Wrist Strap & Footwear Combo Tester

P/N: 492E

- Has 2 Test Modes:
  - Single Test Mode: Checks the ESD status of Wrist Strap or Footwear.
  - Comprehensive Test Mode: Checks the ESD Status of both Wrist Strap and Footwear.
- Customer can connect it to Door Control System thru Access System Control Signal from this Tester.
- This Model uses micro-current testing for stable and accurate results.
- Low Voltage Alarm Function: when the battery goes low in this Tester, there will be alarm indication.

Specifications

|	
Power supply	: 9V Battery
Touch-Point	: Voltage ≤ 400V (peak, DC or AC)
Switching Output	Switch Current ≤ 130 mA
	Touch-Point Resistance of < 30Ω
	Qualified Testing: Touch-Point Close
	Disqualified Testing: Touch-point disclose
Accuracy	: Wrist Strap testing: ± 10%
	Footwear testing: ± 10% (750 KΩ), ± 20% (100 MΩ), ± 30% (1 GΩ)
Dimensions (approx)	: 160 mm x 100 mm x 40 mm
Weight (approx)	: 0.6 kg (Test Unit only)

ESD Safe

Wrist Strap Tester

P/N: 498

- Use anywhere to check personnel ESD grounding quickly
- Checks contact resistance between Wrist Strap and skin
- Power Supply: 9V Battery • Grounding Wire: 2.5 meter

Operation

Simply touch circular surface on Tester with your hand and connect ground wire. In case of a safe ground, LED will be 'Green'. Opposite Table summarizes test indications.

Wrist Strap

Grounding Wire of Wrist Strap Tester

Grounding Wire of Wrist Strap
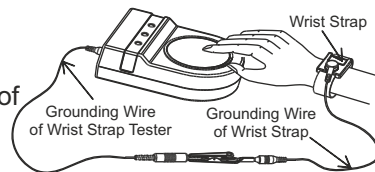
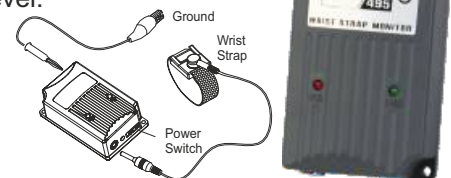| LED Indication	Resistance	Buzzer
Power Low (Red)	<750KΩ	OFF
Good (Green)	750KΩ ~ 10MΩ	ON
High (Red)	>10MΩ	OFF

Continuous Wrist Strap Monitor

P/N: 495

Model 495 monitors the ESD integrity of operator and ground. It provides instant notification of the wrist strap or ground failure. When the production process is of very high value, reliable ESD safety and ground is must for continuous monitoring at operator level.

- Sound and light alarm
- Portable and compact, easy to use.
- Output Voltage : 8 – 12 VDC
- Weight: 50g approx
- Dimensions: 75Lx46Wx27H mm (approx.)

LED	Value
OK (Green)	825KΩ ~ 9MΩ
Fail (Red)	11MΩ and above
Fail (Red)	765KΩ and below

Ground
Wrist Strap
Power Switch

ESD Surface & Grounding Digital Resistivity Tester & Wrist Strap Tester
Tests antistatic materials and insulations in compliance of ASTM Standard D-257

"ESD" Safe

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reliable & caring since 1976

Surface Resistivity & Grounding Tester with Digital Display (not LED indication)   P/N: 499D

Surface Impedance Tester is used for measuring the surface coefficient and grounding resistance of objects, as well as the antistatic and insulating material.

Specifications:

Test range	: 10^3 ~$10^{12}\Omega$
Power	: 9V battery
Resolution ratio	: 0.1 order of magnitude
Precision	: ±10%
Condition	: 0°C ~ 49°C, RH 0%–80%
Size	: 130(L)×72(W)×35(H)mm (approx.)
Weight	: about 170 g (battery included)

Test Results reading

X.X E XX display means X.X raise to the power 10 ($10^{xx)}$)
Example: If display shows 9.5E10, it means $9.5*10^{10}\Omega$ = 95GΩ

Interpretation of Digital Display

bL --- It needs Battery replacement.
CE --- It means Calibration Error, needs re-calibration.
Lr --- Test resistance is less than 300Ω ($3*10^2\Omega$).
Hr --- Test resistance is more than 3TΩ ($3*10^{12}\Omega$).

