 20 unit/each.

For example, by adding 3, you get a total of 60 extra wrist strap entrances available, in addition to the 5 embedded into the **9264.970** instrument, which could be reserved for convenience for external visitors.

They are elegant blue panels spaced from the wall so that all the connecting cables can pass comfortably and hidden behind them.

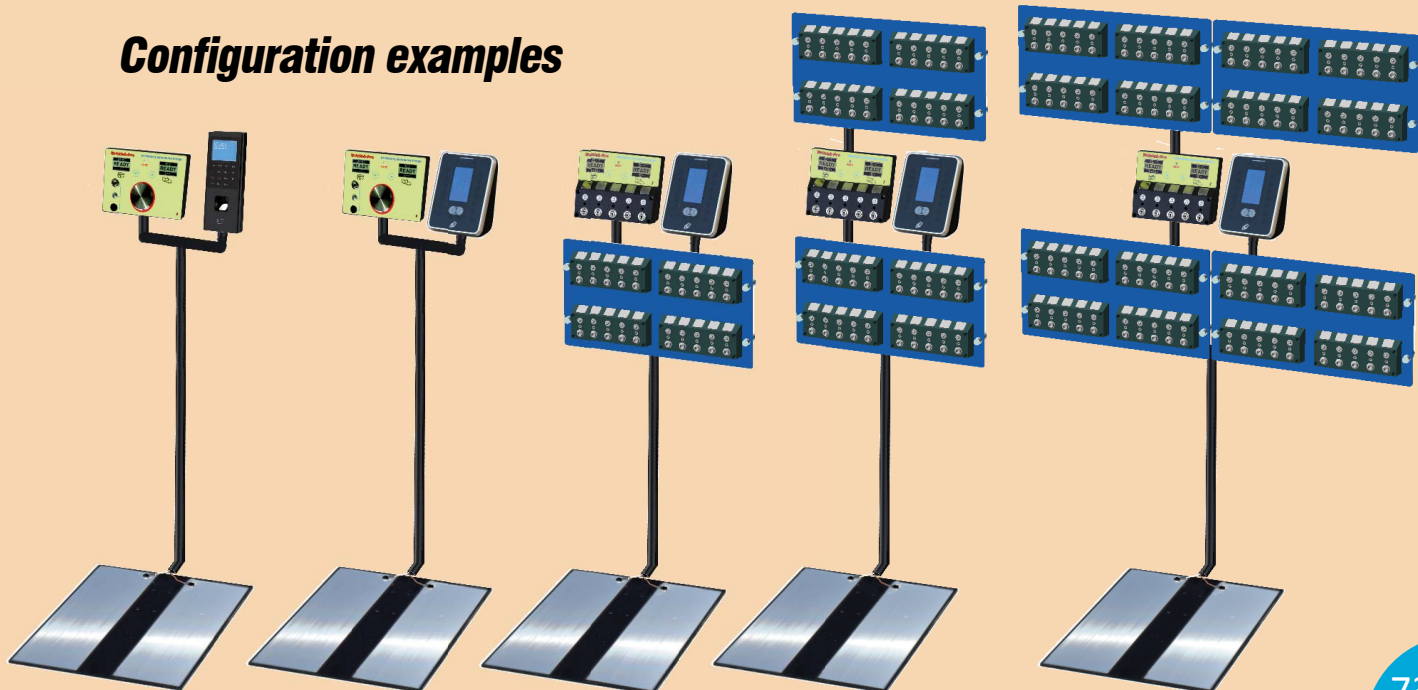
### 9264.974 Expansion Module option

**20 x Touch Plate**



**20x** Wriststrap input:  
20 x (4mm) button  
20 x (4mm) banana socket  
20 x (10mm) button

## Configuration examples



# GIGALAB EVO

SHIELDED CABLE

SHIELDED PROBE

Shielded measuring system eliminates the usual noise providing ease of operation at very high resistance values

indication of humidity and temperature

°C RH

programmable acoustic alarm

100 MEMORY CELLS

The GIGALAB-EVO multi-voltage high resistance meter made by ITECO, is a portable, accurate, and versatile instrument designed to measure resistance between two points, surface to ground, and surface resistivity as defined in IEC61340-5-1.

Vmeas	Range	Accuracy
10V	1KΩ ÷ 50GΩ	±5% ±0.6% per GΩ
100V	100KΩ ÷ 1TΩ	±5% ±0.06% per GΩ
250V	500KΩ ÷ 1TΩ	±5% ±0.045% per GΩ
500V	1MΩ ÷ 1TΩ	±5% ±0.03% per GΩ

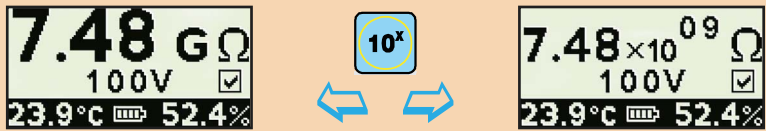
Humidity: 1 a 95%RH (accuracy: ±2%RH)  
Temperature: -20°C to +60°C (accuracy: ±1°C )  
Display: Graphic LCD, 128x64pixel, 68x51mm.  
Power supply: 6 alcaline batteries, LR6 1.5V  
Dimensions: 243x130x60mm  
Weight: 650g

