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We believe that all the information in this catalogue, including technical data, weights and sizes to be reliable. However, we make no warranties expressed or implied and assume no liability regarding any use of this information. All the products listed in this catalogue are subject to our general conditions of sales, supply and payment terms.

ABOUT ESD

The electronic industry has placed a growing emphasis on reliability and quality assurance. ESD damage to ESDS and assemblies can be minimized by using ESD control measures.

- **Handle electrostatic discharge sensitive devices (ESDS) only in an ESD protected area (EPA)**
- **Avoid electrostatic potential differences and electrostatic discharges**
- **Use wrist straps, approved footwear and floor combination for personnel grounding**
- **Wear properly fastened dissipative garments**
- **No electrostatic generating materials (normal PE, PVC, PS, etc.) are allowed inside an EPA**
- **Do not expose ESDS to electrostatic fields > 100V / cm!**
- **Use only approved ESD protective packaging materials**
- **Awareness, personnel training, continuous monitoring are essential for maintaining a static control program**

Recommended international standards:

IEC 61340-5-1	Electrostatics - Part 5-1: Protection of electronic devices from electrostatic phenomena - General requirements	(1998-12)
IEC 61340-5-2	Electrostatics - Part 5-2: Protection of electronic devices from electrostatic phenomena - User guide	(1999-02)
IEC 61340-4-1 Ed. 2.0	Electrostatics - Part 4-1: Standard test method for specific applications Electrical resistance of floor coverings and installed floors	(2003-12)
IEC 61340-4-3	Electrostatics - Part 4-3: Standard test methods for specific applications - Footwear	(2001-08)
IEC 61340-4-5	Electrostatics part 4-5: Standard test method for specific applications Methods of characterizing the electrostatic protection of footwear and flooring in combination with a person	(2004-07)
IEC 61340-2-1	Electrostatics - Part 2-1: Measurement methods - ability of materials and products to dissipate static electric charge	(2002-06)
IEC 61340-2-3	Electrostatics - Part 2-3: Methods of test for determining the resistance and resistivity of solid planar materials used to avoid electrostatic charge accumulation	(2000-03)
IEC 61340-3-1	Electrostatics - Part 3-1: Methods for simulation of electrostatic effects - Human body model (HBM) - Component testing	(2002-03)
IEC 61340-3-2	Electrostatics - Part 3-2: Methods for simulation of electrostatic effects - Machine model (MM) - Component testing	(2002-03)
ANSI/ESD S20.20	ESD association standard for the Development of an Electrostatic Discharge Control Program for - Protection of Electrical and Electronic Parts, Assemblies and Equipment (Excluding Electrically Initiated Explosive Devices)	(1999-08)



symbols used throughout this catalogue to define products in compliance with IEC 61340-5-1 / EN 61340-5-1

All PERMASTAT® products are intended only for ESD protection in industrial electronic production.

Definitions IEC 61340-5-1 / EN 61340-5-1

Low Charging (L) Previously called Antistatic

Packaging exhibiting properties which minimize any charge generation

Electrostatic Conductive (C)

Packaging with a surface resistance $\geq 1 \times 10^2 \Omega$ and $< 1 \times 10^5 \Omega$

Electrostatic Dissipative (D)

Packaging with a surface resistance $\geq 1 \times 10^5 \Omega$ and $< 1 \times 10^{11} \Omega$

Electrostatic Discharge Shielding (S)

Barrier or enclosure that limits the passage of current and attenuates the energy resulting from an electrostatic discharge such that the maximum energy from 1000 V human body model discharge is less than or equal to 50 nJ

Insulating

Packaging with a surface resistance $\geq 1 \times 10^{11} \Omega$

ESD Protected Area (EPA)

Area in which ESDS can be handled with accepted risk of damage as a result of electrostatic discharge or fields



- Consulting, ESD protected areas planning
- Materials evaluation
- Materials certification according to ESD standards
- Measurements in EPA's and Production
 - Electrostatic fields
 - Charge generation
 - Surface and resistance to ground
 - Personnel charging
- ESD Audits
- Test reports and surveys
- ESD training
- ESD workshops



TRAINING

Infineon Video-Clip „ESD - The Invisible Lightning“
ESD damage in the semiconductor industry

CD-ROM (MPEG) for multimedia PC (13 min)



Part Nr. 7901.CD.D	D	German Version
Part Nr. 7901.CD.E	E	English Version

ECOSTAT FLOORING SYSTEMS

Conductive and static dissipative floors are the most basic and the most important elements in the building of a functional EPA (ESD Protected Area)

We offer you:

- Competence and Know-how
- Custom adapted solutions
- Design and materials according to customer's request
- Conductive and static dissipative materials
- Test audits according to actual standards

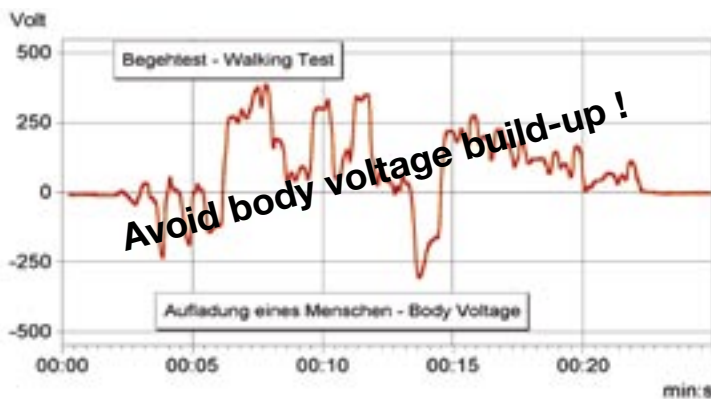
Please ask for our separate leaflet !



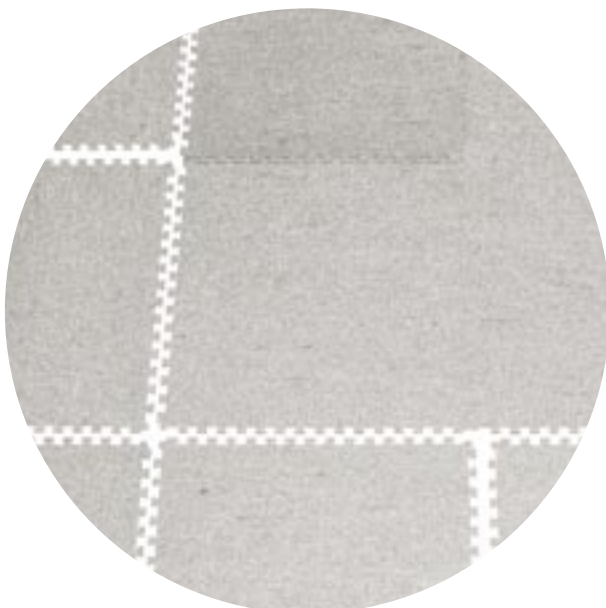
Rubber Flooring



PVC Flooring



Floor Coating



Interlocking Floor Tiles

ESD Floor Cleaner
see page 71



High performance PVC flooring material on rolls, specially designed for the electronic industry. The electrical properties are unaffected by the type of glue used. For light industrial applications, a „quick-lift“ adhesive band may be used.

Refer to our data sheet for more information.

- Two layer PVC flooring
- Electrostatic dissipative flooring
- Insulation resistance for personnel safety acc. to DIN VDE 0100-410
- Matt, silky surface
- Easy maintenance
- High abrasion resistance
- Conductive backing
- **No conductive glue needed, gives better adhesion**
- **Suitable for forklift traffic when installed accordingly**
- Available on rolls

Typical resistance to ground $R_G = 10^6 - 10^8$ ohm



Colour Nr. 75012



Colour Nr. 75011



Colour Nr. 75051

ECOSTAT-DF POLYCAN / ECOSTAT-DF POLYCAN-WL

Single layer, 2 component paints for „do it yourself“ application.

- Application without conductive layer
- Solvent based polyurethane paint
- Glossy surface
- Colour grey, ~ RAL 7035, other colours available on request
- Medium abrasion resistance
- For horizontal and vertical surfaces
- Suitable for hard and resilient surfaces in EPA's
- Suitable for new and existing floors
- Easy application and rework using a roller

Typical resistance to ground $R_g = 10^6 - 10^8 \text{ Ohm}$

IEC
EN

- Application without conductive layer
- **Water based, 2 component epoxy paint**
- Glossy surface
- Colour grey ~ RAL 7035, other colours available on request
- Medium abrasion resistance
- Suitable for hard floors in EPA's
- Suitable for new and existing floors
- Easy application and rework using a roller

Typical resistance to ground $R_g = 10^5 - 10^7 \text{ Ohm}$

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Part. Nr.	Pail
1130.7035.5	5 kg



Part. Nr.	Pail
1131.7035.9	9 kg



EASY application using a roller

Flooring material for „do it yourself“ floor laying



- Two layer material
- Volume conductive
- Abrasion resistant
- Elastic
- Suitable for chair castors, depending on floor substrate
- Reusable



Mega - 4.0 Rubber

Colour: Orion
Thickness: 4 mm

Typical resistance to ground $R_G = 10^6 - 10^8 \text{ ohm}$



Part Nr.	Standard Size
1250.640.R	1,22 m x 7,5 m
1250.640.Z	Custom sizes on request

Duo - 2.0 PVC

Colour: grey (RAL 75012)
Thickness: 2 mm

Typical resistance to ground $R_G = 10^6 - 10^8 \text{ ohm}$



Part Nr.	Standard Size
1250.75012.R	1,5 m x 10 m

Standard Floor Mat

Rounded edges, 2 x 10 mm snap, 3 m grounding cord, Part No. 2250.765.

Mega 4.0

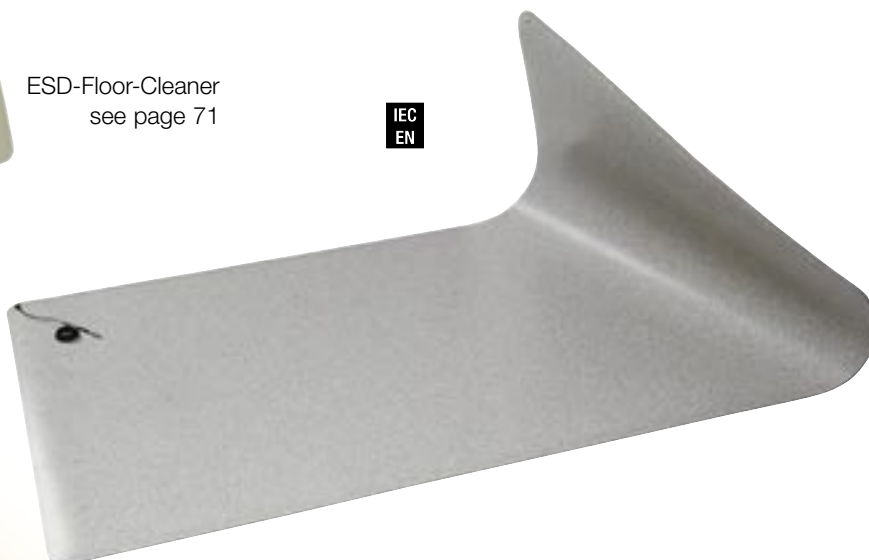
Part Nr.	Standard Sizes
1250.641	1220 x 1500 x 4 mm
1250.642	1220 x 2500 x 4 mm

Duo - 2.0

Part Nr.	Standard Sizes
1250.75012.L	1500 mm x 2000 x 2 mm
1250.75012.S	1500 mm x 1200 x 2 mm



ESD-Floor-Cleaner
see page 71



Static dissipative Anti-Fatigue material, for use in EPA's with hard floors, improves worker comfort and productivity.

- Static dissipative PUR material
- Ergonomic
- Soft and Elastic
- Dome cell structure
- Improved standing comfort
- Heat and sound absorbent

Typical resistance to ground $R_G = 10^6 - 10^8 \text{ ohm}$



- Anti-skid and shock absorbent
- Bevel sides
- 10 mm snap connection
- Colour: black
- Standard mats sizes

Custom sizes available on request

ANTI-FATIGUE „EASY STANDING“ MATS

- Improved Anti-Fatigue properties
- Size extension by glueing

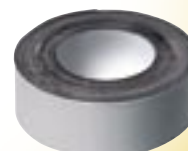
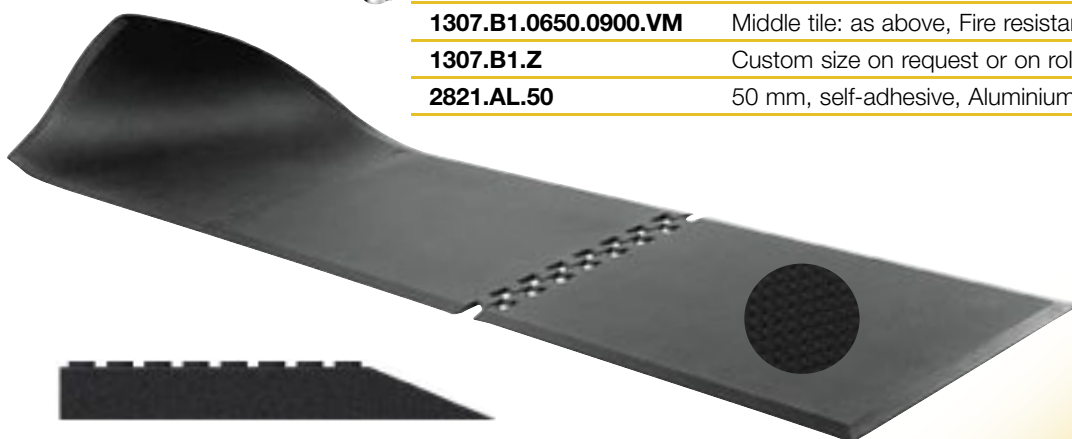
Part Nr.	Standard Size
1306.13.0650.0950	650 x 950 x 13 mm includes 10mm snap
1306.13.Z	Custom size on request
1306.B1.0650.0950	Fire resistance class B1 includes 10mm snap
1306.B1.Z	Custom size on request, class B1



ANTI-FATIGUE „EASY WALKING“ MATS

- Improved Anti-Fatigue standing and walking properties
- Interlocking mats for large area easy coverage
- Smallest configuration: 2 end tiles

Part Nr.	Standard Size
1307.13.0650.0900.VE	End tile: 650 x 900 x 13 mm includes 10mm snap
1307.13.0650.0900.VM	Middle tile: 650 x 900 x 13 mm
1307.13.Z	Custom size on request or on rolls
1307.B1.0650.0900.VE	End tile: as above, Fire resistance class B1
1307.B1.0650.0900.VM	Middle tile: as above, Fire resistance class B1
1307.B1.Z	Custom size on request or on rolls, class B1
2821.AL.50	50 mm, self-adhesive, Aluminium tape



Part Nr.

