



YOUR RELIABLE PARTNER FOR CONTROLLED ENVIRONMENTS

# **About us**

Pro-Pack was founded in 1984, We serve the Electronic, Pharmaceutical, Semicon, and Aerospace Industries. Our mission is to become a total integrated solution provider to the industries. For more than 32 years, the name of Pro-Pack has been synonymous with excellence in providing high quality Static Control products. Pro-Pack operates in 7 countries with a staff strength of over 200, Head office in Singapore and branch offices in Malaysia, Thailand, India, China, Philippines and Indonesia. World-class work force and well-diversified customer market segments and business units. The company continues to grow as a global enterprise through the expansion of its diverse business activities.

Our global presence and resources provide value-added solutions that are integrated with manufacturing and logistics to optimize customer & operations and competency in their respective industry. Pro-Pack cares for your business and so make Pro-Pack your partner to work with today!



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# **Food and Safety**

We offer solutions that help the food industries optimize the quality of their products to enable consumer protection. Our solutions that help to mitigate risk, improve operational efficiencies and impact the bottom line.

## Single Channel

electronic pipettes .....

#### **MODEL NO: PPM-E4XS**

#### **Features**

- All piston movements are controlled by the onboard microprocessor, which moves the piston the set distance at the set speed, regardless of user.
- Ergonomically designed for use with either hand, fits like a glove is extraordinarily well balanced while
- Admin Mode enables you configure the pipette any way you want.



**MODEL NO: PPM-E4XAS** 

VOLUME RANGE	ACCURACY	PRECISION
100 μl – 1000 μl	3.0 μL: ± 3.0 % 4.0 μL: ± 0.8 %	0.6 μL: ≤ 0.6 % 1.0 μL: ≤ 0.2 %

# Adjustable Spacer

#### Features

- Continuously-variable spacing allows nozzle spacing between 9-14 mm on 8-channel models and 9-19 mm on 6-channel models, suitable for pickup from 96-well plates and dispensing to 24-well plates or tubes, or vice versa.
- Multi-dispense takes the drudgery out of repetitive pipetting by calculating how many aliquots can be dispensed from a single pickup



VOLUME RANGE	ACCURACY	PRECISION
100 – 1200 μL	3.6 $\mu L$ : $\pm$ 3.6 % 4.8 $\mu L$ : $\pm$ 0.8 %	0.60 μL: ≤ 0.60 % 1.2 μL: ≤ 0.20 %

# Microbial Luminescence System

food and safety ......

- Microplate, 5 injector-dispenser luminometer designed for microbial detection.
- Results available approximately 48 hours sooner than traditional methods.
- Reduces stock holding requirements and improves responsiveness to customers.
- Time saved improves cash flow.
- Allows quality performance to be tracked over time.



**MODEL NO: PPM-MLS48** 

OPERATION TEMP	INJECTORS	SPECTRAL RANGE
15 to 25°C	IIn to 2 cyrings	280-650 nm

## Multi Channel

electronic pipettes .....

#### **Features**

- Tip and nozzle design provides exceptionally easy multichannel tip mounting.
- Multi-dispense takes the drudgery out of repetitive pipetting by calculating how many aliquots can be dispensed from a single pickup.
- All piston movements are controlled by the onboard microprocessor, which moves the piston the set distance at the set speed, regardless of user.



VOLUME RANGE	ACCURACY	PRECISION
1 – 10 μL	0.04 μL: ± 4.0 % 0.075 μL: ± 1.5 %	0.03 μL: ≤ 3.0 % 0.03 μL: ≤ 0.6 %

### Luminometer

## **Features**

- Lightweight, portable battery-operated instrument.
- Highly sensitive luminescence measurements.
- Dynamic range of 5.5 orders of magnitude.
- Single read mode for unprocessed luminescence readings of single sample tubes.
- Easy-to-use, does not require a PC.



Data output in RLU/s

DYNAMIC RANGE	MEASUREMENT TIME	DATA FORMAT
orders of magnitude	1.0 – 99.9 s	Data output in RLU/s

5.5 orders of magnitude

microplate reader ......

## **Multimode Reader**

## **Features**

- Patented Hybrid Technology with independent filter and monochromator-based optics.
- High performance filter system.
- Ultra-fast plate processing speeds with multiple PMT detectors.
- Live cell options: Controlled environment and direct bottom detection



**MODEL NO: PPM-MR12** 

#### **DETECTOR WAVE LENGTH**

**Photodiode** 

230 - 999 nm 1 nm increments **DYNAMIC RANGE** 

0 - 4.0 OD



# **Food and Safety**

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## Fluorescence Reader

MODEL NO: PPM-FRFS5

•• microplate reader

#### **Features**

- Custom-mapped fiber optics for optimal signal transfer.
- Selectable, automated top- or bottom-probe reading for best sensitivity.
- Glow luminescence reading with top detection for best sensitivity.
- Incubation to 50°C for temperature-sensitive assays.



DETECTOR	WAVE LENGTH	SENSITIVITY
PMT	300 - 700 nm	100 amol ATP (flash)

# Molecular Detection System

MODEL NO: PPM-MDS100

· food and safety

#### **Features**

- Reduce risk of contamination and increase technician productivity.
- Rapidly load and unload reagent tubes.
- Efficiently discard reagent tubes post amplification.



OPERATING TEMP	STORAGE TEMP	POLUTION DEGREE
15°C-35°C	-10°C–60°C	2

#### Hygiene Monitoring System

MODEL NO: PPM-HMS1

food and safety

#### Features

- Measures tests for ATP from surface and liquid samples, high sensitivity ATP/Allergen Prevention, Total Viable Count, Enterobacteriaceae, Coliform, E. coli, Listeria spp., Alkaline Phosphatase, and Acid Phosphatase.
- Sensitive can detect down to 0.1 femtomoles of ATP.
- Advanced photodiode technology internal solid state detector is not damaged by drops or shakes.



TEST PLANS	USER ID'S	TEST LOCATIONS
100	200	5000

# Absorbance Reader

#### Features

- Full-spectrum UV/V is absorbance measurements in less than 1 second.
- Measurement in up to 1536-well microplate format.
- Integrated cuvette port for individual samples.
- Linear, orbital and double-orbital shaking as well as uniform incubation up to 45 °C.
- Compatible with LVis Plate for low volume samples.



DETECTOR	WAVE LENGTH	SPECTRAL RANGE
CD Spectrometer	220 - 1000 nm	220 - 1000 nm for ABS

# **Real Time PCR System**

· food and safety

**Features** 

- Plug and Play:No installation specialist required.
- Streamlined Protocol: Facilitates processing of multiple assays in the same run, for maximum efficiency.
- Simple, Intuitive Software: Enables rapid, straight forward PCR set-up, automatic data interpretation and traceability of results.
- Small Instrument Footprint: Fits easily into laboratory environments, where bench space is at a premium.



VOLUME	TEMP RANGE	DETECTION RANGE
10 - 50μL	4° to 99.9°C	520 to 740nm

# Time Temperature Indicator

MODEL NO: PPM-TT

#### Features

- Can be shipped & stored under most conditions.
- Allows product tracking for internal handling and chain of custody.
- Tested in both real world applications as well as a lab environment.
- Moisture conditions can't stop it from working accurately.



ADHESIVE	TEMP ACCURACY	TIME
sure-Sensitive	+/- 1°C / +2°F	+/- 1

+/- 15% under isothermal conditions

**ACCURACY** 



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## Table Top Autoclave

**MODEL NO: PPM-13060** 

autoclave

#### **Features**

- Microprocessor control system provides fully automatic programs, including add water, sterilization and dry.
- Pre-installed sterilization cycles.
- Two separate water-level check mechanisms: water tank level and chamber water level
- Auto dry function.
- Pressure door auto-lock device.

CAPACITY	TECHNICAL DIRECTIVES	PRODUCTION CAPACITY
21/161/181/231/251	93/42/EEC	1000 units/month

# Vertical Autoclave Sterilizer

MODEL NO: PPM-357

autoclavo

#### **Features**

- Overpressure auto-discharging at 0.145 0.165 Mpa.
- Dual scale numerical pressure gauge indicate temperature and pressure.
- Operating easy, security and reliable.
- Heating Type: Direct heating by immersed copper tubes of heating elements.



VOLUME	TEMPERATURE	MAX WORK PRESSURI
35L/50L/75L	105°C-134°C	0.23 Mpa

# Hand Wheel Type Vertical Autoclave

MODEL NO: PPM-B75

- Complete process of filling water, dynamic pulse exhaust, heating, sterilizing and drying runs automatically.
- Automatic selecting quick or low exhaust to avoid sterilization liquid overflowing.
- Water inlet filter to keep high water quality.
- Optional printer for recording sterilization data.
- Sterilization programs for dressings, equipment, rubber, culture medium, waste, etc.



CAPACITY	WORKI

50L/ 75L/ 100L/ 120L/ 150L/ 200L WORKING PRESSURE

0.175MPa / 0.217MPa

**TEMP. ACCURACY** 

±0.1°C

## Horizontal Steam Sterilizer Autoclave

MODEL NO: PPM-122

autoclave

#### Features

- The sterilizing course of the automatic sterilization is controlled by computer and is easy to operate.
- Horizontal autoclave has a drying function, suitable for dressing drying.
- It offers an over-temperature, over-pressure auto-protect device.
- The chamber of the sterilizer is made of stainless steel.
- It has a printer.

150L/ 200L/ 280L

VOLUME	TEMPERATURE

40 °C - 134 °C

**WORKING PRESSURE** 

0.22 MPa

#### Automatic Glassware Washer

**MODEL NO:** PPM-93468

. life science

### Features

- Maximizes usable space with sliding vertical door and chamber.
- High Volume double sets of racks loaded side by side.
- Visual check on progress of wash cycle enabled through glass door.
- Reduces inventory.



#### WASHER DEPTH SOUND LEVEL

736 mm - 840 mm <63 dBa - <69 dBa

# LOADING HEIGHT

674 - 945 mm

### Biochemistry Analyzer

ry Analyzer MODEL NO: PPM-BCA48

life science

BCA is not just a standard photometer; it is a true new generation semi-automatic biochemistry analyzer capable of performing Routine Biochemistry, Hormonal assay, Electrolytes, Therapeutic drugs and Drug-enzyme investigations.

#### **Features**

- 7 Filters and 3 optional positions
- 48 direct test keys on board
- Lamp saving indication on keyboard
- 10000 memory of tests results
- 248 tests can be programmed
- Facility to create test profiles 2 USB port, 1 RS port
- Search data by Patient ID, Test name, Date, Sample ID
- Real time online graph and temperature on screen
- Storage of Graph (Calibration, QC) for each test



PORT

2 USB port, 1 RS port



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# Bench Top Freeze Dryer

MODEL NO: PPM-BT10FD

freeze drye

#### **Features**

- Pre-freezing function for samples.
- Transparent drying chamber is safe and easy to observe.
- Novel design, small size and easy operation.
- Microprocessor control & LCD touch display which can display drying curve, vacuum, condenser temp., run time, ambient temperature.
- Nitrogen inflation valve is available.



ED	EEZ	EN	IDV	ΛD	EΛ
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**ULTIMATE VACUUM** 

**COLD TRAP TEMP** 

0.07-0.1 m<sup>2</sup>

<10 Pa

<-55°C/-80°C

FREEZE DRY AREA

0.08-0.27 m<sup>2</sup>

without inner coil.

**Features** 

temperature.

compressor.

**VACUUM DEGREE** 

MATERIAL CAPACITY

- Environment-friendly, conform to international standard.

- Communication interface & liquid crystal display include

- With pre-freezing for samples, widely open condenser,

- Large refrigerating capacity and slight noise of Danfoss

drying curve, vacuum, condenser temp., run time, ambient

< 10 Pa

0.7-1.8 L

# **Square Cabinet Freeze**

MODEL NO: PPM-SC30

freeze drye

#### **Features**

- Pre-freezing and drying are in same place.
- The machine is cascade refrigeration technology.
- Silicon oil is intermediate medium in the shelves for heating to ensure drying material uniformity.
- The shelf temperature is adjustable and easy to control.
- The square shelf is easy to operate and clean.
- 7 inch LCD display and touch screen control system, it adopt PID intelligent control system.



FREEZE DRYING AREA

CONDENSER TEMP.

0.24-1 m<sup>2</sup>

≤-80°C

SHELF TEMP

-50 ~ +70°C

# Blood Bank Refrigerator

· refrigerator and freezer

Vertical Freeze Drver

MODEL NO: PPM-RF91

### **Features**

- Controlled by micro-computer; digital display of temperature; the display resolution is 0.1 degree; the inner temperature can be adjustable between 2 to 6 degree.
- Alarm control of high or low temperature; the temperature points for alarm can be set according to the requirements.
- Fluoride-free foaming, fluoride-free refrigerant, environmentfriendly.



CAPACITY

TEMP./DEGREE

**WALL MATERIAL** 

120/310/400/500 LITRE

4±1

**Cold Rolled Steel** 

# Ultra Low Deep Freezer

MODEL NO: PPM-RF97

- Microprocessor-based temperature controller, -10°C~-65°C can be set freely, controlling precision is 1°C,
   Digital temperature display.
- Keyboard lock and password protected configuration page, Delayed start and safe stop interval between restart and being terminated.
- Unique refrigeration circulation and unipolar compressor Oil-lubricated technology.
- Upright type , Stainless steel interior, Outer is painted steel panel, 4units Casters for easy handing
- High or low temperature alarm, Power failure alarm, Low battery alarm, Door open alarm, Filter blocking alarm, system failure alarm.





CAPACITY RANGE	BATTERY BACKUP	ALARM	CONTROL	REMOTE ALARM	INPUT POWER
100 - 828 Litres	72 hours	Visual & Audible	Remote Mobile	Yes	800 - 3200 W



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# Table Top Centrifuge

centrifuge

# Refrigerated centrifuge

#### **Features**

- Brushless DC motor, free maintenance, no powder pollution, micro computer control, digital display indicates the time, speed and RCF.
- Electric lid lock, over speed and imbalance protection.
- The centrifuge body is made of high quality steel, Safe and reliable.



MAX SPEED	SPEED ACCURACY	TIME RANGE
12000 r/min	±20r/min	1~99min

#### **Features**

- Import compressors fluorine free, double cycle cooling, cold and hot alternating easily, free environment pollution and precise in temperature control.
- Flexible axle driven system which drive the rotor directly, smooth in operation, low noise and small vibration.
- 3 tiers protection steel cover, safe and reliable.



MAX SPEED	SPEED ACCURACY	TIME RANGE
6000 r/min	±50r/min	0~99H 59min

# ELISA Microplate Reader MOI

## Features

- Small ice shape, granular amorphous ice, which can penetrate into the narrow space, effectual ice bath, specialized for laboratory.
- Stainless steel shell, beautiful and practical.
- Microcomputer control systems, process monitoring, perfect protection.
- Front power switch, easy to use.



ICE AMOUNT	ICE STORAGE CAPACITY	COMPRESSOR POWER
40 - 210 Kg /24H	15-60 Kg	1/6 - 3/4 HP

# **Features**

- Provided with power on self-checking. Error data will be displayed on LCD monitor if something is wrong with the photoelectric system.
- Checking mode: single wave/dual wave detection; single aperture /dual aperture detection.
- It can touch the screen to operate the device.



REPEATABILITY	MEASUREMENT RANGE	PHOTOMETRIC ACCURACY
<0.5%	0.000~4.000Abs	±1% or ±0.001 Abs

# ELISA Microplate Washer

#### **Features**

- Microcomputer control, 5.1-inch LCD big screen, all wash information are displayed in a screen.
- Humanized menu, Humanized-machine interaction mode, convenient operation and no need of training.
- Traffic thomas vacuum pump, large flow, and ensure the washing effect.
- Automatically emissions when waste liquid full.



WASHING TIMES	RESIDUAL VOLUME	PORT
0~900 Times	< 0.8 UL/Well	RS-232

# **ELISA Processor**

**Features** 

- 1 Robotic hand.
- 4 Pipetting probe, 1ul stepping (1000ul volumes).
- Total 25 racks, arbitrary rack can be defined as sample or reagent on the software.
- 4 units 96 well microplates (pipetting, incubator, reading).
- 1 unit independent washer & reader (two 8 nozzle manifolds).



MODEL NO: PPM-EL14

PRIMARY SAMPLE TUBE	PIPETTING	WASHING RESIDUAL
11 5 12 mm	9l1000l /10l)CV < 50/	~2ml



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### **Horizontal Laminar Flow Cabinet**

#### **Features**

- 99.99% efficient HEPA filter.
- Double-gasket, negative pressure HEPA filter leak
- Front-mounted light and blower switches.
- Glacier white epoxy-coated steel frame and exterior panels.
- Angled front profile.



NOMINAL WIDTH	LIGHTS	CLASS
3 / 4 / 6 Feet	Fluorescent / Ultraviolet	100

biological safety cabinet ......

### **Features**

- Small dimension, save space.
- Centrifugal fan, speed, adjustable; H14 HEPA filter.
- Time reaerve function: This can save 30 minutes waiting time after activating the cabinet and the sterilization time after experiment.
- Remote control: Each function can be realized 6 meters away from the cabinet by remote control, which can protect the operator under emergency.



INFLOW VELOCITY	DOWNFLOW VELOCITY	ILLUMINATION
0.53±0.025 m/s	0.33±0.025 m/s	≥1000Lux

Clean Booth

MODEL NO: PPM-CB23

# **Features**

- Framework: Industrial aluminum the materials are strong, beautiful, non-rust, no dust production.
- Walls: Sealed with anti-static curtain, good anti-static affection, transparency, mesh definition, no deformation,
- Internal of clean booth use dedicated purification lights, do not produce dust.



AIR VELOCITY	SOUND LEVEL	VIBRATION HALF PEAK
0.3 - 0.5 m/s	≤65db	≤ 5 μm

#### Vertical Laminar Flow Cabinet

laminar flow cabinet ......

#### **Features**

- Nominal downflow velocity of 45-65 fpm.
- Aerodynamic air foil.
- UV-resistant, glacier white and gray, dry powder epoxy-coated aluminum and steel construction.
- UV-opaque and resistant 1/4" thick tempered safety glass sash and sides.
- Ergonomic 10° angled and hinged sash that pivots upward, locks to a loading height of 20".



NOMINAL WIDTH	CLASS	DOWNFLOW VELOCITY
2/3/4 Feet	100	45-65 fpm

biological safety cabinet .....

#### **Features**

- The transparent side glass windows maximize light and visibility inside the cabinet, providing a bright and open working environment.
- The 10° slopped front allows an ergonomic, fatigue-free working posture.
- Front window can be closed manually in case of power failure.



INFLOW VELOCITY	DOWNFLOW VELOCITY	ILLUMINATION
349m³/h	638m <sup>3</sup> /h	≥1000Lux

# **Dispensing Booth**

MODEL NO: PPM-BCA48

- Automatic changeable frequency system monitors the air velocity to ensure its stability in the work area.
- Differential pressure gauge is equipped to real-time monitor the filters.
- Unique designed air duct effectively controls the noise.



AIR VELOCITY	SOUND LEVEL	CLEAN LEVEL
0.3 - 0.5 m/s	≤75db	Class 100



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#### **Features**

- Soft touch control panel, LED Display.
- Adjustable airflow system.
- Front window, fluorescent lamp and UV lamp are interlocked, and equipped with UV timer.
- Motorized tempered glass, height adjustable.
- Microprocessor UV radiation.



MATERIAL	AIR SPEED	NOISE
Epoxy coated cold-rolled steel	0.3-0.5 m/s	≤ 65dB

# **Primary Filter**

### **Features**

- Pre-filters for AHUs and other ventilation systems.
- Pre-filters for gas turbines.
- Special industries such as nuclear, defense.
- Circulation filtration system in clean room.
- Pre-filters for HEPA filtration systems in limited area.



EFFICIENCY	AIR FLOW	INITIAL RESISTANCE
G3 / G4	3400 m <sup>3</sup> /h	60-85 Pa

## Clean Air Pass Box

. pass box .....

- Mechanical interlock is reliable, maintenance-free, fail safe and maintains cleanroom integrity by preventing both doors from being opened at the
- The main body of the pass box is constructed of industrial-grade electrogalvanized steel.
- Acrylic doors provide a clear view of the internal chamber.



MODEL NO: PPM-PB26

MATERIAL	EFFICIENCY
Stainless Steel 304 / 316 / 316L	≥ 99.99% @ ≥ 0.3µm

## **Active Carbon Filter**

#### **Features**

- Large media surface
- Strong absorption capacity
- Easy installation
- Long life



EFFICIENCY	RATE AIRFLOW	INITIAL RESISTANCE
90%	400 - 1000 m <sup>3</sup> /h	40 Pa

#### **Features**

- Mini pleat designed and cost efficient.
- Can be widely used and the compact structure saves the storage space.
- With ultra-thin designed which saves the installation space.
- Blue gel sealant designed with perfect sealing performance.



**INITIAL RESISTANCE RATE AIRFLOW EFFICIENCY** 300 - 1300 m<sup>3</sup>/h HC=99.99% @ 0.3μm ≤ 120 Pa

**Portable Air Shower Pass Box** 

MODEL NO: PPM-PB11

pass box .....

- Standard construction is Epoxy Painted Steel, inside stainless steel/full stainless steel 304. 316L Stainless Steel units are also available.
- Flame polished 3/8" thick clear doors.
- Continuous stainless steel piano hinge.
- Heavy Duty 1/4 Turn chrome plated latching handles.
- Mitered anodized aluminum trim molding to frame out opening.



MATERIAL	MATERIAL THICKNESS	SIZE
Steel	1.0/1.2/1.5mm	Customizable

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CO<sub>2</sub> Incubator

incubator

# Biochemical Incubator MODEL

#### **Features**

- Mirror stainless steel tank, easy for cleaning.
- Micro computer temperature control, small temperature
- The door temperature control system can prevent the condensation of the glass door in cabinet.



HEAT METHOD	TEMPERATURE RANGE	VOLUME
Air / Water jacket	RT+5°C-50°C	80 / 160 L

#### **Features**

- Microcomputer intelligent control, LCD temperature, time and luminance display, over-temperature alarm function.
- Surface adopts baking paint sub-light cladding to avoid ray radiation, shelves can be adjusted optionally.
- Cultivating can be taken in the airtight environment.



CAPACITY	TEMP RANGE	TIME RANGE
100L/150L/250L	0-65°C	0-9999 min

# Isolation Chamber

#### **Features**

- The chamber liner is made from a special TPU film and strengthened by inserting ABS poles along each side of the structure.
- The "all around" zipper system allows for the chamber to open completely giving easy operator accessibility.
- The chamber has ten integrated glove portals on three sides to allow for easy access to the patient and two utility portals used for infusions and other medical equipment.
- The chamber negative pressure will be up to -15pa only in 2 minutes after power on.







SSURE

AIRFLOW RATE	CHAMBER NOISE	LOAD BEARING	FILTER EFFICIENCY	OPTIONAL	NEGATIVE PRES
$67\pm10\%({\rm m}^3/{\rm h})$	<72dB(A)	Up to 150 kg	99.999% for 0.3μm	Stretcher	Up to -15Pa

Pathology Workstation MODEL NO: PPM-PG110

- Enclosure constructed of 3/8" acrylic.
- Multiple filtering options available including Bagout HEPA with 99.99% efficiency.
- Angled front of enclosure allows safe up-close work.
- Maximum personnel protection maintained without sacrificing worker comfort.
- Aerodynamically designed air foils equipped with alarm sensor.
- Units come standard with Face Velocity Alarm.

MATERIAL	DISPOSAL	HEIGHT ADJUSTMENT
304 Stainless-Steel	1/2 hp	81cm -111cm





# **Purification**

We provide a wide array of product solutions for customer needs in air and water filtration for residential, industrial and commercial applications.

## Micro-Klean Filter

#### **Features**

- Rigid depth filter construction
- · Reduces unloading at high differential pressure
- Effi cient reduction of deformable materials
- · Consistently superior particle reduction throughout filter life and at high flow rates (flux)
- Enhanced contaminant holding capacity
- · Fewer filter change outs
- · Long filter life

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**GASKETS** 

**MAX. OPERATION TEMP** 

Silicone, Fluorocarbon, EPR, Nitrile & Polyethylene

80 °C

100 kPa - 410 kPa

# **DIFFERENTIAL PRESSURE**

# · Higher filtration efficiency at the selected rating - CFR 21 listed materials of construction • Suitable for food & beverage and other regulated applications - Graded density construction

**Features** 

• Very low pressure drop and high fl ow rates · Longer fi Iter life and more cost effective fi Itration

- Low extractable levels

Nitrile

**Betapure Filter** 

• Suitable for water, electronics and electroplating

**GASKETS** Silicone, Fluorocarbon, EPR &

Micro-Klean Filter

- Blanket media filter cartridge

**MAX. OPERATION TEMP** 

150°F (65°C)

70 psid (4.8 bars)

**DIFFERENTIAL PRESSURE** 

# Micro-Klean Filter

#### **Features**

- Low pressure drop and long life for consistent filtration performance.
- No by-pass or unloading with high pressure drops or pressure surges.
- 2.3 times the surface area of competitive ungrooved cartridges for greater dirt loading capacity.