Internal memory where the data of 100 measures can be stored.  
The data stored for each measurement are:

- Resistance value
- Voltage used for the measurement
- Humidity detected during measurement
- Measured temperature during measurement



9265.064



By pressing a dedicated button it's possible to quickly switch between viewing formats natural to exponential and vice versa

- 9265.063 GIGALAB EVO Meter with batteries and case
- 9265.064 GIGALAB EVO Complete kit including meter, 2 probes, batteries and case, Traceable Certificate is supplied
- 9265.065 Cylindrical SHIELDED PROBE 63mm diameter, 2.3Kg weight
- 9265.070 Concentric ring PROBE 63/30mm diameter, 2.3Kg weight
- 9265.042 Instrument recalibration ISO9000 Traceable Certificate is supplied

## ESD SURFACE RESISTANCE TESTER 100V

The Labeohm EVO and the Labeohm EASY are instruments that measure the surface resistance and the ground resistance of mats, worktops, floorings and other objects in the EPA area.

The embedded probes are suitable for surface resistance measure, connecting one ground cord the resistance to ground can be read, and two external probes can be connected for point to point measurements.

Both instruments are pocket-size and use 2 embedded parallel electrodes, in accordance with DIN EN 100015/1.

The Easy version allows to measure the order of magnitude of surface resistance or resistance to ground.

The EVO version is more accurate (accuracy of ½ decade) , it displays up to one significant digit and it is equipped with a graphical display and programmable sound alarm

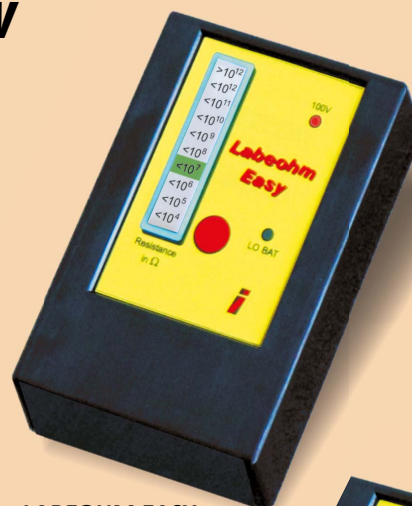
Measuring range: from  $10^4$  to  $10^{12} \Omega$

Test voltage: 10V  $R < 100K\Omega$ , 100V  $R > 100K\Omega$

Electrodes: Soft conductive rubber

Dimensions: 80x120x27mm

ISO9000 Traceable Certificate is supplied



LABEOHM EASY

programmable  
acoustic alarm



LABEOHM EVO

Display: LCD graphic  
102x64pixel, 36x26mm



LABEOHM Kit

DISSIPATIVE  
**4 GΩ**  
100V

DISSIPATIVE  
 **$4 \times 10^{09} \Omega$**   
100V

**ALARM**  
 **$< 1 \times 10^{09} \Omega$**

- 9265.051 LABEOHM EVO 100V, cable,battery,box included
- 9265.055 LABEOHM EASY 100V, cable,battery,box included
- 9265.065 Cylindrical SHIELDED PROBE 63mm diameter, 2.3Kg weight
- 9265.070 Concentric ring PROBE 63/30mm diameter, 2.3Kg weight
- 9265.056 Portable Kit including 9265.051 tester, two 9265.065, probes and carrying case
- 9265.057 Portable Kit including 9265.055 tester, two 9265.065, probes and carrying case
- 9265.003 Labeohm recalibration ISO9000 Traceable Certificate is included

## PROBES FOR GIGALAB AND LABEOHM >>> page 76



9265.065



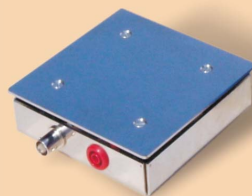
9265.047



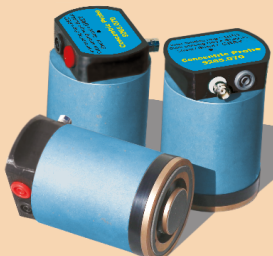
9265.070



**9265.065**  
CONNECTIONS  
Rubber measuring electrode:  
BNC int. / red 4mm socket  
Shield / Guard:  
BNC ext. / gray 4mm socket



**9265.047**  
Counter-electrode for cross  
resistance measurements  
CONNECTIONS  
Stainless steel measuring  
electrode: BNC int. / red  
4mm socket  
Shield / Guard: BNC ext.