1400.686

Workstation, includes:

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1402.663.L

1 table mat 610 x 1220 x 2 mm

1250.642

1 floor mat 1220 x 2500 x 4 mm

2200.123.6

1 barrier strip box for 6 wires connection

2200.113

1 grounding plug with a 4 mm ring terminal

2200.121.10

1 earth connecting box with 2 x 10 mm snaps and
1 x 4 mm banana plug socket

2250.758

2 grounding cords with a 10 mm snap and a 4 mm ring terminal

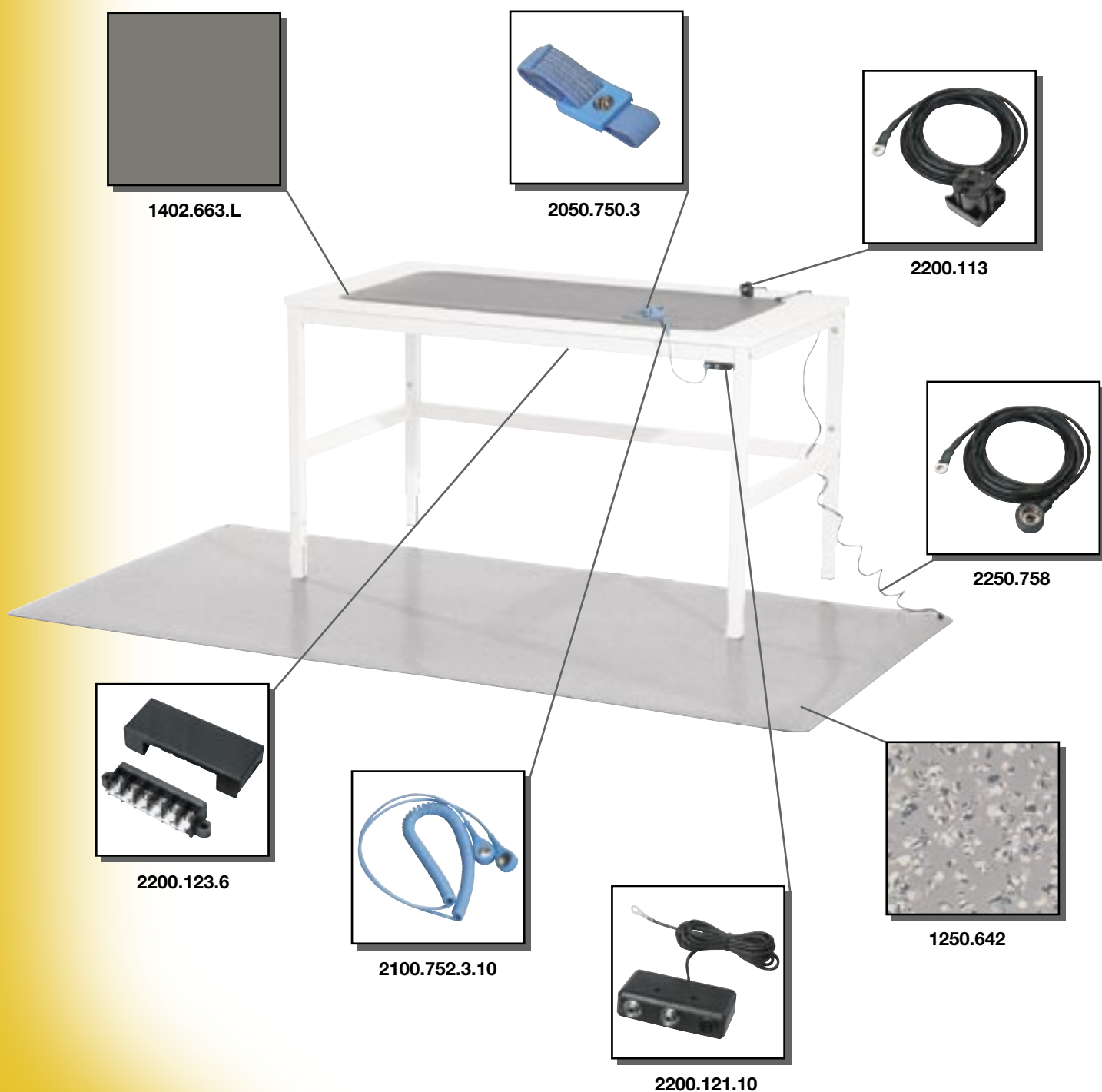
2050.750.3

1 adjustable wrist strap

2100.752.3.10

1 coil cord 2,4 m

WORKSTATION ACCESSORIES



BENCHTOPS



- Metallic support 40 x 40 x 2 mm
- Reinforced metallic construction
- Adjustable level to +10 mm
- Conductive grey paint finish
- Benchtop made of conductive chipboard and static dissipative hard laminate
- Includes an earth connecting box with 2 x 10 mm snaps and 1 x 4 mm banana plug socket

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$



Part Nr.	Standard dimensions
1950.LC.1906	1200 x 800 x 780 mm (W x D x H)
1950.LC.1036	1500 x 800 x 780 mm (W x D x H)
1950.LC.1056	1600 x 800 x 780 mm (W x D x H)
1950.LC.1086	1750 x 800 x 780 mm (W x D x H)
1950.LC.1116	2000 x 800 x 780 mm (W x D x H)



Custom configuration

- Height adjustment between 750 - 950 mm

CABINETS



fixed

- Rugged metal construction with conductive grey paint
- Easy opening drawers
- With central lock
- Fixed or moveable

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$



moveable

Description

- 2 different heights
- 1 - 10 drawers possible
- Custom design available on request

Description

- 3 different heights
- 1 - 18 drawers possible
- Custom design available on request

SHELVES



- Metal shelf unit with 3 supports
- 250 mm height
- Can be mounted on a benchtop
- Shelf area - metal plate 250 mm deep with 30 mm edges
- Conductive paint finish

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$



Part Nr.	Standard dimensions
1950.LZ.3478	1200 mm length
1950.LZ.3484	1500 mm length
1950.LZ.3479	1600 mm length
1950.LZ.3485	1750 mm length
1950.LZ.3486	2000 mm length

ESD cleaner for dissipative and conductive surfaces
see page 71



WORKBENCH



Sample configuration

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$

IEC
EN

- Metallic support 40 x 40 x 2 mm
- Reinforced metallic construction
- Workbench adjustable height between 750 and 950 mm
- Conductive grey paint finish
- Benchtop made of conductive chipboard and static dissipative hard laminate
- Includes on earth connecting box with 2 x 10 mm snaps and 1 x 4 mm banana plug socket
- Not mounted

Part Nr.	Standard dimensions
1950.LC.3906	1200 x 800 x 750 - 950 mm (W x D x H)
1950.LC.3056	1500 x 800 x 750 - 950 mm (W x D x H)
1950.LC.3916	1600 x 800 x 750 - 950 mm (W x D x H)
1950.LC.3086	1750 x 800 x 750 - 950 mm (W x D x H)
1950.LC.3116	2000 x 800 x 750 - 950 mm (W x D x H)

Accessories

- 11 ● Integrated task lights 2 x 36 W

Part Nr.	Dimension
1930.SAMC	910 x 90 x 105 mm

EPA TASK LIGHTING MAGNIFIER

- Made of static dissipative materials
- 3 diopter stadium shaped lens 162 x 105 mm
- 2 switchable light levels
- Includes 3 compact fluorescent 9W lamps
- Extends reach ideal for ESD workstations



Part Nr.

1930.SNL	Task lighting magnifier SNL 319 A
1930.K	Mounting clamp, span 0-65 mm
1930.K.2	Mounting clamp, span 65-135 mm

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EN

ACCESSORIES

① Drawer Cabinet

- Metallic construction
- 2 possible heights
- 1 - 10 drawers possible
- Central lock

Part Nr.	Dimensions
1950.LC.4882	500 x 580 x 560 mm (B x T x H)
4 drawers	1 x 50 mm
	1 x 100 mm
	1 x 150 mm
	1 x 200 mm

② Aluminium Posts 2100 - 4 sides selection

- Anodized aluminium profile 45 x 45 mm continuously adjustable height
- Flexible repositioning system
- Cross connecting bar
- Sliding rail frame
- Sliding rail
- Height: 2100 mm

Part Nr.	Dimensions
1950.LC.8311	1200 mm tablelength
1950.LC.8313	1500 mm tablelength
1950.LC.8314	1600 mm tablelength
1950.LC.8315	1750 mm tablelength
1950.LC.8316	2000 mm tablelength

Options

③ ● Additional sliding rail for equipment installation

1950.LZ.3898	1200 mm tablelength
1950.LZ.3893	1500 mm tablelength
1950.LZ.3899	1600 mm tablelength
1950.LZ.3894	1750 mm tablelength
1950.LZ.3895	2000 mm tablelength

④ ● Galvanized sliding hanger 20 kg load-bearing capacity

Part Nr.
1950.LZ.3406

for 345 mm depth

⑤ ● Continuously adjustable shelf, with front edge 195 - **345** - 495 mm depth available

Part Nr.	Dimensions
1950.LZ.8308	1200 mm tablelength
1950.LZ.8303	1500 mm tablelength
1950.LZ.8309	1600 mm tablelength
1950.LZ.8304	1750 mm tablelength
1950.LZ.8305	2000 mm tablelength

⑥ ● Articulated, moveable storage rack holder 700 mm length

Part Nr.	Dimensions
1950.LZ.8248	435 x 165 x 120 mm

⑦ ● Storage rack, 3 compartments

Part Nr.	Dimensions
1950.LZ.3901	430 x 155 x 310 mm

⑧ ● Extra storage rack holder 15 kg load-bearing capacity

1950.LZ.8235	370 x 370 mm
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⑨ ● Continuously adjustable storage bin holder

Part Nr.	Dimensions
1950.LZ.8328	1200 mm tablelength
1950.LZ.8323	1500 mm tablelength
1950.LZ.8329	1600 mm tablelength
1950.LZ.8324	1750 mm tablelength
1950.LZ.8325	2000 mm tablelength

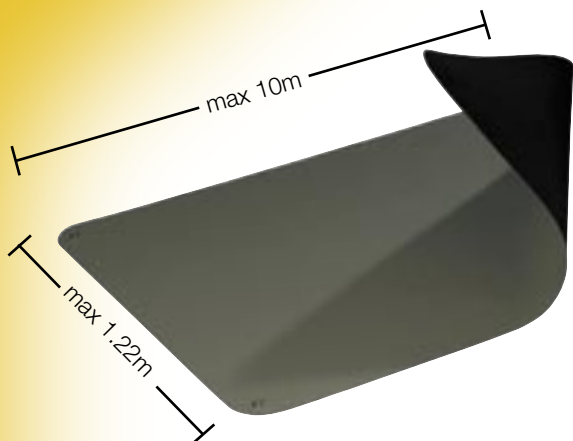
⑩ ● Metallic cable conduit, 67 x 130 mm (D x H) emergency switch, 6 power outlets

Part Nr.	Dimensions
1950.LZ.3514	1200 mm tablelength
1950.LZ.3516	1500 mm tablelength
1950.LZ.3519	1600 mm tablelength
1950.LZ.3517	1750 mm tablelength
1950.LZ.3518	2000 mm tablelength

Aluminium Posts 900

Part Nr.	Dimensions
1950.LC.8300	900 mm

TABLE MATS

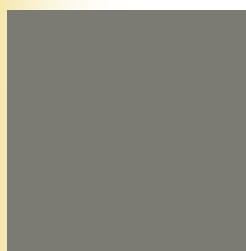


- Two layer material
- Rugged synthetic rubber
- Resistant to solder and heat
- Abrasion resistant
- Halogen free
- Elastic
- Volume conductive
- Thickness: 2 mm
- Includes 2x10 mm snaps and rounded edges

Typical resistance to ground $R_G = 10^6 - 10^7$ ohm

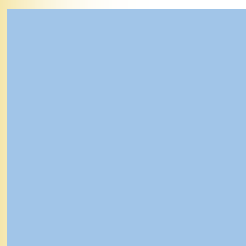
IEC
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Part Nr.	Colour	Standard Sizes
1402.662.L*	beige	610 x 1220 mm
1402.662.S*	beige	610 x 900 mm
1402.662.R		rolls: 1220 mm x 10 m
1402.662.R10		rolls: 1000 mm x 10 m
1402.662.R61		rolls: 610 mm x 10 m
1402.662.Z		Custom sizes available on request



Part Nr.	Colour	Standard Sizes
1402.663.L*	platinum grey	610 x 1220 mm
1402.663.S*	platinum grey	610 x 900 mm
1402.663.R		rolls: 1220 mm x 10 m
1402.663.R10		rolls: 1000 mm x 10 m
1402.663.R61		rolls: 610 mm x 10 m
1402.663.Z		Custom sizes available on request

Part Nr.	Colour	Standard Sizes
1402.664.L*	green	610 x 1220 mm
1402.664.S*	green	610 x 900 mm
1402.664.R		rolls: 1220 mm x 10 m
1402.664.R61		rolls: 610 mm x 10 m
1402.664.Z		Custom sizes available on request



Part Nr.	Colour	Standard Sizes
1402.665.L*	light blue	610 x 1220 mm
1402.665.S*	light blue	610 x 900 mm
1402.665.R		rolls: 1220 mm x 10 m
1402.665.R61		rolls: 610 mm x 10 m
1402.665.Z		Custom sizes available on request



MATS FOR SHELF STORAGE AREAS

ESD cleaner for dissipative and conductive surfaces
see page 71

- Thickness: 1,5 mm

Typical resistance to ground $R_G = 10^6 - 10^7$ ohm

IEC
EN

Part Nr.	Colour	Standard Sizes
1452.659.R	black	rolls: 1220 mm x 10 m
1452.659.R61	black	rolls: 610 mm x 10 m
1452.659.R40	black	rolls: 400 mm x 10 m
1452.659.Z		Custom sizes available on request



White Cleanroom Mat on page 58

COMFORT CHAIR

The **COMFORT CHAIR** provides an exceptional sitting comfort due to its high resilient foam contoured seat. It drains static charges safely, continuously and passively from seated personnel when used in conjunction with conductive flooring or floor mats.



Part Nr.	Colour	Accessories
1700.KS.B	blue	without armrests
1700.KS.D	grey	without armrests

- 5 star base made of chromed aluminium with 5 conductive, soft castors
- Safety gas lift
- Gas lift height adjustment, 430 - 570 mm
- Asynchronous mechanism
- Seat and **dynamic back rest** mechanism, individually adjustable
- Upholstered with a conductive blue or grey fabric
- Conductive plastic back seat shell with ESD symbol
- Standard self-breaking conductive castors
- GS certified

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ ohm}$



Seat height up to 810 mm, star base with 5 conductive glides and a chromed foot ring

Part Nr.	Colour	Accessories
1710.KS.B	blue	without armrests
1710.KS.D	grey	without armrests

Accessories:

Part Nr.	
1700.KS.13	Hard castors (for carpet floors)
1700.XS	Dissipative armrests

Typical point to point resistance $R_p = 10^{10} - 10^{11} \text{ Ohm}$

ECONOMY CHAIR

The **Economy Chair** is designed to provide comfort and safety to the user. It drains static charges safely, continuously and passively from seated personnel when used in conjunction with conductive flooring or floor mats.



Part Nr.	Colour	Accessories
1700.ES.B	blue	without armrests
1700.ES.D	grey	without armrests

- 5 star base made of chromed aluminium with 5 conductive castors
- Safety gas lift
- Gas lift height adjustment, 400 - 520 mm
- Upholstered with a conductive blue or grey fabric
- Conductive back seat shell with ESD symbol
- Standard self-breaking conductive castors
- GS certified

Typical resistance to ground $R_G = 10^5 - 10^7$ ohm



Seat height up to 760 mm, star base with 5 conductive glides and a chromed foot ring

Part Nr.	Colour	Accessories
1710.ES.B.	blue	without armrests
1710.ES.D	grey	without armrests

Accessories

Part Nr.

1700.KS.13	Hard castors (for carpet floors)
1700.XS	Dissipative armrests

Typical point to point resistance $R_p = 10^{10} - 10^{11}$ Ohm

FOOT REST



Part Nr.
1740.001

Adjustable, conductive foot rest. Dimensions 450 x 350 mm

- Enhances the ergonomic sitting comfort
- Rugged metallic construction
- Static dissipative, anti-skid mat
- Colour: black
- Rubber contact pads
- Height and inclination adjustable
- Ground cord with 10 mm snap / banana plug connection
- Complies with DIN 4556
- GS certified

Typical resistance to ground $R_G = 10^5 - 10^6$ ohm



INDUSTRIAL PU-CHAIR

The **Industrial PU-Chair** is designed to provide comfort and safety to the user. It drains static charges safely, continuously and passively from seated personnel when used in conjunction with conductive flooring or floor mats.



Part Nr.	Colour	Accessories
1700.PU	black	without armrests

- 5 star base made of chromed aluminium with 5 conductive castors
- Safety gas lift
- Gas lift height adjustment 380 - 510 mm
- Synchronous mechanism
- Seat and back rest made of black conductive PU foam
- Easy to clean
- ESD symbol
- Standard self breaking conductive castors
- GS certified

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$



Seat height up to 800 mm, star base with 5 conductive glides and a chromed foot ring

Part Nr.	Colour	Accessories
1710.PU	black	without armrests

Accessories

Part Nr.	
1700.KS.13	Hard castors (for carpet floors)
1700.XS.PU	Dissipative armrests with adapter

Typical point to point resistance $R_P = 10^{10} - 10^{11} \text{ Ohm}$

STANDARD SMOCKS AM-160

- Static dissipative fabric made of a mixture of 65% Polyester, 32% Cotton and 3% Carbon coated yarn
- Lightweight, breathable and comfortable
- Easy snap fastening
- Unisex sizes
- Machine washable up to 60 °C
- Weight 156 g/m²
- Conductive in 4 mm grid
- Breast pocket with ESD symbol

Typical point to point resistance
 $R_p = 10^5 - 10^7 \text{ ohm}$

IEC
EN



Custom sizes,
 designs and logos
 available on request!