Electrods on the back side

OHMS PER SQUARE

499D
RESISTIVITY METER

Digital display readout

Digital Static Charge Meter to check ESD Safety   P/N: 193

**Checks static charge on human beings and also discharges the same**

This Static Charge Checking Instrument checks and discharges electrostatic charge on human body. It displays electrostatic charge on human body digitally; and also has provision to discharge the same before personnel enter ESD protected area. It is also effective in detecting the electrostatic potential difference between two persons. This Instrument also checks the effectiveness of grounding straps, coil cords, ground pin, antistatic floors, antistatic clothes etc.

Features:
- Easy-to-use reliable and portable design
- Has provision for wall mounting outside the ESD protected area
- It can check voltages of +ve and -ve polarites

ESD Safe

193

Specifications:

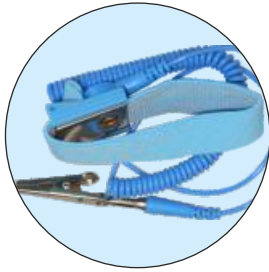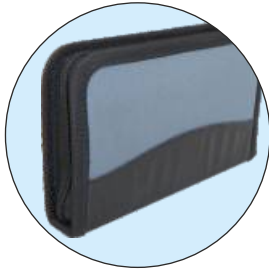|	
Test range	: 0 ~ 19990 Volts
Accuracy	: ±8%, ±1digit (0±10000V)
Output	: Digital display
Power Supply	: 9VDC Battery or AC Adaptor
Dimensions	: 160 x 100 x 40mm (approx.)
Weight	: 230 grams (approx.)
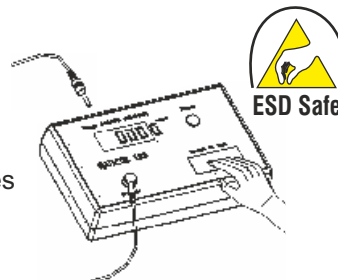
How to read the Display values:

The voltage range of the meter is from 0V to19990V

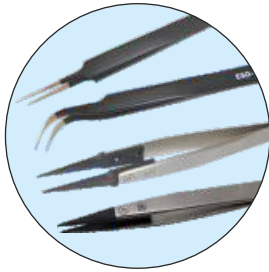"0" on the display means "1" digit, so the final Voltage value is value displayed on LCD X 10.

Website: www.indeonline.in • Landline: 0172 - 4614415 • Cell Phone: 9316134502 • Email: headoffice@indeonline.in

ESD Safe Wrist Strap

Zipper bag is not ESD Safe

ESD Safe Precision Tweezers
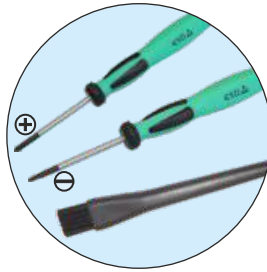
ESD Safe Screwdrivers & Cleaning Brush

Ecotronic ESD
CK Tools Germany

ESD Safe German Cutter & Wire Stripper

The Kit includes:

ESD Safe Screwdrivers	ESD Safe Cutter & Stripper
⊕ Philips Screwdriver #1 ⊖ Slotted Screwdriver 3.0mm	- CK Tools Germany ESD Safe Micro Cutter - CK Tools Germany ESD Safe Precision Wire Stripper
ESD Safe Precision Tweezers	**Miscellaneous ESD Safe Tools**
- ESD Safe Superfine Tip Curved Tweezer - ESD Safe Superfine Tip Straight Tweezer - ESD Safe Soft Fine Tip Tweezer - ESD Safe Soft Tip Tweezer	- ESD Safe Cleaning Brush - ESD Safe Wrist Strap
	Packaging
	- Zipper Pouch (195 x 120 x 35mm)