**9265.070**  
CONNECTIONS  
Inner sensing ring:  
BNC int. / red 4mm socket  
Outer sensing ring:  
BNC ext. / black 4mm socket  
Shield / Guard: gray 4mm socket



**9265.072**  
T-handle with thread end M5  
H = 25cm to facilitate repetitive  
measurements on the floor  
(only for 9265.070 and 9265.065)

- 9265.065** Shielded probe, 63mm, weight 2,3Kg, one BNC socket, two 4mm sockets
- 9265.070** Concentric ring probe, 63/30mm, weight 2,3Kg, one BNC socket, three 4mm sockets
- 9265.047** Counter-electrode, 150 x 150mm
- 9265.013B** Cable 1,5m - jack 3,5/ 4mm banana plugs terminated, BLACK (only for **9265.051** and **9265.055**)
- 9265.012B** Cable 1.5m - 4mm banana plugs terminated, BLACK
- 9265.012R** Cable 1.5m - 4mm banana plugs terminated, RED
- 9265.008** Coaxial cable, L=1m, BNC plug / 2x4mm banana plugs
- 9265.072** T-handle with thread end M5 H = 25cm (only for 9265.070 and 9265.065)

## CALIBRATION UNIT

It's a resistance decade box made specifically for the calibration of the ESD Test Station (Wristlab-II, Test Station EVO, Wristlab PRO and IEC 61340-5-1 compatible testers)

Range: 10W - 110MΩ (resolution 10Ω)

Tolerance: 1%

Power: 1W for resistors up to 4MΩ, 0.5W for resistors from 10MΩ to 40MΩ

Operative Voltage: 250Vac max

Dimensions: 14,7 x 11,7 x 5,5cm - Weight: 320g

Detailed instruction manual for calibration procedures of the IEC61340-5-1



- 9264.980** Calibration Unit for ESD testers cables and adapters included
- 9264.982** Instrument recalibration (ISO9000 Traceable certificate is supplied)

## ESD SURVEY KIT

The ESD Survey Kit contains everything needed to conduct an ESD control program survey according to IEC 61340-5-1 in an ESD protected area (EPA)

The Kit can be customized to meet different needs.

The example below shows a typical kit configuration:

**9265.151** ESD Survey KIT - Carrying case with instruments

### Typical configuration example:

- 9265.063** GigaLab Evo meter >> page 74
- 9265.070** Concentric Ring Probe >> page 6
- 9265.065** Shielded Probe >> pag.76
- 9265.047** Counter-electrode, 150 x 150mm >> page 76
- 7804.190** Walking Test EVO meter >> page 69
- 7804.190** Adjustable Wrist Strap >> page 41
- 7804.874** Earth bonding plug >> page 41



## DRYLOGGER

Precision Temperature/Humidity meter. It is also a datalogger used to collect environmental data of humidity and temperature and to transfer them to a Windows PC.

It is possible to set an alarm that become active when, after a certain period of time, humidity or temperature are above a predetermined maximum threshold.

When the alarm is activated the red LED under the display flashes.

Humidity: 1 to 95%RH, resolution: 0.1%RH

accuracy:  $\pm 2\%$ RH

Temperature:  $-20^{\circ}\text{C}$  to  $60^{\circ}\text{C}$ , resolution:  $0.1^{\circ}\text{C}$

Accuracy:  $\pm 0.5^{\circ}\text{C}$

Display size: 48 x 11mm

Humidity Alarm: from 1 to 95%

Temperature Alarm: from 0 to  $60^{\circ}\text{C}$

Alarm activation delay: from 1 to 99 minutes

Memory: 21600 samples

Sampling rates: can be set at 1, 5, 10, 15, 30 seconds

and 1, 5, 10, 15, 30 minutes

Interface: RS232 and USB

Size: 184 x 67 x 44mm



### Logmanager

The "LogManager" software, working on Windows PC, used for downloading, displaying, analyzing and reporting your collected humidity and temperature data is included.

**9265.302** DryLogger – Humidity/Temperature hand LCD datalogger USB cable and LogManager software to collect data to Windows PC are included.

**CK-005** ISO9000 Traceable certificate for DryLogger

## TEKMATRIX 32 (humidity/temperature monitoring & alarming & datalogging)

It monitors simultaneously humidity, temperature on his large display, and alerts the engineers to check and repair the facilities immediately when the settable HIGH or LOW limits of RH/T are exceeded. When the alarm is active, its output relay can activate an emergency circuitry. The internal datalogger samples the environmental data of humidity and temperature that can subsequently be transferred to a Windows PC via USB or Ethernet interface (the "TekManager" software is included). The instrument sensor can be hooked to the display or positioned externally. Can be set to fixed display of RH/T or alternate it with date and time.

Humidity: 1 to 95%RH, resolution: 0.1%RH

accuracy:  $\pm 2\%$ RH

Temperature:  $-20^{\circ}\text{C}$  to  $+60^{\circ}\text{C}$

resolution:  $0.1^{\circ}\text{C}$

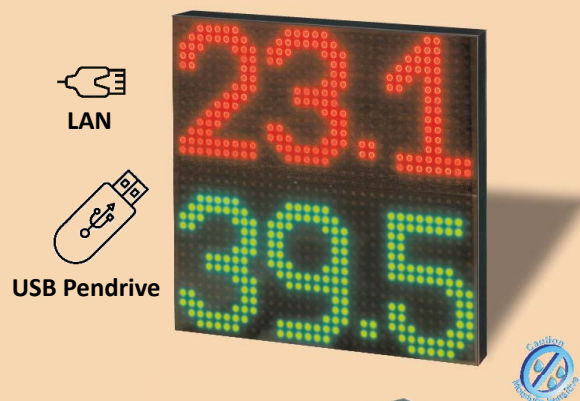
accuracy:  $\pm 0.5^{\circ}\text{C}$

LED Display: 190 x 190mm

Memory: 21600 samples

Interface: USB pendrive (**8105.113U**) or ETHERNET (**8105.113E**)