White:

Part Nr. 2610.AM160.*

* S / M / L / XL / XXL / XXXL

Blue:

Part Nr. 2630.AM160.*

* S / M / L / XL / XXL / XXXL

GARMENTS, BADGE HOLDERS

BADGE HOLDERS



Part Nr. 5221.1

- Clip holder
- Credit card size
- Dissipative material
- Hot stamped ESD symbol

Typical surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$

IEC
EN

Part Nr. 5221.2

- Clip holder
- Credit card size
- Permanent conductive material
- Horizontal and vertical use

Typical point to point resistance $R_p = 10^4 - 10^5 \text{ ohm}$

IEC
EN



POLOSHIRTS

- Static dissipative fabric
(**Blue:** 47% Polyester, 50% Cotton, 3% Carbon coated yarn)
(**Grey:** 8% Polyester, 89% Cotton, 3% Carbon coated yarn)
- Lightweight, breathable and comfortable
- UNISEX sizes
- 1/2 design, short or long sleeves
- Machine washable up to 40°C
- Weight 210 g/m²
- Breast pocket with ESD symbol

Typical point to point resistance
R_p = 10⁵ - 10⁷ Ohm



Blue:

Part. Nr. 2627.P.*

* S / M / L / XL / XXL / XXXL



Grey:

Part. Nr. 2625.P.*

* S / M / L / XL / XXL / XXXL



Part. Nr. 2647.P.*

* S / M / L / XL / XXL / XXXL

T-SHIRT

- Static dissipative fabric for use in ESD protected areas
(**Blue:** 97% Cotton, 3% Carbon coated yarn)
(**Grey:** 88% Cotton, 9% Polyester, 3% Carbon coated yarn)
- Lightweight, breathable and comfortable
- UNISEX sizes
- Machine washable up to 40°C
- Weight 150 g/m²
- Sleeve with ESD symbol

Typical point to point resistance
R_p = 10⁵ - 10⁷ Ohm



Part Nr.	Colour
2655.T.*	grey
2657.T.*	blue

* S / M / L / XL / XXL / XXXL



SMOCK AM-120

- For clean production areas
- Static dissipative fabric made of a mixture of 98% Polyester 2% Carbon coated yarn
- Lightweight and comfortable
- Easy snap fastening
- Unisex sizes
- Machine washable up to 40 °C
- Weight 120 g/m²
- Conductive 4 mm grid
- Breast pocket with ESD symbol

Typical point to point resistance
 $R_p = 10^5 - 10^7 \text{ ohm}$

IEC
EN

White:

Part Nr. 8710.AM120.*

* S / M / L / XL / XXL / XXXL



Other designs available on request.

REUSABLE CAP



- Dissipative reusable cap
- Made of static dissipative polyester fabric
- Colour white
- Other colours available on request

IEC
EN

Typical point to point resistance $R_p = 10^7 - 10^9 \text{ Ohm}$

Part Nr.	Qty.
8761.H.B	10 pcs

DISPOSABLE CAP

- Disposable cap
- Made of non-woven material
- Colour white

Part Nr.	Qty.
8760.H.B	100 pcs



REUSABLE OVERSHOE



- Dissipative reusable overshoe
- Made of static dissipative polyester fabric, colour white
- Includes a dissipative, disposable connecting strap

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$

IEC
EN

Part Nr.	Qty.
8781.P.B*	5 pairs
8781.P.40 (strap)	100 pcs

* S / L

DISPOSABLE OVERSHOE

- Dissipative disposable overshoe
- Made of non-woven material
- Includes dissipative connecting strap
- Colour blue

Typical resistance to ground $R_G = 10^5 - 10^7 \text{ Ohm}$

IEC
EN

Part Nr.	Qty.
8780.P.B	100 pcs



ESD GLOVES

- Non-allergenic polyester fabric

Typical wearer overall resistance
 $R_G < 1 \times 10^8 \text{ Ohm}$

IEC
EN

Part Nr. 8745.0404.* Qty. 10 pairs

* S / M / L / XL



- Non-allergenic polyester fabric
- Anti-slip grid side
- Size, colour coded cuffs

Typical wearer overall resistance
 $R_G < 1 \times 10^8 \text{ Ohm}$

IEC
EN

Part Nr. 8745.0401.* Qty. 10 pairs

* S / M / L / XL



- Non-allergenic polyester fabric
- Anti-slip PU coating

Typical wearer overall resistance
 $R_G < 1 \times 10^8 \text{ Ohm}$

IEC
EN

Part Nr. 8745.GPU.* Qty. 10 pairs

* S / M / L / XL



- Nylon-polyester mixture
- Static dissipative
- Size, colour coded cuffs

Typical wearer overall resistance
 $R_G < 1 \times 10^8 \text{ Ohm}$

IEC
EN

Part Nr. 8745.CG.* Qty. 10 pairs

* S / M / L



- Nylon-polyester mixture
- Static dissipative
- Anti-slip coating on finger tips
- Size, colour coded cuffs

Typical wearer overall resistance
 $R_G < 1 \times 10^8 \text{ Ohm}$

IEC
EN

Part Nr. 8745.APU.* Qty. 10 pairs

* S / M / L



SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Rugged lining
- Cushioned upper collar
- PCP free
- Static dissipative PUR sole
- Static dissipative inner sole
- Includes ESD Symbol

Typical wearer overall resistance $R_G = 10^5 - 10^7 \text{ ohm}$



WOMEN'S / MEN'S SHOES

Part Nr. 2590.32600 size 35 - 47

- Slip resistant air-cushion sole
- Replaceable inner sole, part nr. 2590.3551
- Complies with DIN 4843/part 100
- Complies with DIN EN 347-1



Part Nr. 2590.36900 size 36 - 42

- Includes Reflexor Comfort and Reflexor massage inner sole, replaceable
- Complies with DIN 4843/part 100
- Handmade



Part Nr. 2590.31133 size 35 - 48

- Inner sole with shock absorbing system
- Replaceable inner sole, part nr. 2590.3562
- Complies with DIN 4843/part 100
- Complies with DIN EN 347-1

WOMEN'S / MEN'S SLIPPER



Part Nr. 2590.31143 size 35 - 48

- Inner sole with shock absorbing system
- Replaceable inner sole, part nr. 2590.3562
- Complies with DIN 4843/part 100
- Complies with DIN EN 347-1

MEN'S SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- PCP free
- Cushioned upper collar
- Static dissipative PUR sole
- Includes ESD Symbol

Part Nr. 2590.32923 Size 39 - 47
Colour: black (calf leather)

- Slip resistant rubber sole
- Complies with DIN 4843/part 100
- Complies with DIN EN 347-1



Part Nr. 2590.32651 Size 39 - 47
Colour: black

- Slip resistant air-cushion sole
- Replaceable inner sole, part nr. 2590.3551
- Complies with DIN EN 347-1

SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Rugged lining
- Cushioned upper collar
- PCP free
- Static dissipative PUR sole
- Static dissipative inner sole
- Includes ESD Symbol

Typical wearer overall resistance $R_g = 10^5 - 10^7$ ohm

IEC
EN

MEN'S SHOES

Part Nr. 2590.35810 size 40 - 46

- Made of natural leather
- 2 interchangeable Reflexor inner soles
- Complies with DIN 4843/part 100
- Handmade



Part Nr. 2590.35700 size 40 - 46

- Made of natural leather
- 2 interchangeable Reflexor inner soles
- Complies with DIN 4843/part 100
- Handmade

WOMEN'S / MEN'S SLIPPER

Part Nr. 2590.32300 size 35 - 47

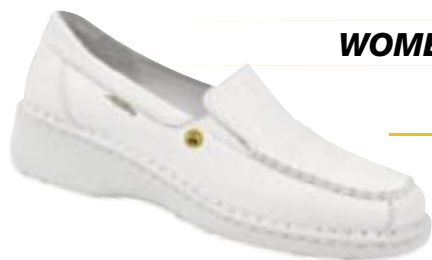
- Made of natural leather
- Interchangeable inner sole, Part Nr. 2590.3551
- Complies with DIN 4843/part 100
- Complies with DIN EN 347-1



WOMEN'S SLIPPER

Part Nr. 2590.36907 size 35 - 42

- Made of natural leather
- 2 interchangeable Reflexor inner soles
- Handmade



WOMEN'S / MEN'S SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Rugged lining
- Cushioned upper collar
- PCP free
- Static dissipative PUR sole
- Static dissipative inner sole
- Includes ESD Symbol

Part Nr. 2590.1594 size 37 - 48

- Breathable Air-Mesh inner lining
- 2 interchangeable inner soles
- Complies with EN 750 20347:2004
- Complies with DIN 4843/part 100



SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Rugged lining
- Cushioned upper collar
- PCP free
- Static dissipative PUR sole
- Static dissipative inner sole
- Includes ESD Symbol

Typical wearer overall resistance $R_G = 10^5 - 10^7 \text{ Ohm}$



WOMEN'S / MEN'S SHOES

Part Nr. 2590.1572 Size 37 - 48

- Breathable Air-Mesh inner lining
- 2 interchangeable inner soles
- Complies with EN ISO 2037:2004
- Complies with DIN EN 4843/part 100



WOMEN'S SHOES



Part Nr. 2590.31596 Size 37 - 48

- Breathable Air-Mesh inner lining
- 2 interchangeable inner soles
- Complies with EN ISO 2037:2004
- Complies with DIN EN 4843/part 100

WOMEN'S / MEN'S SLING

Part Nr. 2590.4045 Size 34 - 48

- Made of natural leather
- Complies with DIN EN 4843/part 100



WOMEN'S / MEN'S SANDAL



Part Nr. 2590.4085 Size 34 - 48

- Made of natural leather
- Complies with DIN EN 4843/part 100

WOMEN'S / MEN'S SANDAL

Part Nr. 2590.4090 Size 34 - 48

- Made of natural leather
- Complies with DIN EN 4843/part 100



SECURITY SHOES

- Safety toe cap
- Comfortable
- Integral foot support
- PCP free
- Cushioned upper collar
- ACC "air climate comfort" inner soles
- Static dissipative PUR sole / rubber sole compound hard/soft
- Includes ESD Symbol

Typical wearer overall resistance $R_g = 10^5 - 10^7$ ohm



DIN EN 345-S1



Part Nr.	Size 36 - 47
2590.31366	Colour: graphit

- Plastic toe cap, complies with DIN EN 12568 und DIN EN 345-1
- Complies with EN ISO 20345:2004
- Complies with DIN EN 4843/part 100
- Including 2 inner soles



Part Nr.	Size 36 - 47
2590.1275	Colour: black

- Plastic toe cap, complies with DIN EN 12568 und DIN EN 345-1
- Complies with EN ISO 20345:2004
- Complies with DIN EN 4843/part 100
- Including 2 inner soles

Part Nr.	Size 36 - 47
2590.1272	Colour: black / nubuk

- Plastic toe cap, complies with DIN EN 12568 und DIN EN 345-1
- Complies with EN ISO 20345:2004
- Complies with DIN EN 4843/part 100
- Including 2 inner soles



Part Nr.	Size 36 - 47
2590.1122	Colour: black/green

- Steel toe cap
- Complies with DIN EN 345-1
- Complies with DIN EN 4843/part 100
- Made of natural leather

Part Nr.	Size 35 - 48
2590.31038	Colour: black

- Steel toe cap
- Complies with DIN EN 345-1
- Complies with DIN EN 4843/part 100



Part Nr.	Size 35 - 46
2590.31037	Colour: black

- Steel toe cap
- Complies with DIN EN 345-1
- Complies with DIN EN 4843/part 100



ELECTRA SHOES

- Comfortable
- Natural rubber and cork inner sole
- Made of natural leather
- PCP free
- Static dissipative PUR sole
- Conductive rubber inner contact points
- Includes the ESD Symbol

Typical wearer overall resistance $R_G = 10^5 - 10^7 \text{ ohm}$



WOMEN'S / MEN'S CLOG



Part Nr.	Sizes: 35 - 48
2550.79350	Colour: white
2550.79353	Colour: blue

WOMEN'S CLOG WITH A WEDGE HEEL

Part Nr.	Sizes: 35 - 42
2550.79350.1	Colour: white
2550.79353.1	Colour: blue



WOMEN'S / MEN'S NON PERFORATED CLOG



Part Nr.	Sizes: 35 - 48
2550.79650	Colour: white
2550.79653	Colour: blue

WOMEN'S / MEN'S CLOG

Part Nr.	Sizes: 35 - 48
2550.79250	Colour: white
2550.79253	Colour: blue



WOMEN'S SANDAL



Part Nr.	Sizes: 35 - 42
2550.79751	colour: beige

ELECTRA SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Natural rubber and cork inner sole
- PCP free
- Static dissipative PUR sole
- Includes the ESD Symbol

Typical wearer overall resistance $R_G = 10^5 - 10^7 \text{ ohm}$



HOOK AND LOOP WOMEN'S SANDAL WITH A WEDGE HEEL

Part Nr.	Sizes: 36 - 42
2550.44920	Colour: white
2550.44923	Colour: blue



WOMEN'S SANDAL WITH A WEDGE HEEL

Part Nr.	Sizes: 36 - 42
2550.44930	Colour: white
2550.44933	Colour: blue



Nubuk



WOMEN'S SANDAL WITH A WEDGE HEEL

Part Nr.	Sizes: 35 - 42
2550.79150.1	Colour: white
2550.79153.1	Colour: blue



WOMEN'S SANDAL WITH A WEDGE HEEL



Part Nr.	Sizes: 35 - 42
2550.79558.1	Colour: multicolour

WOMEN'S / MEN'S SANDAL

- Replaceable rubber and cork inner sole

Part Nr.	Sizes: 35 - 48 (2550.2001) 36 - 47 (2550.2002)
2550.2001	Sandal, dark blue
2550.2002	Sandal, open back, dark blue
2550.2001.S	inner sole for 2550.2001 and 2550.2002



Nubuk



ELECTRA SHOES

- Comfortable
- Integral foot support
- Made of natural leather
- Natural rubber and cork inner sole
- PCP free
- Static dissipative PUR sole
- Includes the ESD Symbol

Typical wearer overall resistance $R_G = 10^5 - 10^7 \text{ ohm}$



WOMEN'S SANDAL



Part Nr.	Sizes: 35 - 42
2550.79050	Colour: white
2550.79053	Colour: blue

Part Nr.	Sizes: 35 - 42
2550.79558	Colour: multicolour



WOMEN'S / MEN'S SANDAL



Part Nr.	Sizes: 35 - 48
2550.79450	Colour: white
2550.79453	Colour: blue

WOMEN'S SANDAL WITH A WEDGE HEEL

Part Nr.	Sizes: 35 - 42
2550.1846	Colour: blue



WOMEN'S / MEN'S SANDAL



Part Nr.	Sizes: 35 - 48
2550.79150	Colour: white
2550.79153	Colour: blue

MEN'S HEEL GROUNDING



- For normal heel shoes
- Durable
- **Hook and loop heel grounder**
- 1 Mohm safety resistor

IEC
EN

Part Nr. 2560.890

WOMEN'S TOE GROUNDING

- For high heel shoes
- Durable
- 1 Mohm safety resistor

IEC
EN

Part Nr. 2560.891



MEN'S HEEL GROUNDING



- For normal heel shoes
- **Durable quick release heel grounder**
- 1 Mohm safety resistor

IEC
EN

Part Nr. 2560.890.2.S

WOMEN'S TOE GROUNDING

- For high heel shoes
- Durable
- **Hook and loop toe grounder**
- 1 Mohm safety resistor

IEC
EN

Part Nr. 2560.891.2.S



DISPOSABLE HEEL GROUNDERS



- For normal heel shoes
- Conductive material strips, self-adhesive

Typical wearer overall resistance $R_G = 10^6$ ohm

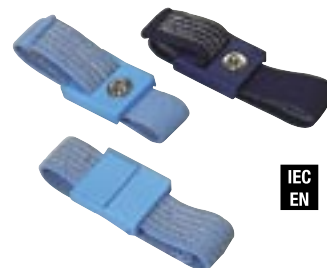
IEC
EN

Part Nr.	Quantity
2560.894	100 pcs

WRIST STRAPS

Adjustable, elastic, with silver impregnated threads interwoven on the inside, hypoallergenic

Part Nr.	Colour	Connection
2050.750.3 *	light blue	3 mm snap
2050.750.7 *	light blue	7 mm snap
2050.750.10	light blue	10 mm snap
2051.750.3 *	dark blue	3 mm snap
2051.750.10	dark blue	10 mm snap



IEC
EN

STAINLESS STEEL BAND

Expandable, adjustable band with an insulated shock resistant exterior, protects the wearer from electrical shocks, hypoallergenic

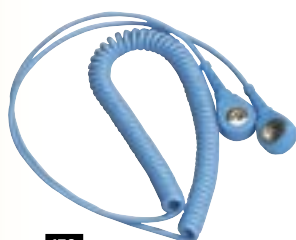
Part Nr.	Colour	Connection
2052.750.5.3	black	3 mm snap
2052.750.5.10	black	10 mm snap



IEC
EN

COIL CORDS

Lightweight 2,4 m coil cords, include 2 x 1 Mohm resistors and 10 mm snaps

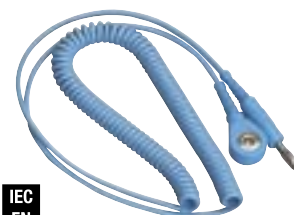


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Part Nr.	Colour	Connection
2100.752.3.10 *	light blue	3/10 mm snap
2100.752.7.10 *	light blue	7/10 mm snap
2100.752.10.10	light blue	10/10 mm snap
2101.752.3.10 *	black	3/10 mm snap
2101.752.10.10	black	10/10 mm snap

1 Mohm resistor only

Part Nr.	Colour	Connection
2100.751.3	light blue	3 mm snap/banana plug
2100.751.7	light blue	7 mm snap/banana plug
2100.751.10	light blue	10 mm snap/banana plug
2101.751.3	black	3 mm snap/banana plug
2101.751.10	black	10 mm snap/banana plug



IEC
EN



IEC
EN

Part Nr.	Colour	Connection
2101.751.3.2	black	3 mm snap/angled 4 mm socket

MINI COIL CORDS

Ultralight weight, 2 x 1 Mohm safety resistors with 10 mm snap or banana plug

Part Nr.	Colour	Connection
2101.780.3.10 *	black	3/10 mm snap
2101.780.3	black	3 mm snap/banana plug



IEC
EN

EARTH CONNECTING BOX

Earth Bonding Point (EBP) includes 2,0 m earthing cable with a 4 mm ring terminal (1 Mohm resistor for every input).



