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**Transforming Technologies**

*Outstanding Alternatives in Static Control*



## Transforming Technologies

offers customized and comprehensive solutions for protecting electronic devices from damage due to static electricity.

Headquartered in Sylvania, OH, USA, Transforming Technologies offers a wide range of critically important ionization, grounding and specialty ESD products for protecting static sensitive electronics.

Products available from Transforming Technologies meet or exceed the requirements of ANSI/ESD S-1.1, ANSI/ESD S-20.20, EIA 625 and MIL-STD-1686.

### Controlling Static

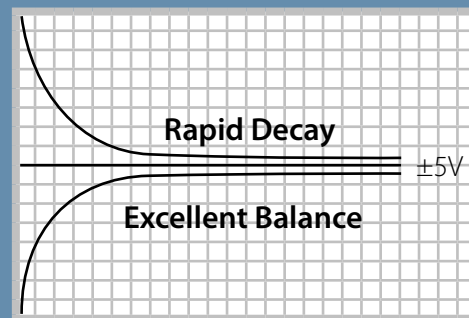
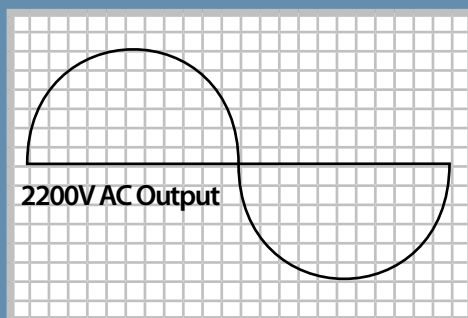
Coming to terms with static charges can be challenging and costly in a production environment. Transforming Technologies provides product, consultation and educational support to its clients for the many problems that arise in myriad of manufacturing workplaces.

### Static Control Basics

- Handle electrostatic discharge sensitive devices (ESDS) only in an ESD protected area (EPA)
- Avoid electrostatic potential differences and electrostatic discharges
- Use wrist straps or approved footwear and floor combination for personnel grounding
- Wear properly fastened dissipative garments
- Exclude static generating materials from the EPA
- Do not expose ESDS to electrostatic fields  $> 100V / cm$
- Use only approved ESD protective packaging materials
- Awareness, personnel training and continuous monitoring are essential for maintaining an effective static control program

### Ptec™ Ionization Technology

Ptec™ static elimination devices use a specialized piezo technology that offers exceptionally fast static decay capabilities with excellent balance stability, all in a small foot-print. Ptec™ ionizers save time and money because they require no calibration. Emitter life is increased and maintenance frequency is reduced, due to 68KHz AC ion emission.



### Fast, Balanced, Stable AC

Ptec™ static eliminators produce a 68KHz AC output of approximately 2200V and a continuous stream of balanced air ions. Stable, small and lightweight, Ptec™ products detect and alarm if the high voltage output fails.



Transforming Technologies proudly distributes Monroe Electric's complete line of electrostatic measuring instruments, including charge plate monitors, electrostatic fieldmeters and resistivity meters.



## ◀ **IN5110 Benchtop Ionizer**

Small, stable and quiet with unmatched performance, the Ptec™ IN5110 provides fast decay of static charges over a targeted workstation or area. The IN5110 offers superior protection from the problems created by ESD events. The ionizer features a removable fan guard for easy maintenance.

### **Features**

- Quickly neutralizes static charges
- Stable Ptec™ AC output
- Balanced to  $0\pm 5$  Volts
- Ionization indicator and alarm light
- Variable fan speed control



*The removable grill designed into all Ptec™ blowers simplifies emitter maintenance.*

### **Specifications**

**Decay Time\*:** <2 sec. @ 12"

**Size:** 7.5"H x 7.1"W x 2.7"D, (19.0 x 18.0 x 7.6 cm)

**Weight:** 2.8lbs, (1.27kg)

**Power Requirement:** 24 VDC, 12W, un-fused, 0.5A or 1.0A max

**Air Volume Output:** 115 cfm, High speed

## **IN5120 In-Tool AC Ionizer** ▶

Utilizing the small physical profile of the Ptec™ piezo technology, the IN5120 is small enough to fit inside many electronic manufacturing tools and powerful enough to provide reliable ESD protection. The IN5120 is especially useful in space-constrained applications.

### **Features**

- Compact size
- Stable Ptec™ AC output
- Balanced to  $0\pm 5$  Volts
- Ionization indicator and alarm light
- Easy to install in electronic equipment

### **Specifications**

**Decay Time\*:** <3 sec. @ 12"

**Size:** 5.5"H x 5.5"W x 2.28"D (14.0 x 14.0 x 7.6 cm)

**Weight:** 1.4lbs, (0.65kg)

**Power Requirement:** 24 VDC, 12W, un-fused, 0.5A or 1.0A max

**Air Volume Output:** 32 cfm, High speed



\*Tested in accordance with ESD-STM3.1-2000



## IN5130 Overhead Ionizer ▶

The IN5130 easily provides fast static charge decay over a standard work surface area. Each of the three fans are supported by dedicated Ptec™ piezo AC power modules. Each unit is equipped with variable fan speed, alarm indicators and removable grills. The IN5130 overhead ionizer are designed to be daisy-chained for easy integration into the manufacturing environment.