**MAX. OPERATION TEMP DIFFERENTIAL PRESSURE GASKETS** Silicone, Fluorocarbon, EPR 70 psid 121°C & Nitrile

# **Features**

- Consistent and reproducible contaminant reduction.
- To meet demanding filtration quality standards in today's market, absolute ratings will provide product consistency and product yields.



**GASKETS MAX. OPERATION TEMP DIFFERENTIAL PRESSURE** 

Silicone, Fluorocarbon, EPR, Nitrile & PE Foam

120°C

550 kPa (79 psi) @ 20 °C

MODEL: NT-T-SFRIFS

# **Betapure Filter**

purification .....

**MODEL: PK-SERIES** 

#### **Features**

- Distinct particle size cutoff at the specified removal rating.
- Reproducible effluent quality throughout the filter's life.
- Significantly longer life.
- Easy disposal, suitable for incineration or shredding.



**GASKETS MAX. OPERATION TEMP** 

Silicone, Fluorocarbon, EPR. Nitrile & PE Foam

121°C

**DIFFERENTIAL PRESSURE** 

70 psid (4.8 bar) @ 20°C

# **Betapure Filter**

## **Features**

- As much as 3 times greater dirt holding capacity than competitive filters.
- Allow for broad chemical and temperature compatibility.
- Suit a wide range of applications.
- Allows for consistent filtration quality.



**GASKETS MAX. OPERATION TEMP** 

Silicone, Fluorocarbon, EPR, Nitrile & Polyethylene

340 kPa (49 psi) at 30°C

**DIFFERENTIAL PRESSURE** 



# **Purification**

We provide a wide array of product solutions for customer needs in air and water filtration for residential, industrial and commercial applications.

Betafine Filter

**Features** 

costs.

### **Betafine Filter**

#### **Features**

- Consistent, repeatable filtration, improving effluent quality.
- Help provide consistent performance.
- Longer service life compared to non-pleated media.
- Lower total filtration operating costs.
- No media migration.



**GASKETS** 

Silicone, Fluorocarbon &

Ethylene Propylene (EPR)

**MAX. OPERATION TEMP** 

**DIFFERENTIAL PRESSURE** 

175°F (80 °C)

60 psid @ 104 °F

**GASKETS** 

Silicone, Fluorocarbon, Ethylene Propylene, Polyethylene & Nitrile **MAX. OPERATION TEMP** 

175°F (80°C)

**DIFFERENTIAL PRESSURE** 

40 psid @ 77 °F

### Zeta Plus

#### **Features**

- Enables loading and unloading at waist height.
- Minimal fluid spills when handling spent capsules.
- Single or two-stage depth filtration within one filter holder.
- Full utilization of the filter media.
- Small footprint during filtration.
- Fast, reliable and robust capsule-to-capsule connectivity.



**GASKETS** 

**MAX. OPERATION TEMP** 

**DIFFERENTIAL PRESSURE** 

Silicone

40°C

2.4 bar (35 psi)

Zeta Plus purification •

#### Features

- Increased throughput with high turbidimetric efficiency.

- Film and paper coatings, photographic film, lens coatings

and magnetic media, can coatings, high quality paints and

- CD and DVD media, printed circuit boards, video displays, DI

reduced downtime, product waste and labor and disposal

- Helps reduce cartridges used, change-out frequency,

- Enhanced protection of downstream membrane
- A complete particle retention range from coarse to fine.
- Open grade EXT filters are designed for primary clarification.



**GASKETS** 

Silicone

MAX. OPERATION TEMP

82°C

**DIFFERENTIAL PRESSURE** 

35 psid maximum cartridge pressure drop

MODEL: I A-SFRIFS

#### Zeta Plus

**MODEL: LP-SERIES** 

#### **Features**

- LP filter medium is non-pyrogenic, and is unlikely to cause false positive results.
- High contaminant holding capacity for economical filtration and reliable particle reduction.
- Allows pilot testing and scale-up with the same materials that will be used in full-scale systems.



**GASKETS** Silicone, Fluorocarbon,

**EPR & Nitrile** 

**MAX. OPERATION TEMP** 82°C

DIFFERENTIAL PRESSURE

2.4 bar maximum cartridge pressure drop Zeta Plus

purification .....

- High contaminant holding capacity for economical filtration and reliable particle reduction.
- Low extractable, fast rinse-up.
- Reduced labour time for change-outs and elimination of cleaning validation.
- Eases validation and regulatory submissions by providing vital documentation and traceability.



**GASKETS** Silicone, Fluorocarbon,

**EPR & Nitrile** 

**MAX. OPERATION TEMP** 

82°C

**DIFFERENTIAL PRESSURE** 

2.4 bar maximum cartridge pressure drop



We provide a wide array of product solutions for customer needs in air and water filtration for residential, industrial and commercial applications.

**MODEL:** PDA/PSA/PFS-SERIES

### **Features**

- Exceptionally high contaminant capacity and fast flow rates for long on-stream life and maximum economy.
- Ensures easy wet out for integrity testing and low protein binding.
- Reliable sterilising filtration.
- Eliminate cleaning and cleaning validation step associated with stainless steel housings for maximal ease-of-use.

PDA	PSA	PFS
Jilli .	A. S.	111

**GASKETS** 

**MAX. OPERATION TEMP** 

**DIFFERENTIAL PRESSURE** 

**MEMBRANE SUPPORT LAYER** 

PDA Polyethersulfone **PSA** Double Layer Multi-Zone Microporous Membrane Nylon 6, 6

PTFE

Membrane

Silicone, Fluorocarbon, EPR **Nitrile & PTFE** 

80 °C

35 psid (2.4 bar) @ 77°F

**Polypropylene** 

Micro-Wynd	MODEL: WYND II

#### Features

- Higher filtration efficiency at the selected rating.
- Suitable for food & beverage, and other regulated applications.
- Very low pressure drop and high flow rates.
- Easy to install and remove.
- Less media migration than conventional wound cartridges.
- Suitable for all filter housings.

**GASKETS** Silicone, Fluorocarbon, EPR

& Nitrile

	1	<b>3</b> 8	
	100	2	
	850	20	
	883	<b>3</b> 2	
	No.	28	
	No.	30	
		20	
	100	20	
		<b>3</b> 0	
	188	30	
	6	200	

COMPLIANT

**FLOW RATE** Z/Y-2, A-3, B/C-4, F/L/O/V/W-5

CFR21

MODEL: 1WTSH1

# Microfluor

#### **Features**

- Durable polypropylene construction.
- Broad chemical compatibility.
- Suitable for aggressive solvents, corrosive liquids, and gases.

**PFS** 

- Various cartridge styles.
- Withstands severe operating conditions.
- Easy installation.



**GASKETS** Silicone, Fluorocarbon, EPR & Nitrile

**MAX. OPERATION TEMP** 

140 °C (60°C)

60 psid (4.1 bar) @ (25°C)

**MODEL: DUOFLO** 

### Cuno CTG Klean

# purification .....

#### **Features**

- No cleaning required.
- Limited operator exposure.
- Reduced labour and faster turn-around.
- No cross contamination of products.
- No components to clean, lose, damage, or stock.
- Reduces operating costs by eliminating unnecessary disposal of partially used filter cartridges.



**DIFFERENTIAL PRESSURE CORE MATERIAL MAX. OPERATION TEMP Polypropylene** 71°C 1723 kPa (250 psi)

### **DF Series Filter**

purification .....

- Longer Service Life up to 4 times or more that of conventional felt filter bags.
- Reduced Filter Usage-minimizes product loss, labor, disposal costs, and operator exposure.
- Reduces unfiltered fluid from contaminating the clean effluent side of the housing during filter change-out.
- Ease of piping for series or parallel installation.



2.4 bar @ 20°C

**DIFFERENTIAL PRESSURE** MATERIAL **MAX. OPERATION TEMP** Polyester/Polypropylene 149°C/82°C



We provide instruments that are used in industrial and research applications ranging from aerospace, power generation, petrochemical, manufacturing, and automotive. We contribute to the quality of products and add to the safety of infrastructure and facilities.

#### Anemometer

#### **Features**

- Circuit: based on fast and high accurate MCU design.
- High accuracy NTC resistance for air temperature measuring.
- Super large backlit LCD displays air velocity, temperature and air velocity level at the same time for easy-reading.
- Air velocity level indication.
- Low voltage battery indication.
- MAX/MIN/AVG/HOLD function.



VELOCITY RANGE	TEMP ACCURACY	VELOCITY ACCURACY
1.4~108 Km/h	±1.5°C	±3% ± 0.1

# **Dual Scale Light Meter**

• industrial test meters & machines

#### Features

- Dual Display, 4-digit LCD reading.
- Spectral Sensitivity close to CIE photopic Curve.
- Measuring Levels Ranging 0.01 to 999900 Lux, 0.01 to 99990 fc, Autoranging 5 step.
- Accurate and Instant response.
- Integral illuminance measurement.
- Luminous intensity measurement.



ACCURACY	MEASURING RATE	RESOLUTION
± 3% rdg ± 5 dgt	5 time/sec	0.01 Lux, 0.001 fc

# Sound Level Meter

#### **Features**

- Simple operation
- Rugged design and high resolution display
- Latest digital technology
- Large measurement range
- Choice of 4 models
- Logging and Averaging models
- Greater than 35 hours battery life



MODEL NO: PPM-SK15

NOISE FLOOR	SELECTABLE RANGES	FREQUENCY WEIGHTINGS
<33dB(A)	30-100 or 60-130dB	A and C

# Digital Thermohygrometer

#### **Features**

- For checking indoor climate.
- A folding stand is located on the back of the device so that we can comfortably read the current values on the display even when we are sitting at our table or on the sofa.
- Measures temperature and air humidity.
- Permanent indication of daily highest and lowest values.
- High-quality rubberised casing finish for easy grip.
- Also possible to mount this device onto the wall.



TEMPERATURE	ACCURACY	HUMIDITY ACCURACY
-10.0 to +70.0 °C	±1°C	5% RH

### Pocket Moisture Meter

industrial test meters & machines

- Electronic moisture meter in pocket format.
- For quick single and serial measurement.
- Moisture in weight %.
- 3-line LC display, resolution: 0.1 %/ 0.1 °C.
- 4-steps wood type correction.
- Min, max and hold function for measured values.
- Display of devices temperature.
- Display of devices surrounding temperature.



RESPONSE TIME	STORAGE CONDITIONS	OPERATION CONDITIONS
< 2 sec	+5 to +40 °C	0 to +50 °C

## **Photo Tachometer**

• industrial test meters & machines .....

MODEL NO: PPM-P110

- Measures RPM, Hz or Total by simple adjusting selector
- Lightweight, ergonomic design allows comfortable long term usage.
- Large, backlit LCD for easy viewing in both bright and dim environments.
- Laser operation shows point of measurement for easy aiming on equipment.



RANGE	ACCURACY	DETECTION
2.5~99999 RPM	+/-0.05% of Reading +/-1   SD	LASER



We provide instruments that are used in industrial and research applications ranging from aerospace, power generation, petrochemical, manufacturing, and automotive. We contribute to the quality of products and add to the safety of infrastructure and facilities.

#### Dial Thermometer

industrial test meters & machines .....

**Features** 

- Reads temperatures up to 220 degrees F, in 2 degree increments.
- Keeps the guesswork out of how hot the water should be to steep grains.
- Monitors boil temperature and wort cooling temperature.
- Quick, accurate readings.
- Our most popular dial thermometer for brewing beer.

DIAMETER	HEIGHT	READ TEMP
2 1/4"	9"	2°F



## industrial test meters & machines .....

#### **Features**

- This tester uses latest design concepts and manufacture technology, reached minimum size and light weight but still consistently has test precision, easy operation, strong expansion and other advantages.
- Single column, most space-saving, is suitable for small size and small force specimen, has good performance when stand-alone use or computer control.



FORCE ACCURACY	TEST SPEED	TEST STROKE
≤± <b>0.5</b> %	50~600 mm/min	450mm

# UV Accelerated Weathering Tester | MODEL NO: PPM-WA17

- The case is made from numerical control equipment, which is with advanced technology, smooth lines, beautifully designed.
- Air channel in the cabinet applies single-cycle system and a import axial flow fan improves the air flow ability of light, heating ability, and also significantly improves the temperature uniformity in the test chamber.



TEMP RANGE	THERMOMETER RANGE	DEPTH OF WATER
RT +20°C ~ 70°C	30°C ~ 80°C	25mm

### **Digital Torque Tester**

industrial test meters & machines

#### **Features**

- Programmable High/Low setpoints with both audible beep and Green/Red LED indicator for uniform torque tightening or GO/NO GO testing.
- Peak, Real Time, Peak Down and Continuous Output modes (selectable).
- Selectable units ozf-in, lbf-in, kgf-cm, N-cm and N-m
- USB data output (virtual RS232 serial output, peak

CAPACITY	ACCURACY	MEMORY RECALL
0.020~5.000 kgf-cm	± 0.5% F.S	800 DATA

## Temperature Humidity Chamber

industrial test meters & machines

#### **Features**

TEI

- PLC programmable logic Inputs/Output.
- Refined door seal with silicone rubber, resulting in high and low temperature aging and hardening does not exist.
- Insulation system uses ultra-fine glass fiber or rigid polyurethane foam insulation area filled to ensure that the internal box temperature.
- Powerful multi-wing air circulation, to avoid any dead region

can test the tempera	ture distribution within the		
l <b>.</b>			
MP RANGE	<b>HUMIDITY RANGE</b>	E	NVIE

20% to 98% -70°C to 150°C

RH + /- 0.5%

RONMENT TEMP

5°C ~ 35°C

# Thermal Shock Test Chamber

industrial test meters & machines .....

MODEL NO: PPM-ST43

- Delicate touch and excellent user experience.
- Unique and compact design, top grade appearance, stable performance and easy operation.
- Can simulate a wide range of temperature and humidity environments.
- Capable of testing large components, assemblies, and finished products.



AMBIENT TEMP	HIGH TEMP CHAMBER	MEMORY
+5 °C~ +35 °C	+60°C ~ +200°C	120 programs



We provide instruments that are used in industrial and research applications ranging from aerospace, power generation, petrochemical, manufacturing, and automotive. We contribute to the quality of products and add to the safety of infrastructure and facilities.

# **Salt Spray Tester**

industrial test meters & machines .....

### **Features**

- Salt spray corrosion testing equipment adapted to the surface treatment of various materials, including paint, electroplating, organic and inorganic coating, anode processing, antirust oil and so on, after these anti-corrosive treatment to test the corrosion resistance of their products.



TANK CAPACITY	TEMP PRECISION	LAB VOLUME
25L	±1°C	270L

## Melt Flow Index Tester

industrial test meters & machines

#### **Features**

- Exactly maintains the temperature between ambient to 400°C with absolute accuracy.
- Proportional integral derivative (PID) temperature controller, which is totally based on a microprocessor.
- Ensures repeatability and accuracy as it incorporated with the Digital pre-settable timer.
- Feature of automatic cutting of melted granules that ensures easy operation and reliable results.



MODEL NO: PPM-TS325

ACCURACY	TEMP RANGE	RESOLUTION
±1°C	Ambient to 400°C	0.1°C

# **Impact Tester**

• industrial test meters & machines ••••••

#### **Features**

- Works on pendulum principle, Difference between height of drop of pendulum before Rupture & Height of rise after Rupture of specimen is directly proportional to impact energy absorbed.
- Direct indication of impact energy absorbed by specimen on large dial.
- Safety guard for the Pendulum.



# Xenon Lamp Aging Tester

#### **Features**

- Advanced design technology and concept.
- Excellent technology of producing and outstanding system of quality management.
- Xenon lamp tester can be the most realistic simulated solar spectrum, including ultraviolet, Visible and infrared.
- Be tested in the range of the full spectrum, necessary for most textile sun and color fastness test.



EXPOSURE CYCLE	INTENSITY	SPRAY WATER FLOW
0.01~999 H 59 M	1200±200w/m <sup>2</sup>	1~2.4 L/min

### Densitometer

industrial test meters & machines

#### **Features**

- Solid samples with any shape can be measured such as granule, thin film, floating, foaming, powder, etc.
- No cap design, more better easy operation.
- Excellent weight precision.
- Function of 10 group data storage and automatical measuring value of average, maximum and minimum.
- Measuring volume, percentage of volume.



RESOLUTION	MEASUREMENT TIME	WEIGHT RANGE
0.001 g/cm³	5 seconds	0.005-300g

### **Abrasion Tester**

industrial test meters & machines .....

## **Features**

- To determine the abrasion resistance of all kinds of footwear vamp material.
- Samples are rubbed against known abrasion at low pressures and in continuously changing directions and the amount of abrasion.
- The unique design allows removal of individual sample holders for examination without lifting the top motion



MODEL NO: PPM-AB25

ROTATIONAL SPEED	SPECIMEN HOLDER	SUM MASS
47.5 ± 2.5 r/min	(198±2) g	(795±7) g



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#### Rheometer

• industrial test meters & machines ••••••

#### **10DEL NO:** PPM-EM51

#### **Features**

- This instrument is really confined mold cavity.
- The instrument development platform based on large databases, temperature control devices using the software to directly control and collection and processing.
- Using imported high-precision sensors.



TEMP RANGE	TEMP CONTROL	TORQUE RANGE
0 ~ 200°C	± 0.3°C	0-200

# Hydrostatic Head Tester

industrial test meters & machines .....

#### MODEL NO: PPM-EH53

#### **Features**

- Used to determine not only the fabric hydrostatic pressure resistance, but also the hydrostatic pressure proof performance of the coating.
- PLC control, Touch Screen.
- High-quality stainless steel materials used in the fabric sample clamp set.
- High-precision pressure sensors used, make the test results accurate stable and reliable.



ACCURACY	ELEVATION SPEED	PRESSURE AREA
H <sub>2</sub> 0	0.1 Kpa/min - 20 Kpa/min	100 cm <sup>2</sup>

### Iltrasonic Flaw Detector

industrial test meters & machines

#### **Features**

- Automated calibration, Automated gain, 0-110dB gain.
- High-speed capture and very low noise.
- Solid metal housing,water / oil proof,dust proof.
- High contrast viewing of the waveform from bright.
- Powerful pc software and reports can be export to excel.
- Automated make video of test process and play.



OPERATING TEMP	FREQUENCY RANGE	MEASURING RANGE
-20 ∼ 50°C	$0.5\sim15~\text{MHz}$	0 ~ 6000 mm

# Laser Range Finder

•• industrial test meters & machines ••••••

### Features

- Blue Tooth Wireless connectivity via CONX Technology - requires Android operating system 4.3, or iOS 8.1 or newer for Apple devices.
- VDT (Vivid Display Technology).
- Range: 5 1760 yards.
- Diopter adjustment.
- Compatible with magnetic attachment system.
- Built-in tripod mount.



RANGE	RANGEFINDER ACCURACY	MAGNIFICATION
5 - 1760 yds.	+/- 1/2 yd	7 x 26 mm

# **Digital Force Gauge**

# MODEL NO: PPM-GG71

### Features

- Compact and light weight.
- 3-way power supply.
- Display hold function is equipped.
- $\hbox{-} \ {\sf Easy} \ {\sf zero} \ {\sf adjustment} \ {\sf function}.$
- Automatic recognition of the type of sensor.
- Judgment function (High & Low) is equiped.



ACCURACY	MEASURING RANGE	CRITICAL LOAD
± 2% (of full scale)	0 - 4900N	20N-7350N

# **Digital Level Meter**

· · industrial test meters & machine

# Features

- Delicate touch and excellent user experience.
- Unique and compact design, top grade appearance, stable performance and easy operation.
- Can simulate a wide range of temperature and humidity environments.
- Capable of testing large components, assemblies, and finished products.



MODEL NO: PPM-ST43

MEASURING RANGE	RESOLUTION	ACCURACY
0° ~ 90°; 4x90° (360°)	0.1° (1.75mm/M)	±0.1° at around 0° & 90°



We provide instruments that are used in industrial and research applications ranging from aerospace, power generation, petrochemical, manufacturing, and automotive. We contribute to the quality of products and add to the safety of infrastructure and facilities.

# **Combustion Analyser**

**MODEL NO: PPM-AR43** 

•• industrial test meters & machines

### **Features**

- Long life sensors(up to six years) with over-range protection.
- Industrial CO range of 8,000ppm (up to 30,000 via on board dilution).
- On-board instrument diagnostics and system leak check.
- Optional NOx sensor is field upgradeable.



MEASURING RANGE	ACCURACY	RESOLUTION
0 to 21 Vol.%	±0.2 Vol.%	0.1 Vol.%

# - Long flexible gooseneck probe

- Low voltage alert function

- Multi-level indicator lights

- Fast response, short warm-up time

Leak Detector

Features

- Automatic shut-off after under-voltage

industrial test meters & machines .....

- Automatic zero point adjustment



RESPONSE TIME	SENSITIVITY	CHARGING TIME
≤5s	Better than 50ppm	4 to 7 hours

#### **Odor Meter**

· industrial test meters & machines

#### **Features**

- Simple Operation.
- Easy to Use in Various Situations.
- Real-time Sampling Mode enables to display odor change continuously.
- Memory Sampling Mode enables to save data based on selected sampling rate. (Up to 32,732 data, 511 files)
- A pair of semiconductor gas sensors provides the odor classification.



MODEL NO: PPM-RD40

MEMORY CAPACITY		
Up to 32,732 Data		

**MEMORY PARTITION** 

Up to 511 Files

**ODOR STRENGTH LEVEL** 

 $0\sim$  999 ug/m $^3$ 

#### Dosimeter

•• industrial test meters & machines ••••••

#### **Features**

- Enhanced EMI immunity
- Ruggedized clip fixing
- Improved wear-out and decontamination properties
- Increased buzzer volume
- Compact and lightweight
- Standard AAA alkaline battery for 1800 h of operation.
- Digital display for integrated dose or alternatively dose rate.



DOSE RANGE	CALIBRATION ACCURACY	DOSE RATE
1 μSv - 9.99 Sv	Better than ±5	5 μSv/h - 3 Sv/h

# Vibration Meter & Analyser industrial test meters & machines ..........

MODEL NO: PPM-VA35

#### **Features**

- Small pocket size vibration meter.
- RMS measurement of ISO overall velocity, 0-200 mm/s, 2 or 10Hz to 1000Hz.
- Bearing condition, 0-20g, 500 to 6400Hz.
- Easy to read.
- Includes detachable cable, accelerometer and magnet 100 mv/g.
- IP65 (Dust tight and splash resistant).





LCR Meter MODEL NO: PPM-DJL25

industrial test meters & machines

- Highest Precision
- True RMS measurement
- USB communication, application software.
- Safe Design and Wide Temperature Range for Harsh Use
- Conforms to safety standards EN61010-1 1000V CAT., 600V CAT.



PARAMETERS	ACCURACY	MEASUREMENT RATE
ZΦR <sub>ac</sub> CDLQBGXYR <sub>dc</sub>	0.020%	1 time/second



We have been committed to providing high-quality products that are accurate and simple to use. We design, integrate, market, and distribute specialized medical and laboratory equipment to clinical and life science customers.

# **Digital Utility Water Bath**

- Seamless 304 stainless steel tank and powder-coated

- Bath temperature can be read from alcohol thermometer

- The steeply gabled, polycarbonate cover accommodates

- Front-panel controls are safe and easy to use.

(included) with a range from -20 to 15°C.

laboratory instruments

exterior are corrosion resistant.

glassware of varying heights.

**Features** 

### **Features**

- Pt100 External sensor connection for measurement and control.

Refrigerated-Heat Circulating Bath MODEL NO: PPM-HR32

- SMART PUMP, electronically adjustable pump stages.

- Early warning system for low liquid level (DBGM 203 06 059.8).
- Adjustable high temperature cut-out, visible via display.
- RS232 interface for online communication.
- Integrated programmer for 10 program steps.
- Active Cooling Control.