Part Nr.	Connection
2200.121.10	2 x 10 mm snaps and 1 x 4 mm banana plug socket
2200.121.10.1	with 3 x 10 mm snaps
2200.121.10.2	with 1 x 10 mm snap and 2 x 4 mm banana plug sockets (not shown)

Custom sizes available on request

BARRIER STRIP BOX

Includes a metal strip with 6 screws which allows 6 wires with a 4 mm ring terminal to be connected to an earth bonding point.



Part Nr.
2200.123.6

GROUNDING PLUG

Used for direct and easy mat grounding



Part Nr.	
2200.111	with 2,4 m coil cord, 1 Mohm safety resistor and a 10 mm snap
2200.113	2 m flat cable, 4 mm ring terminal, without resistor (not shown)
2200.110	without cable, banana plug socket, without resistor



GROUNDING CORD

For floor and table mats with 1 Mohm safety resistor

Part Nr.	Length	Connection
2250.758	1,5 m	10 mm snap/4 mm ring terminal
2250.758.2	3 m	10 mm snap/4 mm ring terminal
2250.756	1,5 m	10 mm snap/banana plug
2250.765	3 m	10 mm snap/banana plug
2250.762	1,5 m	10 mm snap/10 mm snap



Stackable banana plug socket/10 mm, 1 Mohm resistorized snap, a 3 m cord and a banana plug.

Part Nr.	Length	Connection
2250.757	3 m	10 mm encapsulated snap / banana plug socket



ACCESSORIES



Big alligator clip, with a banana plug socket, and a 10 mm snap

Part Nr. 2280.774.10



Encapsulated **banana plug adapter**, includes 10 mm/4 mm snaps.

Part Nr. 2287.10.4

10 mm **snap**
10 mm (stackable snap)

Part Nr. 2287.10.10



Tool
for 10 mm snap

Part Nr. 2280.779.10

10 mm **snap fastener**

Part Nr. 2280.771



Adapter from a 4 mm banana plug socket to a 10 mm snap fastener.

Part Nr. 2280.778

PGT 100 PERSONNEL GROUNDING TESTER



The **PGT 100**, wrist strap and footwear tester, performs a quick test to assure whether wrist straps and footwear are conductive within acceptable limits.

Test voltage: 100 V (switchable 30 V, 50 V)

Test range: 750 kohm ... 35 Mohm, wrist strap / coil cord
100 kohm ... 35 Mohm (100 Mohm), footwear

Operation: Battery operated (9 V), external power supply 230 VAC

Signal: Audible and visible

Output: Door opener and event counter, separate dry contact and relay output

Shoe testing electrode: 400 x 300 x 2 mm

Includes:

PGT 100 stainless steel shoe testing electrode, user's manual in English and German, Calibration Certificate



IEC
EN

Part Nr.

7100.PGT100 Personnel Grounding Tester PGT100

7100.PGT100.101 Wall mounting plate for PGT100
(not shown)

7100.PGT100.KA PGT 100 Recalibration (incl. Certificate)



Calibration Unit includes all the resistors needed for testing the PGT 100 upper and lower limits

Part Nr. 7100.PGT100.T In situ, PGT 100 Calibration Unit

SAFETY PIPS

continuous wrist strap monitor

Test method: Impedance
Test range: 900 kohm ... (100pF + 2Mohm) OK testing
Signal: Audible and visible
Operation: Battery operated



Part Nr.

7100.181 Safety Pips with a 10 mm snap

7100.181.K Safety Pips with relay output, 10 mm snap
Operation: 230 VAC power supply

7100.181.B With 4 mm banana plug socket

7100.181.103 Power supply 230V AC for 7100.181 / 7100.181.B retrofit

7100.181.C Calibration Unit for Safety Pips / Safety Pips K

PGT 2000 PERSONNEL GROUNDING TESTER

Measures personnel grounding including user's identification and test values documentation (required by DIN ISO 9000 for example).

- Simultaneous measurement of wrist strap and footwear according to DIN EN 61340-5-1
- Measurement takes < 1,5 sec for personnel identification, wrist strap and footwear tests
- Separate right and left foot test values
- Transponder personnel identification system
- Access control of protected zones and EPA's through the door opener
- Audible and visible test signal
- Programmable test voltage and resistance values
- Configuration and data transfer through the RS 232 port or the Ethernet network card
- Integral memory for saving personnel data and test values (10.000 test values and 5.000 personnel records)
- Network connection of up to 64 instruments
- Software for "PGT2000-Manager" Windows 98/NT/2000/XP
- Optional software package 01 including PGT2000 viewer Database export and "mis-measurement" database
- **Connection to external Card Reader via RS232 or RS485 interface available on request**

Includes:

PGT built-in network card, shoe-testing electrode, wall mounting plate, external power supply 230 VAC, RS 232 null modem cable, CD-ROM „PGT 2000 Manager“ installation programme, user's manual in English and German and a calibration certificate.



IEC
EN



TEST AND MEASUREMENT



Shoe-testing electrode for separate right and left foot test

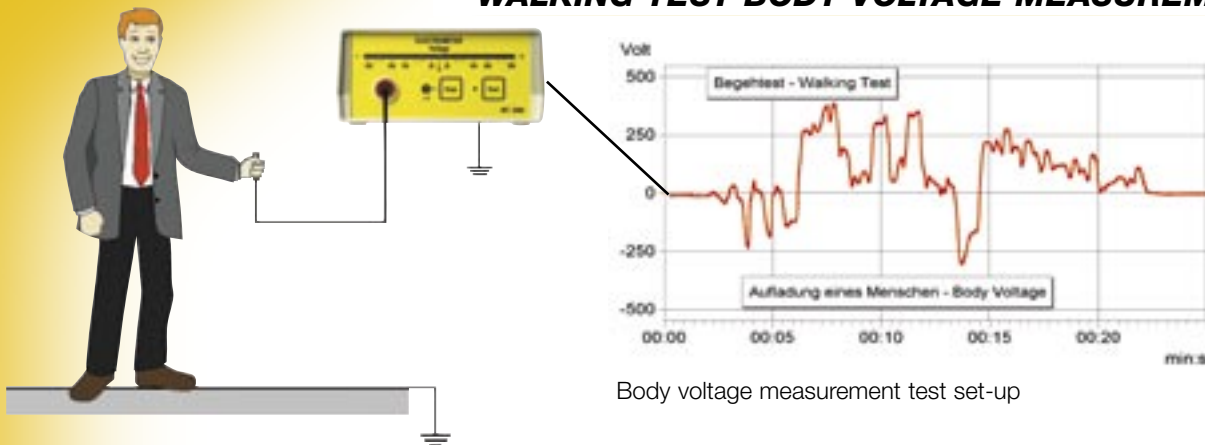
Transponder with transponder holder

Calibration Unit

Part Nr.

7100.PGT2000.NET	PGT 2000 with built-in Ethernet 10 Mbit card
7100.PGT2000.ID	Transponder for wristband or shoe
7100.PGT2000.IDCARD	Transponder ID card for visitors
7100.PGT2000.TB / TS / TW	Transponder holder, blue, black or white
7100.PGT2000.C	PGT2000 calibration unit for testing and recalibrating, includes Calibration Software on CD-ROM
7100.PGT2000.SV	Additional software package 01 on CD ROM including user's manual

WALKING TEST BODY VOLTAGE MEASUREMENT



WALKING TEST KIT WT5000

Walking Test Kit, includes:

a WT5000 electrometer, A/D converter with software, handheld probe, connecting cables, conductive carrying case, user's instruction in German and English and calibration certificate. The graph of the body voltage measurement will be displayed „online“ on the connected PC or LAPTOP.

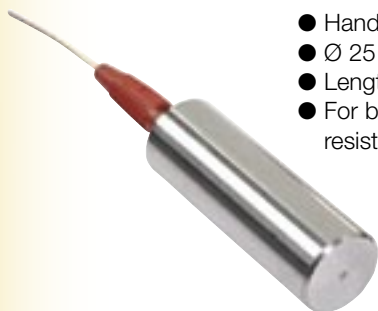
- Electrometer WT5000** (also available as stand alone instrument):
- Test range: ± 5.000 volts or ± 500 volts
 - Accuracy: 5% of measured value
 - Input resistance: $> 10^{14}$ ohm
 - Input capacitance: < 5 pFarad
 - Display: Logarithmic LED-display ± 500 volts, changeable to ± 5.000 volts, Peak hold
 - Output: Analog ± 5 volts for each test range
 - Operation: Rechargeable batteries (battery charger included) Complies with IEC 61340-4-5

Part Nr.

7100.WT5000	Walking Test Kit
7100.WT5000.KA	Recalibration (incl. Certificate)
7100.WT5000.USB	USB / Parallel Converter



HANDHELD PROBE MODEL 45



- Handheld probe made of stainless steel
- $\varnothing$ 25 mm
- Length: 75 mm
- For body voltage measurement and overall system resistance measurement according IEC 61340-4-5

Part Nr. 7220.45



R_E system resistance test set-up.

SRM 110

Pocket size, lightweight, **surface resistance meter**, includes carrying bag, grounding cord and calibration certificate.

- Test range: $10^3 - 10^{12}$ ohm
- Test voltage: 10 V / 100 V
- Operation: Battery operated
- Display: 12 LED display
- Probes: Built-in parallel electrodes

Part Nr.

7100.SRM110	Surface resistance meter
7100.SRM110.KA	Recalibration (incl. certificate)



METRISO 2000 TEST KIT

Metriso 2000 - test kit includes: digital high resistance tester, temperature and relative humidity adapter, RS-232 infrared adapter, PC software for Windows 95/98/NT/2000, 2 probes, handheld probe with connecting cables, user's instructions in German, English and French, calibration certificate, conductive carrying case fitted with dissipative pink foam.

- Suitable for resistance to ground and surface resistance measurements
- Integrated data logger with infrared communication port for data transmission (2.500 test values)
- Clip-on humidity and temperature sensor

Test voltage: DC 10 volts, 100 volts, 250 volts and 500 volts
 Test range: 10^3 to 10^{12} ohm
 Operation: Battery operated
 Probes: See Part Nr. 7220.850

Part Nr.

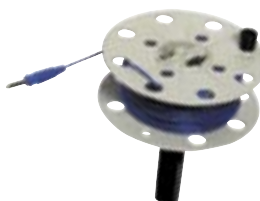
7100.2000.MK	Metriso 2000 Test Kit German
7100.2000.MK.E	Metriso 2000 Test Kit English
7100.2000.G	Metriso 2000 Test instrument only, German
7100.2000.G.E	Metriso 2000 Test instrument only, English

Accessories

7100.2000.TR50	50 m extension cable for floor measurements
7100.2000.MK.Z501.D	Battery charger (not shown)
7100.2000.KA	Recalibration (incl. certificate)



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PROBE MODEL 850

- Measures resistance to ground and surface resistance
- Fitted with conductive silicone rubber electrode ($R < 20$ ohm)
- Total probe resistance $R < 150$ ohm
- 63,5 mm Ø
- 2,27 kg weight

IEC
EN

and DIN EN 61340-4-1

Part.-Nr. 7220.850

RING PROBE MODEL 880

- Measures surface and volume resistance
- Concentric ring with conductive rubber ($R < 5$ ohm) with silver particles
- External use of a 2,5 kg weight or 850 electrode required
- Includes counter probes (stainless steel plate, insulative plate) and conductive carrying case



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and DIN EN 61340-2-3

Part Nr. 7220.880.SET

MINIPROBE SET

- For surface resistance measurement on small packaging and inside cavities
- Conductive rubber electrodes
- Spring loaded mechanism for good contact
- Quick removable head



According to ANSI/ESD STM 11.13-2004

Part Nr. 7220.840.SET Miniprobe Set Model 840 incl. conductive carrying case and a 2 point probe tip

Part Nr. 7220.844.C Calibration Unit for Two-Point-Probe



ELECTROSTATIC FIELD METER EFM51

Handheld, portable, digital electrostatic field meter, detects and measures electrostatic fields. The electrostatic field strength value (V/m) will be automatically translated to the electrostatic potential (V) according to the preset distance. An additional field strength mode is also available.

- Test method: Rotating chopper
- Test range: 0 V - ± 160 kV distance mode
0 - 800 kV/m Field strength mode
- Display: LCD display
- Operation: Battery operated
- Includes: Carrying bag, ground cord, user's manual and calibration certificate



Part Nr.

7100.EFM51	Electrostatic Field Meter
7100.EFM51.KA	Recalibration (incl. certificate)

EFM51 - CPS (CHARGED PLATE SET)

- Hand held instrument for measuring air ionizers efficiency and offset voltage
- Measures the electrostatic decay time from ± 1.000 volts to ± 100 volts
- Measures the plate potential (75x150 mm) with the attached EFM51
- Suitable for measurements inside machines

Dimensions 150 x 125 x 75 including Stand (W x H x D)

Includes: EFM51, carrying case, High voltage generator ± 1200 Volt, base, charging plate, ground connection, battery charger for 9 V batteries, spare 9V rechargeable battery calibration certificate, German and English user's manual

Part Nr.

7100.EFM51.CPS	Electrostatic field meter EFM51 with charged plate set
7100.EFM51.KA	Recalibration (incl. certificate)



Retrofit of existing EFM51 available on request.

CHARGED PLATE MONITOR



- Measures the air ionizer efficiency and the offset voltage
- Measures the electrostatic decay time from ± 1000 V to ± 100 V (standard setting)
- Measures the (150 x 150 mm) plate potential with a built-in electrostatic field meter
- Records the measured values in memory
- Serial communication port for PC connection

Size: 15,2 x 15,2 x 15,2 cm (W x H x D)

Includes: Power supply 230 VAC, ground cord, conductive case, software, user's manual in German and English, calibration certificate



Part Nr.

7100.CPM374	Charged plate monitor
7100.CPM374.KA	Recalibration (incl. Certificate)

AEROSTAT GUARDIAN™ - OVERHEAD IONIZER

- Quickly neutralizes static charges on a work surface
- Effective area 60 x 120 cm
- Patented emitter point cleaner
- Integrated heater and 3 fans with variable speed
- Integrated task lights (2 x 13 watt twin tube)
- Ionization indicator
- Inherently balanced to ± 5 V
- AC technology
- Ozone production: 0,02 PPM, measured 30 cm in front of the unit



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Part Nr. 7500.G

Size: 108,6 cm x 10,2 cm x 17,1 cm (W x H x D)

AEROSTAT® XC - BENCHTOP IONIZER

- Rapid static charge decay times
- Effective area 90 x 180 cm
- Patented emitter point cleaner
- Integrated heater and 3-speed fan
- Ionization status light
- Inherently balanced to ± 5 V
- AC technology, Ozone production: 0,005 PPM, measured 15 cm in front of the unit



Size: 39 cm x 20,7 cm x 11,5 cm (W x H x D)

Part Nr. 7500.XC

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AEROSTAT PC™ - PORTABLE BENCH TOP IONIZER

- Compact and portable, quickly neutralizes static charges
- Effective area 30 x 150 cm
- Unique point cleaner (patent pending)
- Variable speed fan with integrated heater
- Ionization indicator
- Inherently balanced to ± 5 V
- AC technology, Ozone production: 0,005 PPM, measured 15 cm in front of the unit

Size: 14 cm x 21,9 cm x 8,3 cm (W x H x D)



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Part Nr. 7500.PC

minION™ - PORTABLE IONIZER

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- Air inlet from the back, the two sides and the top of the enclosure allows space-constrained application
- Effective area 30 x 120 cm
- Integrated 2 speed fan with on/off switch
- Inherently balanced to ± 10 volts
- DC technology (double DC)
- Ozone production: 0,001 ppm, measured at a distance 15 cm in front of unit
- External power supply 24 V AC/ 230 V AC included
- Articulated arm, optional

Size: 100 mm x 160 mm x 56 mm (W x H x D)



Part.-Nr.