Dimensions: 190 x 190 x 40mm



**8105.113U** Humidity/Temperature Monitoring & Alarming & Datalogging (USB Interface)

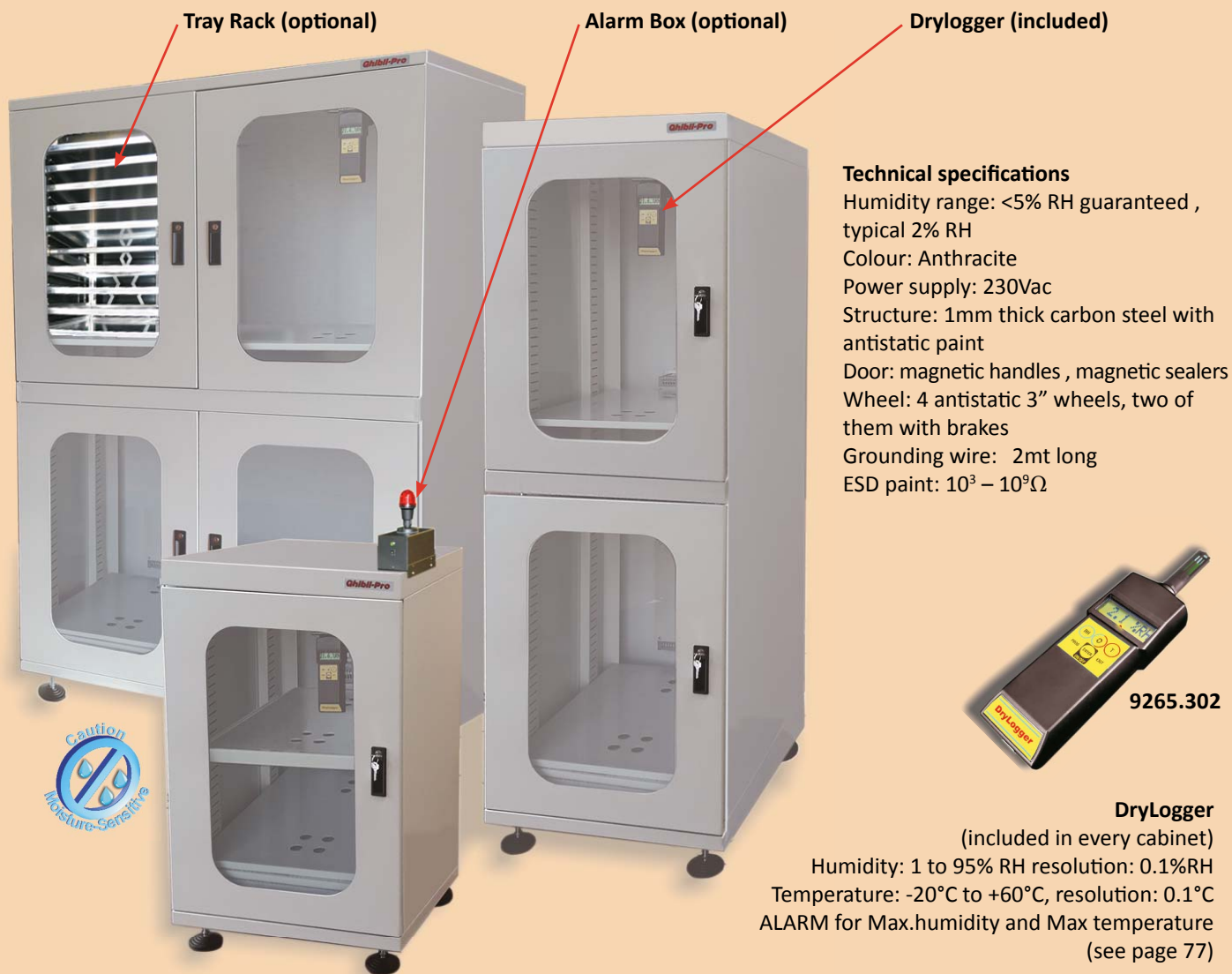
**8105.113E** Humidity/Temperature Monitoring & Alarming & Datalogging (ETHERNET Interface)

**CK-013** ISO9000 Traceable certificate for Tekmatrix



**8105.113E**

**Ghibli-PRO Dry Cabinet** Moisture Sensitive Devices (MSDs), must be managed correctly because "a single mistake" on a tray or reel of MSD causes "negative impact on the entire production batch". Electronic components (like QFP, BGA or SOIC for example), LEDs and Printed Circuit Boards, when extracted from their original protective package, absorb humidity from the environment and during the soldering process the trapped moisture can vaporize and exert internal package stress. GHIBLI-PRO dry cabinets provides a "safe place" to temporary stock the MSDs removed from their original Dry Pack before soldering process. In fact the J-STD-033 tells that under 5% RH the Floor Life is congealed.