TEMP RANGE	TEMP SENSOR	TEMP STABILTY
5°C above ambient to 100°C	Thermistor	±0.2°C

IP STABILTY	TEMP RANGE	TEMP SENSOR	TEMP STABILITY
±0.2°C	-38 to +80°C	PT100	±0.05°C

# Fog Testing System

**MODEL NO: PPM-FGT3** laboratory instruments .....

#### **Features**

- High capacity heaters provide rapid heating to set point temperature.
- Unique pump nozzle ensures circulation around all six beakers to maintain temperature accuracy.
- Integrated bubble level and four adjusting feet provide easy bath levelling process.
- Robust pump design for uniform temperatures

ELLE.
H. S.

TEMP RANGE	PORTS	PUMP TYPE
13° to 200°C	Remote sensor, Multifunction and USB	Force/Suction

# **Features**

Blender

- This heavy duty range of machines are built to industrial standards.
- Often used in applications for large volume food microbiology, forensic residue analysis, and testing of waterborne parasites.
- 400-3500mL sample capacity.
- Suitable for wide range of food applications.
- Cryptosporidium and Giardia testing.



MODEL NO: PPM-DHL9

MODEL NO: PPM-RED23

RANGE	TIMER CONFIG.	DIMENSIONS (WxHxD)
5 to 80mL	30,60,120s or Continuous	11 1/2" x 7 1/2" x 12 3/4"

## Centrifuge

· laboratory instruments

### MODEL NO: PPM-CF18

### **Features**

- Cost effective choice for spinning blood tubes.
- Total spin capacity is 18 tubes at one time.
- Increase capacity by adding 2 additional inserts for either tube size.
- Programmable in RPM/RCF and minutes.
- Aerosol containment for safety



Netson contaminent for surety.				
VOLUME	MAX RPM/RCF	SPIN CAPACITY		
150ml	4,000 RPM / 2,558 RCF	10 13 x 75/100mm tubes 8 16 x 75/100mm tubes		

### **Kjeldahl Digestion System** laboratory instruments .....

- A complete device for safe digestion of up to 20 sample simultaneously.
- The sample tubes are consistently heated and digestion fumes are completely collected using the Scrubber.
- Digestion temperature and time can be entered and read on the display at any time.
- Countdown time indicator is displayed.
- All glassware is made of high quality, borosilicate glass.

FREQUENCY	TEMP RANGE	POWER
50/60 Hz	50 –420 °C (450 °C)	220 –240V AC



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### **Oxidation Test Reactor**

laboratory instruments ......

· laboratory instruments

#### NODEL NO: PPM-FB22

#### Features

- Single or multiple sample processing.

Raw Fiber Analyzer

- Short filtration time under 20 minutes, even for 6 samples.
- Pump to speed up filtration process & washing.
- Compressed air can be also injected from the bottom to remove any sample accumulated in the filter of the crucible, which affects the quality of filtration.



COUNTER PRESSURE	FILTRATION TIME	POWER
Electronic Setting	Shortening	220 W

#### Features

- The operational activities are extremely simple and intuitive and allow time-saving for the lab operator.
- The evaluation of oxidation stability can be accelerated, using comparatively high temperatures (20 - 110°C), in the presence of a measurable oxygen pressure.
- Market sectors: food and feed industries, fats and oils manufacturers, research centres.

CAPACITY	TEMP RANGE	PRESSURE RANGE
Upto 100 ml	Room temp. to 110°C	0 - 8 bar

# Nitrogen / Protein Analyzer

... laboratory instruments

## **Solvent Extractor**

.. laboratory instruments

# MODEL NO: PPM-SDF43

## Features

- Time Saving: Unparalleled productivity, results in only 3-4 minutes.
- Energy Saving: Excellent engineering, low consumption
- Money Saving: Limited cost per analysis, less gas and reagent used, minimum maintenance.
- Space Saving: Just one slim unit required for the whole analysis.



RECOVERY	OXYGEN PRESSURE	METHOD OF ANALYSIS
> 99.5%	2 Bar	Dumas method / Combustion

# Features

- Elevated temperature (up to 200°C) and pressure (1500 psi) reduce extraction times and solvent consumption.
- Fast pump (70mL/min.) enables fast extractions (typically 12 to 20 mins.)
- Specialized oven design ensures precise temperature control for excellent reproducibility.
- Enhanced flexibility to support multiple applications.



PRESSURE	TEMP CONTROL	PUMP FLOW
10 Mpa	Upto 200°C	70mL/min

# **Hydrolysis Unit**

laboratory instruments .....

#### MODEL NO: PPM-HULP2

MICHEL NO. PPINI-HULPZ

#### **Features**

- Hydrolysis / digestion by acid or base.
- Ensures conformity with AOAC standard.
- No sample transfer no sample loss.
- Reduces handling to a minimum.
- $\hbox{-} \ {\bf Automatic} \ {\bf extraction} \ {\bf of} \ {\bf unwanted} \ {\bf fraction}.$
- No exposure to vapors.



# **Electromantle Extraction**

.. laboratory instruments .....

MODEL NO: PPM-EE82

- Auto-recapture of magnetic stir bar; simple switch to re-activate stirring.
- "Cool-to-the-touch" exterior.
- Built-in energy regulator.
- Indicator lamps for power and heater operation
- Replaceable insulated heater and stirring cartridge.
- An easy to clean powder coated aluminium outer casing.
- Non-skid feet and support clamps.







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# **Rotary Evaporator System**

laboratory instruments .....

### **Features**

- Analog heating bath with adjustable safety circuit, "stand alone" operation is possible, pivoting safety hood as an accessory.
- Safe and simple operation by means of ergonomically shaped control unit in the front.
- Adjustable end position recognition to protect the glass from breaking.



SPEED RANGE	TEMP RANGE	CONTROL DEVIATION
20 to 280 rpm	RT to 180°C	± 5 K

# Tray Dryer

#### **Features**

- High capacity heaters provide rapid heating to set point temperature.
- Unique pump nozzle ensures circulation around all six beakers to maintain temperature accuracy.
- Integrated bubble level and four adjusting feet provide easy bath levelling process.
- Robust pump design for uniform temperatures



MODEL NO: PPM-DT3

TEMP COLLECTOR	ULTIMATE PRESSURE	PUMP DISPLACEMENT
-50° C and -84°C	0.002 mBar	144 liters per minute

#### Incubator MODEL NO: PPM-CU2 laboratory instruments

#### Features

- Chamber volume size: 22, 48, 55, 111, 150, 170, 222, 404, and 707 liters.
- Temperature range: From 5°C above the ambient temperature up to 99.9 °C.
- Two lines of the basic control automatics: Standard-line and Comfort-line.
- Wide range of optional equipment and accessories.
- Possibility of a printer or PC connection.



laboratory instruments ......

- Compact, bench-top design.
- Temperature to -70°C.
- Reliable motor driven rollers for flask rotation.
- Single or Dual Bath.
- Decrease drying time by shell freezing product thereby increasing surface area for energy input and vapor removal.
- Easy install, requires standard laboratory utilities.



LOW BATH TEMP	CAPACITY	MINIMUM CLEARANCE
15-25 °C	40 - 1200 ml	10 inch

### Muffle Furnace

laboratory instruments ....

**Features** 

- Designed for high temperature heatings.
- Structure made in sheet-steel, furnace frontal in diecasted steel to avoid the aggretion of the acid smokes.
- The thermic insulation is in ceramic fibre to avoid the smallest heating leakage and so it takes a great energetic
- Electronic visualized regulation of the temperature obtained by a digital thermostat.



MODEL NO: PPM-MF34

MAX. TEMP	VOLUME	CHAMBER STABILITY
1100° C	39 liters	± 1° (

# Digital USB Microscope

#### MODEL NO: PPM-DMU9

- Extremely detailed images
- Dynamic 2.0 megapixel image sensor
- Recording of examining object is possible.
- 2 megapixels resolution to Image very clearly, Zoom Max
- Focus Range: Manual Focus from 0mm to 80mm.





We have been committed to providing high-quality products that are accurate and simple to use. We design, integrate, market, and distribute specialized medical and laboratory equipment to clinical and life science customers.

## Stereo Microscope

**MODEL NO: PPM-SM56** 

··· laboratory instruments

#### **Features**

- Objective Lenses: Inward facing quadruple objective turret revolving nosepiece holds Color Corrected Infinity System.
- Eyepieces: Siedentopf high eyepoint widefield 10x eyepieces, FN 20mm, 30° inclined binocular tubes with interpupillary distance adjustments from 55 mm to 75 mm.
- T-shaped base and pyramid-designed frame provide superb stability and mechanical design to achieve ergonomic and fatigue-free operation.



CAMERA	FRAME RATE	CARD SLOT
Mega Pixel	15fps @ 1280 x 720 30fps @ 640 x 480	SD/SDHC

- Zero using pure water - Battery operated with auto shut-off		
ACCURACY	RESOLUTION	RANGE
±0.1%	0.1 %	010 %Brix

laboratory instruments .....

# Oven MODEL NO: PPM-VEN1

#### **Features**

- Inner chamber material is stainless steel, outer material is well coated steel plates.
- $\hbox{- The door sealing uses silicone, which endures high temperature. View window attached.}\\$
- The centrifugal fan can provide greater cyclic airflow to avoid dead corner in the chamber so as to obtain uniform distribution of temperature.
- PID controller, double sided overheating protection.
- Multiple loading shelves to support the testing samples

- multiple loading shelves to support the testing samples		
TEMP RANGE	TEMP CONTROL ACCURACY	TEMP UNIFORMITY
+10°C to +200°C	±0.3°C	±1°C



Digital Refractometer

- 1.5 second measurement time

- Direct readout in % Brix and °C

No calibration solutions requiredLarge clear LCD display

- Easy clean sample well

- Automatic temperature compensation

**Features** 



# Orbital Shaker MODEL NO: PPM-SK15

#### **Features**

- Smooth orbital shaking action.
- Orbit of 16mm is ideal for larger samples, for example multi well plates.
- Built-in digital timer.
- Variable speed control to 300rpm.
- Supplied with non-slip mat for multi-well plates.
- Optional accessory cradle system for flasks and bottles.



TEMP RANGE	SPEED RANGE	ORBIT / AMPLITUDE
+4 to +40°C	30 to 300rpm	16 mm

# Vortex Mixer

**TEMP RESOLUTION** 

0.1°C

· · laboratory instruments

#### Features

- Option of selecting Clockwise (CW) and Anticlockwise motion both in normal run and in pulse mode.
- Programmable Pulse with selection of variable time 30-99 seconds.
- Power Mode feature in case of power failure where equipment starts automatically and runs for the remaining left time.



MODEL NO: PPM-EE82

RUN TIME	VARIABLE SPEED	PULSE MODE
1-999 mins & infinite	300-2200 RPM	30-99 Sec (Variable)



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## Sieve Shaker

laboratory instruments

#### **Features**

- Suitable for dry and wet sieving.
- Excellent separation efficiency even with short sieving times.
- Efficient electromagnetic drive.
- 3-D throwing motion which ensures optimum use of the open sieve area and lets the sample move equally over the whole sieving surface.
- Maintenance-free.
- Sieve stack up to 510 mm height.



# **Turbidity Meter**

laboratory instruments .....

#### **Features**

- Three-angle turbidity measurement (transmission 0°, scattered light at 25° and 90°) at 650 nm
- Approved ratio method eliminates the influence of particle size on the turbidity value.
- Highly accurate Peltier-thermostatted cell.
- Up to 7 parameters in one measuring cycle if used in combination with PBA-B (density, alcohol, beer color, pH, CO2, O2, turbidity)
- Combination with all Generation M systems, with Alcolyzer Plus Beer, with Alcolyzer Plus Spirits or with the Beer Analyzing System.

WAVE LENGTH	TURBIDITY	TEMPERATURE
650 nm	0 EBC to 100 EBC	-5 °C to 40 °C

### Spectrophotometer

#### **Features**

- The lightest, most compact portable spectrophotometer available easily goes where need to go.
- Analyze water with more preprogrammed methods than any other portable spectrophotometer, or easily create own methods to suit unique needs.
- Simple, easy-to-use interface plus the widest range of vial sizes makes testing flexible.
- Rugged construction keeps the elements out, which means you can test in the most demanding conditions.

WAVELENGTH RANGE	WAVELENGTH ACCURACY	SOURCE LAMP
340 to 800 nm	± 2 nm	Xenon Flash





FLOW RATE	MAXIMUM PRESSURE	MEASURING TIME
0.4 L/min to 0.7 L/min	0.5 bar (7.3 psi)	3 to 4 minutes

## **Ultrasonic Processor**

MODEL NO: PPM-3UP

#### **Features**

- Exclusive energy (Joules) monitor and controller
- Digital wattmeter
- Integrated temperature controller
- Smallest footprint in the industry
- 3-year transferrable warranty for parts and labor
- Used in more laboratories worldwide than any other ultrasonic processors.



TEMP CONTROLLER	PROCESS TIMER	PROBE
1°C to 100°C	1 sec - 10 Hrs	Titanium alloy

## Viscometer

laboratory instruments ......

MODEL NO: PPM-XB24

- 5-inch full color, touch screen display supports multiple
- Displayed info includes: viscosity (cP/mP·s), temperature (°C/°F) shear rate/stress, % torque, spindle/speed, step program status.
- Enhanced Security with customizable user access, date/time stamp file, password access, portable log-in settings.
- Auto range shows maximum viscosity measured with any spindle/speed combination.

VISCOSITY RANGE	SPEED	SPRING TORQUE
6- 320 mPa.s	0.1 to 200 RPM	57,496.0 Dyne-cm



# **Turnkey**

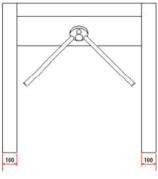
We recognize the need to serve our customer and cater to them more efficiently and productively. We have always ensure that we are able to provide an excellence pre and post sales experience to our customers.

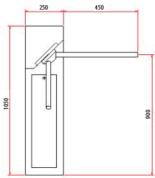
ESD Turnstile MODEL NO: PPM-TR05

· turnkey ·····









- Arms automatically drop when power supply is off.
- Automatically resumes when power supply is on again.
- Indoors and Outdoors Usages.
- High quality stainless steel.
- Processed for anti-rust, daintiness, safety. Easy cleaning and maintenance.
- LED counting indicators (both sides).
- Passing indication LED lights (both sides).
- Card reader/Biometric readers/Combo tester can be integrated based on our requirements.
- Reliable and stable automatic lockup design for the tripod arms.
- TCP/IP RS232 computer data transmission.

PARAMETERS	DETAILS
Functions	Bi-directions, electronically controllable
Materials	SS316, SS304, SS439 and EG Plated Powdered Coated
Drive	Hand Operated (Optional Servo Motor)
Mechanism	Electro-mechanical mechanism at the top section of the casework a positive lock action to prevent two passes at one time, a self-centering mechanism to ensure complete rotation, a spring damper to ensure smooth operation and anti-backup device to prevent reverse rotation. Standard Drop Arm feature, Arm will drop automatically during power failure or during emergency.
Orientation	Pass left or Pass right
Optional	Card Reader Mounting - Surface mounting only of customer supplied readers.  Status light - Directional Signage Green Arrow/Red Cross.  Push Button Control - Simple remote push button console.  Usage counters - Electro-mechanical, re-settable/non counter inside tripod.  Mechanical Operation - Non-electrical allowing free movement, reverse direction-locked.
Power Supply	230V AC 50/60 Hz
Power Rating (per lane)	150 VA
Logic Voltage	24V DC
Power Failure	"DROP ARM" feature
Fire Alarm	Input facility available for 0V contact
Mechanism Fail State	Same as power failure choice.

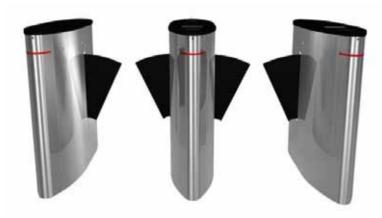


# **Turnkey**

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# **ESD Flap Barrier**

turnkey .....



- The flap barrier will closed the door when somebody enter the gate illegal, Tailgating or break into negative direction gate.
- Before received the open signal, the turnstile will lock automatically.
- The arm have the collision avoidance function: when the turnstile arm closed, if it is under the collision, the arm will open to protect the Transmission of inner machine.
- Automatic Reset Functions: after we swap the card, during the specific time (the system is 10s), if we didn't pass the turnstile, the system will cancel our authority automatically to pass the gate, (reset time is 1~60s we can adjust it what time is suit for us). totally meet the fire protection needs.
- Infrared reset function (Optional: 4 pairs or 6 pairs Infrared).
- Infrared induction clamp function (4 pairs Infrared).
- The turnstile can work with door access control system/ consumption system/biometric recognition.
- The turnstile is bidirectional (pedestrian can enter and exit from one pair of turnstiles).

PARAMETERS	DETAILS
Size	1200/1400mm (L) * 280mm (W) * 1000mm (H)
Retractable arm length	260 mm
Pass speed	40 persons/min (open), 25-30 persons/min (closed)
Passage width	≤600mm
Normal running life	3 million
Time of opening/closing	0.6 second
Time to work after power on	3 seconds
Reset time after break down	10 seconds
Direction	single or bi-directional (optional)
Drive motor	DC 24 V brush motor
Working environment	indoor/outdoor (with a tent over) -10°C~70°C
Communication interface	standard RS 485 interface, distance ≤1200m
Input interface	+12V level signal or pulse width>100 ms 12V pulse, drive current>10 mA
Relative humidity	≤90% coagulation free
Housing material	domestic standard 304 # stainless steel
Working voltage	AC220±10%V 50±10%HZ



# Turnkey

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# Modular Cleanroom Setup MODE

MODEL NO: PPM-QS99

#### **Features**

- One pass or recirculating.
- Temperature/Humidity environmental controls
- Standard modular.
- Custom floor plans.
- Equipment mezzanines.
- Drawings and engineering calcs for permits.
- Wall surfaces: Melamine, vinyl coated gypsum, FRP, glass, polycarbonate, painted aluminum, or stainless steel.
- Wall core: honeycomb, urethane, polystyrene, or aluminum honeycomb.
- Doors: single, double, automatic sliding, motorized roll up, interlock
- Superior performance and durability.
- Easily modified for expansion or changing needs.
- Fast clean installation with minimum on-site disruption.
- Flooring: VCT, heat welded vinyl, epoxy, anti-static and raised.



CUSTOM HEIGHT	FILTER	CLASS
7.5' to 40'	HEPA and ULPA	100 to 100k

Air Shower

MODEL NO: PPM-CJ27

Air shower series product is a kind of partial purifying equipment of strong universality. With novel structure, beautiful appearance, reliable running, low consumption, energy saving and convenient maintenance, it is widely used in electron, machinery, medicine, foodstuff, color packing, brewage, biological engineering and other industry and scientific research fields. It is usually installed between clean room and unclean room. When people and goods enter into clean room, they have to be blown at first. The blown clean air can get rid of dust brought in by people and goods and can effectively prevent dust source from entering into clean area.

- Adjustale 360 air shower nozzle.
- Air shower time adjustable 0 to 60 seconds.
- Novelstructure, beautiful appearance, reliable operation, low energy consumption and energy saving, easy maintenance.
- Can be configured to spray implements the automatic control, through the photoelectric sensor to realize two door interlock, automatic shutdown, operation becomes convenient.
- Material: Choi Steel, 201 stainless steel



DIA OF NOZZLE	NOZZLE DIAMETER BREEZE	NOZZLE MATERIAL	EFFICIENCY OF FILTER	AIR SHOWER TIME	NOZZLE NUMBER
30 mm	20 -28 m/s	Stainless Steel	99.99% at 0.5 μm	0-99 Sec	Customized



# **Surface Mount Technology**

We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

### Manufacturing Defect Analyzer

MODEL NO: PPM-MA23

machiner

#### **Features**

- High-End semiconductor CMOS Switching design, enables long time usage.
- Test interface available in Press Type, Vacuum Type and Off-Line, In-Line.
- High capacity rack design, test points up to 3584.
- Multiple Safety Protection design.
- IC Clamping Diode test enhances the testing coverage of BGA package.



**OPEN / SHORT CHECK** 

**ANOTHER CELL** 

+1% ~ 999%, -1% ~ -999%

1.5 Sec/1000 Pins

0.9 - 30 m.Sec

# Solder Paste Inspection

MODEL NO: PPM-ISP69

macinic

#### **Features**

- Large Board Handling Supports large boards up to 810 x 612 mm.
- Fastest 3-D SPI 80cm<sup>2</sup>/second inspection speed that doesn't compromise measurement accuracy and repeatability.
- Most accurate SPI Inspects pad sizes down to 01005 component size (150 x 150  $\mu m)$  while keeping up with ever-increasing lines speeds.



**BOARD SIZE** 

**INSPECTION SPEED** 

**CONVEYOR SPEED RANGE** 

MIN - 100x100 mm MAX - 810x612 mm

80cm²/sec @ 30μm

150 -450 mm/Sec

#### Reflow Oven

MODEL NO: PPM-TSV13

machinery

#### **Features**

- Eight groups of top and bottom forced hot air convection heating zones.
- Patented heating plates in each zone uniformly transfer heat to the PCBs using forced hot air convection.
- Independent temperature control in each zone to ensure temperature uniformity within the process tunnel.
- Power consumption savings of 1/3 as compared to other systems.
- Patented motorized blower in each zone is designed to ensure stable air pressure, withstand high process temperature and is disturbance-free.



NO OF HEATING ZONES

Up-8 / Bottom-8

LENGTH OF HEATING ZONE

**WARMING TIME** 

Approx. 20 minute

MODEL NO: PPM-SP67

#### Features

Screen Printer

- A stable printing table supported by 4 servomotors with precise ball screws.
- Two independent precision regulator control for squeegee with a programmable pressure adjustment system work on the basis of a servomotor, controlled by a computer with feedback for much better printing space control
- A double system of board clamping from the top and from the side.



PCB THICKNESS

0.3mm to 5mm

**PCB SIZE** 

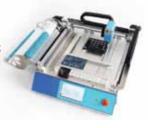
MIN - 50x50 mm MAX - 550x400 mm PRINTING SPEED

7sec + printing time

## Pick & Place Machine

#### **Features**

- Laser positioner, easy for online programming.
- Own vacuum testing, if one component suck crooked, will throw to the deposit area, then re-pick and place again.
- Ful touch screen interface input/output, easy operation.
- Integrated Automatic Feeders & Automatic Nylon Spool Wheel.



MODEL NO: PPM-PL186

SPEED

6000 cph

PRECISION

+0.025mm

PCB AREA

Min: 10 x 10 mm Max: 380 x 415 mm

MAX WIDTH OF PCB CONVEYOR HEIGHT SPEED RANGE

320mm 900+/-20 mm 300~2000 mm/min

# **Surface Mount Technology**

We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

## **Automatic Optical Inspection Machine**

MODEL NO: PPM-INL71

#### **Features**

- Desktop AOI system.
- Remote service support.
- Multi-touch touch screen.
- Internal board transport w/pneumatic operation standard (mechanical operation available).
- Designed to make in-house online AOI affordable and manageable for first-article inspection, prototyping, and even full production inspection requirements.



PCB THICKNESS	PCB WRAP	PCB SIZE
0.5mm~6mm	±3.0mm	50*50 - 510-600mm

# Wave Soldering Machine

## **Features**

- Efficient, energy-saving, lead-free, environment-friendly, safe and brand-new design, simple oreration, convenient maintenance.
- Full computer control with windows XP interface, kinetic energy monitoring, greatly improving the work efficiency and reducing the production cost.



PCB SIZE	FLUX CAPACITY	POT CAPACITY
30 - 300 mm	6L	240 kg

#### **Features**

- Adopt linear slide which makes X, Y, Z axis all can do micro adjust or rapid positioning, with high precision, easy operation.
- High definition touch screen, PCL control, can save multiple groups profile, password protection and modify function, equipped with instant temperature curve analysis function.



TEMP ACCURACY	PCB SIZE	TOP HEATER
±2°C	20*20 – 450*550 mm	800W

# Automatic Optical Inspection Machine

#### **Features**

- HD Image, easy for 0402 chip.
- Full color image statistics analysis.
- Optical character recognition (OCR).
- IC bridge analysis.
- Color analysis.
- Graphics similarity.
- Black white ratio analysis.
- Auto Skip Test.