7500.M minION™ - standard version

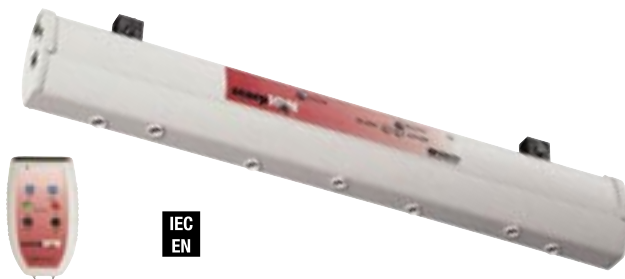
7500.M.C minION™ - with closed back for mounting close to walls or covers (air inlet only from the two sides and the top)

7500.M.S Articulated arm for minION™, incl. fastening clamp

SCORPION™

Ionizing bar with integrated controller for cleanroom environment

- Neutralizes static charges in cleanroom environment with existing airflow
- Integrated controller
- IR remote control setup
- Steady State DC or pulsed DC operation
- Multiple ionizing bars can be connected together
- Tungsten emitters
- Power supply 24V DC
- Dimensions: 4,3 cm x 7 cm x length of the bar



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Part Nr. 7500.SC.x	Scorpion™ - Ionizing bar x=length 457 mm to 1626 mm (18" - 64")
Part Nr. 7500.SC.R	Scorpion™ - Remote control
Part Nr. 7500.SC.T	Power supply 230V AC / 24V DC for up to 3 ionizer bars

FUSION™

Mini Ionizer for applications with space constraint and low clearance



- Ideal for pick and place machines and wave soldering
 - Integrated controller
 - Self-balancing
 - Steady State DC operation
 - Up to 4 units can be interconnected
 - Optional fan support
 - Tungsten emitters
- Size: 7,5 cm x 4,8 cm x 8,9 cm

IEC
EN

Part Nr. 7500.FU	Fusion™ - Mini Ionizer
Part Nr. 7500.FU.T	Fusion™ - Power supply 230V AC / 24V DC for up to 4 ionizers
Part Nr. 7500.FU.F	Fusion™ - Optional fan assembly 40 x 40 x 10mm

PULSE BAR™

Neutralizes electrostatic charges in combination with the PulseFlow-Controller PFC20 (Part No. 7500.PFC20).

- Neutralizes static charges in cleanroom environment with existing airflow
- High voltage is provided by the controller (PulseFlow Controller)
- Steady State DC or pulsed DC operation
- Multiple ionizing bars can be connected to one controller
- Tungsten emitters

Size: 2,5 cm x 3 cm x length of the bar



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Part Nr. 7500.PB.x	Pulse Bar
	x=length 305 mm to 1880 mm (12" - 74")

PULSE FLOW® CONTROLLER



- Controls the Pulse Bar™
- Steady state mode or 5 different pulse rates
- DC technology

Size: 14,6 x 4,19 x 12,7 cm (W x H x D)

Part Nr. 7500.PFC20	PulseFlow-Controller
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IEC
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TOP GUN 3™

- Quickly neutralizes static charges
- Ergonomically designed features
- Air pressure supply needed between 1 and 6,8 bar
- For use in electronic and cleanroom manufacturing
- Replaceable filter (0,01µ)
- Variable air flow **(only Top Gun 3)**
- Ionization voltage applied only when the air flows
- Ionization inherently balanced to ± 15 V
- AC technology
- Ozone production: 0,001 ppm (measured 45 cm in front of the unit)

AirGun: Dissipative Polycarbonate/ABS
 Connecting cable: Dissipative Polyurethane
 Controller Size: 13,2 x 8,5 x 16,4 cm (W x H x D)



Part Nr. 7500.TG3



ORION™ WITH SIDEKICK (foot pedal) / ORION™

- Technical description as TopGun 3



Part Nr. 7500.O.SK



Orion with flexible neck and foot pedal „side kick“ (included)



Part Nr. 7500.O

Free mountable air nozzle, remote controlled with electrical activation

AIRFLOW® CONTROLLER / PULSE GUN™ 5



Part Nr. 7500.AFC2

- Controls the “Pulse Gun™ 5”
- Air/Gas supply needed
- Ionization voltage applied only when the air flows
- Steady State Modus or 5 different pulse rates
- DC technology

Size: 14,6 x 4,19 x 12,7 cm (W x H x D)

- Pulse Gun™ 5 (air gun) for use with AFC2
- Quickly neutralizes static charges
- Sturdy, rugged construction
- Ergonomically designed features
- Field replaceable emitters
- Stainless hook for convenient hanging

Size: Gun diameter 32 mm
 Gun length 146 mm
 Cable length 1,80 m



Part Nr. 7500.PG.5



Our range of conductive brushes allows thorough cleaning of ESD sensitive assemblies without the danger of high charges generated by conventional brushes. They consist of a conductive plastic handle and bristles made of highly conductive fibers

which will dissipate any charges by corona discharge, due to their small diameter. Natural hair is mixed with the conductive fibers to provide the desired stiffness. Includes the ESD Symbol.

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Part Nr. 6100.107

Part Nr. 6100.106

Part Nr. 6100.105

Part Nr. 6100.104

Part Nr. 6100.103

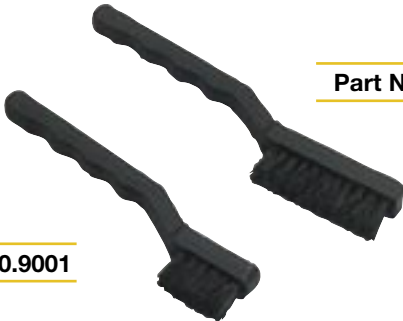


Part Nr. 6100.4000



Part Nr. 6100.201

Part Nr. 6100.200



Part Nr. 6100.9002



Part Nr. 6100.9001

Part Nr. 6100.1001



Part Nr.
6101.160

Part Nr.	Size	Description
6100.103	12,5 mm	Flat hard brush
6100.104	19 mm	Flat hard brush
6100.105	25 mm	Flat hard brush
6100.106	38 mm	Flat hard brush
6100.107	50 mm	Flat hard brush
6100.200	3 mm	Round hard brush
6100.201	6 mm	Round hard brush
6100.1001	140 mm	Flat soft brush
6100.4000	80 mm	Hard brush
6100.9001	30 mm	Hard brush
6100.9002	60 mm	Hard brush
6101.160	160 mm	Hand broom

Custom sizes available on request.



PERMASTAT®

- Static dissipative Polyethylene film
- Heat sealable
- Recyclable

- Colour: Pink
- Standard print: Product name, ESD symbol, Recycling symbol and Lot Nr.

Typical surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$



PERMASTAT® Bags

Part Nr.	Bag sizes	Bags per box
3110.360	100 x 150 x 0,10 mm	2500 pcs
3110.361	130 x 200 x 0,10 mm	2500 pcs
3110.362	150 x 225 x 0,10 mm	1000 pcs
3110.363	200 x 250 x 0,10 mm	1000 pcs
3110.364	250 x 300 x 0,10 mm	500 pcs
3110.365	300 x 400 x 0,10 mm	500 pcs
3110.366	400 x 500 x 0,10 mm	500 pcs
3110.367	500 x 600 x 0,10 mm	500 pcs

PERMASTAT® Bags - Reclosable

Part Nr.	Bag sizes	Bags per box
3120.330	80 x 120 x 0,10 mm	5000 pcs
3120.331	100 x 150 x 0,10 mm	2500 pcs
3120.332	150 x 225 x 0,10 mm	1000 pcs
3120.336	120 x 170 x 0,10 mm	2500 pcs
3120.333	200 x 250 x 0,10 mm	1000 pcs
3120.334	250 x 300 x 0,10 mm	1000 pcs
3120.335	300 x 400 x 0,10 mm	500 pcs
3120.3301	80 x 120 x 0,06 mm	5000 pcs
3120.3311	100 x 150 x 0,06 mm	5000 pcs
3120.3361	120 x 170 x 0,06 mm	5000 pcs
3120.3321	150 x 225 x 0,06 mm	2500 pcs
3120.3331	200 x 250 x 0,06 mm	1000 pcs
3120.3341	250 x 300 x 0,06 mm	1000 pcs
3120.3351	300 x 400 x 0,06 mm	1000 pcs

PERMASTAT® Tubing

Part Nr.	Roll width	Roll length
3130.340	100 mm x 0,10 mm	250 m
3130.341	130 mm x 0,10 mm	250 m
3130.342	150 mm x 0,10 mm	250 m
3130.343	200 mm x 0,10 mm	250 m
3130.344	250 mm x 0,10 mm	250 m
3130.345	300 mm x 0,10 mm	250 m
3130.346	400 mm x 0,10 mm	250 m
3130.347	500 mm x 0,10 mm	250 m

PERMASTAT® Half Tubing

Part Nr.	Roll width	Roll length
3135.15.0910	910/910 x 0,15 mm	250 m

PERMASTAT® 3 layer Cushion Material

Flat inner and outer layers

Part Nr.	Width	Length	Roll
3150.380	400 mm	100 m	40 m ²
3150.381	600 mm	100 m	60 m ²
3150.382	1200 mm	100 m	120 m ²

PERMASTAT® 2 layer Cushion Material

available on request

PERMASTAT® Cushion Pouches

Part Nr.	Bag Sizes	Bags per box
3151.360	100 x 150 mm + 50 mm flap	500 pcs
3151.361	130 x 200 mm + 50 mm flap	250 pcs
3151.362	150 x 225 mm + 50 mm flap	250 pcs
3151.363	200 x 250 mm + 50 mm flap	250 pcs
3151.364	250 x 300 mm + 50 mm flap	250 pcs

Custom sizes with or without flap available on request.

Custom bags, covers, layflat material and custom printing available on request.

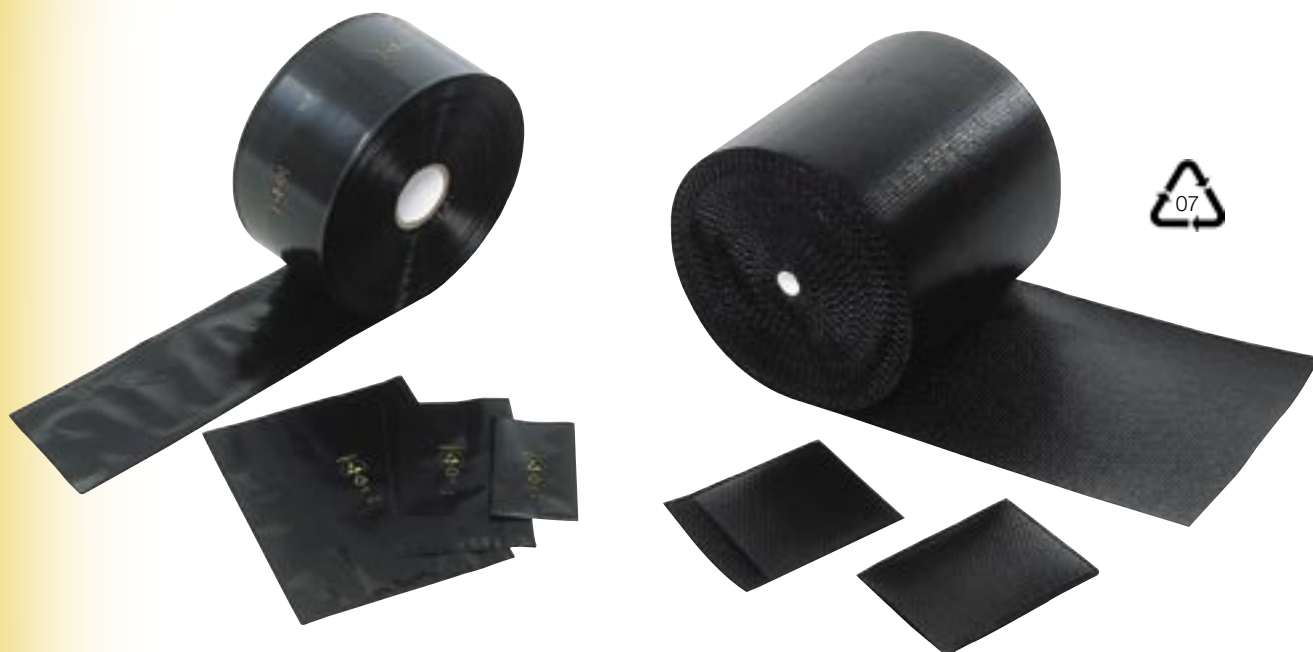


CARBOSTAT

- **Permanent, conductive,** carbon loaded material
- Heat sealable
- Recyclable

- Colour: Black
- Standard print: Product name, ESD symbol, Recycling symbol and Lot Nr.

Typical surface resistance $R_s = 10^4 - 10^5 \text{ ohm}$



Carbostat Bags

Part Nr.	Bag sizes	Bags per box
3210.150	100 x 150 x 0,08 mm	5000 pcs
3210.151	130 x 200 x 0,08 mm	2500 pcs
3210.152	150 x 225 x 0,08 mm	2500 pcs
3210.153	200 x 250 x 0,08 mm	1500 pcs
3210.154	250 x 300 x 0,08 mm	1000 pcs
3210.155	300 x 400 x 0,08 mm	1000 pcs
3210.156	400 x 500 x 0,08 mm	500 pcs
3210.157	500 x 600 x 0,08 mm	500 pcs
3210.162	350 x 450 x 0,08 mm	1000 pcs



Carbostat Tubing

Part Nr.	Roll width	Roll length
3230.250	100 mm x 0,08 mm	500 m
3230.251	130 mm x 0,08 mm	500 m
3230.252	150 mm x 0,08 mm	500 m
3230.253	200 mm x 0,08 mm	500 m
3230.254	250 mm x 0,08 mm	500 m
3230.255	300 mm x 0,08 mm	500 m
3230.256	400 mm x 0,08 mm	250 m
3230.257	500 mm x 0,08 mm	250 m
3230.258	600 mm x 0,08 mm	250 m



Carbostat 3 layer Cushion Material

Flat inner and outer layers

Part Nr.	Width	Length	Roll
3250.370	300 mm	100 m	30 m ²
3250.371	400 mm	100 m	40 m ²
3250.372	600 mm	100 m	60 m ²
3250.373	1200 mm	100 m	120 m ²

Cushion pouches,

with or without flap and custom sizes available on request.

Carbostat 2 layer Cushion Material

available on request.

Customs bags, covers, layflat material and custom printing available on request.

HIGHSHIELD

- Shielding bag, "metal in" construction
- Outer layer dissipative Polyester
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Aluminium metallized

Electrostatic Shielding < 15 nJ (Energy Test)



- Inner layer - dissipative Polyethylene
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Heat sealable
- Standard print: Product name, ESD symbol, Recycling symbol and Lot Nr.



Highshield Bags

Part Nr.	Bag sizes	Bags per box
3310.HS.0305 /.1	76 x 127 mm	100 / 3000 pcs
3310.HS.0404 /.1	102 x 102 mm	100 / 3000 pcs
3310.HS.0406 /.1	102 x 152 mm	100 / 3000 pcs
3310.HS.0508 /.1	127 x 203 mm	100 / 2000 pcs
3310.HS.0610 /.1	152 x 254 mm	100 / 2000 pcs
3310.HS.0810 /.1	203 x 254 mm	100 / 2000 pcs
3310.HS.0812 /.1	203 x 305 mm	100 / 2000 pcs
3310.HS.0816 /.1	203 x 406 mm	100 / 1000 pcs
3310.HS.0818 /.1	203 x 457 mm	100 / 1000 pcs
3310.HS.1012 /.1	254 x 305 mm	100 / 1000 pcs
3310.HS.1014 /.1	254 x 356 mm	100 / 1000 pcs
3310.HS.1115	279 x 381 mm	100 pcs
3310.HS.1212 /.1	305 x 305 mm	100 / 1000 pcs
3310.HS.1216	305 x 406 mm	100 pcs
3310.HS.1218	305 x 457 mm	100 pcs
3310.HS.1418	356 x 457 mm	100 pcs
3310.HS.1618	406 x 457 mm	100 pcs
3310.HS.1818	457 x 457 mm	100 pcs
3310.HS.1820	457 x 508 mm	100 pcs
3310.HS.1824	457 x 609 mm	100 pcs
3310.HS.2024	508 x 609 mm	100 pcs
3310.HS.0426	102 x 660 mm	100 pcs
3310.HS.0626	152 x 660 mm	100 pcs
3310.HS.1026	254 x 660 mm	100 pcs

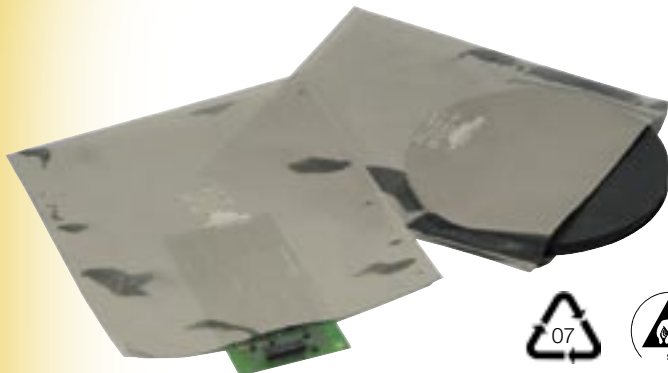
Highshield Bags, reclosable

Part Nr.	Bag sizes	Bags per box
3320.WV.0305	76 x 127 mm	100 pcs
3320.WV.0406	102 x 152 mm	100 pcs
3320.WV.0508	127 x 203 mm	100 pcs
3320.WV.0610	152 x 254 mm	100 pcs
3320.WV.0810	203 x 254 mm	100 pcs
3320.WV.0812	203 x 305 mm	100 pcs
3320.WV.1012	254 x 305 mm	100 pcs
3320.WV.1014	254 x 356 mm	100 pcs
3320.WV.1216	305 x 406 mm	100 pcs
3320.WV.1218	305 x 457 mm	100 pcs
3320.WV.1418	356 x 457 mm	100 pcs
3320.WV.1818	457 x 457 mm	100 pcs

TRANSLUCENT DRY-SHIELD ESD SHIELDING BAGS

- **Translucent** shielding moisture barrier bag
- Complies with MIL-B81705 Type 3 Class 1
- Electrostatic shielding < 20 nJ (Energy Test)

- Specially designed for ESD and moisture vapor barrier applications
- Heat sealable
- Standard print: Product name, ESD symbol, barrier bag symbol, Recycling symbol and lot Nr.