"ESD" Safe

CK Tools Germany ESD Safe Electronics Toolkit Model T3707DX

Contains most commonly used electronics assembly tools

INDE
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Precision Tweezers

Sensoplus Side Cutter

SENSOPLUS ESD

C.K
C.K Tools
Germany

Sensoplus Snip Nose Plier

SENSOPLUS ESD

XONIC ESD Safe Screwdrivers
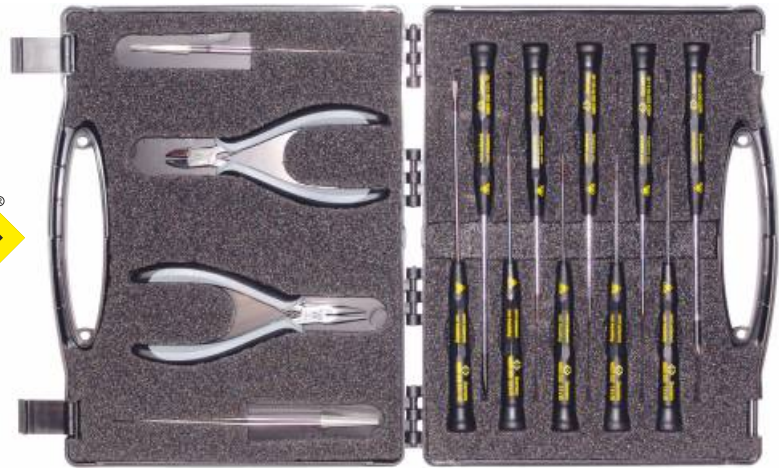
XONIC ESD

The Kit Consists of:

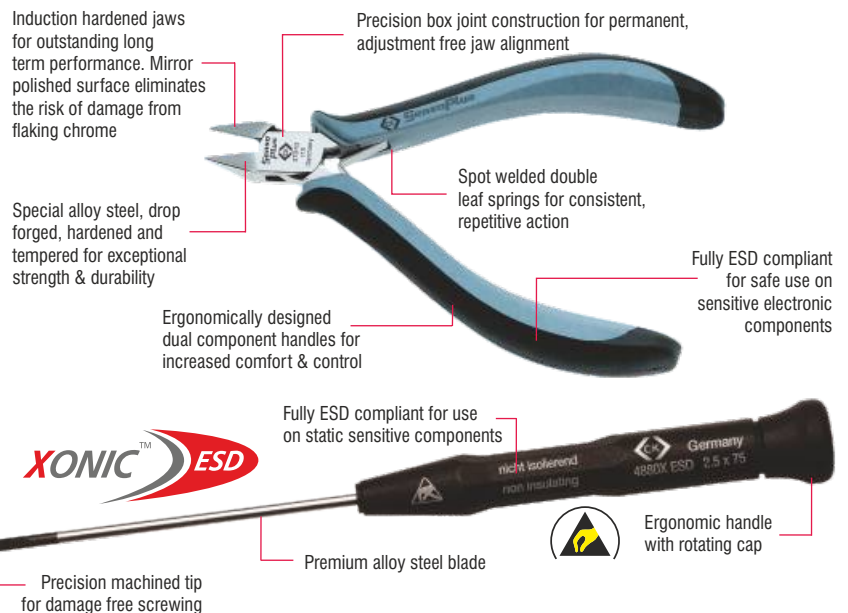| Items Description |
| --- |
| ⊖ Xonic ESD Screwdriver 1.5 x 60mm |
| ⊖ Xonic ESD Screwdriver 1.8 x 60mm |
| ⊖ Xonic ESD Screwdriver 2.5 x 60mm |
| ⊖ Xonic ESD Screwdriver 2.5 x 75mm |
| ⊖ Xonic ESD Screwdriver 3 x 100mm |
| ⊖ Xonic ESD Screwdriver 4 x 100mm |
| ⊕ Xonic ESD Screwdriver #000 x 60mm |
| ⊕ Xonic ESD Screwdriver #00 x 60mm |
| ⊕ Xonic ESD Screwdriver #0 x 60mm |
| ⊕ Xonic ESD Screwdriver #1 x 80mm |
| Sensoplus ESD Safe Side Cutter |
| Sensoplus ESD Safe Snip Nose Plier |
| Precision fine tip Curved Tweezer |
| Precision SMD handling Tweezer |
| Rugged Hard Shell Carry Case |

SENSOPLUS ESD

ELECTRONIC AND
SensoPlus
ELECTRONICS PLIERS

Induction hardened jaws for outstanding long term performance. Mirror polished surface eliminates the risk of damage from flaking chrome

Precision box joint construction for permanent, adjustment free jaw alignment

Spot welded double leaf springs for consistent, repetitive action

Special alloy steel, drop forged, hardened and tempered for exceptional strength & durability