MODEL NO: PPM-0FL71

PCB THICKNESS	POSITION ACCURACY	PCB SIZE
0.3 - 5.0 mm	10μm	25*25 – 365*455mm

# **Automatic X-ray Inspection Machine MODEL NO:** PPM-FP75

**Features** 

- Inspection of electronics assemblies populated on one or both sides.
- Greatest flexibility through 3D, 2.5D or 2D AXI
- Flat Panel Detectors (FPD) or image intensifiers.
- High inspection depth through XM 3D or 8 M camera technology.
- Viscom Quality Uplink: process optimization and first-pass yield increase
- Comprehensive IPC-compliant AXI inspection library.

SOURCE	FIELD OF VIEW	RESOLUTION
Closed X-ray tube	40 mm x 40 mm	16 µm

### Stencil Cleaning Machine

- The operation of machinery is powered by compressed air and requires no electricity.
- It is suitable for any kind of alcoholic solution for quick cleaning while preventing fire and explosions triggered by electrical sparks.
- With a normal cleaning agent usually completes a cleaning and drying cycle in 10 minutes.



STENCIL SIZE	STANDARD MODE	DRYING MODE
29" x 29" max	800L/min @ 6 bar	1400L/min @ 6 bar



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## Line Loader / Unloader

#### **Features**

- Automatic full magazine load and empty magazine offload.
- SMEMA compatible.
- SMC pneumatic pusher cylinder pressure regulated.
- Japan Keyence sensor control.
- LCD touch screen control.
- Cast aluminum integrated lifting platform.
- Light tower and audible alarm.

- CE compliance.		
SELECTABLE PITCH	AIR PRESSURE	COMPONENT CLEARANCE
10mm upto 40mm	5kgf/cm <sup>2</sup>	top 80mm bottom 20mm







LINE UNLOADER

# **Linking Conveyor**

**Features** 

- All metal solid design linking conveyor.
- Stainless steel lead screw width adjustment.
- Ergonomically designed arm rest.
- Adjustable Speed Control.
- SMEMA Compatible.
- Conveyor length could be customer made 0.5/0.6/0.8/1/1.2 meters etc
- CE compliance.

PCB WIDTH	AIR PRESSURE	CONVEYOR SPEED
50 - 460 mm	5kgf/cm <sup>2</sup>	1-12 m/min adjustable





# Magazine Buffer System

MODEL NO: PPM-MS75

- FIFO( first in first out) & LIFO( last in first out).
- Loader unloader or reject stock.
- Pass through operating modes.
- 50 pcs PCBs storing capacity.
- Store NG/OK PCBs automatically.
- SMEMA compatible.
- LCD touch screen control.
- 3-color light tower and audible alarm.

AVAILABLE MAGAZINE SIZE	AIR PRESSURE	CONVEYOR SPEED
250 / 330/ 390 / 460 mm	5kgf/cm <sup>2</sup>	10m/s





# **Surface Mount Technology**

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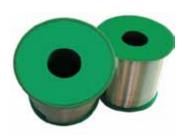
### **Solder Paste**

consumable .....



NO CLEAN LEAD-FREE SOLDER	MELTING POINT, °C	<b>ELONGATION RATE,%</b>	DIAMETER, um
Sn63Pb37	183	45	25~75
Sn96.5Ag3.5	222	54	25~75
Sn96.5Ag3.0Cu0.5	217	58	25~75
Sn99.0Ag0.3Cu0.7	217	30	25~75
Sn64Bi35Ag1	189	50	25~75
Sn62Pb36Ag2	189	54	25~75
Sn42Bi58	138	50	25~75

## Lead Free Solder Wire



NO CLEAN LEAD-FREE SOLDER	MELTING POINT, °C	ELONGATION RATE,%	DIAMETER
Sn99.3Cu0.7	227	45	≥0.1mm
Sn96.5Ag3.5	222	54	≥0.2mm
Sn96.5Ag3.0Cu0.5			
Sn99.0Ag0.5Cu0.5	217	58	≥0.1mm
Sn99.0Ag0.3Cu0.7			
Sn64Bi35Ag1	189	50	-
Sn62Pb36Ag2	189	54	-
Sn42Bi58	138	50	≥0.5mm

# **Leaded Solder Wire**

MODEL NO: PPM-SV39

consumable .....



ALLOY COMPOSITION Sn/Pb	SPECIFIC GRAVITY	LIQUID TEMP	WIRE DIAMETER
63/37	8.39	183	≥0.35mm
60/40	8.65	190	≥0.35mm
55/45	8.75	200	≥0.35mm
50/50	8.85	216	≥0.35mm
45/55	8.97	227	≥0.35mm
40/60	9.3	238	≥0.35mm
35/65	9.5	240	≥0.35mm
30/70	9.7	260	≥0.38mm
25/75	9.8	265	≥0.38mm
20/80	10.05	275	≥0.38mm

## **FLUX REMOVER**

MODEL NO: PPM-YK54

- Powerful cleaner removes R, RA, RMA, synthetic fluxes, no-clean flux, high temperature & lead free flux, rosin-based fluxes.
- Nonflammable/ Flammable based on the type of Flux to be Cleaned.
- Evaporates quickly without leaving residue.

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211		1	171	ш	-

**PACKING** 

5 years & 2 years after opening

Aerosol / Pail







We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

#### Saueeaee

**MODEL NO:** PPM-0G63

**Features** 

#### Features

 Materials for SMT stencil roll include various kinds of non woven fabrics. For instance, 55% Wood pulp and 45% polyester as the material.

consumable .....

- Lint free and exceptional strong, Good tensile strength.
- Fit different printing machines

Stencil Wiper Roll

- Customized size, Standard and custom rolls are also available.



CUSTOM LENGTH	

- Stainless steel base metal with our exceptional

- The coating consists of a proprietary blend of chromium

- Electrolizing offers consistent and reliable performance

for SMT printing needs and future applications.

MATERIAL

**HARDNESS** 

up to 30"

Electrolized coating.

and other elements.

Polyurethane / Metal

RC 70/72

WEIGHT OF PAPER

**WEIGHT OF MESH** 

**CORE MATERIAL** 

56/60/65/68 gsm

45gsm

Plastic or Paper

# **Cleaning Agent**

MODEL NO: PPM-BW5/

# Features

- Colorless, flammable chemical compound with a strong odor.
- Used widely as a solvent and as a cleaning fluid, especially for dissolving oils.
- Available in different concentration to meet the application needs.
- Available Grades : Lab , Commercial , Food.



PURITY WEIGHT	SPECIFIC GRAVITY	KEY INGREDIENT
75% & 99%	0.785	IPA

#### consumable

**Features** 

SMT Nozzles

- Available for all leading Brands.
- Can place components accurately and run efficiently.
- Can meet all the OEM's Specification.
- Extra thin-wall construction permitting nozzle penetration into those densely packed PCB's.
- Constructed from thermo plastics to significantly reduce replacement cost and prevent ESD on static sensitive devices.



## Feeder

MODEL NO: PPM-TDR13

consumable

- Available for all leading Brands.
- Inspected, tested, guaranteed functional with no missing parts.
- Improved Locking Mechanism.
- Stiffer Cover Structure.
- Handle all tapes no matter plastic or paper.
- Fed components down to chips.
- SMT intelligent feeders store data about the component type loaded and communicate with the machine to maximise placement efficiency and avoid faulty configuration.





# **Surface Mount Technology**

We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

# Single / Double Splice Tape

splice tape - consumable .....

#### **Features**

- The most economic splicing solution
- Being joined without any special tool.
- Increasing efficiency.
- Easy operating and saving labours.
- High accuracy & reliability, Low cost, high return.
- Easy to manage material.

SIZE	COLOR
8 / 12 / 16 / 24 mm	Yellow, Blue, Green, Black

# Splice Tape With Clips

splice tape - consumable .....

#### **Features**

- Available with Anti-static Property.
- Paper carrier tape and plastic carrier are available.
- Significant savings on production costs.
- Increase Pick & Place machine output by 5%-30%.
- Reduce reel change downtime.
- Guarantees a precise connection of component reels.
- Decrease machine abrasion by reducing the need to reload the feeder.
- Increased efficiency by using all the components on the carrier tape.

SIZE	COLOR
8 / 12 / 16 / 24 mm	Yellow, Blue, Green, Black & Glossy Black

# **Soft Support Block**

- Easy operation: directly put the pin module into two guide rails. PCB need no precise alignment.
- Increase efficiency: saving more time when changing wires than using original hard PIN.
- Good generality: applying to any PCB and any brand of printing press.
- Safe and reliable: avoiding damages to component and microcircuitry.



MODEL NO: PPM-SB33

EXTERNAL DIMENSION	ANTISTATIC PARAMETERS
200 mm × 42 mm	Below 1000MΩ

#### MODEL NO: PPM-ST36



MODEL NO: PPM-ST37



**SINGLE SPLICE TAPE** 

**DOUBLE SPLICE TAPE** 

MODEL NO: PPM-ST38



MODEL NO: PPM-ST39



**ESD SPLICE TAPE WITH CLIPS** 

SPLICE TAPE WITH METAL CLIPS

# Antistatic Kapton Tape

**MODEL NO: PPM-TB67** consumable .....

- Good Heat resistance. Use high temperature. No residue after removing.
- Good Cold resistance, Solvent resistance, Chemical resistance, Dielectric strength, Good Insulation.
- Transformer, PCB Masking, Plane parts, and Subway train electric parts insulation, etc.



ADHESIVE	THICK	COLOR
Silicone	50 ~ 70 Mic	Yellow



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## **Syringe Barrel Adapter**

# **Features**

- Industrial grade safe for use to 100 psi.
- Silicone free plastics and components.
- Our adapters are safe and hygienic, eliminating risk of splitting or breaking while being dispensed.
- Fit most industrial syringe dispensers.
- Supplied with standard EPR black rubber o-ring.



VOLUME	O-RING	COLOR
3 cc to 55 cc	EPR black rubber	White/Black/ Yellow/Green

### chloride free and designed to work with syringe guns and pneumatic dispensers. - Features a luer lock for secure dispense tip

attachment.

- Dispensing syringe barrels are silicone and

- Maximum operating pressure 100 psi (6.9bar)

consumable .....

- Pistons available for all barrel sizes as well as end caps and adapter assemblies.



VOLUME	MATERIAL	COLOR
3 cc to 55 cc	Polypropylene	CLEAR/AMBER/BLACK

# TT Tapered Tips

#### Features

- Suitable for many fluids including solder pastes, fluxes, gels, epoxies, grease, compounds, particle filled materials, adhesives, silicones, sealants and
- Double helix locking luer thread provides safe attachment to all syringes and valves.
- Tapered tips are industrial safe to 100 psi and are silicone free plastics.



GAUGE SIZE	OPERATING PRESSURE	COLOR
14 to 27	100 psi	Oliver/Grey/Green Pink/Blue

# TEF PTFE Lined Tips

Features

#### **Features**

- The PTFE Lined Tip is suited to the controlled application of Cyanoacrylates, Solvents, Activators, Primers and other liquids.
- The crimped PTFE inner tube prevents reactive Cyanoacrylates from clogging during application.
- The tips are silicone free and chloride free to prevent contamination of any liquid dispensed.



GAUGE	MATERIAL	COLOR
21 to 27	PTFE	Grey/Pink/Red

# Metal Tips

consumable .....

### **Features**

- The high precision all metal tips consist of a stainless-steel luer lock hub with stainless steel precision shaft.
- This high quality line of dispensing needles is burr-free and electro-polished shaft for unobstructed and consistent material flow.
- Suitable for dispensing most fluids, SMT adhesives and solvents.



GAUGE SIZE	OPERATING PRESSURE	PACKAGE
8 to 32	100 psi	12 pcs/box

# Soldering Tip



- Wide range of tips to fit different brands of soldering irons available.
- Tips can be used for any Soldering of narrow pitches, correction of bridging and drag

AVAILABLE SERIES 900M 900L 200 500 T18 LT ET T12 T13 STTC



# **Surface Mount Technology**

We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

## SMD Component Counter

smt test equipments .....

#### **Features**

- Full automatic counting, high accuracy,
- No risk of damage to tapes, we have designed to prevent it from dropping.
- The counter use drafting LCD screen, easy operating, full English display.
- Optical fiber sensor detect leak, motor will stop working when detected leak.



REEL WIDTH	WIDTH OF TAPE	COUNTING SPEED
8 mm to 72 mm	8/12/16/24/32/44/56mm	5000ncs/30s

# Automatic Glue Dispenser

smt test equipments .....

#### **Features**

- 100 programs, 400,000 points memory capacity, 4000 points per program.
- Dispensing dose is stable without leakage.
- An LCD display prompts the user for a data input and once confirmed, automatically displays the next instruction.
- Dispense in point, line, surface, arc, circle and irregular curve, and triaxial linkage function.



RESOLUTION	MAX SPEED	DATA STORAGE
0.01mm/Axes	0.1~500/350 or 0.1~800/500	CF Card

# Single Fume Extractor

smt test equipments .....

#### **Features**

- Purification rate up to 99.97%.
- Can absorbe and filter fumes or dust.
- No external piping to the outdoor emissions.
- Small size for desktop use.
- Smoke purifying filter can be effectively absorb and filter fumes or dust generated during the production process, one of the toxic and harmful gases and dust.



AIR INLET	STATIC PRESSURE	WIND SPEED
Ф75mm Flange	900Pa	17m/s

# Dual Fume Extractor

- The machine is easy to install, it doesn't need to connect other channels, this does good to the space's neat and
- The design of multiple filter make it for sure that the hazardous substance can be filtered to protect human's safeness. Primary/medium/high efficiency filter element can be replaced alone, which extends the service life of the filter.



AIR INLET	STATIC PRESSURE	AIR VELOCITY
Φ75mm x 2 Flange	1200Pa	2 × 10 m/s

#### Tin Furnace

smt test equipments .....

### **Features**

- Anti-corrosion effect enables the pot last 5 times longer than the conventional one.
- Be effective on both lead-free solder and solder
- Heating element parted left and light enables to be replaced separately.
- Enables to reduce the amount of solder usage and solder dross.



TEMP RANGE	POT SIZE	SOLDER CAPACITY
0.85 Kg	50 × 50 mm	0.85kg

# **Dross Separator**

- Advanced design concepts
- The whole elegant appearance
- Simple operation and maintenance
- Dross processing capacity, restore high
- Re-use the tin directly forming
- The key parts of the wear resistant materials



TEMP RANGE	CAPACITY	HEAT TIME
200 to 450°C	30 kg	30 mins



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### **PCB Separator**

smt test equipments .....

**Features** 

- With unique cutting method, the circuit board is cut by six blades. It is a group composed of one upper and one lower blade, and is also a cutting unit.
- The edge of the board and its surface are very smooth without warping.
- Can be mounted stainless steel platform with laser calibration positioning function.



CUTTING SPEED	CUTTING THICKNESS	MAX CUT LENGTH
80,120, 200, 400 mm/s	0.2-5 mm	360 mm

# Feeder Calibration jig

MODEL NO: PPM-KQ36

smt test equipments .....

#### **Features**

- The operation is simple, the external appearance is simple and cleverly.
- High accuracy wheel gear drive, precision and credibility.
- Install dynamoelectric, single and continuous strike LEVER, simulate machine action.
- Observing the wheel gear dynamic state step the conditions.



MATERIAL	AIR PRESSURE	DISPLAY
Aluminum & Iron	5 kg/cm²	LED Display

### Tweezers



**High Precision Tweezers Cutting Tweezers** 



Plastic Replaceable Tip Tweezers



**Plastic Tip Tweezers** 



**Precision Tweezers** 



**Economy Tweezers** 



**General Purpose Tweezers** 



Wafer Tweezers



**Ceramic Tweezers** 



**SMD Tweezers** 



**Plastic Tweezers** 



**Boley Tweezers** 



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**Reverse Action Tweezers** 



**Components Positioning Tweezers** 



**Heavy Duty Tweezers** 



**Ergonomic ESD Tweezers** 



**ESD Diamond Coated Tweezers** 



**ESD Epoxy Precision Tweezers** 



**Flat Tips Tweezers** 



**Mini Tweezers** 

ESD Cutter

## **ESD Plier**

### Features

- Relieved to maximize accessibility.
- High quality ball bearing steel.
- Matched bearing rings in order to minimize metal-metal contact and friction.
- Lap joint with screw in order to achieve a high level of strength and precision. The nut is made of hardened alloy steel in order to resist high cutting\load.



OVERALL LENGTH	
121	

**BOX WIDTH** 

**BOX THICKNESS** 

8 mm

6.4 mm

#### **Features**

- High quality ball bearing steel.
- 63 65 Rockwell Hardness (HRC): Pyrometer controlled inductive hardening.
- 2-Component ESD Ergonomic handles, soft comfortable gripping surface, hard plastic core.
- Matched bearing rings in order to minimize metal-metal contact and friction.



OVERALL LENGTH	JAWS LENGTH	BOX WIDTH
133 mm	20 mm	10 mm

#### Stapler Splicing Tool splicing tool - repair & rework .....

#### **Features**

- Zero wastage of component.
- No damage to the cutter blades.
- Accurately cuts all kind of carrier tapes.
- Material is iron, so it is long-lived.
- For splicing clip, and for all size paper carrier tape and plastic carrier tape.
- Long life and durable; Ensure that SMD component tapes can be joined securely and quickly



CARRI	ED W	INTU
LANN	IEK W	пип

8-56 mm carriers

MATERIAL

Iron

**CARRIER PITCH** 

#### Splice Scissor

- To cut out starting point of a splice clip and to precisely cut out the margin of Paper or Emboss carrier tape.
- Specially redesigned from existing scissors for precise cutting.
- Dual Pitch scissors for specialist: versatile use for carrier tape 8mm-32mm width.
  - Dedicated pitch scissors: carrier tape with 8-56mm width.







We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

#### Splice Clip

MODEL NO: PPM-ML67

splicing tool - repair & rework .....

#### Features

- Can be used with tapes in any width.
- Brass clip with holes used with tape splicing tool.
- The shim includes holes to allow the material to go through the sprocket wheel of tape feeder, and points to secure it to the carrier tape.



MATERIAL	WIDTH	LENGTH
Brass or Steel	2.5mm	22mm

### Soldering Wick

· repair & rework ·

#### **Features**

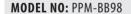
- Engineered specifically for high temperature, lead-free solders.
- Transfers heat to the solder joint more quickly and efficiently than conventional desoldering braids.
- Specifically designed for all lead-free solders.
- Can also be used with Tin/Lead solders.
- Minimizes the risk of damage associated with static electricity.



WIDTH	LENGTH	COMPLIANT
0.030"/0.8mm	5' / 1.5 m	RoHS

#### Handi Vac Vacuum Pen

• vacuum pen - repair & rework •••





#### Features

- Select a tip with a rubber vacuum cup on a probe that is slightly smaller than the part you want to pick and place. Put the probe snuggly on the tip of the HANDI-VAC tool. Make sure that there is no dust on the rubber vacuum tip.

NOTE: Our larger rubber vacuum cups can be placed directly on the HANDI-VAC tip without using a probe.

#### **ESD Plastic Probes**

. renair & rewor

#### **MODEL NO:** PPM-4/19

• Tepati & Tewor

#### **Features**

- Probe for lead-free soldering operations.
- Positioning aid tool for assembly operations.
- Spatula for applying adhesives, dosing chemicals in labs.
- Stirring rod for the preparations of adhesives, solutions.
- Scraper to remove solder masking agents, rubber latex, adhesive coatings.



LENGTH	HEAT CAPABILITY	ESD READING
150 mm, 5.90"	260-300°C	10 <sup>6</sup> 0hm

#### Vampire Vacuum Pen

MODEL NO: PPM-QP71

#### **Features**

- Vampire is the new battery-free hand held vacuum pick up pen designed for the safe pick-up of SMD components during assembly, test and rework processes.
- With fountain-pen dimensions, Vampire grabs, lifts and places components in complete safety, aided by a powerful internal piston.
- A complete choice of tips designed for any size of SMD component helps the operator to have always the right tool in hand.



#### ESD SMD Hot Tweezer

#### Features

- ESD safe design.
- Twin-tube heating comes into contact with the components directly without affecting adjacent components.
- Especially suitable for rework on component-densely-mounted circuit board.
- Suitable for mounting on several types of soldering stations.



 TEMP RANGE
 GROUND POTENTIAL
 GROUND RESISTANCE

 200°C - 480°C
 2mV
 2Ω



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#### **ESD SMD Rework Station**

MODEL NO: PPM-0R997

#### **Features**

- ESD safe design.
- Brushless fan with long life time, suitable for working in cleanroom.
- Low noise airflow, even temperature is suitable for lead free soldering and desoldering.
- Intelligent design, rapid heating while working, cools down to 100 degree automatically.
- Varies type of nozzle available.



AIR VOLUME	NOISE	POWER CONSUMPTION
120 L/min	< 45 dB	700 W

ESD Hot Air De-Soldering Station

#### Features

- ESD safe design.
- Brushless fan with long life time, suitable for working in cleanroom.
- Low noise airflow, even temperature is suitable for lead free soldering and desoldering.
- Intelligent design, rapid heating while working, cools down to 100 degree automatically.
- Varies type of nozzle available.



GAS FLOW	TEMP RANGE	NOISE
27 L/min (Max	150°C - 500°C	< 45dB

**ESD Soldering Station** 

repair & rework ......

#### Features

- Ceramic heater has a long lifetime.
- Light handle is suitable for long time of use.
- Calibrate temperature digitally.
- New appearance and firm structure.
- Various types of tips are available.
- It is especially suitable for mounting and reworking SMD components by hand, soldering common and directly-inserted electronics.



TEMP RANGE	TEMP STABILITY	AMBIENT TEMP
80°C - 480°C	±2°C	40°C

ESD Hot Air De-Soldering Station

#### **Features**

- ESD safe design.
- Brushless fan with long life time, suitable for working in cleanroom.
- Low noise airflow, even temperature is suitable for lead free soldering and desoldering.
- Intelligent design, rapid heating while working, cools down to 100 degree automatically.
- Varies type of nozzle available.



GAS FLOW	TEMP RANGE	NOISE
120 L / min (Max)	100°C - 450°C	< 45dB

**ESD Hot Air Soldering Station** 

#### **Features**

- ESD safe design.
- Brushless fan with long life time, suitable for working in
- Low noise airflow, even temperature is suitable for lead free soldering and desoldering.
- Intelligent design, rapid heating while working, cools down to 100 degree automatically.
- Varies type of nozzle available.



**ESD Soldering Station** 

repair & rework .....

- Light handle is suitable for long time of use.
- It is designed with ESD safe and can protect sensitive SMD components from being damaged by static charge leakage.
- Precise and stable temperature control.
- Ceramic heating element with super long life time.





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#### **ESD Soldering Station**

repair & rework .....

#### **Features**

- Light handle is suitable for long time of use.
- It is designed with ESD safe and can protect sensitive SMD components from being damaged by static charge leakage.
- Precise and stable temperature control.
- Advanced micro computer inside.
- Lock screw prevents inadvertent changes to the temperature setting.



TEMP RANGE	TEMP STABILITY	GROUND POTENTIAL
200°C - 480°C	±1°C	<2mV

### **ESD Soldering Station**

- Light handle is suitable for long time of use.
- It is designed with ESD safe and can protect sensitive SMD components from being damaged by static charge leakage.
- Precise and stable temperature control.
- Ceramic heating element with super long life time.



TEMP RANGE	OUTPUT VOLTAGE	POWER CONSUMPTION
200°C - 480°C	24V AC	60W

### Magnifying Lamp





LENS SIZE	DIOPTER	LENS MATERIAL
5″	3 Diopter / 5 Diopter	Glass

#### **ESD Soldering Station**

repair & rework .....

#### **Features**

- Light handle is suitable for long time of use.
- It is designed with ESD safe and can protect sensitive SMD components from being damaged by static charge leakage.
- Precise and stable temperature control.
- It is especially suitable for mounting and reworking SMD components by hand, soldering common and directlyinserted electronics, or lead free soldering under other special conditions.



TEMP RANGE	OUTPUT VOLTAGE	POWER CONSUMPTION
260 - 480°C	24V AC	60W

#### Preheater

### **Features**

- Repid heating only 10s to reach 250 degree
- Built- in temperature sensor, stable output temperature
- Cool or hot air can be selected to preheat or cool chips
- The preheater can be used with rework stations to process BGA or other flake ICs.



TEMP RANGE	AIR VOLUME	POWER
120 - 250°C	0.18 m³/min	460W

#### Magnifying Lamp





LENS SIZE	DIOPTER	LENS MATERIAL
6.85" X 4.25"	3 Diopter	Glass



We provide complete solution & highly flexible Surface mount technology equipments & Consumables to many factory.