Part Nr.	Size	Quantity
3720.DR.T.0426	102 x 660 mm	100 pcs
3720.DR.T.0626	152 x 660 mm	100 pcs
3720.DR.T.1026	254 x 660 mm	100 pcs
3720.DR.T.1626	406 x 660 mm	100 pcs
3720.DR.T.1818	457 x 457 mm	100 pcs

Custom sizes available on request.

Desiccant Bags

Part Nr.	Type and Size	Quantity
3775.VA.017000	non-dusting bag, 1/6 unit (ca.6 g)	1.500 pcs
3775.VA.033000	non-dusting bag, 1/3 unit (ca.12 g)	1.000 pcs
3775.VA.050000	non-dusting bag, 1/2 unit (ca.18 g)	800 pcs
3775.VA.101000	non-dusting bag, 1 unit (ca.35 g)	500 pcs
3775.VA.102000	non-dusting bag, 2 unit (ca.70 g)	240 pcs
3775.VA.104000	non-dusting bag, 4 unit (ca.145 g)	120 pcs
3775.PA.017000	high strength non-dusting-bag, 1/6 unit	1.500 pcs
3775.PA.033000	high strength non-dusting-bag, 1/3 unit	1.000 pcs
3775.PA.050000	high strength non-dusting-bag, 1/2 unit	800 pcs
3775.PA.101000	high strength non-dusting-bag, 1 unit	500 pcs
3775.PA.102000	high strength non-dusting-bag, 2 unit	240 pcs



Humidity Indicator Cards

Humidity Indicator Cards display the moisture level within the moisture barrier bags.

Part Nr.	
3770.1060	10% - 60% Relative Humidity Range
3770.2080	20% - 80% Relative Humidity Range
3770.2081	30% - 40% - 50% Relative Humidity Range



DRY-SHIELD ESD/EMI SHIELDING BAGS

- Shielding, moisture barrier bag
- Complies with MIL-B81705 Type 1 Class 1
- Electrostatic Shielding < 10 nJ (Energy Test)
- EMI - Shielding > 40 db
- Specially designed for ESD and moisture vapor barrier applications

- Heat sealable
- Can be used for vacuum packaging applications
- Standard print: Product name, ESD symbol, barrier bag symbol, Recycling symbol and lot Nr.



Part Nr.	Bag sizes	Bags per box
3710.DR.0426	102 x 660 mm	100 pcs
3710.DR.0626	152 x 660 mm	100 pcs
3710.DR.1026	254 x 660 mm	100 pcs
3710.DR.1626	406 x 660 mm	100 pcs
3710.DR.1818	457 x 457 mm	100 pcs

Custom sizes available on request.

HIGHSHIELD

Metallized rolls

- **3 layer** cushion material
- Outer layer - **HIGHSHIELD** film, flat
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Inner layer - **PERMASTAT®** film, flat
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Heat sealable
- Recyclable



Electrostatic Shielding < 5 nJ (Energy Test)



Highshield 3 Layer Cushion Material

Part Nr.	Width	Length	Roll
3350.392	300 mm	100 m	30 m ²
3350.393	400 mm	100 m	40 m ²
3350.394	600 mm	100 m	60 m ²
3350.395	1200 mm	100 m	120 m ²

Highshield Cushion Pouches

Part Nr.	Bag Sizes	Bags per box
3351.0406	100 x 150 mm + 50 mm flap	500 pcs
3351.0508	130 x 200 mm + 50 mm flap	250 pcs
3351.0609	150 x 225 mm + 50 mm flap	250 pcs
3351.0810	200 x 250 mm + 50 mm flap	250 pcs
3351.1012	250 x 300 mm + 50 mm flap	250 pcs

Custom sizes with or without flap available on request.

FOAMSHIELD

Shielding foam cushion material

- 3 layer material
- Thickness: about 2 mm
- Outer layer - **HIGHSHIELD** film, flat
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Inner layer - dissipative Polyethylene foam, laminated with **PERMASTAT®** film, flat
Surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$
- Heat sealable
- Recyclable

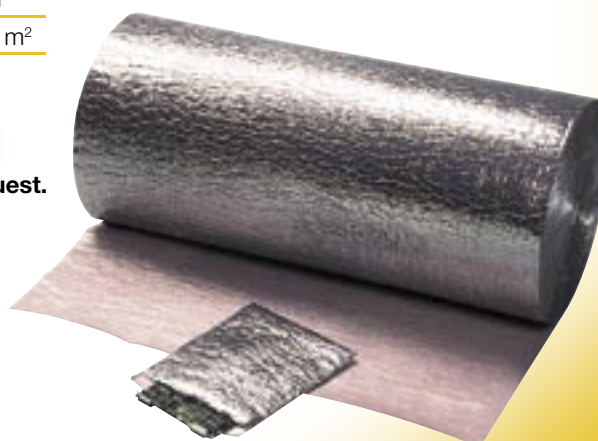
Electrostatic Shielding < 5 nJ (Energy Test)



Part Nr.	Width	Length	Roll
3360.1200	1200 mm	100 m	120 m ²

Foamshield pouches,

with or without flap and custom sizes available on request.



SHRINKSTAT SHRINK FILM



- Static dissipative
- Transparent
- Non-corrosive, clean surface
- Excellent shrinkability
- Recyclable
- For automatic and manual wrapping of unpopulated PCB's, I.C. shipping tubes etc...



Typical surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$



Part Nr.	Roll width	Roll length	Thickness	Core Ø
 3800.25.14	356 mm	800 m	0,025 mm	76 mm
3800.25.22	559 mm	800 m	0,025 mm	76 mm

PACKAGING FILMS

PERMASTAT® STRETCH FILM

- Static dissipative
- Recyclable
- Colour: Pink

Typical surface resistance $R_s = 10^{10} - 10^{11} \text{ ohm}$



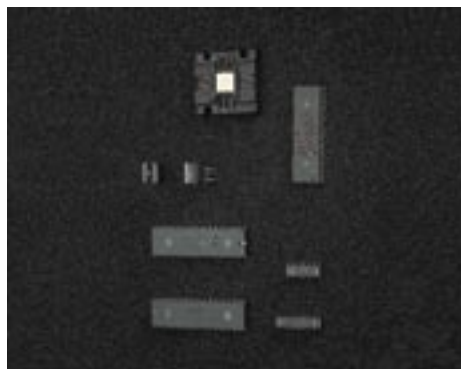
Part Nr.	Roll width	Roll length	Thickness	Core Ø	Qty
 3170.0300	500 mm	300 m	0,025 mm	50 mm	4
3170.1560	500 mm	1560 m	0,025 mm	76 mm	1

POLYETHYLENE FOAMS

- PE foam
- **Permanent, static dissipative**, carbon loaded foam
- Cross linked, closed cell
- Abrasion resistant, non-corrosive
- **Hard** (Standard: 1 side with skin)
- Colour: Black

Typical surface resistance side without skin $R_s = 10^7 - 10^8$ Ohm
side with skin $R_s = 10^5 - 10^6$ Ohm

IEC
EN



Part Nr.	Sizes
4550.03.1000	1000 x 1000 x 3 mm
4550.03.1100	1100 x 1500 x 3 mm
4550.06.0253	253 x 353 x 6 mm
4550.06.0300	300 x 300 x 6 mm
4550.06.0353	353 x 553 x 6 mm
4550.06.1000	1000 x 1000 x 6 mm
4550.06.1100	1100 x 1500 x 6 mm
4550.10.0253	253 x 353 x 10 mm
4550.10.0353	353 x 553 x 10 mm
4550.10.1000	1000 x 1000 x 10 mm
4550.10.1100	1100 x 1500 x 10 mm

POLYURETHAN FOAM

- PU foam
- **Conductive**, carbon loaded foam
- Open cell
- **Soft**
- Colour: Black

Typical surface resistance $R_s = 10^4 - 10^5$ ohm

IEC
EN



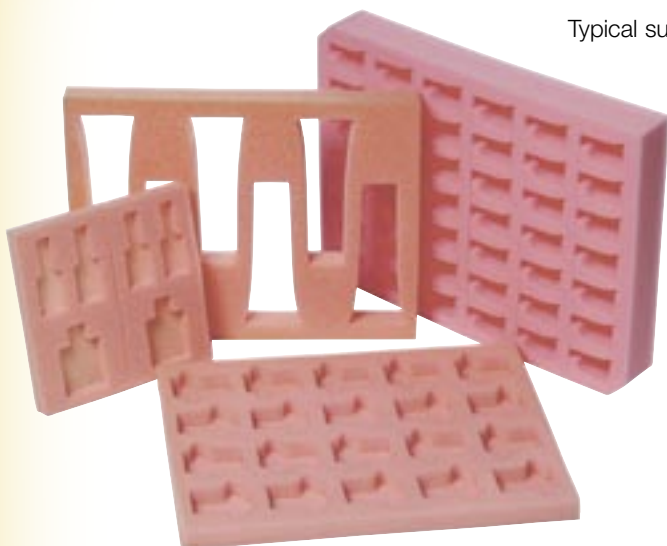
Part Nr.	Sizes	Pieces per box
4450.W	253 x 353 x 6 mm	50 pcs
4451.W	553 x 353 x 6 mm	50 pcs
4456.W	253 x 353 x 15 mm	20 pcs
4457.W	553 x 353 x 15 mm	20 pcs

POLYURETHANE SEMI-RIGID FOAM

- PU foam
- Static dissipative
- Open cell
- Semi-rigid
- Abrasion resistant, non-corrosive
- Colour: pink

Typical surface resistance $R_s = 10^{10} - 10^{11} \text{ Ohm}$

IEC
EN



Custom sizes and rolls available on request.

POLYURETHANE FOAM

- PU foam
- Static dissipative
- Open cell
- Soft
- Colour: Pink

Typical surface resistance
 $R_s = 10^{10} - 10^{11} \text{ ohm}$

IEC
EN



Part Nr.	Sizes	Profile	Qty. p. box
4903.0.15	178 x 127 x 15 mm	flat	100 pcs
4903.0.20	178 x 127 x 20 mm	flat	100 pcs
4903.1.15	178 x 127 x 15 mm	profile 1:1	100 pcs
4903.1.20	178 x 127 x 20 mm	profile 1:1	100 pcs
4904.0.15	250 x 191 x 15 mm	flat	100 pcs
4904.0.20	250 x 191 x 20 mm	flat	100 pcs
4904.1.20	250 x 191 x 20 mm	profile 1:1	100 pcs
4906.0.20	267 x 216 x 20 mm	flat	100 pcs
4906.1.30	267 x 216 x 30 mm	profile 1:1	100 pcs
4910.0.15	420 x 220 x 15 mm	flat	100 pcs
4910.1.20	420 x 220 x 20 mm	profile 1:1	100 pcs
4911.0.20	400 x 300 x 20 mm	flat	80 pcs
4911.1.30	400 x 300 x 30 mm	profile 1:1	50 pcs

Custom sizes suitable for standard Safeshield shipping boxes
5510.902 - 911, see page 49.

SAFESHIELD SHIPPING BOXES



The patented **Safeshield**, shipping cardboard boxes, provide a high shielding performance due to their special shielding layer. The blue inner and outer layers are made of a permanent static dissipative material which dissipates charges at a low relative humidity level.

Part Nr.	Sizes:	Qty.
5510.902	95 x 30 x 15 mm incl. 6 mm cond. foam	100 pcs
5510.903 a	178 x 127 x 38 mm	100 pcs
5510.904	250 x 191 x 38 mm	100 pcs
5510.905	250 x 191 x 64 mm	100 pcs
5510.906	267 x 216 x 64 mm	100 pcs
5510.907 c	200 x 140 x 50 mm incl. 20 mm profiled foam	80 pcs
5510.908 b	100 x 60 x 15 mm incl. 6 mm cond. foam	700 pcs
5510.909	100 x 120 x 15 mm incl. 6 mm cond. foam	400 pcs
5510.910	420 x 220 x 40 mm	100 pcs
5510.911	400 x 300 x 65 mm	100 pcs
5510.095 e	630 x 95 x 95 mm for IC shipping tubes	100 pcs
5510.195 d	630 x 195 x 95 mm for IC shipping tubes	100 pcs

- High shielding performance due to highly conductive inner layer
- Inner and outer permanent static dissipative layers
- Good mechanical properties
- Recyclable
- Reusable
- Non-corrosive
- No heavy metals
- Colour: Blue
- ESD and RESY symbols

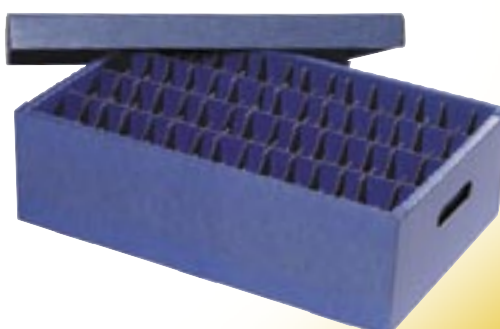
Typical surface resistance
Inner and outer layer $R_s = 10^9 - 10^{11} \text{ ohm}$



Electrostatic Shielding < 0,5 nJ (Energy Test)

See page 48 for matching foam cuts.

Custom sizes available on request.



**EPEFIX PS 70 PAPER TAPE**

- Dissipative, environment friendly
- Biodegradable
- For manual and automatic tape dispensers
- Core diameter: 76 mm

IEC
EN

Part Nr.	Width	Length	Quantity
2800.2212.DE	38 mm	66 m	48 rolls per box
2800.7212.DE	50 mm	66 m	36 rolls per box
2800.7212.E	50 mm	66 m	36 rolls per box

PVC ADHESIVE TAPEIEC
EN

- Permanent, static dissipative surface
- ESD symbol
- Core diameter: 76 mm

Part Nr.	Width	Length	Quantity
2820.3866.IDP	38 mm	66 m	48 rolls per box
2820.5066.IDP	50 mm	66 m	36 rolls per box

ADHESIVE GRID TAPE

- Low charge surface
- ESD Symbol
- Core diameter: 76 mm

IEC
EN

Part Nr.	Width	Length	Qty.
2820.3462.12	12 mm	36 m	24 rolls
2820.3462.18	18 mm	36 m	18 rolls
2820.3462.24	24 mm	36 m	12 rolls
2820.3462.48	48 mm	36 m	6 rolls

WARNING ADHESIVE TAPEIEC
EN

- Static dissipative Cellophane, transparent
- Printed with red stripes
- Low tribocharging
- ESD Symbol
- Used for marking rejected items
- Core diameter: 76 mm

Part Nr.	Width	Length	Quantity
2820.1966	19 mm	66 m	8 rolls

AUTOMATIC TAPE DISPENSER

- Automatic tape dispenser for tapes, 20 to 999 mm, step
- Photoelectric cell activation
- Tape width up to 50 mm

Part Nr.	Dimensions
7300.190.CE	137 x 218 x 150 mm (W x D x H)



SELF-ADHESIVE PACKAGING WARNING LABELS



Part Nr. 2850.26105.DE



Part Nr. 2850.26138.DEF



Part Nr. 2850.3675.D



Part Nr. 2850.3675.E



Part Nr. 2850.6

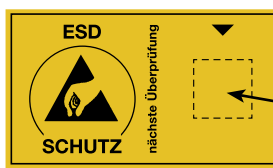
SELF-ADHESIVE ESD WORKSTATION WARNING LABELS



Part Nr. 2850.2040



Part Nr. 2850.3025



Part Nr. 2850.6035



Part Nr. 2850.6035.06

Part Nr. 2850.6035.07 (green)



Part Nr. 2850.300500.*

Part Nr. 2850.300500.KS.*

Plastic hanging sign, 5 mm thickness

* (D = German, E = English)



Part Nr. 2850.4090.DE



Part Nr. 2850.10

Part Nr. 2850.5033
ESD Floor Marking Tape



Part Nr.	Sizes	Type	Quantity
2850.3675.D	36 x 75 mm	paper	1000 pcs per roll
2850.3675.E	36 x 75 mm	paper	1000 pcs per roll
2850.26105.DE	26 x 105 mm	paper	1000 pcs per roll
2850.26138.DEF	26 x 138 mm	paper	1000 pcs per roll
2850.2040	20 x 40 mm	PVC	30 pcs / sheet
2850.3025	30 x 25 mm	PVC	50 pcs / sheet
2850.6035	60 x 35 mm	PVC	30 pcs / sheet
2850.6035.06	15 x 15 mm	PVC	30 pcs / sheet for 2006
2850.6035.07	15 x 15 mm	PVC	30 pcs / sheet for 2007
2850.6	Ø 6 mm	paper	4000 pcs per roll
2850.300500.*	300 x 500 mm	PVC	1 piece
2850.300500.KS.*	300 x 500 mm	Plastic Sign	1 piece
2850.4090.DE	40 x 90 mm	PVC	100 pcs
2850.5033	Width: 50 mm	PVC	33 m per roll
2850.10	Ø 10 mm	PVC	250 pcs / sheet

RING BINDERS



DIN A4 Ring binder

- Permanent, static dissipative cardboard
- Protected edges
- Back with label
- Colour: Black
- ESD symbol

Typical surface resistance

$$R_s = 10^6 - 10^8 \text{ ohm}$$



Part Nr.	Sizes
5800.846	back width 45 mm / 4 rings
5800.847	back width 65 mm / 4 rings
5800.848	back width 65 mm / 2 rings

TRAY

DIN A4 Tray

- Volume conductive material
- Stackable
- ESD symbol

Typical surface resistance

$$R_s = 10^3 - 10^5 \text{ Ohm}$$



Part Nr.	Size
5150.841	260 x 350 x 55 mm (W x D x H)

IDP CLEAR BINDER



- Permanent, static dissipative PVC binder
- Made of Inherently Dissipative Polymer
- Recyclable
- Standard print: ESD Symbol, Recycling Symbol and Lot Nr.