Fully ESD compliant for safe use on sensitive electronic components

Ergonomically designed dual component handles for increased comfort & control

XONIC ESD

Fully ESD compliant for use on static sensitive components

Precision machined tip for damage free screwing

Premium alloy steel blade

Ergonomic handle with rotating cap

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"ESD" Safe

ESD Safe SMD Side Cutter (Slim - Relieved Head)

CK Tools Germany P/N: T3886

- Sharp, precision cutting edges with extra full flush cut
- Made from special tool steel blade, hardened for long-term cutting performance
- ESD handles - dissipative 10^8 Ohm
- Dual component handle design for comfortable working
- Black oxidized finish for corrosion resistance and reduced glare
- Smooth-action return spring for convenience during repetitive work
- Cutting Capacity: 1.3mm dia wire
- Length: 140mm (approx.)

"ESD" Safe

C.K Tools Germany

Ecotronic ESD

ESD Safe Oblique Cutter

CK Tools P/N: T3799DF 110

- Fully ESD compliant for safe use on static sensitive components
- Induction hardened jaws for outstanding long term performance.
- Precision box joint construction for adjustment-free jaw alignment
- Special alloy steel, drop forged, hardened & tempered for exceptional strength and durability
- Ergonomically designed dual component handles for increased comfort and control
- Spot welded double leaf springs for consistent, repetitive action

Specifications:

- Cutting capacity
  - Soft Wire   : 1.2mm/16AWG
  - Hard Wire   : 1.0mm/18AWG
  - Piano Wire   : 0.4mm/26AWG
- Cut type   : Full Flush
- Length (approx.) : 120mm

SENSOPLUS™ ESD

"ESD" Safe

C.K Tools Germany

ESD Safe Screwdriver Set (6pcs of SL/PH types)

CK Tools Germany P/N: T4741SESD

- Ergonomic tri-lobe handle design for comfort and effective delivery of torque
- Fully ESD compliant for safe use on sensitive electronic components
- Toughened alloy steel blade for exceptional strength & durability
- Black anti-peel finish eliminates the risk of damage from flaking chrome
- Handle injection moulded directly to blade giving the ultimate bond for increased reliability and durability
- Precision Tip for exact fit and damage free screwdriving

C.K Tools Germany

TRITON ESD

"ESD" Safe

The Set contains:

- Slotted Screwdriver 3 x 75mm   - Philips Screwdriver #0 x 60mm
- Slotted Screwdriver 3 x 100mm   - Philips Screwdriver #1 x 80mm
- Slotted Screwdriver 5 x 135mm   - Philips Screwdriver #2 x 100mm

ESD Safe Precision Wire Stripper

CK Tools Germany P/N: T3893

For safe and damage-free stripping of fine insulated solid wires where it is critical to prevent damage from electro-static charge and also to avoid any cutting nick on conductor

- Precision stripping holes guarantee the accurate size of notches for accurate stripping without any nick to the conductor
- Laser marked gauges in AWG & mm
- Made from special tool steel blade, hardened for long-term cutting performance
- ESD handles - dissipative 10^8 Ohm
- Dual component handle design for comfortable working
- Black oxidized finish for corrosion resistance and reduced glare
- Smooth-action return spring for convenience during repetitive work
- Also has Cutting Capacity: 3.0mm dia wire
- Length: 170mm (approx.)
- Stripping capacity: 0.25, 0.32, 0.4, 0.5, 0.6 & 0.8mm (30, 28, 26, 24, 22 & 20 AWG)

"ESD" Safe

C.K
C.K Tools
Germany

precise holes for nick-free stripping

Soft Cu

ESD Safe Precision Wire Stripper

CK Tools P/N: T3757ESD 2

- Compact precision Wire Strippers for repeatable and damage free stripping of PVC, Teflon & similar coated insulating wire
- Integrated depth stop for stripping to precise lengths
- Specially hardened blades for outstanding long term performance
- Fully ESD compliant for safe use on static sensitive electronic components
- Adjustable to strip 6 wire diameters:
  0.25, 0.30, 0.40, 0.50, 0.60, 0.80mm

"ESD" Safe

C.K
C.K Tools
Germany

ESD Safe Desoldering Pump

CK Tools P/N: T6103A

Large capacity Desoldering Pump specifically designed to be used in ESD Safe areas.