### Features

- Stable Ptec™ AC output
- Balanced to  $0\pm 5$  Volts
- Quickly neutralizes static charges
- Ionization indicator and alarm light
- Variable fan speed control

### Specifications

**Decay Time\*:** <6 sec. @ 24"

**Size:** 2.5"H x 39.4"W x 5.75D, (64.0 x 1000 x 146 cm)

**Weight:** 11.5lbs, (5.0kg)

**Power Requirement:** 100-240 VAC, 36W, un-fused, 0.5A or 1.0A max. Air Volume Output 300 cfm, High speed



## IN3420 Ionizing Nozzle ▶

The model IN3420 air ionizing nozzle produces a 68KHz AC output of approximately 2200V and a continuous stream of balanced air ions. The IN3420 works efficiently with clean dry air (CDA) and nitrogen (N2) and is capable of 100 psi input. Stable, small and lightweight, Ptec™ products detect and alarm if the high voltage output fails.

### Features

- Fast charge decay
- Balanced to  $0\pm 5$  Volts
- Ionization indicator and alarm light
- Optional output nozzles
- Optional photoelectric switch
- Simple to operate

### Specifications

**Decay Time\*:** <1 sec. @ 24"

**Size:** 2.0"H x 7.1"W x 2.7"D, (5.0 x 2.9 x 8.7 cm)

**Weight:** 1.0lbs, (.45kg)

**Power Requirement:** 24 VDC, 12W, un-fused, 0.5A or 1.0A max.

**Air/Gas Supply:** Inlet pressure, 5 psi min, 100 psi max

**Gas Tube:** 1/4" OD



## Grounding Accessories

### Field Service Mats

2 pocket, 24"x24"

Red **FSM2424R**  
Blue **FSM2424B**

### Common Point Ground

10mm Male **CP2522**  
10mm Female **CP2524**

### Floor Mat Ground

10mm Male **FM1515**  
10mm Female **FM1517**

### Clinch Snap

10mm Female **CS1010**  
10mm Male **CS1020**

### Bench Mount Ground

4mm Parking Snaps **CP4070**



## 4500 Series 2 Layer Rubber

This exceptional 2-ply static dissipative mat is manufactured from premium NBR rubber for long lasting life. It is resistant to hot solder. The static dissipative top layer is backed by a conductive bottom layer for outstanding electrical properties. Versatile product with good lay flat properties.

Meets requirements of ANSE/ES S20/20 and recommendations of ESD 4.1.

### Features

- Meets EOS/ESD Standard
- .080" (2mm) thickness
- Superior resistance to heat, chemicals
- Cut mats available

### Specifications

**Widths:** 24", 30", 36" and 48"

**Roll Length:** 50'

**Thickness:** .080" (2mm)

**RTT:**  $6.9 \times 10^7$  ohms per EOS/ESD-s4.1@ 10v

**RTG:**  $1.2 \times 10^8$  ohms per EOS/ESD-s4.1@ 10v

### 2 Layer Rubber Mat

	24"	30"	36"	48"
NASA Blue	<b>MT4524B</b>	<b>MT4530B</b>	<b>MT4536B</b>	<b>MT4548B</b>
Gray	<b>MT4524GY</b>	<b>MT4530GY</b>	<b>MT4536GY</b>	<b>MT4548GY</b>
Green	<b>MT4524GN</b>	<b>MT4530GN</b>	<b>MT4536GN</b>	<b>MT4548GN</b>



**Cut mats available**

## Wrist Strap Sets

All wrist strap and coil cord sets feature a 360 degree conductive contact around the wrist, providing maximum skin contact. Wrist band is standard with 4mm male snap. The 2.5mm polyurethane coil insulation assures excellent coil memory. A swivel type banana plug increases coil life and prevents cord tangles. The soft, blue woven fabric of the wrist band allows the skin to breathe and is very comfortable to wear. It uses hypo-allergenic silver-plated nylon thread for conductivity and it has a maximum resistance of 160 ohms. Product meets the ESDA Standard 1.1, EIA 625, MIL-STD-1686 and MIL-HDBK-263.



### Features

- Full stainless back plate on wrist straps
- Large conductive area on fabric
- 6' & 12' cord sets available
- Coil cords exceed 20K flex cycles

### Wrist Strap Sets

Set	Snap Size	Coil Cord	Length	Wrist Strap
<b>WB1637</b>	4mm	CC0037	6'	WB0016
<b>WB1643</b>	4mm	CC0043	12'	WB0016
<b>WB2637</b>	4mm	CC0037	6'	WB0026
<b>WB2643</b>	4mm	CC0043	12'	WB0026
<b>WB6037</b>	4mm	CC0037	6'	WB6014
<b>WB6043</b>	4mm	CC0043	12'	WB6014



### Wrist Straps

A comfortable and adjustable wrist band with soft, woven fabric, allows the skin to breathe and is hypo-allergenic. An adjustable metal band with a machined snap is also available.