## Advantages about GHIBLI-PRO

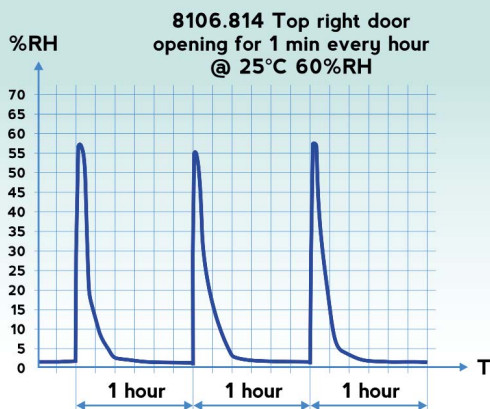
**Easy use:** It's plug and play, just connect it to the main supply without any settings and it will be stable at less than 5%RH (5%RH is guaranteed but the cabinets easily reach 2%). The dehumidifier units are always active and not controlled by any sensor. This avoid dangerous problems due to malfunction or drift of hygrometers.

**Easy calibration:** Inside every cabinet there is a portable Hygrometer (DryLogger 9265.302) visible through the glass of the upper door. You can return it for calibration anytime without problems: the cabinet still works to the best.

The portable instrument DryLogger can measure RH & Temperature values in several points inside the cabinet, and can record H/T and transfer the data to PC for graphing and analyzing. Made for very low humidity measurement can be used also for applications outside the cabinets.

**Modular design:** The dehumidifier modules are easy extractable with only a screwdriver. This allow easy reparation and grant the long life of the cabinet, over 20 years, as long as the metal structure last. This is our green policy. Smart magnetic handles with key lock at every door. The front of the cabinet is flat.

2 years warranty



#### Data analysis

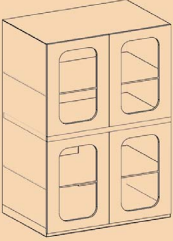
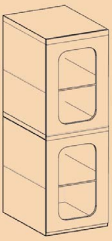
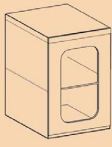
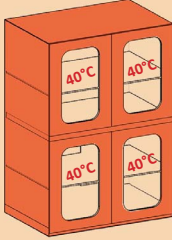

With the portable instrument DryLogger and the software LogManager supplied with every cabinet you can calculate the time intervals and percentage that exceed the 10%RH or 5%RH which leads to the estimation of the MSD floor life ( "Floor Life" is the allowable time period after removal from a moisture barrier bag, dry storage or dry bake and before the solder process reflow).

Another typical data analysis is the graph of the door opening.

#### 40°C Baking

Some cabinets version can do 40°C low baking process of SMD components.

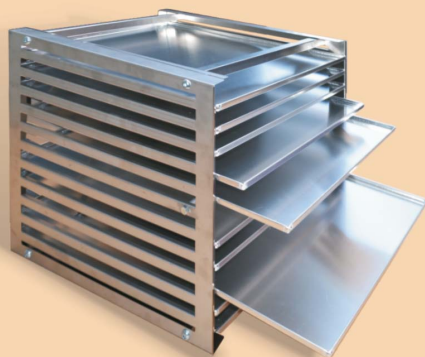
At this temperature the reels are not damaged and can be afterwards inserted into the feeders of the pick and place without problems.

					
<b>Code</b>	<b>8106.814</b>	<b>8106.807</b>	<b>8106.803</b>	<b>8106.834</b>	<b>8106.837</b>
<b>Model</b>	Ghibli PRO 1400	Ghibli PRO 700	Ghibli PRO 350	Ghibli PRO 1400 (baking 40°C)	Ghibli PRO 700 (baking 40°C)
<b>Capacity</b>	1400L	700L	350L	1400L	700L
<b>Ext.Dimensions (mm)</b>	1160x767x1720	580x767x1755	580x767x895	1160x767x1720	580x767x1755
<b>Shelves</b>	5	5	2	5	5
<b>Shelf Size (mm)</b>	1094x606x18	510x606x18	510x606x18	1094x606x18	510x606x18
<b>Average power</b>	80W	80W	40W	80W without baking 580W with baking	80W without baking 330W with baking
<b>Maximum power</b>	500W	500W	250W	500W without baking 1500W with baking	500W without baking 1000W with baking
<b>Weight</b>	178kg	118kg	56kg	198kg	128kg

**8106.840** Additional shelf 510x606x18 mm , Ghibli-PRO 700 and 350

**8106.841** Additional shelf 1094x606x18 , Ghibli-PRO 1400

**8106.850** Wheel Kit ESD



### Tray rack

Professional tray rack made of stainless steel that can be placed on the trays of the Ghibli-PRO dry cabinets.

**8106.866** Ghibli-PRO - RACK 10 trays store

**8106.583** Aluminium tray 495x570x12mm

### ALARM BOX

With this option it's possible to set an alarm that become active when, after a certain period of time, humidity or temperature are above a predetermined maximum threshold. The Alarm Box has a warning light and a buzzer that can be silenced from a switch on the panel.