- ESD Safe
- Heat resistant carbon fibre Tip
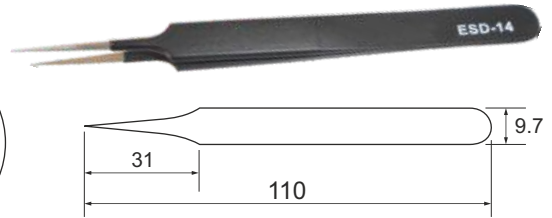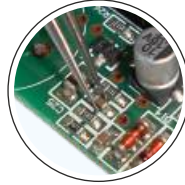- Anti-rust long lasting spring
- Length: 210mm (approx.)

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ESD Safe Straight Tweezer   P/N: ESD-14

for handling small parts and SMD components and fine wires

• With ESD Safe coating
• Super fine straight tip type
• Material: Stainless Steel
• Non-Magnetic
• Length: 110mm (approx.)

"ESD" Safe
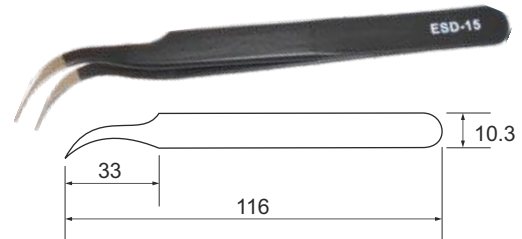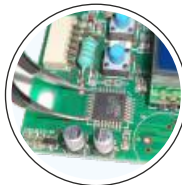
ESD-14

31 · 110 · 9.7

ESD Safe Curved Tweezer   P/N: ESD-15

for SMD IC removal with hot air application and for easy handling in confined areas

• With ESD Safe coating
• Super fine curved tip type
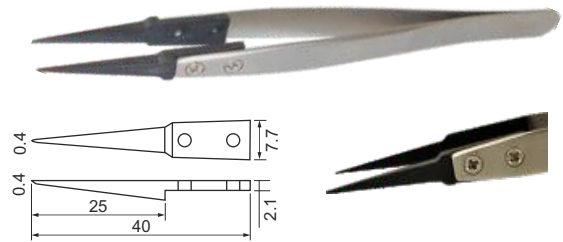• Material: Stainless Steel
• Non-Magnetic
• Length: 116mm (approx.)

"ESD" Safe

ESD-15

33 · 116 · 10.3

ESD Safe Soft Tip Tweezer   P/N: ESD259A

for handling fragile parts

• Non-Magnetic
• Resistance: < 10^8 Ohm
• Tip Material : PPS, ESD Safe
• Length: 130 mm (approx.)
• Does not scratch surface of fragile parts and sensitive SMD ICs

"ESD" Safe

0.4 · 0.4 · 7.7 · 25 · 40 · 2.1

ESD Safe Straight Tweezer   P/N: ESD259

for handling fragile parts

• Non-Magnetic
• Resistance: < 10^8 Ohm
• Tip Material : PPS, ESD Safe
• Length: 130 mm (approx.)
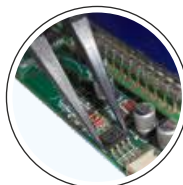• Does not scratch surface of fragile parts and sensitive SMD ICs

"ESD" Safe

0.6 · 0.5 · 7.7 · 26 · 44 · 2.1

ESD Safe Cleaning Brushes and Component Trays

"ESD" Safe

Removes dirt on PCBs and on other static sensitive components. These Brushes minimize static charge generation while cleaning the PCBs.

- Material: PP Conductive Handle and PA Fiber Bristles
- Surface resistivity: $10^6 \sim 10^9 \Omega$

Heavy Duty ESD Safe Cleaning Brush

P/N: ICBESD-1607

- Bristle matrix: 3x12
- Bristle length: 19 mm (approx.)
- Length: 170mm (approx.)

ESD Safe Cleaning Brush

P/N: ICBESD-1608

- Bristle matrix: 2x6
- Bristle length: 18mm (approx.)
- Length: 150mm (approx.)

ESD Safe Hard Cleaning Brush with Bent Grip

P/N: ICBESD-1609

- Bristle matrix: 5x10
- Bristle length: 20 mm (approx.)
- Length: 95mm (approx.)

ESD Safe Cleaning Brush vertical type wide

P/N: ICBESD-1610

- Bristle matrix: 1x9
- Bristle length: 25mm (approx.)
- Length: 142mm (approx.)