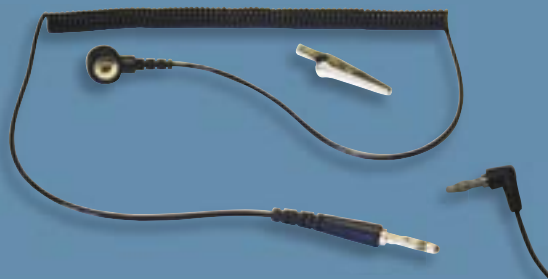
### Wrist Straps

	4mm	4mm (M*)	7mm	10mm
Blue	<b>WB0016</b>	<b>WB2016</b>	<b>WB0017</b>	<b>WB0018</b>
Maroon	<b>WB0026</b>	-	-	-
Black (Metal)	-	<b>WB6014</b>	-	-

\*Machined snap

## Coil Cords

Our premium quality coil cords use superior materials and construction to assure long life and excellent memory. Product comes standard with a 4mm female snap, 2.5mm PU insulation and black color. A right angle banana plug is also offered.



### Coil Cords

	6' cord	12' cord
4mm	<b>CC0037</b>	<b>CC0043</b>
4mm (90°)	<b>CC0237*</b>	<b>CC0243*</b>
7mm	<b>CC0038</b>	<b>CC0044</b>
10mm	<b>CC0039</b>	<b>CC0045</b>

\*90° banana plug

## Heel Grounders

Heel grounding devices provide protection for staff on the move. Transforming Technologies offers a wide range of heel grounding styles. All products are constructed from durable materials and feature various rubber configurations, closure mechanisms and resistor options. Heel grounders connect the person wearing them to ground via a proper floor mat or flooring material. A rugged 1 Mega ohm resistor is standard in all products.



HG1246

### Features

- Rugged 2 layer rubber construction with scrim for strength
- Large conductive area contacting floor
- Non-marking interior (Black / White) rubber
- Non-marking exterior (HG1360NM)
- All popular closure mechanisms available
- Custom designs available



HG1232



HG1360



HG1360NM



HG1341



HG1390S



HG0368



HG1590/HG1594



HG4560

### Foot Grounder Styles

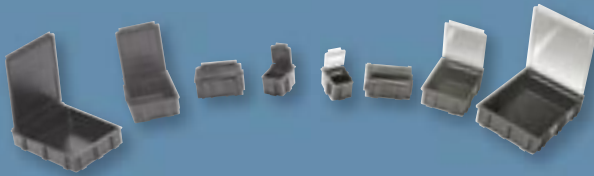
Product Number	Style	Closure Method	Reusable	Standard Resistor
HG1232	35mm cup	Buckle	Yes	1M
HG1246	35mm cup	D-ring	Yes	1M
HG1341	1.25" Cup	Hook & Loop	Yes	1M
HG1360	1.25" Cup	Stretch velcro	Yes	1M
HG1390S	1.25" Cup	Elastic Hook & Loop	Yes	1M
HG1590	35mm Sport	Hook & Loop	Yes	1M
HG1594	35mm Sport	D-ring	Yes	1M
HG1360NM	Non-marking	Stretch velcro	Yes	1M
HG2520	Toe	Elastic	Yes	1M
HG0368	Disposable	N/A	No	N/A
HG4560	Disposable	N/A	No	N/A



HG2520

### Static Safe SMD Boxes

	Black Lid	Transparent Lid
16x12x15 mm	SM0873	SM0880
37x12x15 mm	SM0874	SM0881
40x37x15 mm	SM0875	SM0882
68x57x15 mm	SM0876	SM0883

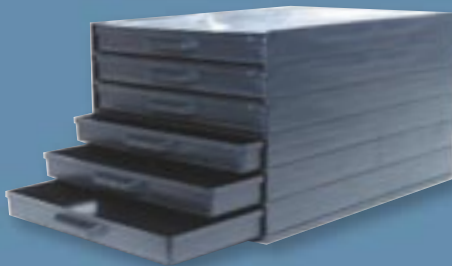


### Sheet Protectors

8.5x11"  
DC1185

### 6 Drawer Box

250x340x22 mm SM0810



### Static Safe Hot Gloves

	11" length	16" length
Small	FG2601	FG3901
Medium	FG2602	FG3902
Large	FG2603	FG3909
X-Large	FG2604	FG3904



### Tool Caddy

Caddy TC0839  
Insert TC0843



### Conductive Grid Tape

1/2"	3/4"	1"	2"
CT1204	CT1805	CT2406	CT4807



### ESD Wiper

9x9"  
WP6200



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