### Magnifying Lamp





LENS	SIZE	

	PΤ	

LENS MATERIAL

3 Diopter + 12 Diopter

Glass

### Magnifying Lamp





**LENS SIZE** 

DIOPTER

LENS MATERIAL

3 Diopter/5 Diopter

Glass

### Magnifying Lamp



#### **DIOPTER**

**LENS MATERIAL** 

7.5" X 6.2"

3 Diopter / 5 Diopter

Glass

### Magnifying Lamp



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DIOPTER

LENS MATERIAL

3 Diopter

#### **IPA Dispenser**

#### MODEL NO: PPM-WR17

#### **Features**

- Used to dispense solutions in a controlled capacity, including buffers, acids, bases, and sterile solutions.
- Available in a wide range of shapes and volume sizes.
- Bottles are produced in a variety of bottle top dispenser styles to prevent spills and evaporation, including captive spouts with caps, flip spouts, which are raised and pressed to dispense fluids.



### **CAPACITY**

40Z, 60Z, 80Z

#### MATERIAL

Plastic

#### **COLOR**

Pink, Green, Blue and White

#### ESD Brush

repair & rework

#### **Features**

- Easy to use and wash.
- Light weight.
- High durability and softness.
- Made of electric-plastic in various shapes and
- Used in cleaning PCB, surface of the electronic products and the workshop of the SMT.



MODEL NO: PPM-BK60

**BRUSH MATERIAL** Nylon

**SURFACE RESISTANCE** 

10<sup>6</sup>-10<sup>9</sup>ohm

HANDLE MATERIAL

Polypropylene

Sudden discharge of static electricity can cause damage electronic devices which are sensitive to electrostatic discharge (ESD). When a statically-charged person or object touches an electrostatic discharge sensitive (ESDS) device, there is a possibility that the electrostatic charge could be drained through sensitive circuitry in the device. If the electrostatic discharge possesses sufficient energy, damage could occur in the device due to localized overheating. Generally, devices with finer geometries are more susceptible to damage from ESD. The modes in which ESD damage occurs are:

- (a) Discharge to the device
- (b) Discharge from the device
- (c) Field-induced discharge.

Electrostatic discharge sensitive (ESDS) parts are commonly characterized to three defined models:

- Human Body Model (HBM)
- Machine Model (MM)
- Charged Device Model (CDM)

There are basically two categories of damage from ESD:

- (a) Catastrophic damage the electronic device is rendered inoperable immediately after the ESD event. A semiconductor junction or a connecting metalliza tion could have been damaged by the electrostatic discharge.
- (b) Latent damage the electronic device appears to be working fine following the ESD event. However, the sensitive circuitry has been damaged and could fail to operate properly at some time in the future.

#### Protection for Electrostatic Discharge Sensitive (ESDS) devices.

#### For Work area:

- 1. It is essential to handle ESDS devices at static-safe workstations. This will prevent yield loss (through catastrophic damage) or, worse, potential reliability failures in the field (through latent damage).
- 2. Where it is impractical or impossible to use antistatic wrist-straps or remove items that are composed of insulative materials at a static-safe workstation, use an air ionizer designed to neutralize electrostatic charges or apply topical antistats to control generation and accumulation of static charges.
- 3. When an air ionizer is utilized, it is vital that maintenance procedures and schedules are adhered to in order to ensure that ions generated by the ionizer are sufficiently balanced.
- 4. Avoid bringing sources of static electricity within 1 meter of a static-safe work bench.
- 5. Where it is necessary to use air-guns, use special models that do not generate static charges in the air stream.

#### **For Personnel:**

- 1. Any accumulated charge on the body of the human operator should be discharged first before opening the protective container with ESDS devices inside. The discharge can be accomplished by putting a hand on a grounded surface or, ideally, by wearing a grounded antistatic wrist-strap.
- 2. The use of an antistatic smock for each worker is highly recommended.
- 3. Education and training on ESD preventive measures is invaluable.
- 4. A regular audit is also helpful in supporting an ESD program.

#### **Packaging and Transportation:**

ESDS devices should be contained in a static protective bag or container at all times during storage or transportation.

The following pages consists of list of products that help to protect from damage due to ESD.

We provide easy-to-use audit kit, lonizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### **Bench Top Ionizer**

**MODEL NO:** PPM-SB22

#### **Features**

- The lonizer's neutralization discharge time will be best approximately 12" to 48" directly in front of the unit and will increase as the distance from the unit increases.
- lonizers are useful in preventing electrostatic charge generation, Electro Static Discharge, Electro Static Attraction, as well as preventing equipment latch-up and safety related shock.



DECAY TIME	AIR FLOW	BALANCE
< 2 s at one foot	2.9 m <sup>3</sup> /min	0 ± 10 V at 1 ft

### Bench Top Ionizer

NODEL NO: PPM-SB23

ionize

#### **Features**

- Auto ion balance, within 0  $\pm$  5V.
- Ionization indicator light.
- Special alloy discharge needle.
- Detach of the front louver.
- Serial connection of up to six unit.

DECAY TIME	AIR FLOW	OZONE DENSITY	
Ahout 1 Sec	1 3 ~ 3 25 m <sup>3</sup> /min	Less than 0 007 nnm	

**DC** Ionizer

MODEL NO: PPM-CI68

#### **Features**

- Intrinsically balanced; no calibration needed.
- Minimum ion recombination provides maximum static control.
- Convenient power options, wall-provided AC or tool-provided DC.
- Provides visual notification of any operational failures.



BALANCE	ION EMISSION	AIR FLOW
± 20V	Steady-state DC	49 CFM

Desktop / Overhead Ionizer

**MODEL NO:** PPM-9100

#### Features

- 68KHz High Frequency AC Technology.
- Decay Time < 2s at 1', (ANSI/ESD STM3.1-2006 lonizer).</li>
- 7 Speed fan for airflow control.
- Status Indicators of Emitters and Fan.
- Maintenance Free, Auto-Clean System.



DECAY TIME	AIRFLOW	ION EMISSION
<2 sec at one foot	2.5 - 4.0m <sup>3</sup> /min	Corona Discharge

Desktop / Overhead Ionizer

**MODEL NO:** PPM-9200

· ionizer

#### •••••

#### Features

- 68KHz High Frequency AC Technology.
- Decay Time < 2s at 1', (ANSI/ESD STM3.1-2006 Ionizer).
- 7 Speed fan for airflow control.
- Status Indicators of Emitters and Fan.
- Maintenance Free, Auto-Clean System.



DECAY TIME	AIRFLOW	BALANCE
<2 sec at one foot	2.5 - 4.0m <sup>3</sup> /min	0± 10 V at one foot

### Desktop / Overhead Ionizer

MODEL NO: PPM-930

• ionize

- Decay Time < 3s at 18", Balance <±10V.
- 7 Speed fan for airflow control.
- Status Indicators of Emitters and Fans
- 68K Hz High Frequency AC Technology.
- Maintenance Free, Auto-Clean System.



DECAY TIME	AIRFLOW	ION EMISSION	
< 3 sec at 18 inch	2.5 - 4.0m <sup>3</sup> /min	Corona Discharge	



We provide easy-to-use audit kit, lonizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### **Features**

- Air joint with increased ozone resistance.

ionizer .....

- Newly-designed transformer box stops high voltage output when the emitter needle is being cleaned or changed.
- Wide range of nozzle applications for better ozone resistance.
- An LED and a normal open no voltage relay warn of abnormal discharges from the emitter needle.



AIRFLOW SUPPLY OZONE DENSITY		OPERATING TEMP
30 ℓ / min to 160 ℓ/min	0.05 ppm or less	-10°C to 60°C

### Bar Type Ionizer

#### **Features**

- Bar shaped and cross over static eliminator.
- Manufactured by using the latest patented technology of static removing.
- Fast speed of static removing, low ion balance and high safety.
- Output voltage adjustable, fit for different static environment.

DUTY FACTOR	OUTPUT FREQUENCY	ION BALANCE
34% - 64%	0.1, 0.3, 1, 3, 5, 8 10, 20, 30, 50 Hz	≤  ±30V

#### Gun Type Ionizer

#### Features

- This ionizer consists of an integrated high-voltage power supply and electrode (gun), meaning that its high-voltage cable is not exposed, resulting in outstanding safety and compact dimensions.
- The main unit of the air gun is made of a silicon-free material, meaning the ionizer can be used in a clean-room environment.



AIR PRESSURE	AIR CONSUMPTION	OZONE PRODUCTION
0.1 - 0.4MPa	140 - 235L/min	0.02 ppm or less

### Ionizer with optical Sensor

#### **Features**

- Lightweight, Ergonomic Design.
- Flow Control Valve for Adjustable Airflow.
- Electrically balanced ion output.
- Integrated, Replaceable Filter-Nozzle.
- Ionization Indicator Light.



DECAY TIME	MAX AIR PRESSURE	ION BALANCE
<1.3 sec	100 psi	0V ± 15V

### **Snake Type Ionizer**

MODEL NO: PPM-8251

#### **Features**

- Exquisite appearance, simple structure, easy to move and install.
- Metal ring switch with flash light enables user to monitor working status of the product.
- HV alarm by beeping and LED.
- Inductive current with high safety performance.
- All in one design saves space.



WORKING DISTANCE	ION BALANCE	WORKING HUMIDITY
100 - 400mm	≤ ±35V	<70%

### Disposable Heel Grounder

- Disposable Foot Grounder: Provides a path-to-ground and will not generate a charge.
- Highly Visible Yellow Polyester Fabric: Identifies the wearer as properly grounded.
- Non-Marring Material: Will not leave marks on floors or operator's shoes.



MATERIAL	CONDUCTOR	WIDTH
Yellow Polyester	$\geq$ 5 x 10 <sup>4</sup> < 8 x 10 <sup>5</sup> ohms	14 mm



We provide easy-to-use audit kit, Ionizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### Heel Grounder

· · aroundina

MODEL NO: PPM-7560

#### **Features**

- Extra-Wide Contact Area: Additional surface area allows for a better path to ground.
- Tear Resistant Rubber With Inner Scrim Reinforced material prevents tearing - increasing the service life of foot grounder.
- Conductivity: 8x10<sup>3</sup>ohms/sq.
- Resistance to ground: 1.3x10<sup>6</sup> ohms max.

	ABRASION	ELONGATION
INNER LAYER	800 cycles	600%
OUTSIDE LAYER	3000 cycles	400%

### Wrist Strap

grounding .....



Fabric Wrist Band
MODEL NO: PPM-WB01



Metal Adjustable Wrist Straps
MODEL NO: PPM-WB02



### **Cleanroom PU Wrist Straps**

MODEL NO: PPM-WB03



Dual Wire Fabric Wrist Straps
MODEL NO: PPM-WB04

#### Features

- Comfort and reliability, while providing rapid and continuous drain of static charge.
- Simplify Adjustment, one size adjusts to any size wrist. A one megohm resistor is built into the ground cord.
- Including an alligator clip, which fits over the installed banana jack on the ground cord, to provide an alternative ground attachment method.

SPECIFICATION	FABRIC WRIST BAND	CLEANROOM PU WRIST STRAPS	DUAL WIRE FABRIC WRIST STRAPS	METAL ADJUSTABLE WRIST STRAPS
INNER SURFACE	Elastic Nylon with silver plated threads	Conductive TPU	Elastic Nylon with silver plated threads	304 Stainless Steel, Non- coating
OUTER SURFACE	Elastic Nylon, insulative	Insulated TPU	Elastic Nylon, insulative	304 Stainless Steel Coated PVF film, Insulated
RESISTANCE	150-200 Ohm/inch	1000-2000 Ohm/inch	150-200 Ohm/inch	1-5 Ohm/inch

#### **Worksurface Grounding**

.. grounding

- Common Point Grounding cord: Compatible snaps to bench mat and accepts two wrist strap.
- Quad Common Point Ground: Compatible with mats & 4 Banana jack.
- Bench Mount Ground: Provides two grounding points for wrist straps.
- Floor: Mat Ground CordSnap Stud used to Ground Floor Mat connection.

SNAP	CORD END	OPTIONS
10 mm Socket/10 mm Stud	Ring terminal/Banana plug	With / Without 1 Mega Ohm Resistor



Common Point Grounding cord MODEL NO: PPM-CG01



**Bench Mount Ground MODEL NO:** PPM-CG03



**Quad Common Point Ground MODEL NO:** PPM-CG02



Floor Mat Ground Cord
MODEL NO: PPM-CG04



We provide easy-to-use audit kit, Ionizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### Resistance System Kit

#### Features

- Auto Resistance Range Control
- Auto Test Voltage Control
- Automatic Electrification Period adjustment to obtain most accurate measurements.
- Fast and Flexible
- Constant Test voltages 10V and 100V for specification measurements to meet international and domestic ESD measurement standards
- Variable Voltage 0.1 my to 9.99 V for low resistance measurements.



**Plant Auditor's Surface Resistance Kit** 

MODEL NO: PMK-153

MODEL NO: CVM-780



**Basic System Kit** MODEL NO: PAK-210



**ESD Auditor's Kit** MODEL NO: PAK-212

MODEL NO	RESISTANCE RANGE	STANDARD	ACCURACY
PMK-153	0.01 ohm to 9.99x10 <sup>12</sup> ohms	ANSI/ESD 541	
PAK-210	0.1 Ω to 2.0x10 <sup>14</sup> Ohms	ANSI/ESD STM	±5%
PAK-212	0.1 Ω to 1.0x10 <sup>12</sup> Ω	11.11	

#### Contact Voltmeter Set

analytical measurement .....

#### **Features**

- Measure Voltages on conductors with Pinpoint Accuracy.
- A most valuable ESD Tool for Process Analysis Measurements of: Equipment, Devices, Subassemblies, Tools & Production
- Portable, easy to use and accurate.



**CIRCUIT ACCURACY** 

<±1%

**RECORDING DEVIATION** 

Typically  $< \pm 10$  volts at ± 500 Volts

**OPERATING RANGE** 

0 to ± 525 volts

Auto-Analysis System Set

analytical measurement .....

#### **Features**

- Records voltage data at 50, 100 or 200 samples per second.
- File recording time at 50 samples/second is
- Has internal memory for remote data recording, allows downloading at a later time.



**SAMPLING RATE** 

50, 100 and 200 Samples per second **FILE LIMIT** 

17 to 20 minutes per file continuous recording

**TEMP RANGE** 

-30 to + 85°C

#### Electrostatic Field Meter Set

analytical measurement .....

RANGE

**Features** 

- Measure range & polarity of electrostatic fields in 1 volt or 10 volts increments.
- Measure Body Voltage Generation and Decay.
- Use with a datalogger to record measurements & create reports.
- Compatible with the Autoanalysis System.



0 to ± 6 KV at a plate separation of 0.60 inch

**ACCURACY** ± 2% at 1,000 volts SIZE

3.25"W x 3.25"L x .9"D

#### **Ionization Test Set**

analytical measurement .....

MODEL NO: PFK-105

#### **Features**

- Includes a Fleld Meter, Charge Plate Monitor, Charging Source and Decay Timer.
- Measure Body Voltage Generation and Decay.
- Measure decay times for ionizers and materials.

± 2% at 1,000 volts

- Evaluate Ionizers and Packaging Materials.



ACCURACY **RANGE** 

0 to ± 6 KV at a plate separation of 0.60 inch TIME RANGE

0.2 to 159.9 sec



We provide easy-to-use audit kit, lonizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### Charge Plate Monitor

#### analytical measurement .....

#### Features

- Four working modes and voltmeter function and parameters of four modes can be set.
- "PASS" Features allows to configure the test specification based on our requirements.
- Simple, portable, easy to operate.



VOLTAGE ACCURACY	PRECISSION	TEST TIME
5%	1%	0-600 seconds

analytical measurement .....

#### Nano Coloumb Meter

MODEL NO: PPM-1002

#### **Features**

- The amount of electrostatic discharge is easily measured by having the Coulomb meter contact the object of measurement.
- The measurement method is based on the actual phenomenon of electrostatic destruction.
- The optional conductive probe tip lets the unit be used safely for sensitive products.



ANALOG OUTPUT	MEASUREMENT PRECISION	DETECTION METHOD
0 - ±999.9mV	Within ±5% + 2 counts	Capacitor charging

## Event Indicator

#### **Features**

- Detects and counts ESD events for control program troubleshooting and improvement.
- Shows the relative strength of the ESD event.
- Use the rotary switch to set the strength for which the ESD event must meet in order to be counted.
- Displays the number of ESD events that occurred at or above the alarm threshold.
- No charging or sourcing of special batteries needed.



#### **Static Decay Timer**

analytical measurement .....

**Features** 

- Designed to measure the time required for a 1,000 volt charge to dissipate to less than 100, 50 or 10 volts in tenths of a second.
- Used to evaluate the static decay capabilities of materials, personnel, equipment and other products.
- Compatible with most portable CPM's and field meters having an analog output of  $\pm 2$ .



### Controlled Humidity Chamber

analytical measurement .....

**Features** 

- Create a controlled humidity environment, from 5 to 98% RH, when you use this chamber with a
- Access door is held closed by a single half-turn latch with a gasket to ensure an airtight seal.
- Produces low chamber humidity without continuous pump operation.



CAPACITY	HUMIDITY RANGE	HUMIDITY ACCURACY
255 Liters	5 to 98% RH	±3% RH

#### Event Monitor

- Counts and provides real-time detection of most ESD events and their magnitudes.
- Identifies problematic environments and qualifies tools for handling ESD-sensitive devices.
- Outputs a 4.20 mA signal for use with data acquisition software.





We provide easy-to-use audit kit, lonizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### **ESD Event Meter**

#### **Features**

- Detects, counts and measures ESD events that can damage ESD items and cause tool lock-ups, erratic behavior and parametric errors.
- Calculates event magnitude for Charged Device Model, Human Body Model and Machine Model.
- Records all measurements to a microSD card for PC hsolnwoh
- Touchscreen display provides intuitive user interface



### Analog IC Test System

#### **Features**

- Mainframe up to 26 slots in total as 13 slots each cagel.
- DC Measure Units by per channel or per
- Multi-channel high resolution time measure unit.
- AC source/meter with AWG and Digitizer.



TEST VOLTAGE	TEST TIME	DISPLAY
2.5/3.0/3.3/5V	0.6Sec	16 Chars in 1 line LCD

#### ESD Simulator

#### **Features**

- 3 pre-checking functions taking the confirmable test into the account.
- CR constant indicator to ensure correct attachment is in place.
- Infra-red Remote Controller to allow remote Generator setting.
- White LED light to show Discharging points.



### **POLARITY**

Positive or negative

NO. OF TIME OF DISCHARGE

1 to 60,000 times /

**BANDWIDTH** 

9kHZ to 450MHz

**DISCHARGE MODE** 

Contact discharge /

### **Ground Master**

grounding tester .....

### MODEL NO: PPM-3323

#### Features

- Continuous ground monitoring.
- ANSI/ESDA S.20.20 compliant.
- EMI monitoring on each ground.
- Adjustable alarm threshold.

**STANDARD** 

ANSI/ESDA S.20.20

- Safety protection for each ground.
- Enable switches for each ground.



UNIVERSAL

100-230 V AC, 50-60 Hz

Air discharge

OUTPUT PLUG POLARIZATION

**Center Positive** 

Universal SureTest Circuit Analyzer MODEL NO: PGT-61-164

#### **Ground Integrity Tester** grounding tester .....

**MEASUREMENT RANGE** 

10mV to 5Vpeak

80dBµV to 134dBµV

#### Features

- Measures AC voltage, DC voltage, EMI voltage and AC impedance.
- Measures maximum millivolt requirement of IPC-A-610.
- Factors out the impedance of the test leads for improved measurement accuracy.
- Audible alarm sounds when impedance measurement is below threshold set by operator.



MODEL NO: PPM-051

**MEASUREMENT TYPE** 

**Average Peak** 

#### Features

- Measures Ground Impedance per ANSI/ESD S6.1.
- Neutral & Ground Wires Verification per ANSI/ESD S6.1.
- Verifies that Hot & Neutral are not reversed.
- Verifies that Hot & Equipment Ground are not reversed.
- High accuracies.
- Ground to neutral voltage.



**OPERATING TEMP** ALTITUDE DISPLAY TIME 32°F to 122°F at <80% Rh 2000 m 2.5 sec



Wrist Strap And FootWear Checker MODEL NO: PPM-8952

We provide easy-to-use audit kit, Ionizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### Wrist Strap Checker

grounding tester .....

#### **Features**

- Unit checks operator, wrist strap's contact to skin, wrist strap's resistor and ground connection in one fast, convenient, simple and safe touch operation.
- A red light indicates resistance is less than 800k at its lower limit, indicating a possible to ground.



POWER	TEST VOLTAGE	RESISTANCE
9 V Battery	7.6 V Nominal	750 K - 100 MΩ

#### **Features**

- Versatile switch can test footwear and wrist
- Button rugged and reliable operation.
- LEDs display test results.
- Red, Yellow light & audible alarm indicate that circuit resistance is too high or low.



WRIST STRAP RANGE	FOOTWEAR RANGE	POWER
750 K - 100 MΩ	750 K - 100 MΩ	Battery Operated

### **Digital Display Wrist Strap and Footwear Checker**

MODEL NO: PPM-100

#### Features

- Digital display resistances.
- Near fail indicator.
- Manual select test mode: wrist only, foot only or both wrist and foot.
- Easy, time saving with one touch.



WRIST TEST LIMIT	FOOT TEST LIMIT	ADJUSTABLE TEST LIMIT
1 ΜΩ - 35 ΜΩ	1 ΜΩ - 100 ΜΩ	100 ΚΩ - 1 GΩ

Personnel ESD Network System

#### **Features**

- Truly 100% paperless testing.
- Automatic test records logging with history tracking.
- Digital resistance display.
- Microprocessor-based independent left and right



WRIST TEST LIMIT	FOOT TEST LIMIT	ADJUSTABLE TEST LIMIT
1 ΜΩ - 35 ΜΩ	1 ΜΩ - 100 ΜΩ	100 ΚΩ - 1 GΩ

### Single Wrist Strap Monitor

**MODEL NO: PPM-898-1** 

•• grounding tester ••••••

**Features** 

#### - ON / OFF switch on front panel.

- Constantly monitoring the wrist strap for skin contact, 1 Meg resistor and ground contact.
- LED indicator on the front panel.
- Green for PASS.
- 2 recessed holes for mounting screws.
- Ground connection post at the back panel

divalia connection post at the back panel.		
LOWER LIMIT	UPPER LIMIT	DIMENSION
1 ohm	Max 10 Mega ohm	67 x 60 x 29 (mm)

#### **Dual Wrist Strap Monitor** grounding tester .....

- ON / OFF switch on front panel.
- Constantly monitoring the wrist strap for skin contact, 1 Meg resistor and ground contact.
- LED indicator on the front panel.
- Ground connection post at the back panel.
- No Checking is required.
- Small and handy, easy to use.



CAPACITY	LOWER LIMIT	UPPER LIMIT
1.4M +/- 5 % Ohm	1 ohm	Max 10 Mega ohm



We provide easy-to-use audit kit, Ionizers and Test equipments that is designed to test static dissipative surfaces for electrical resistivity and resistance according to industry standards.

#### Workstation Monitor

grounding tester .....

#### **Features**

- Meets ANSI/ESD S20.20 in accordance with ESD TR12-01.
- Visible and audible alarms indicate improper grounding of the operator and worksurface.
- Test voltage can be set to 9 or 16 volts; test limit can be set to 10 or 35 megohms.
- Buzzer volume may be disabled or set to loud



TEST CURRENT	OUTPUT POLARIZATION	TEST VOLTAGE
< 3 μAmp	Center Negative	9 VDC / 16 VDC

#### **Wrist Strap Tester**

grounding tester ••••••

#### **Features**

- Ensures employee safety.
- Eliminates product defects caused by static
- Easy-to-use, quick-response tester for wrist strap.
- Connection status of wrist strap can be easily checked.



INDICATION LOW	INDICATION GOOD	INDICATION HIGH
R<800kΩ	$800k\Omega \le R \le 9M\Omega$	$R > 9M\Omega$

#### Megohmmeter

grounding tester .....

- Suitable to use in all facets of material production, including engineering, maintenance, quality control, incoming inspection, manufacturing & research.
- Measures resistance, resistivity, humidity, and temperature.
- Measurement range for 10v resistance is from 10 <sup>3</sup> to 10<sup>6</sup>.
- Accuracy  $\pm 10\%$  at  $10^3$   $10^8$ .