**8104.856** Alarm Box for Ghibli-PRO cabinets



## Sahara - baking ovens

Forced ventilation oven available in two models: with temperature control only (Sahara) and also with humidity control (Sahara DRY). They are designed to perform the following works:

**1) Baking of the PCBs**, according IPC-1602 standard, should be done at 105-125°C for 4-6 hours into a forced ventilation oven. All our ovens are equipped with timer, programmable start-up, and countdown mode that is helpful to make sure you do the baking of PCBs only for 4-6 hours, avoiding the risk of an unnecessary oxidation of the printed board circuits.

**2) Baking of SMD components** according to J-STD-033 that specify three temperatures: 40°C, 90°C and 125°C.

To ensure <5% RH when baking at 40°C or 90°C is recommended the use of the Sahara DRY that are ovens equipped with humidity control. How long to bake depends on the moisture sensitive level and package type and body thickness.

In the worst case is 79 days for 40°C baking, 10 days for 90°C baking and 96 hours for 125°C baking. Once baked MSDs have their Floor Life restored to the initial value. It's important to bake in ovens equipped with a programmable timer command like all the ovens in the Sahara line.

**3) Thermal cycle.** All the Sahara ovens can execute thermal program (easy editable on a PC) useful for testing and for heating/cooling with settable temperature gradient

### Technical specifications:

Outer body: steel coated in epoxy anti-acid paint.

Inner structure: in stainless steel AISI304

Heating elements: not in contact with the internal chamber

Thermal insulation: with natural mineral fibre

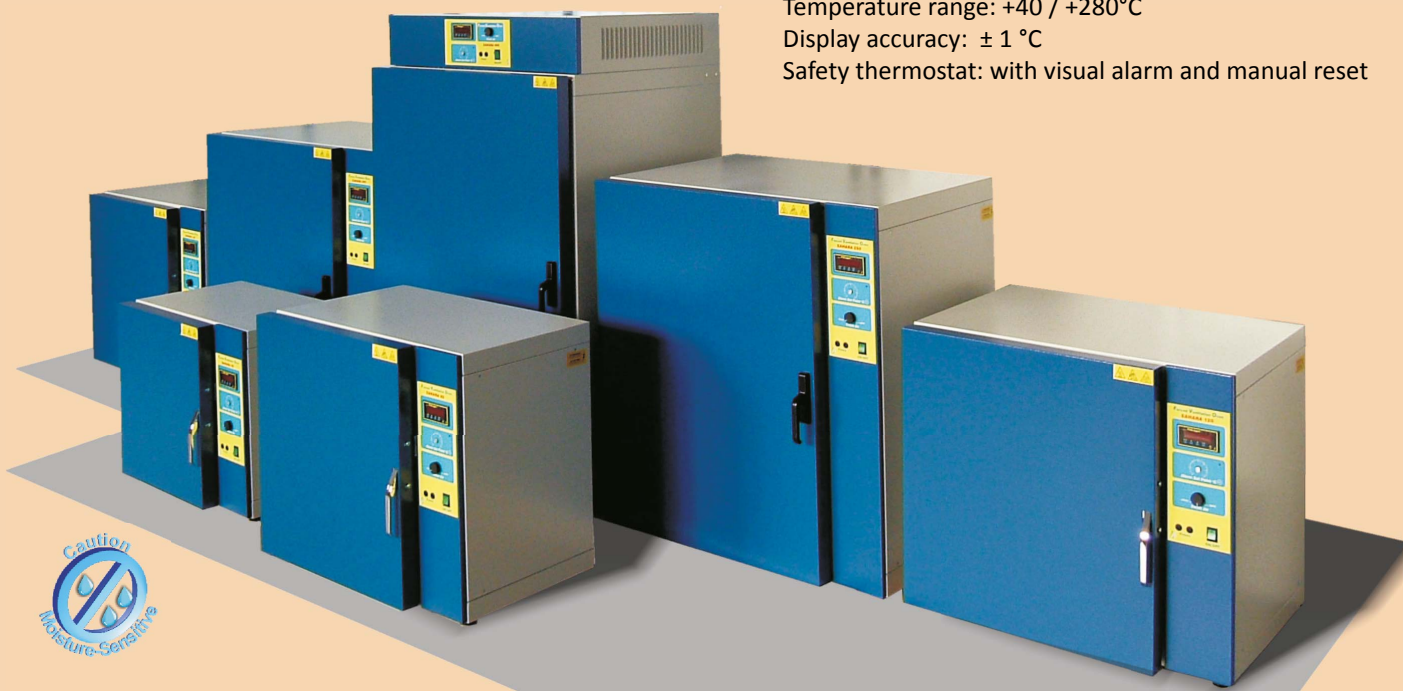
Internal grid shelves: can be placed at different height