Typical surface resistance $R_s = 10^9 - 10^{10} \text{ ohm}$



Part Nr.	Size	Qty.
5710.A4.1	DIN A 4	25 pcs

CLIPBOARD

- Static dissipative clipboard size A4
- Aluminium
- Spring loaded clip

Typical surface resistance $R_s = 10^4 - 10^6 \text{ Ohm}$



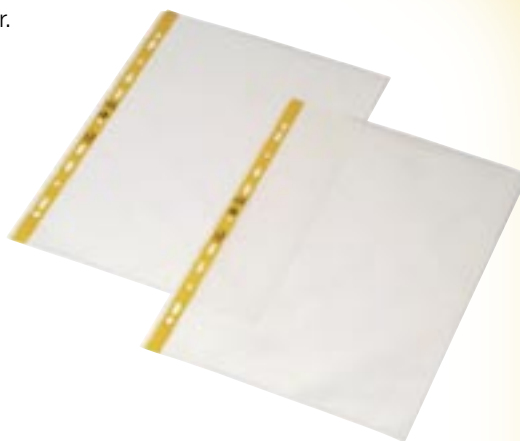
Part Nr.	Size
5600.400	230 x 340 x 1,6 mm



IDP DOCUMENT HOLDERS

- **Permanent, static dissipative**, IDP film
- Made of Inherently Dissipative Polymer
- Recyclable
- Standard print: ESD Symbol, Recycling Symbol and Lot Nr.

Typical surface resistance $R_s = 10^9 - 10^{10}$ Ohm



Part Nr. Size

3015.319 DIN A4 (transparent), 0,1 mm
Qty. = 100 pcs, open top with perforations

PERMASTAT® DOCUMENT HOLDERS

- Static dissipative Polyethylene film
- Recyclable
- Standard print: ESD symbol, Recycling symbol, Lot Nr.

Typical surface resistance $R_s = 10^{10} - 10^{11}$ ohm



Part Nr. Sizes

3115.321 DIN A4, 0,1 mm
100 pcs 2 open sides, no perforations

3115.323 DIN A5, 0,1 mm
100 pcs 2 open sides, no perforations

Part Nr. 3115.321



Part Nr. Sizes

3115.320 DIN A4, 0,1 mm
100 pcs open top with perforations

3115.322.3 DIN A3, 0,1 mm
100 pcs open top with perforations
(not shown)



Part Nr. 3115.320



Part. Nr. 3115.319

Part Nr. Size

3115.319 DIN A4, 0,1 mm
100 pcs clear, transparent, open top
with perforations

Wall mounted, metal framed, document holding system



Wall mounting frame

- Stainless steel
- For 10 document holders

Part Nr. 5600.100 Set with 10 document holders

Part Nr. 5600.100.1 wall mounting frame only



DIN A4 document holders

- **PERMASTAT®** film
- **Permanent, static dissipative** IDP film
- Colour: Transparent
- Frame: Black
- ESD symbol

Typical surface resistance
 $R_s = 10^9 - 10^{10} \text{ ohm}$



Part Nr. 5600.324 1 box = 10 pieces



Part Nr. 5600.101 Stainless steel benchtop frame with 10 document holders



SERVICE KIT



- Portable static controlled station for mobile personnel
- Rugged, dissipative Vinyl material
- Includes a 610 x 610 mm mat with two pockets
- Carrying wallet with a snap fastener
- Includes a coil cord with an adjustable wrist strap, a 3 m grounding cord and a large alligator clip (VDE)

Typical resistance to ground
 $R_G = 10^7 - 10^8 \text{ ohm}$

IEC
EN

Part.-Nr. 2400.673

DISPOSABLE WRIST STRAP

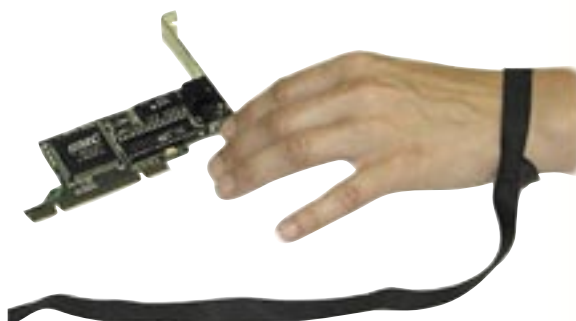
Dissipative Nylon wrist strap, ideal for visitors and one time use applications, length: 1,4 m, width: 12 mm

- Black wrist strap with a looped end
- Self-adhesive copper foil for ground connection
- **Do not use with voltages above 250 V**

Typical wearer overall resistance
 $R_G = 10^6 - 10^7 \text{ ohm}$

IEC
EN

Part Nr. 2060.5406 - 1 box = 100 pieces



VACUUM CLEANER -CONVAC-

Conductive vacuum cleaner, specially designed for cleaning ESD protected areas (EPA).



- **Permanent, carbon loaded,** conductive Polypropylene
- ESD symbol
- 1200 Watt
- Weight: 6,3 kg
- Volume: 9 litres

Typical surface resistance $R_S = 10^4 - 10^5 \text{ ohm}$

Part Nr.
7360.VAC

Includes:

Vacuum cleaner, 10 m power cable, 2,5 m flexible pipe, 1,3 m pipe and 4 accessories (see picture)



CONDUCTIVE VACUUM FORMING MATERIALS

- **Permanent, carbon loaded,** conductive Polystyrene
- Colour: Black
- Available in rolls or plates



Typical point to point resistance $R_p = 10^4 - 10^6$ ohm

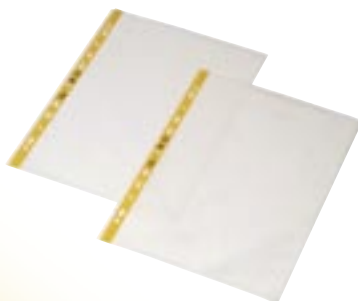
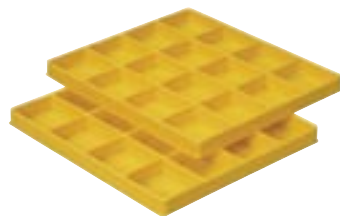


Custom sizes available on request.

IDP (INHERENTLY DISSIPATIVE POLYMERS)

A wide range of blown film, vacuum formed and injection moulded products made of Inherently Dissipative Polymers:

- Safe storage of ESD sensitive devices
- Permanently static dissipative
- No migration
- Humidity independent
- Dissipation through network forming
- Non sparking



STATIC DISSIPATIVE DPC-100 MATERIAL

DPC- 100 plates, two sides coated, permanent static dissipative

DPC- 100

- Material: Polycarbonate
- Dissipative Coating
- Transparent
- High impact
- Machineable
- Can be formed
- Cleanroom compatible
- Transparent release film for protection

Typical Applications:

- Machine covers
- Conveyor covers
- Cleanroom partitions
- Protection hoods

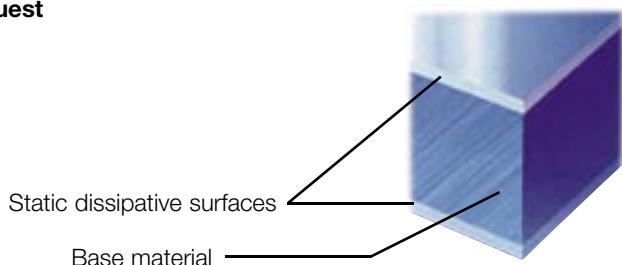
Typical point to point resistance $R_p = 10^5 - 10^7$ ohm

IEC
EN

Part Nr.	Standard Size
5231.DPC100.*	2000 x 1000 mm

Standard Thickness	Qty.
* 3 mm	6 plates
4 mm	5 plates
5 mm	4 plates
6 mm	3 plates
8 mm	2 plates
10 mm	1 plate

Custom sizes, other thickness and colours available on request



Typical applications: SMD Machine covers

DPF-100 POLYESTER FILM

DPF-100 is a transparent static dissipative Polyester film, 2 sides coated.

- Dissipative Polyester film
- Abrasion resistant
- Thickness: 0,1 mm
- Can be used as transparencies for copies

Typical point to point resistance
 $R_p = 10^6 - 10^8 \text{ ohm}$

IEC
EN



Part Nr.	Size	Quantity
5235.DPF100	1220 mm x 100 m	roll
5235.DPF100.A4	DIN A4	100 pcs.
5235.DPF.Z	custom size on request	

DPF-SK 100 SELF-ADHESIVE POLYESTER FILM

DPF SK 100 is a transparent static dissipative, self-adhesive Polyester film. It includes a special coating on one side and a release film on the other side. It can be applied on flat, insulative surfaces.

- Dissipative Polyester film
- Self-adhesive
- Abrasion resistant
- Thickness: 0,1 mm

Typical point to point resistance $R_p = 10^6 - 10^8 \text{ ohm}$

IEC
EN



Part Nr. 5235.DPF.SK100

Size: 1220 mm x 100 m

Custom sizes available on request.

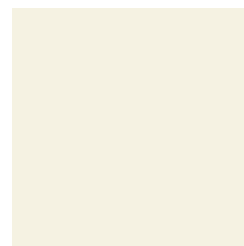
WHITE STATIC DISSIPATIVE CLEANROOM MAT

- Cleanroom compatible, very low outgasing
- One layer, rugged synthetic rubber
- Resistant to solder and heat
- Abrasion resistant
- Halogen free
- Elastic
- 1,9 mm thickness

Typical point to point resistance $R_p = 10^8 - 10^9 \text{ Ohm}$



Part Nr.	Colour	Standard Dimensions
8200.W.R	white	rolls: 1220 mm x 10 m
8200.W.Z		custom size on request



HINGED UTILITY BOXES

- **Permanent, carbon loaded**, conductive material
- Include a dissipative PE foam insert
- Lid printed with ESD symbol

Typical surface resistance $R_s = 10^4 - 10^5$ ohm



Part Nr.	Sizes	Qty.
5100.860	55 x 38 x 14 mm	100 pcs
5100.861	70 x 45 x 14 mm	100 pcs
5100.862	130 x 32 x 14 mm	100 pcs
5100.864	77 x 55 x 12 mm	100 pcs
5100.865	117 x 90 x 21 mm	50 pcs
5100.866	138 x 44 x 14 mm	80 pcs



Boxes with soft conductive foam available on request.

SMD BOXES

- **Permanent, carbon loaded**, conductive material
- Spring loaded lid
- Tray compatible size combination
- **Suitable for compartmented box type 810**

Typical surface resistance $R_s = 10^4 - 10^5$ ohm



Black lid

Part Nr.	Inner sizes	Quantity
5100.873	16 x 12 x 15 mm small	100 pcs
5100.874	37 x 12 x 15 mm med.	50 pcs
5100.875	40 x 37 x 15 mm big	25 pcs
5100.876	68 x 57 x 15 mm big	10 pcs

Transparent metallized lid

Part Nr.	Inner sizes	Quantity
5100.880	16 x 12 x 15 mm small	100 pcs
5100.881	37 x 12 x 15 mm med.	50 pcs
5100.882	40 x 37 x 15 mm big	25 pcs
5100.883	68 x 57 x 15 mm big	10 pcs



COMPARTMENTED BOXES

- **Permanent, carbon loaded**, conductive material
- 6/4 compartments
- Stackable

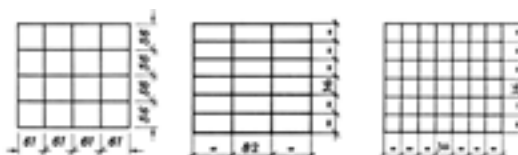
Typical surface resistance $R_s = 10^4 - 10^5$ ohm

IEC
EN



Part Nr.	Outer Dimensions
5150.830	273 x 265 x 187 mm (W x D x H)
	6 compartments
	drawer dimensions: 261 x 238 x 20 mm

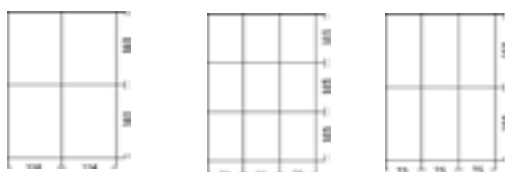
830 box compartment layout - permanent dissipative IDP



Part Nr.		
5150.830.A.Y	5150.830.B.Y	5150.830.C.Y

Part Nr.	Outer Dimensions
5150.815	266 x 365 x 305 mm (W x D x H)
	4 compartments
	drawer dimensions: 250 x 340 x 62 mm

815 box compartment layout - permanent conductive, black

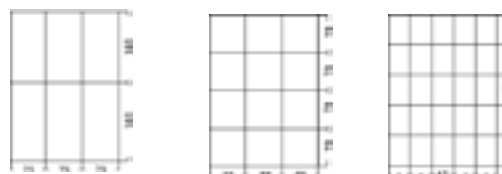


Part Nr.		
5150.815.A	5150.815.B	5150.815.C



Part Nr.	Outer Dimensions
5150.831	266 x 365 x 305 mm (W x D x H)
	6 compartments
	drawer dimensions: 250 x 340 x 40 mm

831 box compartment layout - permanent conductive, black



Part Nr.		
5150.831.B	5150.831.D	5150.831.G

Part Nr.	Outer Dimensions
5150.810	265 x 355 x 205 (W x D x H)
	6 compartments
	drawer dimensions: 250 x 340 x 22 mm

Suitable for the SMD boxes described on page 59.



TOTE BOXES - CONDUCTIVE



- Permanent, carbon loaded, conductive Polypropylene
- Stackable
- Pallet modular size
- With ESD Symbol

Typical surface resistance $R_s = 10^4 - 10^5 \text{ ohm}$



Part Nr.	Outer Dim. mm	Inner Dim. mm	Stacked mm
5310.10	400 x 300 x 120	355 x 255 x 117	104
5310.14	400 x 300 x 170	355 x 255 x 165	152
5310.20	400 x 300 x 220	355 x 255 x 217	204
5310.31	400 x 300 x 320	355 x 255 x 317	304
5310.15	600 x 400 x 75	555 x 355 x 71	56
5310.24	600 x 400 x 120	555 x 355 x 115	104
5310.33	600 x 400 x 150	555 x 355 x 146	131
5310.34	600 x 400 x 170	555 x 355 x 165	152
5310.42	600 x 400 x 220	555 x 355 x 215	204
5310.50	600 x 400 x 236	555 x 355 x 232	214
5310.55	600 x 400 x 280	555 x 355 x 276	261
5310.70	600 x 400 x 336	555 x 355 x 332	314
5310.80	600 x 400 x 420	555 x 355 x 415	314



Part Nr.	Outer Dimensions (mm)
5310.43	400 x 300 top cover
5310.64	600 x 400 top cover
5310.99	snaplock (not shown)

STORAGE BINS



- Permanent, carbon loaded, conductive Polypropylene

Part Nr.	Outer Dim. mm	Inner Dim. mm	Stacked mm
5320.FA2	500 x 300 x 200	425 x 280 x 183	183
5320.FA3	350 x 200 x 200	280 x 182 x 185	185
5320.FA3Z	350 x 200 x 145	280 x 182 x 127	127
5320.FA4	235 x 145 x 125	180 x 127 x 108	108
5320.FA5	175 x 100 x 75	129 x 87 x 67	67



Part Nr.	Outer Dim. mm	Inner Dim. mm	Stacked mm
5320.2	500 x 300 x 200	425 x 280 x 183	183
5320.3	350 x 200 x 200	280 x 182 x 185	185
5320.3Z	350 x 200 x 145	280 x 182 x 127	127
5320.4	235 x 145 x 125	180 x 127 x 108	108
5320.5	175 x 100 x 75	129 x 87 x 67	67
5320.6	95 x 100 x 50	60 x 87 x 44	44
(5320.2 and 5320.3 include a handle).			