•		
TEMPERATURE	RELATIVE HUMIDITY	TEST VOLTAGE RANGE
32°F to 100°F	10% - 90%	10v and 100v

#### Surface Resistance Meter Kit

esd resisitance meter .....

#### **Features**

- Thinner and narrower design is easier to hold and provides protection from drops.
- Bypasses the 15 second electrification period to allow quick spot checks.
- Easy-to-access compartment without the need for tooling or probes.
- Provides an easy to read and accurate measurement.



RESISTANCE RANGES	OPERATING TEMP	ACCURACY
1 X 10 <sup>3</sup> - 1 X 10 <sup>12</sup> OHMS	32°F - 104°F	±10%

#### Surface Resistance Meter Set | MODEL NO: ORITEQ-880

### **Resistivity Meter**

MODEL NO: ORITEO-892

esd resistance meter .....

#### **Features**

- Handheld and portable surface resistance meter.
- Simple push button test method.
- Exceptional accuracy, stability and repeatability.
- Complies to ANSI/ESD Association Standards.
- Accessories include 2 x 5lb Weight, Carrying Case, Charging Adaptor & Connecting Cables.





MEASUREMENT RANGE	TEST VOLTAGE	HUMIDITY RANGE
10³ ~ 10¹² ohms	10/100 Volts	10% - 90% RH

- Portable and versatile instrument.
- Repeatable measurement of conductive static dissipative and isolative surface.
- Simple repeatable measurements of Conductive, Static Dissipative and Insulative surfaces by the ASTM standard D-257method of parallel bar sensing.



MEASUREMENT RANGE	OPERATING TEMP	ACCURACY
10 <sup>3</sup> ~ 10 <sup>12</sup> ohms	5°C ~ 49°C	±10%



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Conductive Checked Polyester Fabric MODEL NO: PPM-3604

#### **Features**

- Made from 100% filament polyester.
- Weave with conductive yarns at a interval of 2.5 mm/5 mm.
- Pattern : Grid & Stripe Material is ESD Safe.
- Good fluid repellent.
- Good antimicrobial properties.
- Colors: Customizable.



STATIC DECAY 5000-500V	WEAVING STRUCTURE	WIDTH
<0.01 sec	2 up 1 down	150 cm

## Garments

#### **Features**

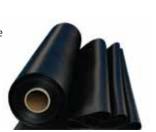
- Used to control Static electricity by wearing in Electornic industries.
- Compatible for cleanroom.
- Style Can be Customized as per end user desire
- Stitched using Conductive silver Thread ensure lifelong conductivity
- Surface Resistivity: 10<sup>5</sup>-10<sup>6</sup> Ohm / Sq
- Can be used in form of Smocks, Aprons, Coverall, Caps, Hoods, Cleanroom Booties, etc.,



#### **Conductive Mat** MODEL NO: PPM-477

mat & tiles .....

- The surface layer is a 0.5mm thick static dissipative layer and the bottom layer is a 1.5mm black conductive layer.
- Not affected by humidity.
- Superior resistance to abrasion, chemicals and heart resistant.
- Easy to clean and maintain.



THICKNESS	MATERIAL	COLOR
2 mm	Anti-static material and Synthetic rubber	Black

#### 5mm Conductive Diamond Fabric

#### **Features**

- Mixture of polyester and cotton.
- Material is soft and comfortable.
- ESD Safe Material.
- Suitable for use in production and assembly area.
- Colors: Customizable.

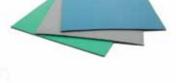


STATIC DECAY 5000-500V	WEIGHT	SURFACE RESISTIVITY
<0.01 sec	165 g/m²	10 <sup>5</sup> -10 <sup>6</sup> ohm/sq

**ESD Rubber Mat** 

#### Features

- It is designed to provide a static safe work surface where ESD control is required.
- Two-layer rubber table mat that is heat and chemical resistant.
- Table mat is ideal for static dissipative and flexible work surfaces.



SIZE	THICKNESS	TEMP RESISITANCE
Customizable	2, 3 mm	130 °C

**ESD PVC Mat** 

MODEL NO: PPM-154

- Sandwich of conductive layer between 2 dissipative layers.
- Greater strength and load bearing capacity.
- Easy to maintain.
- Easy installation and flawless finish.
- When laid on a shelf or on the floor connected to the Earth grounding point.



SURFACE RESISTIVITY	STATIC DECAY	COLOR
10 <sup>5</sup> -10 <sup>6</sup> ohm/sq	<0.1s	Green, Blue, Grey



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### **ESD AntiFatique Mat**

#### **Features**

- Homogenous construction ensures charge moves easily.
- Works well in wet or oily situations since it does not absorb liquids.
- Mats dampen vibration and reduce heat and cold transmission.
- Non-allergenic: latex and silicone free.



SURFACE RESISTANCE	STATIC DECAY 5000 - 100V	SIZE
E5 ohms	0.01 sec	Customizable

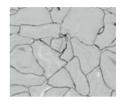
PARAMETERS	DETAILS
Weight/m <sup>2</sup>	2.0 mm : 3.24 kg/m <sup>2</sup> 3.0 mm : 4.87 kg/m <sup>2</sup>
Static Load Limit	2 mm : 1500 PSI 3 mm : 2500 PSI
Electrical Resistance	Conductive: 2.5 x 10 <sup>4</sup> – 1.0 x 10 <sup>6</sup> ohms Dissipative: 1.0 x 10 <sup>6</sup> – 1.0 x 10 <sup>8</sup> ohms
Static Generation	<100V
Static Decay	≤2 sec

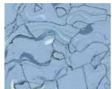
#### **Features**

- Excellent wear resistance and easy cleaning with the special coating.
- Conductive material is distributed evenly in entire tile so that it has permanent conductiviity.
- Anti-fire, anti-chemical properties.
- Uniform gauge and color maintenance.

### **ESD Vinyl Tile**

mat & tiles .....



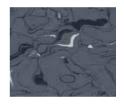


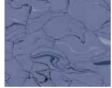


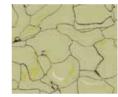


















### **ESD Interlocking Tile**

**Features** 

#### - Extremely Hard Wearing.

- 5 mm or 7 mm thick options.
- Low Life Cycle Cost And Simple To Maintain.
- Smart & Modern Appearance.
- ESD / Anti-static Version Available.
- Ideal For Use With Fork Trucks And Heavy Loads.



**SURFACE RESISTIVITY STATIC DECAY AT 15% ELECTROSTATIC PROPENSITY** 0.01 sec < 10 Volts / <2.0 kV  $2.2 \times 10^{4} \Omega \text{ TO } 3 \times 10^{6} \Omega$ 

#### ESD interlocking Heavy Duty Tile

- Interlocking PVC tile.
- Resists punctures & abrasions.
- Resistant to most chemicals.
- 100% recyclable.
- Fire retardant & Anti-Slip.
- Easy installation & Low maintenance.



THICKNESS	FINISH	COMPOUND
7 mm	Studded	Heavy Duty



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### **Raised Flooring**



#### **Features**

- Full Steel structure, High quality Cement in filled
- Panel Surface is painted electro-statically with conductive epoxy resin.
- Lock hole in four corners
- High dimensional precision , Strong load-ability and shock proof.
- Adjustable height for pedestal, assembly agility.
- Convenient removing, Saving Cost, long performance life
- Provides perfect sealing property



	Concentrate	Impact Load	Ultimate Load	Uniform Load	Rolling Load N	
Model No	Load N N N/m²			10 Times	10000 Times	
PPM-440	≥ 1960	≥ 295	≥ 5880	≥ 9720	1958	1566
PPM-662	≥ 2950	≥ 445	≥ 8850	≥ 12500	2946	2356
PPM-800	≥ 3560	≥ 536	≥ 10680	≥ 16100	3560	2670
PPM-1000	≥ 4450	≥ 670	≥ 13350	≥ 23000	4450	3560
PPM-1250	≥ 5560	≥ 780	≥ 16680	≥ 33000	5560	4450
PPM-1500	≥ 6660	≥ 1005	≥ 19980	≥ 34500	6675	5340

#### **ESD Epoxy Paint**

MODEL NO: PPM-1561

mat & tiles

- Good mechanical and chemical resistance.
- Easy application.
- Easy to clean.
- In accordance with general ESD requirements.
- Particularly suitable for areas with requirements for a low electrostatic.
- Charge (Body-voltage) and static dissipative surface.
- Suitable industries that process, assemble, install, package, test or transport, such as clean room, pharmaceutical, automotive industries etc

Compressive Strength	44 N/mm²
Flexural Resistance	20 N/mm <sup>2</sup>
Abrasion Resistance	60 mg
Adhesion	> 1.5 N/mm <sup>2</sup>
Resistance to ground	10 <sup>6</sup> to 10 <sup>9</sup> Ω
Consumption / Dosage	1.5 to 1.6 kg/m² / @ 1mm thickness





Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

furnitures .....

#### **Features**

- Material : Static Dissipative leather / Antistatic PU Foam / Stainless Steel.
- Compatible for Clean-room application.
- Height adjustable based on different sizes of Gas Cylinder.
- Foot ring & Conductive Metal Chain is optional.
- Steel Chroming/ Plastic five star leg; Color: Sky blue / Black.
- Wheels: Conductive plastic, Metal Casters & Stud.
- Surface resistance : 10^4 10^6 & 10^6 10^9 0hm.
- Customization is available.



MODEL NO: PPM-CH04





MODEL NO: PPM-CH05



MODEL NO: PPM-CH01

MODEL NO: PPM-CH06



MODEL NO: PPM-CH02

MODEL NO: PPM-CH07



MODEL NO: PPM-CH03

MODEL NO: PPM-ST01



MODEL NO: PPM-ST02



MODEL NO: PPM-ST03



MODEL NO: PPM-ST04



MODEL NO: PPM-ST05



MODEL NO: PPM-ST06



MODEL NO: PPM-ST07



MODEL NO: PPM-CH08



MODEL NO: PPM-CH09



MODEL NO: PPM-ST08



MODEL NO: PPM-ST09



MODEL NO: PPM-CH10



MODEL NO: PPM-CH11



MODEL NO: PPM-SS01



MODEL NO: PPM-SS02



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Workstation

. furnitures



Flow Through Workbench



Multi ESD Workbench



**Laboratory ESD Workbench** 



**Basic ESD Workbench** 



**Corner ESD Workbench** 



**Double ESD Workbench** 



**Motorized Workbench** 



**Conveyor Workbench** 



**Custom Made ESD Workbench** 

SL.	TYPE OF	
NO	WORKBENCH	APPLICATION
1	Laboratory ESD Workbench	Has the ability to adopt the structure of table together with the double slotted Upright frame supporter in a simple and effort less method.
2	Multi ESD Workbench	Provides the functionalities of erasing the entire problems of storage, caters a better display, fully operational in performance and meet the end user requirements
3	Basic ESD Workbench	Equipped with the necessary strength and stability for meeting the demanding environments
4	Corner ESD Workbench	Allows to enlarge the working space for the angled work area that enhances the usable space of the room
5	Double ESD Workbench	Allows the worktop and accessories to be shared with the double sided mounted on upright frame
6	Motorized Workbench	Target at reducing the strain and fatigue in shoulders, arms and the back of the workers
7	Flow Through Workbench	Equipped with the rule of first-in / first-out
8	Conveyor Workbench	Equipped with the conveyor that is capable of connecting the different working position together and allow the bulk material to quickly flow through
9	Custom Made ESD Workbench	Very simple as the end user requirements are specific in nature that vary in lots of ways consisting of the workbench functions, size and Existing Layout.



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### ESD Pipes

furnitures

#### **Features of ESD Metal Joints**

- New, patented design for  $\emptyset 28$  Stainless Steel Pipes .
- Excellent grip characteristics achieved by introducing series of protruded pyramids in contact with stainless steel pipes.
- When used with coated pipes, grip is enhanced by 30%.

#### **Features of ESD Pipes**

- Steel Pipe is coated with ABS . Then , the surface is coated again with the new material of PA ABS.
- Compared to the conventional ABS Coating pipe.
- Pipe is outstanding in oil resistance and chemical resistance.
- In Particular salinity, rust preventive oil or discoloration of the pipe.
- This product comes in a variety of colors.
- With outstanding durability , this pipe is easily processed.
- Rust proof coating inside the pipe provides superior corrosion resistance.





Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.





















**SIZE:** \$\psi 28\*4000mm

THICKNESS: 0.8mm/1.0mm

PPJ-110

PF-0015

PF-2044F

**SIZE: 0**28\*4000mm PF-1008A

THICKNESS: 0.8mm/1.0mm PF-1009B











**SIZE:** 028\*4000mm

THICKNESS: 0.8mm/1.0mm

**SIZE:** Standard

**SIZE:** 74\*20\*25

**SIZE:** 54\*20\*25





PF-1200L



PF-1200B



MJ-110



SIZE: Standard

PF-2044D PF-2044DW

SIZE: Standard

SIZE: Standard PF-2044J

SIZE: Standard PF-2044





SIZE: Standard







SIZE: Standard SIZE: Standard

SIZE: Standard

SIZE: Standard **SIZE:** 38\*44\*(2000/4000/6000)

Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Static Dissipative Acrylic Sheet MODEL NO: PPM-C300

.. walls & nartition

#### **Features**

- Prevents buildup of static charge & accumulation of harmful contamination.
- Cannot be tribocharged when properly grounded.
- Electrostatic decay is less than .05 second.
- Results in rapid static dissipation without arching.



DENSITY	TENSILE STRENGTH	SURFACE RESISTIVITY
1.19 g/cm <sup>3</sup>	10000 psi	10 <sup>6</sup> ohms/sq

### Antistatic PVC Grid Curtain Film MODEL NO: PPM-C400

walls & partition

#### Features

- Anti-static PVC curtain can be utilized as a barrier wall or protective curtain material in the ESD sensitive environment.
- Carbon lines are printed on anti-static PVC
- Excellent draping ability.



THICKNESS	WIDTH	LENGTH
0.2 - 1 mm	1.37 mm	30 m

### Antistatic PVC Clear Curtain Film MODEL NO: PPM-C500

.. walls & partition

#### **Features**

- Heat and sound insulation.
- Conserve air-con energy.
- Saves energy and times.
- Prevents dust and insect.
- Reduces noise/sound.
- Humidity and temperature control.



SURFACE RESISTIVITY	SIZE
10 <sup>10</sup> to 10 <sup>11</sup> ohm/sq	200 mm x 50 mm x 2 mm / 300 mm x 50 mm x 3 mm

ESD PVC Opaque Black Curtain Film MODEL NO: PPM-C550

#### Features

- They have good transparency.
- It can stop the loss of cold air or warm air effectively and prevent the invasion of dust and ultraviolet.
- PVC strip curtains also reduce the dB value of noise, constrain noise from spreading and noise pollution



WATER ABSORPTION	TENSILE STRENGTH	THICKNESS
0.1%~0.3%	(30~40) MPa	1-5 mm

## Antistatic PVC UV Curtain Film MODEL NO: PPM-Ko

• • walls & partition

#### **Features**

- Anti-Static PVC sheet is a highly transparent and flexible PVC film with special anti-static formulation.
- It can be selected from a wide variety of lineup in response to your requirements, such as clean room, clean booth, buffer zone...etc.



THICKNESS RANGE	STATIC ELECTRICITY
0.3mm,0.5mm & 1.0mm	10 <sup>10</sup> Ω

#### Conductive HIPS Sheets

-- raw materials -----

#### Features

- The sheets that have been designed to have electrical conductivity with carbon black in Polystyrene based grades are available in a wide range of uses.
- Surface Resistance 10 ∧ 4 ~ 6 0hm.
- Black conductive surface.
- Offering an excellent balance between mechanical strength and mold ability.



MODEL NO: PPM-0B73

TENSILE STRENGTH	ELONGATION	GLOSS
270 kg/cm <sup>2</sup>	50%	72%



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Conductive Compound

raw materials .....

#### **Features**

- Good toughness, strong impact resistance.
- Suitable for extrusion hollow board & conductive box.
- Non-toxic.
- Light weight.
- Low absorption of water.
- Excellent mechanical performance.



SURFACE GRAVITY	TENSILE STRENGTH	SURFACE RESISTIVITY
1.66	89 Mpa	10^3 -10^5 Ohm

Conductive Film

#### **Features**

- It is made from modified polyethylene resins specially developed to possess low surface and volume resistivities and yet retaining the desirable properties of low density polyethylene.
- It is volume conductive and is independent of relative humidity.



STATIC DECAY	VOLUME RESISTIVITY	SURFACE RESISTIVITY
<0.01 secs	2 x10 <sup>4</sup> ohm-cm	1 x10 <sup>4</sup> ohm/sq

### Conductive Binder

MODEL NO: PPM-SF62 

#### **Features**

- Excellent ESD Function Surface Resistivity.
- Suitable for Clean room class 100 environment.
- ESD Vinyl material.
- Customized sizes available.



SIZE	RING	SURFACE RESISTANCE	
Α4	2 or 3	< 9.0 x 10 <sup>9</sup> 0hm	

### Conductive Corrugated Sheet

- Available in Virgin & 100% Recyclable Plastic
- Available in 3mm, 4mm, & 6mm sheets.
- Meets the guidelines of the Electronics Industries Association.
- Moisture Proof & Extremely lightweight.
- Tear, puncture and impact-resistant.



THICKNESS	MATERIAL	GSM
2-12 mm	PP	250-2400 (Variants Available)

### Static Dissipative Acrylic Clipboard MODEL NO: PPM-GJ38

#### **Features**

- Constructed from ESD acrylic and is ideal for use in cleanroom class 10 or class 100 environment.
- Colors available: Clear or Beige.
- Custom sizes available.

CLIP	SURFACE RESISTANCE	MATERIAL
Chrome	<10 <sup>9</sup> ohms	ESD Acrylic

#### ESD Soft Document Holder

office stationery .....

- Open top for easy loading.
- Holes on the side for easy filing.
- Made of Antistatic Polypropylene material.



THICKNESS	SIZE	SURFACE RESISTIVITY
0.05 mm	A4	10° - 10¹¹ ohm/sq



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Antistatic Document Holder

#### **Features**

- Material: Antistatic PVC.
- Size: A4, A3, B4, B5.
- Surface resistivity reading: 1.0 x 10<sup>11</sup> ohm
- Used to hold instruction manual, assembly drawings and other documents used in ESD controlled production area.
- Customised design are available.



TEN	ICI	LE ST	DEV	CTL
HEI	иэн		MEN	

**ELONGATION** 

**SOFTENING POINT** 

Vertical - 589 kgf/cm<sup>2</sup>

Vertical - 80% Horizontal - 584 kgf/cm<sup>2</sup> Horizontal - 50%

**59.0**°C

STATIC DECAY

material parts.

office stationery ...

- Electrically conductive.

- Extremely high wear and abrasion resistance.

- Very high chemical and thermal resistance.

- No metal contamination in the handlng of the hard

Features

- ESD Safe.

**BASE MATERIAL** 

COLOUR

<0.3 Sec

**ESD Calculator** 

ABS

Black

#### Conductive Pen Holder

#### **Features**

- Size: H 105mm x D 75mm (maximum dimensions).
- Dissipative Time: 0.1s.
- Metal mesh structure, solid shatter-resistant.
- Rust-proof, aesthetic and easy to wash.
- Can also be used as small storage barrels, containing a variety of small objects.



MATERIAL

Black

**SURFACE RESISTANCE** 

Metal

**COLOR** 

 $10^{5} \sim 10^{8}$  Ohms

**ESD Safe Mouse & Keyboard** 

MODEL NO: PPM-KC98

#### **Features**

- Anti-static keyboard, made of ABS
- ESD safe type
- Black color only
- Application: widely used in ESD office areas, electronics sensitive areas, semi-conductors, PCB, LCD, SMT, computer areas and more.
- Also can be used in the 10-100 purification level cleanrooms.



**SURFACE RESISTANCE DECAY TIME** FRICTION VOLTAGE 1000V-100V <100V 10<sup>5</sup> - 10<sup>8</sup>ohms

#### **Features**

- Conductive casing.
- Big display screens and keypad.
- Accurate calculation.
- Delivery fast.
- High quality.



**SURFACE RESISTANCE** 10<sup>5</sup>~10<sup>8</sup> Ohms

MATERIAL

**POWER SUPPLY** 

ABS

Battery

#### ESD Safe Mouse Pad

MODEL NO: PPM-YE43

- The ESD mouse pad is made of dissipative rubber
- It is of long term protection against ESD, durable, non slip and ideal for clean room use.



MATERIAL	SURFACE RESISTANCE	SIZE
Dissipative Rubber	<10 <sup>8</sup> Ohms	220*180*2 mm



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### **Features**

- Good toughness, strong impact resistance.
- Suitable for extrusion hollow board & conductive box.
- Non-toxic.
- Light weight.

<ul> <li>Low absorption of water.</li> <li>Excellent mechanical per</li> </ul>		
MATERIAL	CHDEACE DECICTANCE	CTATIC DECAY

MATERIAL	SURFACE RESISTANCE	STATIC DECAY
High Quality ABS	10 <sup>3</sup> - 10 <sup>8</sup> ohm	1000V - 100V

### **ESD Handheld Magnifier**

#### **Features**

- Simplest type of magnifiers.
- Hand-held magnifiers with a variety of lens designs - including aspheric, aplanatic, biconvex, and the hi-tech diffractive lens.
- Available in powers from 2x to 12.5x diopters.
- Ideal for short-term spotting tasks.

HANDLE SIZE	LENS DIAMETER	MAGNIFICATION
19 cm	60 mm	225%

#### **ESD Tape Dispenser** MODEL NO: PPM-YK83 office stationery .....

#### **Features**

- Easy cut blade for easy tape dispensing.
- Conductive pad that prevents slipping and damage to your work surface.
- Material : Conductive ABS
- The rubber on the bottom of the dispenser acts as the ground and should be placed on grounded work surface.
- Slip resistant, Blade guard.
- Tape width: 25mm max



#### **Features**

- Good quality.
- Low price.
- Cleanroom Class: 1000.
- Easy to operate.
- Durable.

MATERIAL	COLOR	SURFACE RESISTANCE
Conductive ABS & Stainless steel	Black	10 <sup>3</sup> - 10 <sup>8</sup> ohm

•••		 				•
E	SD Stapler	MODEL	NO:	PPM-	GJ38	,
	office stationery	 				

#### **Features**

- Static charges are generated by separation of materials or any 2 surfaces.
- The ESD Stapler reduces the generation of static charges during abrasion or movement, enhancing ESD control measures in static sensitive areas.

ESD READING	MATERIAL	COLOR
10 <sup>4</sup> - 10 <sup>8</sup> ohm/sq	ABS with permanent ESD	Black

## **ESD Tape Dispenser**

#### **ESD Tape Dispenser Handheld**



MODEL NO: PPM-YK83



MODEL NO: PPM-YK83

STATIC DECAY TIME	CORE DIA	ESD READING
< 2 Sec	76 mm	10 <sup>4</sup> -10 <sup>6</sup> 0hm



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### Conductive Paper Hole Punch

#### **Features**

- Designed to meet the requirements of ESD.
- Used to create holes in sheets of paper.
- Easy to Handle.
- Powder coated on Stainless Steel.



COLOR	MATERIALS	SURFACE RESISTANCE
Black	ESD Coated	10 <sup>5</sup> - 10 <sup>9</sup> Ohm

### Conductive Document Holder

#### **Features**

- Suitable for both cleanroom and EPA area.
- Made of high quality conductive material.
- 3 Compartments.
- Accepts A4 Size Paper.



MATERIAL	COLOR	SURFACE RESISTANCE
Metal	Black	10 <sup>5</sup> -10 <sup>9</sup> Ohms

Conductive	Letter Tray Set	MODEL	NO: PPN	I-TY61
<ul> <li>office stationery</li> </ul>				

- Suitable for both cleanroom and EPA area.
- Made of high quality conductive material.
- Accepts A4 Size Paper.



MATERIAL	COLOR	SURFACE RESISTANCE
Metal	Black	10 <sup>5</sup> ~10 <sup>9</sup> Ohms

### **ESD Desk Telephone**

32Mbits

#### **Features**

- -Handset volume adjustable.
- Ringer/in use indicator.
- Ringer Hi-Lo switch.

0~40°C

- 10 two-touch memories
- Power Consumption: Idle:1.5W/Active:1.8W.



## Conductive Filing Tray

10~65%

#### **Features**

- Designed in landscape style.
- Stable Design.
- Stackable.
- Conductive/ Dissipative plastic.