Ventilation opening: with manual flow control

Temperature range: +40 / +280°C

Display accuracy:  $\pm 1^\circ\text{C}$

Safety thermostat: with visual alarm and manual reset



## Sahara ovens

Oven with temperature control only



Temperature Control  
Safety thermostat  
Ventilation opening

Compliance with:  
IPC-1602  
Baking PCB

## Sahara DRY ovens

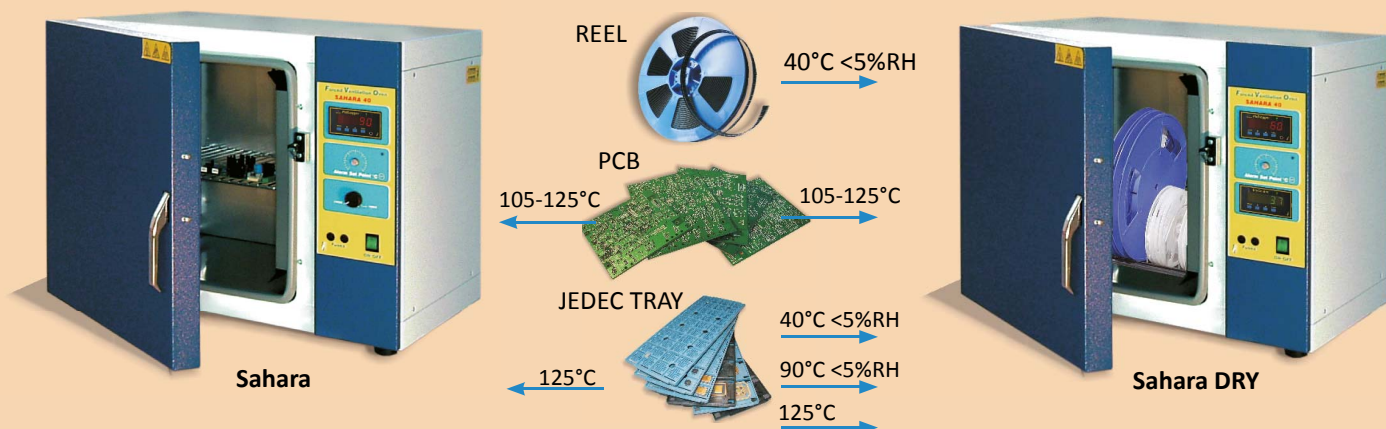
Oven with temperature control and humidity control (<5%RH)



Ventilation opening  
Safety thermostat  
Humidity Control

Compliance with:  
J-STD-033 Baking SMD  
IPC-1602 Baking PCB

Dehumidification at <5% RH is reached by blowing dry air. The Sahara DRY ovens, unlike Sahara models, are equipped with a air-tightness improved internal chamber so as to keep the dry environment achieved without having to continually blow dry air.



## Temperature Control

(Included both on Sahara and Sahara DRY models)



Temperature electronic control with PID regulator and multifunction timer.

Temperature Range: 40-280°C

Accuracy:  $\pm 1.5^\circ\text{C}$

Resolution:  $\pm 1^\circ\text{C}$

The digital controller has an internal clock with back-up that can keep the right clock for a week without power supply. This is useful to minimize the damage caused by any black-out when the oven is working in "Countdown", "Programmed start-up" or "Thermal programmer" mode.

The Sahara ovens can work in 4 modes:

### 1) SetPoint:

The oven reaches a setpoint temperature and stays steady.

### 2) Countdown:

It's like the SetPoint mode but with a time limit. After the countdown time is expired the oven stops. Time limit can be set from 1 minute to 999 hours and 59 minutes.

### 3) Programmed start-up:

It's useful when you want to start-up the oven on a precise date/time (for example at 6:30 on monday after the weekend the oven start-up to SetPoint 200°C)

### 4) Thermal programmer:

It's possible to edit on a PC and then download to the digital controller up to 10 programs with 100 steps each. In every step you can set: the temperature setpoint, the maximum gradient to reach it and the duration.

To set the thermal programmer it is necessary to have the **8107.215** option, comprehensive of the PidManager software and the special USB cable (see next page)

## Humidity Control

(Included on Sahara DRY models only)



Humidity electronic control

Humidity control:  $<5\% \text{ RH}$  when  $40^\circ\text{C} \leq T \leq 100^\circ\text{C}$

Humidity range: 1-95%RH

Accuracy:  $\pm 2\% \text{ RH}$

Resolution:  $\pm 0.1\% \text{ RH}$

It can work in 2 modes:

**Fast:** dehumidification occurs at the maximum possible speed.

**Eco:** dehumidification is proportional adjustment to optimize the consumption of compressed air. This mode is for a more rational use of compressed air, in fact, the low level of humidity is reached for subsequent cycles and not in a direct way.

The Sahara DRY Ovens must be fed with dry air from 3 to 8 atm.

### How much should be dry the air supply?

Normally, centralized systems of compressed air are already equipped with dehumidification system good enough to work properly with this humidity control.

For example, a compressed air system to 7 bar with a dew point of less than  $3^\circ\text{C}$  is usually sufficient.

### How much is the compressed air consumption?

The dry air is blown into the inner chamber very slowly and only when necessary.

Max consumption: 100 nl per minute

Average consumption: 30 nl per minute

### Can be used the nitrogen and what advantages there are?

Yes. The baking in inert environment reduces oxidation of the PCBs and SMD components..