ESD Safe Cleaning Brush vertical type with Long Bristles

P/N: ICBESD-1616

- Bristle matrix: 1x3
- Bristle length: 42 mm (approx.)
- Length: 125mm (approx.)

ESD Safe Cleaning Brush vertical type extra wide

P/N: ICBESD-1618

- Bristle matrix: 1x12
- Bristle length: 26mm (approx.)
- Length: 170mm (approx.)

ESD Safe Conductive Tray

P/N: ESD-TR-9

"ESD" Safe

- Surface resistance: $10^4 \sim 10^6 \ \Omega$
- 9 sections each of 100x100x10 mm size
- Internal: 300x300x10 mm (approx.)
- External: 315x315x15 mm (approx.)

ESD Safe Conductive Tray

P/N: ITESD-1613

"ESD" Safe

- Surface resistance: $10^4 \sim 10^6 \Omega$
- Dimensions:
  - Internal: 300X215X37mm (approx.)
  - External: 320X230X42mm (approx.)

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"ESD" Safe

Anti-allergic (with Silver Fibers) Wrist Strap

P/N: IWSAAESD-1603

- Elastic Polyester fabric with conductive Silver Fibres which eliminate allergic skin reaction
- In-built 1 MOhm resistor
- Available in blue colour
- Length of Cord: 8 feet
- Snap Button at one end & Banana Plug with Alligator Clip at other end

"ESD" Safe

ESD Safe Wrist Strap

P/N: IWSESD-1602

- Elastic Polyester fabric with conductive plated threads
- In-built 1 MOhm resistor
- Length of Cord: 6 feet
- Snap Button at one end & Banana Plug with Alligator Clip at other end

"ESD" Safe

Grounding Cord

P/N: IGC-1619

Antistatic Grounding Cord used to transfer the static charge from personnel to ground to protect static sensitive electronic devices

- Both ends has Snap Button
- Length: 8 feets (approx.)
- Cord diameter: 2.4mm (approx.)
- Copper wire with PU protection layer
- in-built 1MOhm resistance

Grounding Cord

P/N: IGC-1601

- Designed to ground ESD Table Mats
- Provides two grounding points: one for Wrist Strap and other for connection to ground
- One end has Snap Button and 2 Banana Jacks & other end has Grounding Thimble
- Length: 2 meters (approx.)

"ESD" Safe

ESD Chip Component Box

P/N: ESD-BOX-M

- Surface resistance: $10^4 \sim 10^6$ Ω
- Size: 56x32x21 mm (approx.)
- Spring loaded top cover
- Very useful to store miniature SMD Chip Components

"ESD" Safe

ESD Safe Slippers

P/N: ISESD-1606

- ESD Safe and skidproof
- Tenacious sole and upper
- Comfortable & convenient
- Washable & wear-resistant
- Resistivity: $10^6 \sim 10^9$ ohm
- Colour: Black/Blue
- Size: 40, 42 and 44

"ESD" Safe

ESD Safe Dispensing Bottle

P/N: ESD-DB-180

"ESD" Safe

- Made up of Polyethylene
- Stainless steel one touch pump top
- Capacity: 180ml
- Surface resistivity: $10^9 \sim 10^{10}$ Ohms

ESD Safe Flux Bottle

P/N: EFAB-60

"ESD" Safe

- Made up of Polyurethylene
- Stainless Steel Hypodermic Needle
- Capacity: 80ml
- Surface resistivity: $10^9 \sim 10^{10}$ Ohms

# ESD Safe Gloves, Aprons & other accessories

ESD Safe Apron
P/N: IA-Series

ESD Safe Aprons are made of lint-free polyester filament, which provides good static dissipation and superior air permeability and particle filtration. This helps the operators to be comfortable.
These Aprons have a conductive yarn that provides low surface resistivity of between $10^6\Omega \sim 10^7\Omega$/square and quick static dissipation for effective control of ESD.

- Durable anti static property
- High fastness to washing 100 times.
- High color fastness and tear strength.
- Breathable to wear.
- Available sizes: Medium (M) & Large (L)
  P/N: IAMESD-1604 for Medium size
  P/N: IALESD-1605 for Large size
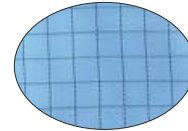
"ESD" Safe

5mm Strip Fabric

ESD Safe Conductive Grid Bags
P/N: IGBESD-1616

Protects stored PCBs and components from the electrostatic charges inside as well from outside through the conductive grid printed on the outside surface.