SURFACE RESISTANCE	COLOR	DIMENSION
10 <sup>4</sup> -10 <sup>5</sup> Ohms (Black) 10 <sup>4</sup> - 5x10 <sup>10</sup> Ohms (Yellow)	Black / Yellow	343 x 258 x 53 mm

### Conductive Square Waste Bin

- Used for collecting useless rubbish in dust-free workshop and electronic waste.
- Avoid friction which leads to Static charge generation.
- No need to wash the ESD garbage can.



SIZE	VOLUME	SIZE
L300 x W230 x H335 mm	15L	10 <sup>5</sup> -10 <sup>9</sup> Ω.CM



Specialized range of ESD products including Apparels, Mat & Tiles, Walls & Partition, Raw material and Office Stationery.

#### **Conductive Waste Bin**

MODEL NO: PPM-EW21

office stationery ......

#### **Features**

- Used for collecting useless rubbish in dust-free workshop and electronic waste.
- Avoid friction which leads to Static charge generation.
- No need to wash the ESD garbage can.



ROUND SIZE	SURFACE RESISTANCE	COLOR
φ310*290mm	15L	Black

#### Conductive Long Broom

office stationery .....

#### Features

- Light dustpan set needs only little space for storage.
- Helps to clean up dirt very fast without
- The flap lid of the dustpan ensures a safe and hygenic disposal of waste.
- Material: Conductive PP, black.



MAX WIDTH	LENGTH OF BRUSH HAIR	RESISTANCE
25 cm	6.5 cm	< 10 <sup>4</sup> 0 hms

#### Conductive Tool Box

office stationery ......

#### **Features**

- Padlock Tabs.
- Heavy duty recessed handle.
- Positive action latch.
- Material: conductive polyproplene.
- Surface resistivity: <10<sup>6</sup>.
- Static decay time: <2 sec.

ESD-safe storage tool box is a sturdy, static safe container for static protection work areas. Features a heavy duty recessed handle and positive action latch. Inner lift-out tray fits neatly inside for additional storage while a convenient padlock tab keeps your contents safe. Made from conductive polypropylene and features a bright yellow ESD logo, making it the perfect storage solution for your personal tools and equipment.





HEIGHT	LENGTH	WIDTH
80-90 cm	5.9"	7.08"

#### **ESD Clip Board**

office stationery .....

#### **Features**

- Made of dissipative PP material.
- Excellent protection against ESD.
- Ideal for clean room use.
- Available in size A3 and A4.
- ESD Property remains permanent.



THICKNESS	DECAY TIME	SURFACE RESISTANCE
2 mm	To 100 V Within 2 Sec	<10 <sup>8</sup> 0hms

#### **ESD Safe Bar Code Scanners**

MODEL NO: PPM-IQ17

- Great for clean room and static sensitive environments.
- Available in both corded and cordless versions.
- Developed to satisfy strict EPA requirements (ESD Protected Area).
- Coated with conductive materials engineered to eliminate the build up of dangerous static charge on the



SCAN RATE	SURFACE RESISTIVITY	SCAN PATTERN
Up to 270 Scans/Secon	<10 <sup>6</sup> 0hms/Sq	Single Line



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### **Sontara Wipes**

cleanroom

#### Features

- Excellent absorbent capacity (418mL/m<sup>2</sup>) and absorbency rate (7680mL/m<sup>2</sup>/s).
- Outstanding purity low lint, no binders or chemical additives, biodegradable.
- Excellent dynamic wiping efficiency (98.3%) and wet particles removal ability (99.3% of 10mm particle challenge) – the key function of cleanroom wipes - leaves surfaces clean and dry.



ABSORBENT CAPACITY	BASIC WEIGHT	DIMENSIONS
48 mL/m <sup>2</sup>	49.3 g/cm <sup>2</sup>	8" x 8"

### **Sontara Wipes**

#### **Features**

- Extremely low in both particles and fibres.
- Strong, solvent resistant 100% polyester.
- Abrasion and chemical resistant.
- Sealed edges prevent particle or lint generation.
- Unique aperture pattern.
- Double packaged in bags.



THICKNESS	BASIC WEIGHT	DIMENSION
>350 ml/m <sup>2</sup>	130 g/m <sup>2</sup>	9" x 9"

### Kasher Klean

#### **Features**

- The Pro-pack polyester knit wipes are made of 100% polyester.
- Edges are sealed by laser machine.
- Wipes are laundered and double packed for Class 100 cleanroom environment.
- Metallic ion and extractable levels are extremely low.



MODEL: PRO-KNIT

ABSORBENCY CAPACITY	BASIS HEIGHT	DIMENSION
320 ml/m <sup>2</sup>	130 g/m <sup>2</sup>	9" x 9"

### Sontara Wipes

cleanroom

#### Features

- Strong, solvent resistance blend of cellulose and polyester.
- Formed with clean water iets that wash the fibres.
- No binders or chemical additives.
- Double packaged in bags.



MODEL: MPLP

ABSORPTIVE CAPACITY	BASIC WEIGHT	DIMENSION
4.62 mL/g	68 g/m <sup>2</sup>	4",6",9",12"

#### Sontara Wipes

cleanroom .....

#### **Features**

- High performance, absorbent product engineered for cleanroom.
- Made using the hydro entangling process, where needle-like water jets from a strong, nonwoven fabric without any binders, these fabrics are ideally suited for critical cleanroom.
- Environment of Class 10 (M2.5) and higher.
- Low extractable level and ion content.



#### Kasher Klean

#### **Features**

- Excellent absorption capacity, can absorb water, oil and other liquid.
- Soft, smooth texture
- Durable, low particle generation
- Strong solvent resistance
- Laser cutting
- Available size: 4"\*4"



MODEL: SILKY CLOTH

CLASS	COLOR	PARTICLES COUNT/CM <sup>2</sup>
10 - 100	White	< 1100



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

Kasher Klean MODEL: NON-WOVEN

## Cleanroom Mop MODEL: PPM-MP19

#### **Features**

- 55% cellulose and 45% polyester blend.

Cleanroom Swabs

- Cold knife cut edge Contains no chemical binders.
- High absorbency and low abrasion resistance.
- Chemically compatible with common cleaning and disinfecting solutions.
- Low levels of extractable and moderate particle counts.
- Available in a variety of sizes to suit most applications.



BASIC WEIGHT	SORPTIVE RATE	SORPTIVE CAPACITY
$68\pm3~\mathrm{g/m}^{2}$	0.3 sec	331 mL/m <sup>2</sup>

#### **Features**

- Soft, non-abrasive.
- Economic and absorbent.
- Recommended for ISO class 5-8.

FOAM SWABS -----

- Mop Head Autoclavable per standard operating procedures.
- Tubular knit construction with fan tailed looped ends, minimizes particle generation.



MOP MATERIAL	SIZE OF MOP	SIZE OF HANDLE
100% Microfiber Polyester	16 cm x 35 cm	154 cm (Adjustable Type)

Provide precision surface cleaning within cleanroom and other controlled environments.

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM750B	Sponge	3.2mm 0.126"	3.2mm 0.126"	10.0mm 0.394"	Polypropylene	2.7mm	66mm	76mm	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
				_					
PPM750D	Sponge	3.2mm 0.126"	3.2mm 0.126"	10.0mm 0.394"	Polypropylene	2.7mm	66mm	76mm	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
PPM757B	Sponge	3.2mm 0.126"	3.0mm 0.118"	11.0mm 0.433"	Polypropylene	2.3mm 0.091"	59.1mm 2.327"	70.1mm 2.760″	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
PPM742B	Sponge	3.6mm 0.142"	3.5mm 0.138"	12.0mm 0.472"	Polypropylene	3.0mm 0.118"	56.0mm 2.205	68.0mm 2.677"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
					-				
PPM742C	Sponge	3.6mm 0.142"	3.5mm 0.138"	12.0mm 0.472"	Polypropylene	3.0mm 0.118"	56.0mm 2.205	68.0mm 2.677"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### FOAM SWABS

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM742B	Sponge	3.6mm 0.142"	3.5mm 0.138"	12.0mm 0.472″	Polypropylene	3.0mm 0.118"	56.0mm 2.205"	68.0mm 2.677"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swal
				-					
PM741B	Sponge	2.8mm 0.110"	3.0mm 0.118"	11.3mm 0.445"	Polypropylene	2.5mm 0.098″	56.5mm 2.224″	67.8mm 2.669"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swa
	F4			-					
PPM751B	Sponge	3.7mm 0.146"	3.7mm 0.146"	15.0mm 0.591"	Polypropylene	2.4mm 0.094"	51.8mm 2.039"	66.8mm 2.630"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swa
1									
PM610	Sponge	5.0mm 0.197"	4.0mm 0.157"	11.0mm 0.433"	Polypropylene	4.5mm 0.177"	57.5mm 2.264"	68.5mm 2.697"	100 swabs/bag 100 bags/carton
Me									
PM920	Sponge	4.7mm 0.185"	4.8mm 0.189″	11.0mm 0.433"	Polypropylene	4.4mm 0.173"	57.0mm 2.244″	79.0mm 3.110″	100 swabs/bag 100 bags/carton
		_							
PM746S	Sponge	6.2mm 0.244"	5.1mm 0.201"	19.0mm 0.201"	Polypropylene	3.2mm 0.126"	73.0mm 2.874″	92.0mm 3.622"	50 bags/carton 5 inner bags of 100 swa 50 bags/carton
				-					
PM740	Sponge	6.0mm 0.236"	5.0mm 0.197"	18.5mm 0.728 <i>"</i>	Polypropylene	3.2mm 0.126"	144.5mm 5.689"	163.0mm 6.417"	500 swabs/bags 5 inner bags of 100 swa 10 bags/carton
				_					
PM740B	Sponge	6.0mm 0.236"	5.0mm 0.197"	18.5mm 0.728 <i>"</i>	Polypropylene	3.2mm 0.126"	144.5mm 5.689"	163.0mm 6.417"	500 swabs/bags 5 inner bags of 100 swa 10 bags/carton



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM1702	Sponge	3.0mm 0.118"	3.0mm 0.118"	10.3mm 0.406"	Polypropylene	2.5mm 0.098"	57.0mm 2.244"	67.3mm 2.650"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
1	i i								
PPM718	Sponge	12.4mm 0.488"	5.7mm 0.224"	26.5mm 1.043"	Polypropylene	5.1mm 0.201"	76.0mm 2.992"	129.0mm 5.079"	50 bags/carton 50 swabs/bag
PPM712A	Sponge	10.5mm 0.413"	8.4mm 0.331"	25.0mm 0.984"	Polypropylene	5.1mm 0.201"	103.2mm 4.063"	128.2mm 5.047"	50 swabs/carton 100 bags/carton

### CLOSED-CELL CLEANFOAM SERIES

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM706A	Sponge	10.9mm 0.110"	7.8mm 0.307"	28.3mm 1.114"	Polypropylene	6.6mm 0.260"	54.0mm 2.126"	82.3mm 3.240″	50 swabs/bag 100 bags/carton
PPM707A	Sponge	16.0mm 0.630"	9.2mm 0.362"	25.5mm 1.004"	Polypropylene	6.7mm 0.264"	104.8mm 4.126"	130.3mm 5.123"	50 swabs/bag 50 bags/carton
PPM708A	Sponge	19.0mm 0.748"	9.0mm 0.354"	26.7mm 1.051"	Polypropylene	6.9mm 0.272"	105.0mm 4.133"	131.7mm 5.185"	50 swabs/bag 50 bags/carton

#### HIGH DENSITY CLEANFOAM SERIES

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM707W	Sponge	16.0mm 0.630"	9.2mm 0.362"	25.5mm 1.004"	Polypropylene	6.7mm 0.264"	104.8mm 4.126"	130.3mm 5.123"	50 swabs/bag 50 bags/carton



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### POLYESTER SWABS

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PM758B	Double Layer Polyster	4.0mm 0.157"	2.5mm 0.098"	11.0mm 0.433"	Polypropylene	2.3mm 0.091"	59.0mm 2.323"	70.0mm 2.756"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swal
PM758L	Single Layer Polyster	3.5mm 0.138"	1.8mm 0.071"	11.0mm 0.433"	Polypropylene	2.3mm 0.091"	59.0mm 2.323"	70.0mm 2.756"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swa
		-	-						
PM743B	Double Layer Polyester	3.5mm 0.138"	3.3mm 0.130"	12.7mm 0.500"	Polypropylene	2.9mm 0.114"	56.0mm 2.205"	68.7mm 2.705"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swa
PM766	Double Layer Polyester	5.8mm 0.228"	3.0mm 0.118"	17.0mm 0.669"	Polypropylene	3.2mm 0.126"	75.0mm 2.953"	92.0mm 3.622"	20 bags/carton 500 swabs/bag 5 inner bags of 100 swa
PM761	Double Layer Polyester	6.0mm 0.236"	3.0mm 0.118"	17.3mm 0.669"	Polypropylene	3.2mm 0.126"	145.0mm 5.709"	162.0mm 6.378"	10 bags/carton 500 swabs/bag 5 inner bags of 100 swa
		_		_			_	-	
PM714A	Double Layer Polyester	13.0mm 0.512"	4.0mm 0.157"	25.0mm 0.984"	Polypropylene	5.2mm 0.205"	103.0mm 4.055″	128.0mm 5.039"	100 swabs/bag 50 bags/carton
					9				
PM707	Double Layer Polyester	15.0mm 0.591"	4.0mm 0.157"	25.0mm 0.984"	Polypropylene	6.6mm 0.260"	105.0mm 4.134"	130.0mm 5.118"	100 swabs/bags 50 bags/carton
PM713	Double Layer Polyester	12.3mm 0.484"	3.3mm 0.130"	23.0mm 0.906"	Polypropylene	5.8mm 0.228"	100.0mm 3.937"	123.0mm 4.843"	100 swabs/bags 50 bags/carton



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM768S	Double Layer Polyester	3.5mm 0.138"	2.4mm 0.094"	11.0mm 0.433"	Polypropylene	3.0mm 0.118"	79.5mm 3.130"	89.5mm 3.524"	20 bags/carton 500 swabs/bag 5 inner bags of 100 swabs

#### MICROFIBER SWABS

MICROFIE									
PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM707M	Double Layer Microfiber	13.0mm 0.512"	4.0mm 0.157"	24.0mm 0.945"	Polypropylene	6.6mm 0.260"	105.0mm 4.134"	129.0mm 5.079"	100 swabs/bag 50 bags/carton
PPM714MD	Double Layer Microfiber	13.0mm 0.512"	3.6mm 0.142"	25.0mm 0.984"	Polypropylene	5.1mm 0.201"	103.0mm 4.055"	128.0mm 5.039"	100 swabs/bag 50 bags/carton
PPM713M	Double Layer Microfiber	12.3mm 0.484"	3.0mm 0.118"	23.0mm 0.906"	Polypropylene	5.8mm 0.228"	100.3mm 3.949"	123.3mm 4.854"	100 swabs/bag 50 bags/carton
		-							
PPM766M	Double Layer Microfiber	7.5mm 0.295"	3.0mm 0.118"	17.0mm 0.669"	Polypropylene	3.0mm 0.118"	75.0mm 2.953"	92.0mm 3.622"	500 swabs/bag 5 inner bags of 100 swa 20 bags/carton
				-					
PPM761MD	Double Layer Microfiber	5.8mm 0.288"	2.9mm 0.114"	17.0mm 0.669"	Polypropylene	3.2mm 0.126"	145.0mm 5.709"	162.0mm 6.378"	500 swabs/bag 5 inner bags of 100 swal 50 bags/carton
PM758MD	Single Layer Microfiber	3.4mm 0.134"	1.6mm 0.063"	11.0mm 0.433″	Polypropylene	2.3mm 0.091"	59.0mm 2.323"	70.0mm 2.756"	500 swabs/bag 5 inner bags of 100 swa 50 bags/carton



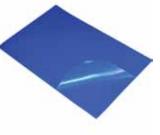
Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

PART NO.	HEAD MATERIAL	HEAD WIDTH	HEAD THICKNESS	HEAD LENGTH	HANDLE MATERIAL	HANDLE WIDTH	HANDLE LENGTH	TOTAL LENGTH	PACKING
PPM758MD	Double Layer Microfiber	3.8mm 0.150"	2.3mm 0.091"	11.0mm 0.433"	Polypropylene	2.3mm 0.091"	59.0mm 2.323"	70.0mm 2.756"	500 swabs/bag 5 inner bags of 100 swabs 50 bags/carton
PPM759LM	Single Layer Microfiber	2.2mm 0.087"	1.3mm 0.051"	10.0mm 0.394"	Polypropylene	2.2mm 0.087"	61.0mm 2.402"	71.0mm 2.795″	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs
		-							
PPM759M	Single Layer Microfiber	2.15mm 0.085"	1.3mm 0.051"	10.0mm 0.394"	Polypropylene	2.2mm 0.087"	61.0mm 2.402"	71.0mm 2.795"	50 bags/carton 500 swabs/bag 5 inner bags of 100 swabs

### **Sticky Mat** sticky series .....

#### Features

- Used at doorway to remove dirt and dust from footwear before personal enter into the production area.
- Comes in 30 peelable sheets per mat.
- Used in electronic manufacturing, hospital theatre, cleanroom, bio lab, wafer fab, solar manufacturing and pharmaceutical manufacturing company.



AVAILABLE SIZES	AVAILABLE COLORS
24" x 36", 26" x 45"	Blue, other color on indent basis

**TENSILE STRENGTH** More than 1.2 kg/10mm

### **Sticky Roller**

### **Features**

- The length of the silicone can reach to 30-406mm. Outside diameter 20-30mm, both ends have bearing.
- The SMT sticky rolley surface smooth as a mirror, moderate viscosity, lightweight, particle size less than 2um.



MATERIAL	COLOR	HANDLE
Silicon	Blue,White	Aluminum alloy handle

#### Non-Woven Sticky Roller MODEL NO: PPM-1211 sticky series .....

#### **Features**

- Deal for eliminating dust and contamination of the floor, wall and ceiling, etc.
- Mainly used at clean room or other working places.
- Characterized with stable 'Tack level' and 'Unwinding
- Non-Woven Film coated with Acrylic adhesive.



CORE SIZE	THICKNESS	SURFACE RESISTIVITY
Ø38mm, Ø76mm	<b>150±10</b> $\mu$ m	≤10 <sup>11</sup>

### **Roller Handle**

MODEL NO: PPM-1244 

- Lightweight for comfortable use.
- Can be dis-assembled for easy storage.
- Used for reaching the hard to reach areas.

SIZES AVAILABLE					
CORE DIA	38 mm	38 mm	38 mm	76.2 mm	
HEAD	8 cm	16 cm	16 cm	32 cm	
LENGTH	25 cm	29 cm	107 cm	120 cm	

SIZES AVAILABLE					
CORE DIA	38 mm	38 mm	38 mm	76.2 mm	
HEAD	8 cm	16 cm	16 cm	32 cm	
LENGTH	25 cm	29 cm	107 cm	120 cm	
				_	

HANDLE MATERIAL	FRAME MATERIAL	HEAD MATERIAL
PP	Steel chrome Plating	PE



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### Cleanroom Spiral Notebook cleanroom office supplies .....

MODEL NO: PPM-5267

### Cleanroom Stapled Notebook

cleanroom office supplies .....

#### **Features**

- Clean paper made of natural pulp.
- Ruled line/checkered line.
- 50 sheets per book (inclusive of cover).
- Weight: 72 Gsm or 80 Gsm
- Used Widely in Cleanroom environment.



SIZE	SURFACE RESISTIVITY	THICKNESS
A4/A5	10 <sup>11</sup> ohm/sq	0.110 +/- 0.010 mm

#### **Features**

- Clean paper made of natural pulp.
- Ruled line/checkered line.
- 50 sheets per book (inclusive of cover).
- Weight: 72 Gsm or 80 Gsm
- Used Widely in Cleanroom environment.



SIZE	SURFACE RESISTIVITY	THICKNESS
A4/A5	10 <sup>11</sup> ohm/sq	0.110 +/- 0.010 mm

cleanroom office supplies .....

### Cleanroom Paper

#### Cleanroom Memo Pad

#### **Features**

- Cleanroom paper are made from natural pulp material. It is packed under cleanroom environment and have a resistivity of 10<sup>11</sup>ohm / sq.
- It comes in 72 and 80 gsm weight with 250 sheets per
- Colours available are White, Sky Blue, Orange, Light Green, Pink and Yellow.
- Standard sizes available are A4, A5, A3 and B4.



WEIGHT	RESISTIVITY	SIZE
72 Gsm or 80 Gsm	< 10 <sup>11</sup> ohm / sq	A4 and A5

#### **Features**

- Cleanroom memo pads are made from natural pulp.
- Have a resistivity of 10 E11 ohm / sq. it comes in sky blue colour.
- It comes in sky blue colour.
- Custom size available.



WEIGHT	RESISTIVITY	COLOR
72 Gsm or 80 Gsm	< 10 <sup>11</sup> ohm / sq	Sky Blue

#### Cleanroom Marker

#### **Features**

- Cleanroom marker are used in cleanroom environment.
- It is permanent and come in fine and extra fine tip.
- Specially formulated ink.
- Permanent.
- Colour: Black
- Comes in fine and extra fine tip.



STYLE	CLASS	COLOR
Capped / retractable	ISO 5	Black, Blue or Red

### Cleanroom Waste Receptacles

- Soft-Close mechanism eliminates jarring noise and turbulence when top closes; lid gently floats closed.
- Easy-open foot-pedal keeps hands free and clean.
- Contoured tight-fitting lid ensures safe, clean disposal of cleanroom trash.
- Bottom can be removed for easy cleaning and sterilization, eliminating contaminant build-ups.



CAPACITY	MATERIAL	
7 - 40 gallons (L)	Electropolished 316 Stainless Steel /	



Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### Cleanroom Apparels

cleanroom ....

#### COVERALL

- Bound seams
- Bound neck
- Raglan sleeve
- Covered elastic wrist & ankle.
- Zipper closure White
- 25/cs
- SM, MD, LG, XL, 2X, 3X, 4X

#### MODEL NO: PPM-CCA1



#### COVERALL

- Serged seams
- Elastic hood opening
- Set sleeve, Elastic wrist, ankle
- Attached thumb loops
- Attached boots with PVC soles
- White 25/cs
- MD, LG, XL, 2X, 3X

MODEL NO: PPM-CCA2



#### LABCOAT

- Serged seams
- Laydown collar
- Raglan sleeve
- Snap closure (5) pockets
- (1 chest pencil, 2 lower front)
- White 30/cs
- SM, MD, LG, XL, 2X

MODEL NO: PPM-CLC1



#### FROCK

- Serged seams
- Bound neck
- Raglan sleeve
- Elastic wrist
- Zipper closure
- a-line white 30/cs
- SM, MD, LG, XL, 2X

MODEL NO: PPM-CFR1



#### **FROCK**

- Bound seams Bound neck
- Set sleeve
- Covered elastic wrist
- Snap closure (6 + 1 adjustable)
- White 30/cs
- SM, MD, LG, XL, 2X, 3X, 4X

MODEL NO: PPM-CFR2



#### **BOUFFANT**

- Serged seams
- Elastic headband
- 21.5" diameter
- White
- 250/cs
- Universal sizing (00)

MODEL NO: PPM-CBF1



#### HOOD

- Bound seams
- Full face opening
- Bound hood opening ties with loops for fit
- White -100/cs
- Universal sizing (00)

MODEL NO: PPM-CHD1



### SLEEVES

- Bound seams
- Covered elastic wrist, bicep
- 18" length
- White
- 100/cs
- Universal sizing (00)

MODEL NO: PPM-CSS1



#### **BOOT COVERS**

- Bound seams
- Covered elastic opening ties at ankle
- Gripper sole
- 18" high White
- 100/cs MD, LG, XL

MODEL NO: PPM-CBC1



#### **BOOT COVERS**

- Serged seams
- Elastic opening ties at ankle
- PVC sole
- 18" high
- White 100/cs
- SM, MD, LG, XL

MODEL NO: PPM-CBC2



#### **BOOT COVERS**

- Serged seams
- Elastic opening
- Bound Tyvek ties at ankle
- Gripper sole
- 18" high
- White 100/cs
- MD, LG, XL

MODEL NO: PPM-CBC3



#### **SHOE COVERS**

- Serged seams
- Elastic opening
- PVC sole
- Elastic toe
- 5" high
- White 300/cs - SM, MD, LG, XL

MODEL NO: PPM-CCA2



### Non-Woven Face Mask

cleanroom disposable .....