			Int. Dimensions	Ext. Dimensions	Power	Weight
	Sahara MODEL	(included/max)	(LxPxH)	(LxPxH)	W	kg
<b>8107.103</b>	Sahara 40 litre	1/7	348x312x367	686x515x575	800/230V	35
<b>8107.105</b>	Sahara 60 litre	2/7	408x372x422	746x570x605	1200/230V	40
<b>8107.107</b>	Sahara 80 litre	2/8	458x372x472	796x570x680	1200/230V	45
<b>8107.109</b>	Sahara 120 litre	2/9	498x477x512	836x680x720	1600/230V	50
<b>8107.111</b>	Sahara 250 litre	2/14	593x522x797	956x730x1025	3200/230V	90
<b>8107.113</b>	Sahara 400 litre (with wheels)	2/18	693x607x980	901x815x1487	3200/230V	140
<b>8107.108</b>	Sahara DRY 80 litre	2/8	458x372x472	796x570x680	1200/230V	45
<b>8107.110</b>	Sahara DRY120 litre	2/9	498x477x512	836x680x720	1600/230V	50
<b>8107.112</b>	Sahara DRY250 litre	2/14	593x522x797	956x730x1025	3200/230V	90

#### ACCESSORIES

<b>8107.150</b>	Additional shelf for Sahara 40 litre	(max. 7 shelves)
<b>8107.152</b>	Additional shelf for Sahara 60 litre	(max. 7 shelves)
<b>8107.154</b>	Additional shelf for Sahara and Sahara DRY 80 litre	(max. 8 shelves)
<b>8107.156</b>	Additional shelf for Sahara and Sahara DRY 120 litre	(max. 9 shelves)
<b>8107.158</b>	Additional shelf for Sahara and Sahara DRY 250 litre	(max. 14 shelves)
<b>8107.160</b>	Additional shelf for Sahara 400 litre	(max. 18 shelves)

#### OPTIONS

<b>8107.1xxW</b>	Door with inspection window, 200x200mm
<b>8107.1xxH</b>	Lateral hole for cables, Ø 50mm

## DATALOGGER



All our ovens are equipped with a data logger for traceability and you can print/save graphs of temperature (for sahara ovens) and temperature/humidity (for Sahara DRY ovens)

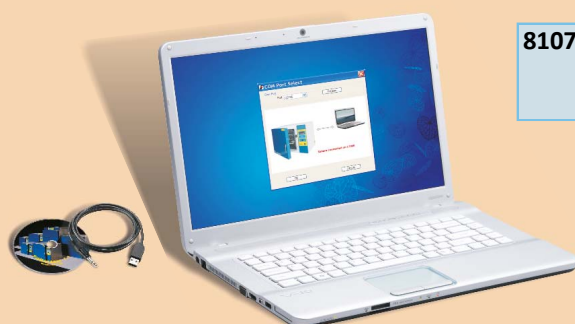
To analyze the logged data and to set the thermal programmer is required the **8107.215** option which include the PidManager software and USB specific cable.

The software is compatible with Windows XP/./11.

Sample rate: 1, 5, 10, 15,30 sec 1, 5, 10, 15, 30 min

Duration (T) Sahara from 6 hour(1sec) to 450 day(30min)

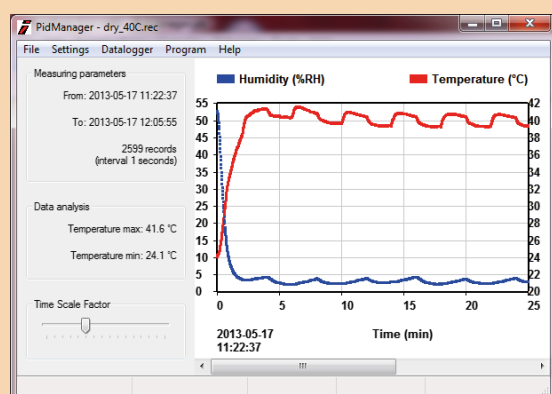
Duration (T+RH%) Sahara DRY: from 3 hour(1sec) to 225 day(30min)



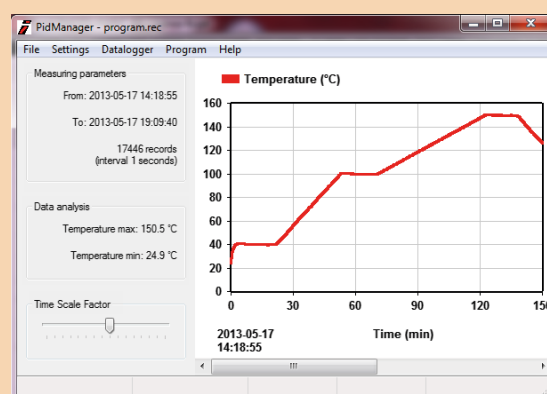
**8107.215** PIDManager software and specific USB cable to set the thermal programs and to download and view datalogger records

#### Thermal Program :

- 1 SETPOINT 40°C / gradient MAX.
- 2 WAIT 20min @40°C
- 3 SETPOINT 100°C / GRADIENT<2°C/min
- 4 WAIT 20min @100°C
- 5 SETPOINT 150°C / GRADIENT<1°C/min
- 6 WAIT 20min @150°C



Sahara DRY 80L 40°C < 5% RH



Sahara 80L Thermal Program

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