- Blow moulded added with black carbon & cavitations agent.
- Surface resistance of 10^4-$10^6\Omega$
- Size: 250 x 305mm (approx.)
- Packaging: 1000 Pieces/Bag

"ESD" Safe
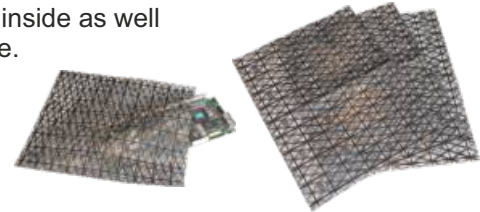
ESD Warning Tape
P/N: IWTESD-1614

High quality ESD Warning Tape is self-adhesive, highly visibility floor marking Tape for marking the boundaries of ESD protected areas. It is highly visible and adheres very well to synthetic floors such as PVC floor tiles, the tape will also adhere to concrete floors and can be expected to remain intact for several months depending on traffic.

- Excellent ESD Performance
- High temperature resistance
- Antistatic warning signs
- Size: 48mm width and 27.5 meters length
- Black legend colour with yellow background

"ESD" Safe

Attention
Observe precautions for handling Electrostatic Sensitive Devices

ESD Safe Gloves with PU Coated Finger Tips

P/N: IPUG-Series

- Made from soft nylon for operator's comfort
- PU coated Finger tips
- Integrated with carbon fiber
- Surface resistivity: $10^6 \sim 10^{10}$ Ohm
- Elastic, absorbent and non-slip type
- Available sizes: Medium (M) & Large (L)
  P/N: IPUGMESD-1611 for Medium size
  P/N: IPUGLESD-1612 for Large size

"ESD" Safe

Lint-free Cleanroom Wipers (9" x 9" size)

P/N: ILFW-99

Non-woven wipers for cleanrooms

- Material: 55% cellulose, 45% polyester
- Size: 9" x 9"
- Packaging: 100pcs/pack
- Excellent absorbency with solvents: 245ml/m^2

This adjustable Circuit Board Holder is very useful for clamping PCB for comfortable working of operator during soldering, desoldering and reworking .

It features 2 adjustable grips on a retractable stand to accommodate various sizes of PCBs up to 198mm width. The adjustable clamps allow the PCB to rotate 360 degrees and stay set in any position.

The base of this rigid metal stand features four rubber feet to ensure stability.