DISSIPATIVE IDP TOTE BOXES

- **Permanent, static dissipative** Polypropylene
- Made of Inherently Dissipative Polymer
- Humidity independent
- Stackable
- Pallet modular size
- Colour: red, yellow
- With ESD Symbol, Recycling symbol and LOT-No.



Typical surface resistance $R_s = 10^9 - 10^{10} \text{ Ohm}$

IEC
EN



Part Nr.	Outer Dim. mm	Inner Dim. mm	Stacked mm
5311.Y.14	400 x 300 x 170	355 x 255 x 165	152
5311.Y.24	600 x 400 x 120	555 x 355 x 115	104
5311.Y.42	600 x 400 x 220	555 x 355 x 215	204
5311.R.14	400 x 300 x 170	355 x 255 x 165	152
5311.R.24	600 x 400 x 120	555 x 355 x 115	104
5311.R.42	600 x 400 x 220	555 x 355 x 215	204

Part Nr.	Outer Dimensions in mm	
5311.Y.43	400 x 300	top cover
5311.Y.64	600 x 400	top cover

Part Nr.	Outer Dimensions in mm	
5311.R.43	400 x 300	top cover
5311.R.64	600 x 400	top cover



TRANSPORT PALLET

- **Permanent, carbon loaded**, conductive Polypropylene
- Includes 3 skids
- Europallet size 1200x 800 mm
- Static load up to 5.000 kg
dynamic load up to 1.000 kg
- ESD-Symbol

Typical surface resistance $R_G = 10^3 - 10^5 \text{ Ohm}$

IEC
EN



Part Nr.	Outer Dimensions in mm:
5395.850	1200 x 800 x 160 mm with 3 skids

SHELVING SYSTEM

Stability and flexibility are the key concepts behind our galvanized steel shelving system. The system is easy to assemble and may be extended in either direction.

- Posts made of profiled steel 30 x 30 mm
- Rugged galvanized steel shelves
- Shelves thickness - 40 mm
- Adjustable at 50 mm increments
- Stackable
- Shelves width: 970 mm
- Shelves depth: 400 / 500 / 600 mm
- Posts length: 2000 / 2500 mm
- Load-bearing capacity: 100 kg



Optional

- Sides and back wire enclosure panels
- Sides and back galvanized plates enclosure panels, 0,75 mm thickness

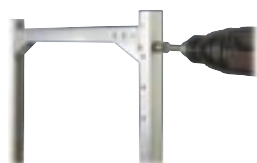
IEC
EN

Height in mm:

2000

2500

Do it yourself system



Width in mm:

1030

1000

1030

1000

Description:

Standard shelf

Optional shelf

Standard shelf

Optional shelf

Number of shelves:

5

5

6

6

Depth in mm

Shelf
load-bearing

Part Nr.

400	100 kg	5370.RB.1111	5370.RB.1131	5370.RB.1171	5370.RB.1191
500	100 kg	5370.RB.1112	5370.RB.1132	5370.RB.1172	5370.RB.1192
600	100 kg	5370.RB.1113	5370.RB.1133	5370.RB.1173	5370.RB.1193

CAROUSEL STORAGE SYSTEM

- Galvanized steel
- Empty carousel for 12 storage racks 150/1200 series
- Dimension: 1760 x 470 x 470 mm
- Includes a grounding cord

Typical resistance to ground $R_G < 10^6$ Ohm



Part Nr.	Size
5380.LK.1	1760 x 470 x 470 mm



STORAGE RACKS

- Galvanized steel
- Standard storage rack contains 40 storage bins:
 - 36 pcs, model 150-01 (64 x 35 x 135 mm / W x H x D)
 - 3 pcs, model 150-02 (87 x 57 x 135 mm / W x H x D)
 - 1 pcs, model 150-03 (275 x 57 x 135 mm / W x H x D)
- Dimensions: 306 x 552 x 150 mm (W x H X D)
- Includes a grounding cord

Typical resistance to ground $R_G < 10^3$ Ohm

Part Nr.	Content	Outer Dimension
5380.LK.1.40	40 bins	306 x 552 x 150 mm (W x H X D)

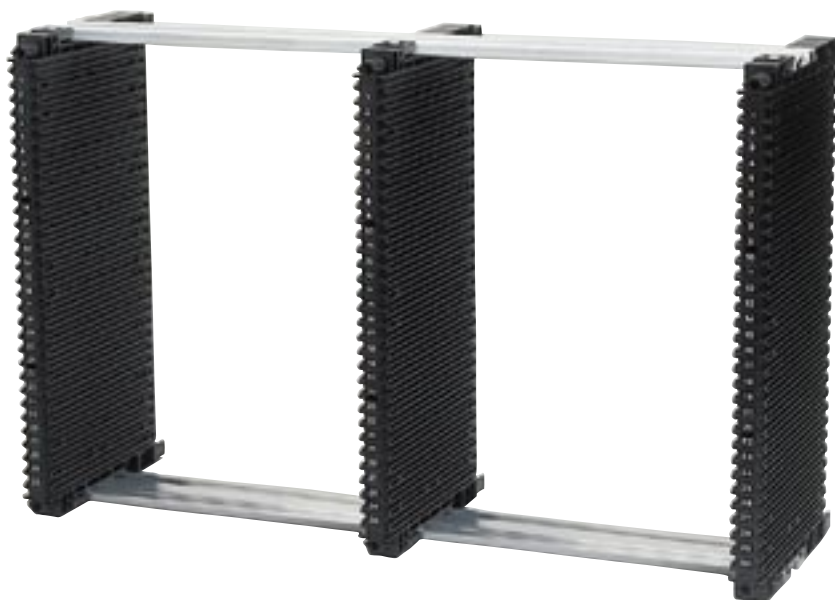
Other storage bins available on request.

PCB RACK

- **Permanent, carbon loaded**, conductive Polypropylene
- Fits into our standard tote boxes
600 x 400 mm and 400 x 300 mm
- Adjustable width

Typical resistance to ground $R_G = 10^3 - 10^5$ Ohm

IEC
EN



Custom sizes available on request.

DISSIPATIVE PCB HOLDER

- **Permanent, static dissipative**, IDP material
- For storage of printed circuit boards
- Capacity: Long side up to 19 PCB's, short side up to 13 PCB's
- With ESD Symbol

Typical point to point resistance $R_p = 10^6 - 10^9$ Ohm

IEC
EN



Part Nr.	Size
5366.350.250.G	350 x 250 x 15 mm

VELCRO BAND

- Conductive Velcro band

Typical point to point resistance $R_p = 10^4 - 10^5$ Ohm

IEC
EN



Part Nr.	Dimension
3410.710	710 mm length

SMD SPOOL RACKS

- **Permanent, carbon loaded**, conductive Polystyrene
- Stackable when empty
- With ESD and Recycling Symbol

Typical point to point resistance $R_p = 10^4 - 10^5$ ohm

- Suitable for:
Utility carts
Shelf storage
Tote boxes
Revolving shelves



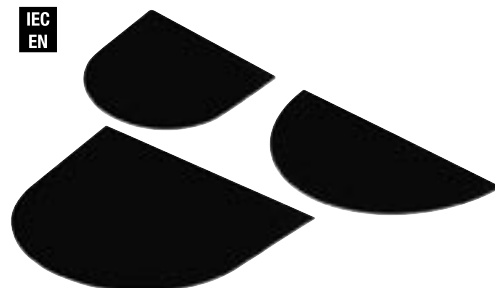
Part Nr.	Outer Dimensions (W x H x D)
5200.01.560.365.178	560 x 365 x 178 mm
	Spool diameter: 330 mm
	Holds up to 38 spools

Part Nr.	Outer Dimensions (W x H x D)
5200.02.362.188.110	362 x 188 x 110 mm
	Spool diameter: 180 mm
	Holds up to 23 spools

SPOOL RACK SEPARATORS

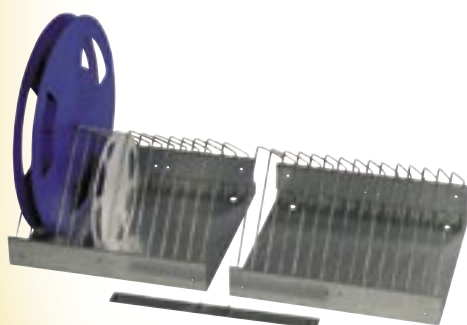
- **Permanent, carbon loaded**, conductive Polystyrene

Typical point to point resistance $R_p = 10^4 - 10^5$ ohm



Part Nr.	Dimensions
5200.180.180.2 (not shown)	180 x 180 x 2 mm for 180 Ø
5200.330.165.2	330 x 165 x 2 mm for 330 Ø
5200.330.330.2	330 x 330 x 2 mm for 330 Ø

METAL SMD SPOOL RACK



- Galvanized steel, rugged construction
- For Spool diameter 180 - 380 mm
- Holds up to 14 spools
- Stainless steel partitions, 20 mm distance, variable
- Linkable, 300 mm width blocks
- Plastic stands
- Labelling frame optional

Typical surface resistance $R_s = 10^2 - 10^3$ Ohm

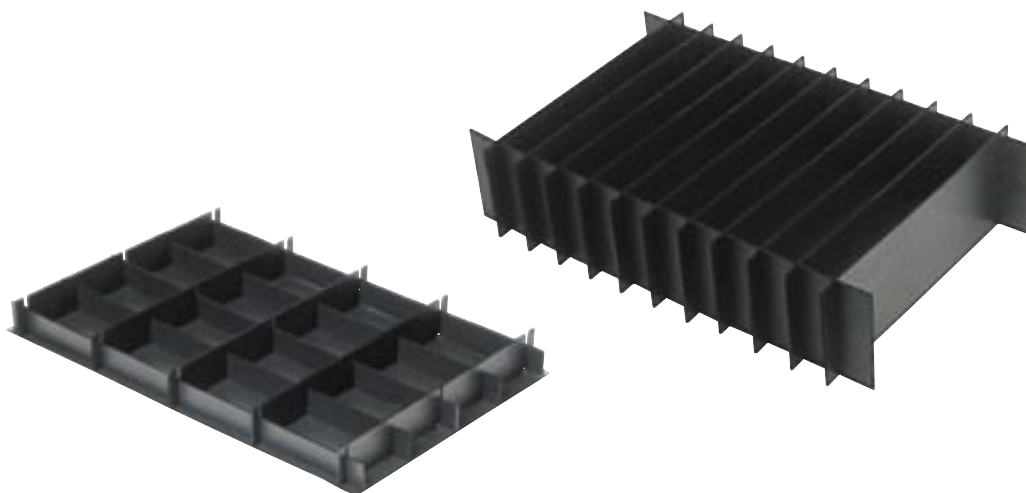


Part Nr.	Dimension
5330.14	300 x 285 x 175 mm

TOTE BOXES PARTITIONS FOR PCB'S

- **Permanent, carbon loaded**, conductive Polypropylene
- Honeycomb profile
- Abrasion resistant
- For tote boxes 300 x 400 mm and 400 x 600 mm

Typical point to point resistance $R_p = 10^4 - 10^5$ ohm



Custom sizes available on request.

SEPARATORS FOR TOTE BOXES

- **Permanent, carbon loaded**, conductive Polypropylene

Typical point to point resistance $R_p = 10^4 - 10^5$ ohm



Part Nr.	Outer Dimensions mm	
5401.0253	353 x 253 x 3	with 2 cut edges
5401.0353	553 x 353 x 3	with 2 cut edges



Custom sizes available on request.



Permanent, carbon loaded conductive
Polypropylen separator with static dissipative foam.

TRANSPORT ROLLI

- Made of galvanized steel
- Includes 4 swivel rubber castors
- Conductive castors 100 mm Ø
- Silent and smooth operation
- Load bearing up to 150 kg

Typical resistance to ground $R_G = 10^3 - 10^5$ ohm

IEC
EN



Part Nr.	Dimensions
5390.200	615 x 410 mm



UTILITY CARTS

- As above, but with plated metal handle
- Delivered with the handle non mounted

Part Nr. 5390.1198

STORAGE CART

- Made of galvanized steel
- Includes 3 height adjustable shelves
- Adjustable to 25 mm
- 4 swivel rubber castors
- All castors are conductive, 100 mm Ø
- For self assembly

Typical resistance to ground $R_G = 10^3 - 10^5$ ohm

IEC
EN



Part Nr.	shelves:
5390.1210.01	925 x 405 mm
delivered without boxes	

Single shelves

5390.12102	suitable for 5390.1210.01
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Part Nr.	shelves:
5390.1207.01	625 x 405 mm
delivered without boxes	

Single shelves

5390.12072	suitable for 5390.1207.01
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UTILITY CARTS

- Made of galvanized steel
- Conductive swivel castors

- Rubber castors
- Silent and smooth operation

Typical resistance to ground $R_g = 10^6 - 10^7$ ohm

IEC
EN



Part Nr. shelf

5390.400 740 x 430 mm

- 2 shelves, fitted with table mats, cart not mounted
- Highest shelf 730 mm
- Load bearing up to 150 kg
- Distance between shelves: 520 mm
- castors $\varnothing$ 100 mm
- 3rd shelf optional, Distance between shelves: 250 mm

Part Nr. shelf

5390.700 950 x 550 mm

- 3 shelves, fitted with table mat, cart not mounted
- Highest shelf, 770 mm
- Load bearing up to 250 kg
- Distance between shelves: 260 mm
- castors $\varnothing$ 125 mm



Part Nr. shelf

5390.510 950 x 540 mm

- 1 shelf, fitted with rubber mat, cart not mounted
- Height: 180 mm
- Load bearing up to 125 kg
- Suitable for PCB racks transport
- castors $\varnothing$ 100 mm



TRANSPORT SYSTEMS, RUBBER MAT

RUBBER MAT

- **Permanent, carbon loaded**, conductive rubber
- For carts and transport rollies
- Durable, low-wear, synthetic rubber
- Slip resistant
- Thickness: 3 mm

IEC
EN

Typical resistance to ground $R_g = 10^5 - 10^6$ Ohm



Part Nr.

Colour

Sizes

1451.7205.R

black



1000 mm x 10 m rolls

1451.7205.Z

custom size on request

WASTE BASKET

- **Permanent, carbon loaded**, conductive Polypropylene
- ESD symbol
- Recycling symbol

Typical surface resistance $R_s = 10^4 - 10^5$ ohm

IEC
EN

Part Nr.	Dimensions	
5180.850	Diameter:	300 mm
	Height:	320 mm
	Volume:	14 litres
5180.851	Diameter:	410 mm
	Height:	390 mm
	Volume:	36 litres



PERMASTAT® WASTE BAGS

- Static dissipative Polyethylene
- Recyclable
- ESD symbol
- Recycling symbol
- Colour: Pink

Typical surface resistance
 $R_s = 10^{10} - 10^{11}$ ohm

IEC
EN



Part Nr.	Sizes	Volume	Quantity
3110.850	300/200 x 600 x 0,025 mm	30 litres	500 bags/roll for waste basket
3110.850.1	700 x 1100 x 0,080 mm	120 litres	100 bags/roll for waste basket
3110.852.1	750/550 x 1800 x 0,080 mm	240 - 300 litres	75 bags/roll for wast bin

ESD WIPES



- Static dissipative ESD wipes for all Electronic manufacturing and optical cleaning Applications
- 100% knitted polyester
- No carbon or metal fibers
- Good solvent resistance, lint free
- For use with normal cleaning fluids
- Size: 230 x 230 mm
- Colour: pink

Part Nr.	Quantity
6200.20	50 pcs./bag

Typical surface resistance $R_s = 10^8 - 10^9$ ohm

IEC
EN

ESD FLOOR POLISH

- Dissipative floor wax
- Suitable for normal PVC, linoleum and parquet floors
- High gloss, durable finish
- Effective and economical
- Easy to apply
- Recoating needed on a regular basis
- Approximate floor coverage 40 m²/litre

Typical surface resistance $R_s = 10^7 - 10^9$ ohm

IEC
EN



Part Nr.	Quantity
2900.581.1	5 litres

ESD FLOOR CLEANER

- Special cleaner for ESD floors
- Protects against the deterioration of the static dissipative properties
- Removes grease and dirt

IEC
EN



Part Nr.	Quantity
2900.560.1	5 litres

ESD CLEANER

- Special cleaner for dissipative and conductive surfaces
- Protects against deterioration of the static dissipative properties
- Removes liquid spill stains, flux, residues, grease and dirt
- Trigger-spray bottle for easy application

IEC
EN



Part Nr.	Quantity
2900.570	1 litre spray bottle
2900.571.1	5 litres