Angle adjusting knob

PCB Clamps

Length Adjusting Knob

"ESD" Safe Working

360 degree adjustable
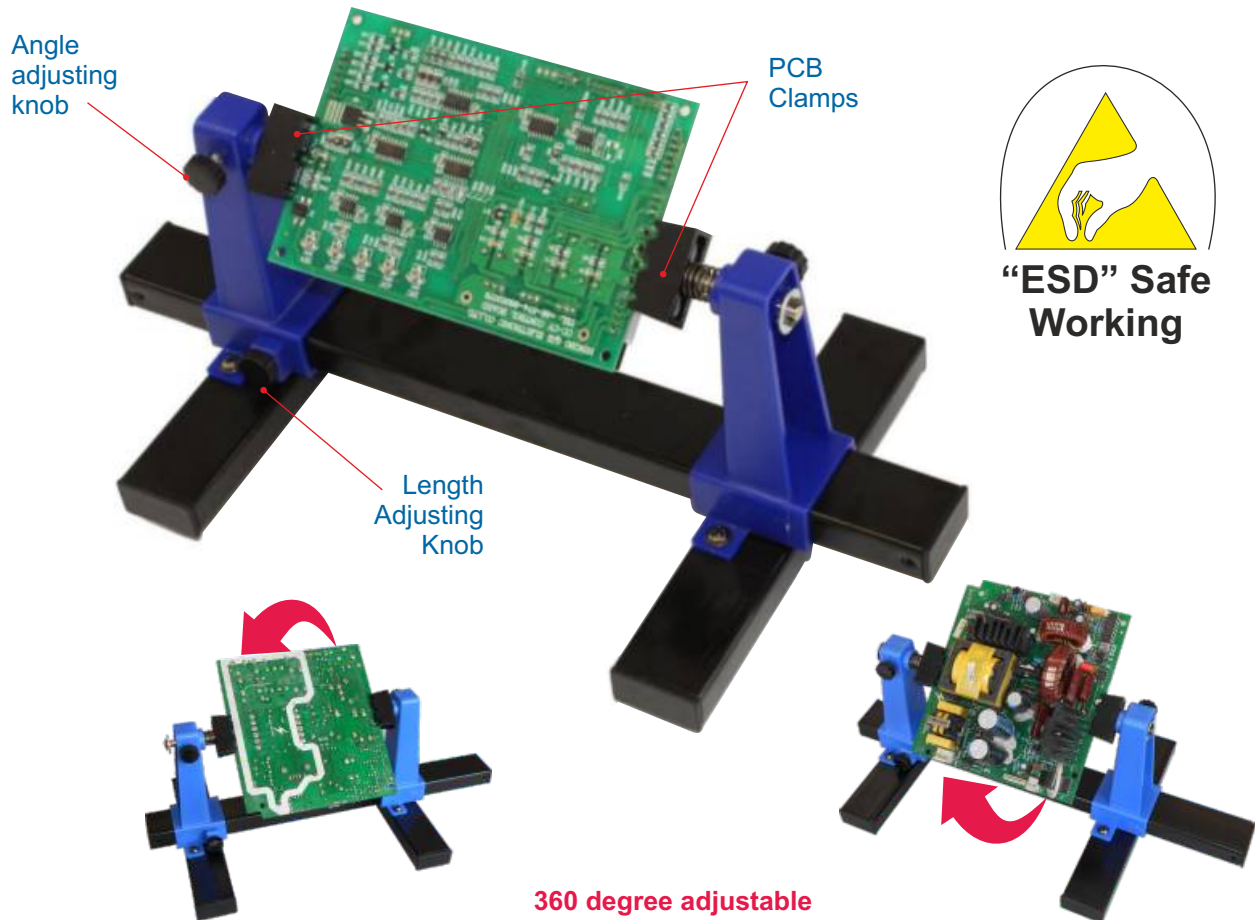
Features:

- The PCB can be turned and rotated thru-out 360° to set the PCB to comfortable positioning to have every access (like front, back viewing) of the PCB.
- Holds circuit boards up to 200 x 130mm size.
- Spring Clamp for holding PCBs
- Light weight, easy to move around

Operation:

- Unscrew Length Adjusting Knob for clamping as per PCB requirement and screw the knobs.
- Put the PCB into the clamping teeth
- Unscrew Angle Adjusting Knob to get the desired angle and then screw the knobs.

ESD Safe **fully metallic** high temperature PCB Rack P/N: COP-804L (suitable for use in ovens)

Zinc plated steel base

Removable Flashboards type Side Panels

"ESD" Safe Working

Aluminium Pillars

Features:

- Complete metallic body of Aluminium alloy
- Heat Resistant upto 180°C
- Side panels consists of five flashboards for easy change
- Screw adjustable type can also be used in ovens

Specifications

Surface Resistance	: $10^4 \sim 10^6 \Omega$
Overall Size (approx.)	: 355 x 320 x 563 mm
PCB Capacity	: 50 pieces
Suitable PCB sizes	: 50~250 mm PCB width
PCB Guide Slot	: 3.5D x 5W x 10P mm
Material:	
- Side Panel	: Aluminium Side Panel
- Pillars	: Aluminium Pillars
- Base	: Zinc coated steel base

ESD Safe **easily adjustable with 4-Levers** PCB Rack P/N: IPMR-805

**Smooth sliding easy PCB size adjustment**

Specifications

- Surface Resistance: $10^4 \sim 10^6 \Omega$
- Heat Resistance: 80°C
- Size: 355 x 320 x 563 mm (approx.)
- PCB Capacity: 50 pieces
- Suitable for 50~250 mm PCB width:
- PCB Guide Slot: 3.5 x 5 x 10 mm
- Top & Bottom Plates: Plastic
- Easy-to-adjust Lever Mechanism

High quality heavy duty Screws for channels

Hi-Quality, easy-to-adjust Lever mechanism inplace of screws
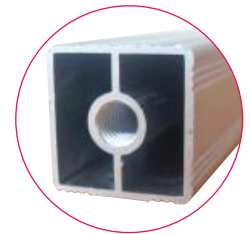
High strength thick wall metallic channel