### MODEL NO: PPM-5303

- **Features**
- -Prevents skin irritation - Bacteria filtration efficiency for single ply 80%, for double ply: 85% & for three ply: 97% pleated for full face coverage
- Adjustable PVC coated aluminium nose clip and soft thread elastic ear bands or lace
- Cool & breathable, lint Free
- Color: Variants Available (Blue, Green & White)
- Ionized and packed in bag under class 100 Cleanroom.



Parameters	1 Ply Face Mask	2 Ply Face Mask	3 Ply Face Mask
Outer Layer	40 GSM SBPP	22 GSM SBPP	22 GSM SBPP
	Non-woven	Non-woven	Non-woven
Middle Layer	-	-	20 GSM SBPP Non-woven
Inner Layer	-	22 GSM SBPP Non-woven	22 GSM SBPP Non-woven
Length	180±3 mm		
Width	90±3 mm		



### Cleanroom

Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### **Beard Cover**

cleanroom disposable .....

#### **Features**

- Strong and Durable.
- Contamination Control Compatible to Class -10.
- Lightweight Material Offers Comfort and Breathability, while maintaining coverage.
- Individual Inspected for Stitching, Sizing, Material and Workmanship.



SIZE	WEIGHT	MATERIAL
18" x 6.5"	10 g/m <sup>2</sup>	Non Woven

### Cleanroom Vinvl Glove

cleanroom disposable .....

#### **Features**

- Non-Sterile and disposable.
- Transparent/ clear and colored.
- Latex and Protein Free.
- Ambidextrous to fit either hand.
- Economical value. low-cost gloves.
- Embossed to maintained a sense of touch.



SIZE	LENGTH	WIDTH
S/M/L/XL	245 mm	125 ± 2 to 145 ± 2 mm



### Disposable Mop Cap

cleanroom disposable .....

#### **Features**

- Complete hair covering made from soft comfortable. themallay bonded light polypropylene fibre with an encapsulated elastic edge.
- High air permeability.
- Suitable for use in electronic manufacturing, restaurants, food processing, hospital.



MODEL NO: PPM-5326A

SIZE	MATERIAL
21 inches	PP Non Woven

#### leanroom Nitrile Glove MOI cleanroom disposable ..... Cleanroom Nitrile Glove

#### **Features**

- Packed in class 100 or 1000 environment.
- Made from 100% nitrile material.
- Comes in palm textured, finger textured or tacky.
- Widely used in cleanroom environment.
- Electronic, solar and wafer plant uses this in the operation.



TOTAL LENGTH	PALM WIDTH	THICKNESS
300 mm	77 - 122 mm	Cuff - 0.09/ Palm - 0.15/ Finger - 0.16 mm

#### Cleanroom Latex Glove

cleanroom disposable .....

#### **Features**

- Made from natural rubber.
- Packed in Class 100 environment.
- Come in finger textured, smooth surface.
- Colour : Natural.
- Chlorinated & Ambidextrous
- More economical than nitrile glove.



SIZE	TOTAL LENGTH	PALM WIDTH
XS/S/M/L/XL/XXL/XXXL	245 mm	77 - 122 mm

#### CPE / PVC Shoe Cover

MODEL NO: PPM-CP56 . cleanroom disposable .....

- Disposable CPE or PVC shoe cover is the most economical in the market.
- Used to cover the shoe before entering into dust sensitive area.
- The shoe cover is secure through a elastic
- Used to prevent contamination of foot wear in cleanroom.





MATERIAL	COLOR	WEIGHT
LDPE + LLDPE	Blue	3/3.5 g



## Cleanroom

Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

#### Non Woven Shoe Cover

#### **Cleanroom Socks**

MODEL NO: PPM-M28F

#### **Features**

- Good conductivity.
- Good strength.
- Good chemical resistance.
- Low heat shrinkage.
- Lint-free filament.
- Cost effective.



ELONGATION RATE	AVERAGE LENGTH	AVERAGE WIDTH
50 - 60%	377 - 380 mm	160 +/- 5 mm

#### **Features**

- No particle generation.
- Cleanroom compatible.
- Suitable for CleanRoom Workers.
- Developed especially for use in clean rooms.
- Prevents contamination using its abrasion resistant construction perspiration is reduced.
- Eczema is avoided.

SIZE	MATERIAL	CLASS
S/M/L	Polyester - 97% Polyurethane - 3%	ISO 5

#### **Cleanroom Safety Shoe**

#### **Features**

- Special lining, breathable and moisture absorbing.
- Soft PU midsole.
- Meet EN ISO 20345 : 2011 STANDARD.
- Comfortable cushioning effect and high flexibility.
- Resistant to oil and fuel.
- Uses polyurethane as under-sole material, not easy to come unglued, excellent hydrolysis resistance, Strong oil resistance, Pollution-free.
- Diversified sole styles including sole structure and pattern are designed by professional engineers in accordance with ergonomics and aim at different professional work place.

#### MODEL NO: PPM-SFS1







#### MODEL NO: PPM-SFS2



MODEL NO: PPM-SFS4



SIZE	225,	225, 230, 235, 240, 245, 250,255,260, 265, 270,275, 280, 285,290 mm		
OUT SOLE RESISTANCE	·	10 <sup>6</sup> ~10 <sup>8</sup> (45% RH, 23°C) ohms		
RESISTIVITY		1.0M< RTG < 35M (45% RH, 23°C) ohms		
STATIC DECAY	5k – 0.5k	< 0.5	sec	
Upper Cove		PU (Polyurethane) / Leather	·	
MATERIALS Toe Inner So	Toe	Steel Toe (200J Impact &15KN Compression)		
	Inner Sole	EVA+ Polyester		
	Bottom Sole	PU Injection Mould with ESD Compound		



### Cleanroom

Our products are designed to meet operational flexibility and conform to stringent quality norms of Cleanroom.

Conductive Shoe

MODEL NO: PPM-CS01

cleanroom footwear

MODEL NO: PPM-CS02

MODEL NO: PPM-CS03

### Features

- Material Patented PVC outsole + ESD insole + Artificial leather cover.
- Advantage RTG: 10<sup>4</sup>- 10<sup>6</sup> ohms, conductive ESD control, extremely low static generation, reliable steady resistivity, no marking on the floor.



220, 225, 230, 235, 240, 245, 250, 255,

260, 265, 270, 275, 280, 290, 300 (mm)







**Cleanroom Booties** 

MODEL NO: PPM-5101

MODEL NO: PPM-5101

MODEL NO: PPM-5101

#### **Features**

- Elastic on top.
- Adjustable by press button.
- Zipper in front.
- Snap lock over the instep, adjustable.
- Flexible Foam Sole.
- Flat Sole.
- Firm High Rubber Sole.







#### Cleanroom Vacuum Cleaner

cleanroom

MODEL NO: PPM-CV11

MODEL NO: PPM-CV12

#### Features

- Novelty design, the surface without screws, anti-bump
- Special stainless steel, dust-proof, easy to clean.
- 0.3um particle will be filtrated fully
- Class: 100
- Four layers of filtration system.

CAPACITY



NOISE STANDARDS

INSPIRATION CAPACITY

5 / 8 Gallons 96 cfm 42 L/sec

AIR FLOW

22Kpa

**VACUUM SUCTION** 

62db (a)

99"H,0 3200mm H,0



We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### **Knitted White Cotton Gloves**

MODEL NO: PPM-KG41

#### **Features**

- EN420 standard.
- Comfortable.
- Reversible.
- Widely used in Manufacturing, General Labor, Material Handling, Shipping/Receiving, Agriculture, Automotive plants, Bottling industries, Package handling, Farm and gardening.



MATERIAL	LENGTH	FUNCTION
Cotton & Polyester	220 - 270 mm	Anti-scratch

#### PVC Dotted Cotton Knitted Gloves MODEL NO: PPM-KG43

#### **Features**

- EN420 standard.
- Comfortable.
- Reversible.
- Good gripping.
- Used in Manufacturing, General Labor, Material Handling, Shipping/Receiving, Agriculture, Automotive plants, Bottling industries, Package handling, Farm and gardening.



MATERIAL	LENGTH	FUNCTION
Cotton & Polyester	220 - 270 mm	Anti-scratch

### **Kevlar Gloves** MODEL NO: PPM-RG51

#### **Features**

- 100% Kevlar outer shell, 100% cotton terry
- Heat protection of up to 608°F (320°C).
- Leather lined front and back.
- 4" leather gauntlet cuff.



TEMP RESISTANCE	DEGREE BURN	ALARM TIME
320°C	≥15 sec	≥4 sec

#### **Kevlar Knitted Gloves**

#### **Features**

- EN420, EN388, standard.
- Comfortable.
- Five times stronger than steel.
- Heat resistance.
- Reversible.



MATERIAL	LENGTH	FUNCTION
Cotton & Polyester	220 - 270 mm	Anti-scratch, Anti-Cutting

#### Double PVC Dotted Cotton knitted Glove MODEL NO: PPM-KG44

#### **Features**

- EN420 standard.
- Comfortable.
- Reversible.
- Good gripping.
- Used in Manufacturing, General Labor, Material Handling, Shipping/Receiving, Agriculture, Automotive plants, Bottling industries, Package handling, Farm and gardening.



MATERIAL	LENGTH	FUNCTION
Cotton & PVC	220 - 270 mm	Anti-scratch, Anti-Slip

#### **Knitted Gloves**

MODEL NO: PPM-RG52

heat resistance glove .....

- Hot objets handling, barbecue use, domestic use.
- Heat protection.
- Thermal insulation.
- Comfort.
- Big size.



MATERIAL	WEIGHT	GAUGE
Terry Cotton	800 g/m <sup>2</sup>	8



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#### **Welding Gloves**

heat resistance gloves .....

MODEL NO: PPM-RG53

#### Features

- Very good mechanic resistance.
- Very good perforation resistance.
- Very good tearing resistance.
- Fire, heat and molten metal projection resistance.
- Forearms protection.



SIZE	MAX LENGTH	COLOR
10	35 cm	Natural

#### Latex Coated Gloves

•• cut resistance glove •••••••

- Suitable for varied application because of it's outstanding grip.
- High elasticity.
- Tear resistant.
- Crinkled latex coating on seamless polyester cotton liner is ergonomically designed and snug fitting and good against abrasion & puncture.



MODEL NO: PPM-CR11

GAUGE	COATING	SIZE
10	Latex	S - XL

#### **PU Coated Gloves**

cut resistance glove ·····

#### **Features**

- Integral elasticated wrist.
- Perfect for medium risk areas where dexterity is paramount.
- Excellent resistance to cut abrasion and tear.
- Open back allows the hand to remain cool.



MODEL NO: PPM-CR13

GAUGE	COATING	SIZE
13	Polyurethane	S - XL

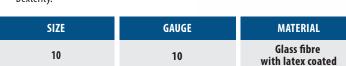
#### **Kevlar Heat Resistant Gloves**

MODEL NO: PPM-RG54

heat resistance gloves

#### **Features**

- Handling of sharp-edged, sheet metal and plastic pieces, automobile industry, metal industry, contruction work, glass industry.
- Very good cut, puncture and tearing resistance.
- Kevlar and glass fibre: excellent mechanical performances.
- High quality latex coating: excellent grip.
- Dexterity.



### **String Knitted Gloves**

### 

#### **Features**

- Composite blend of para-aramid wrapped around composite filament fiber.
- Highly dexterous, yet provides stellar cut protection.
- Ergonomically designed curved hand and finger shape.
- Provides unsurpassed comfort and dexterity, without compromising on protection.

GAUGE	COATING	SIZE
13	Para-aramid string knit	S - XL

#### **ESD Palm Fit Gloves**

esd glove ·····

MODEL NO: PPM-ED31

- Provides non slip & eliminate finger print contamination.
- PU foam coating provides a super grip & abrasion resistance.
- Protect damage of product from chlorine of sweat.
- Ambidextrous to fit either hand.
- Help protect the product from harmful static electricity.



SURFACE RESISTANCE	SIZE	PALM WIDTH
10 <sup>7</sup> - 10 <sup>8</sup> Ohm	S - XXL	85 - 100



We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### **ESD Palm Fit Grey Glove**

#### **Features**

- Seamless knitted nylon glove.
- Breathable wet coating on each palm.
- Super grip & abrasion resistance.
- Non Slip.
- Protect hand from acid and chemical residue.
- Help protect the product from harmful static electricity.



SIZE	MATERIAL	PALM WIDTH (±5mm)
S/M/L/XL/XXL	100% Textured Nylon, 280 Denier, 13 Gauge	85 - 100

### Carbon Yarn Top Fit Glove

#### **Features**

- Excellent for handling assembling small parts and having a good dexterity & grip with the PU dipped on the fingerstips areas only.
- Excellent fitting from the seamless knit construction.
- Dissipating static quickly with carbon yarn.
- Lowering lint & dust.



COLOR	SURFACE RESISTIVITY	MATERIAL
Grey	2.1 x 10 <sup>7</sup> Ω	Nylon 80% + Carbon Yarn 20% W/Coating Pl

# **Antistatic Dotted Glove**

#### **Features**

- Have excellent ESD protective properties.
- Are elastic, absorbent and anti-slopping.
- Gloves is embossed with PVC.
- Mainly made of polyester fibers knitted with a conductive carbon line every 10mm apart.



SURFACE RESISTANCE	SIZE	LENGTH
10 <sup>7</sup> ohm	XS - L	205 - 235 mm

### **ESD Top Fit Glove**

#### **Features**

- Made from nylon and carbon yarn.
- Polyurethane finger tip coated.
- The finger tip is PU coated for better grip and handling of assembly parts.
- Used in production assembly or PCB manufacturing.



SURFACE RESISTIVITY	SIZE	PALM WIDTH
10 <sup>8</sup> - 10 <sup>9</sup> ohm/sq	S/M/L/XL	70 - 85

### Copper Yarn Glove

#### **Features**

- Manufactured with pliable copper thread.
- Polyurethane coated in the fingertips.
- Provide useful antislip tactile efficiency and avoid perspiration contact at finger top level.
- Protects handled products from sweat and dust.
- Electrostatic painting in Automotive and other Industries.



SIZE	PALM WIDTH	SURFACE RESISTIVITY
XS - XL	75.1 - 85.2 mm	10 <sup>3</sup> - 10 <sup>4</sup> 0hm/Sq

10 mm Conductive Glove

- Conductive polyester glove are made from 100% polyester with conductive yarn weaves together.
- 5 mm conductive grid interval.
- Use in production assembly or PCB manufacturing.



SIZE	WEIGHT	STATIC VOLTAGE
10 <sup>7</sup> - 10 <sup>9</sup> ohm/sq	99 GSM	50V



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#### **ESD Glove With PVC Dots**

MODEL NO: PPM-ED38

#### **Features**

- Semi-Conductor prefabrication and operation, telecommunications & Electronic products assembly.
- Comfortable for use over prolonged periods of time
- Water-washable and reusable, has good feeling of wearing.
- Great anti-static effect, and prevent skin irritations caused by corona discharge.
- Optimum comfortability and dexterity.



SIZE	SURFACE RESISTIVITY	GAUAGE
XS - XXL	10 <sup>6</sup> - 10 <sup>8</sup> Ohm/ Sq	13

## ESD Heat Resistant Glove MODEL NO: PPMesd glove

#### **Features**

- Heat resistant & Antistatic gloves.
- Palm/back layer: Polyurethane film laminated nylon tricot fabric with Beltron conductive fibers
- Palm reinforced by: Silicone rubber laminated Twaron spun fiber fabric.



HEAT RESISTANT	LENGTH	CLASS
150°C	45 cm	1000

#### **Features**

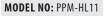
- Carbon Stripe + polyester knitted liner.
- PVC Dotted on palm.
- Knitted wrist.
- Dissipative carbon glove ideal for handling electronic parts.
- Colour: Natural white.



SIZE	SURFACE RESISTIVITY	GAUAGE
XS - XXL	10 <sup>6</sup> - 10 <sup>8</sup> Ohm/ Sq	13

#### **Head Protection**

MODEL NO	MATERIAL	SUSPENSION	STANDARD
PPM-HL11	ADC shall + Nulan Datchat		EN 397, ANSI
PPM-HL12	ABS shell + Nylon Ratchet Suspension	6	EN 397
PPM-HL13	Juspension		EN 397, ANSI
PPM-HL14	HDPE	4	ANSI Z89.1-2009 and CSA Z94.1-
FFINI-FIL 14	nure	4	15
PPM-HL15	Copolyester	5	ANSI and CSA Type I E
PPM-HL16	Proprietary Nylon and Fiber glass	8	ANSI Z89.1-2014 Type I Class G,
PPMI-FIL TO	blend	8	CSA Z94.1-2005 Type 1 Class G
			ANSI Z89.1-2009 Type I Class G
PPM-HL17	Injection-molded fiberglass	6	and CSA Z94.1-2005 Type I Class
			G or C
PPM-HL18	Thermoplastic	8	ANSI Z89.1-2003





MODEL NO: PPM-HL15



MODEL NO: PPM-HL12



MODEL NO: PPM-HL16



MODEL NO: PPM-HL13



MODEL NO: PPM-HL17



MODEL NO: PPM-HL14



MODEL NO: PPM-HL18





We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### **Face Shield**

face protection .....

#### **Features**

- Curved design that protects a larger area of your face without distortion.
- Respirator may be worn underneath.
- Adjustable ratchet style headgear.
- 8 in. x 12 in. replaceable clear lens.



FITS OVER GLASSES	IMPACT RESISTANT	RACHETING SHIELD
Yes	Yes	Yes

### Air Circulating Visor Overlays

face protection ......

#### **Features**

- Fully protects lungs and face during woodworking.
- Twin filters with 98% efficiency.
- New high-impact eye protection rating of ANSI/ISEA Z87.1-2010.
- Suitable for use when machining MDF.
- Combination face-seal and hood improves protection.



SIZE	HEADBAND SIZE RANGE	WIEGHT IN USE
Adjustable	20-1/2" to 24-1/2"	2.21 lbs

#### Spectacles MODEL NO: PPM-1710 eye protection .....

#### **Features**

- Comfortable, secure fit with wrap around design.
- Scratch Resistant hard coating on poly carbonate lenses increases durability and life.
- Provides greater than 99% protection from UVA and UVB.
- Distortion free Zero powered lenses provide clear
- Lightweight plastic frames, Fashionable good looks.

MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Uncoated	Clear

#### Face Shield With Ratchet Head Gear | MODEL NO: PPM-FS13

#### **Features**

- Heat resistant brow-guard.
- Visors easily attach with no snaps, posts or levers
- Easy sizing and tension adjustment for individual visor positioning.
- Ratchet Headgear.
- Clear propionate visor (replaceable).



REPLACEABLE LENS	ANTI-FOG COATING	CHEMICAL SPLASH
Yes	No	Yes

#### Spectacles

eye protection .....

#### **Features**

- Helps provide limited impact protection from flying particles.
- Hard-coated Polycarbonate lens offers 99% UV protection.
- Meets ANSI Z871 standards.
- Lightweight, contemporary style.
- Adjustable temples.



**MODEL NO: PPM-1709** 

MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Anti-Scratch	Clear

### **Spectacles**

eye protection .....

**MODEL NO: PPM-13296** 

- Safety spectacles that exceed the Military VO test regimen for high velocity impact.
- DX coating provides enhanced anti-scratch and anti-fog protection.
- Spectacles with ventilation channel across the lens to minimise misting.
- Soft, adjustable nose bridge and a 'soft-touch' brow guard.





te	DX-Coating	Clear

We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### Spectacles

eye protection ·····

**Features** 

Spectacles

- Sleek-styled protective eyewear blends clarity and safety with a soft nosebridge.
- Adjustable temples, anti-fog coating, and a wraparound, polycarbonate lens.
- Sporty, wraparound frame design.
- Adjustable temples.

SIZE

Polycarbonate

- Soft nose bridge.



**MODEL NO: PPM-12100** 

#### **Features**

- Economy-rated glasses merge style, fit, lightweight comfort, and affordability.
- Integrated side-shields provide additional protection.
- Wraparound design provides extended eye protection and unobstructed viewing.
- Contoured temples fit comfortably and snugly.

MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Anti-Scratch	Clear

### Over Spectacles

**MODEL NO: PPM-1489** 

### **Over Spectacles**

**LENS COLOR** 

Clear

**Features** 

- LightVision protective eyewear features adjustable, hands-free LED lights, while its high wrap lens offers additional coverage.
- Hands-free directed lighting.
- Ultra-bright, adjustable LED lights.
- OTG lens and adjustable temple lengths.

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FRAME MATERIAL	LENS COATING	LENS COLOR
HSE Plastics and Glass	Anti-Fog	Clear

### **Features**

- It is the basic version of overspectacles with standard temples and an uncoated polycarbonate lens.
- Overspectacles with a comfortable fit.
- Light weight for added comfort.
- No metal parts -perfect for electricians.

S COATING	LENS COLOR

MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	None	Clear

**LENS COATING** 

Anti-Scratch & Anti-Fog

#### Over Spectacles

MODEL NO: PPM-2114

eye protection ·····

#### Safety Goggles

eye protection ....

MODEL NO: PPM-454

#### **Features**

- Contemporary styled Maxim protective eyewear combines prescription quality optics, a dual-injected molded and lightweight frame, and polycarbonate lenses to offer optimum visual clarity.
- Meets Military Vo Regimen for High Velocity Impact protection.



MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Anti-Fog Hard Coat	Clear

- Wide-angle wraparound lens and frame for good peripheral vision.
- Indirect venting system to help minimize fogging.
- Accommodates most prescription eyewear.
- Fits over most personal prescription eyewear, Indirect ventilation, Neoprene Strap.

SPLASH PROTECTION	LENS COATING	LENS COLOR
Yes	Anti-Fog	Clear





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#### Safety Goggles

eye protection .....

#### Safety Goggles eye protection ·····

#### **Features**

- Protects from chemical splashes.
- Polycarbonate Frame / Lens.
- Wear over prescription lenses.
- Meets ANSI Z87.1-2003.
- 4 one-way vents allow ventilation and does not allow splashes to enter.
- Anti-fog option available.



MATERIAL	FRAME	LENS COATING
Polycarbonate	Vinyl	Anti-Fog

#### **Features**

- Aspheric lens provides expansive coverage and a virtually unobstructed viewing range.
- Fully assembled goggles with soft flange seals
- Vented channels to increase airflow, minimize fogging and keep out particulates.
- The goggle's soft flange seals entire lens perimeter to help keep out liquid splash, and includes indirect vent channels to increase airflow.



LENS	LENS COATING	SPLASH PROTECTION
Clear	Anti-Scratch & Anti-Fog	Yes

#### Safety Goggles eye protection .....

MODEL NO: PPM-7136

#### Features

- A soft PVC crystal frame goggle with a wide support area all around the face to enhance comfort.
- Specific channel on the side of the frame to accommodate the temple of prescription frames.
- Model fits well with prescription glasses, disposable respirators and half-masks.
- Lens treatment provides both scratch resistance and anti-fogging.



MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Anti-Scratch & Anti-Fog	Clear

### Safety Goggles

#### **Features**

- Aspheric lens provides expansive coverage and a virtually unobstructed viewing range.
- Foam flange seals entire lens perimeter to help keep out particulates.
- Soft foam flange provides comfort and a complete seal around perimeter.
- Adjustable headband ensures a secure fit, even in active applications.



MATERIAL	LENS COATING	LENS COLOR
Polycarbonate	Anti-Scratch & Anti-Fog	Clear

#### Safety Goggles eye protection .....

#### **Features**

- Impact-resistant goggles withstand even extreme temperatures.
- Panoramic, anti-fog lens for superior visibility
- Flexible body adapts to the individual contours of multiple face sizes.
- 11 indirect air vents provide circulation while protecting against splash and dust.
- Filters 99.9% of UV rays.

USE	LENS COATING	LENS COLOR
Indoor/General	Anti-Scratch & Anti-Fog	Clear

### Single Use Ear Plug

hearing protection .....

- The world's most-used polyurethane foam earplug.
- Bell shape delivers maximum in-ear comfort.
- Contoured design easier to insert, resists tendency to back-out of ear canal.
- Polyurethane foam enhances comfort, especially for long-term wear.
- Smooth, soil-resistant closed cell-foam skin prevents dirt build-up.



MATERIAL	SIZE	NRR
Polyurethane Foam	One Size Fits All	33



We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### Multi Use Ear Plug

hearing protection .....

## **Features**

- Patented dual material design

Detectable Ear Plug

- Stem is easy to grasp, ensures easy insertion into the ear canal.

- Create comfortable seal in the ear canal for superior comfort and protection.
- Attached cord and metal stem ring easily detected by automated equipment.



MATERIAL	SIZE	NRR
Molded/Steel Ring	Regular	25

#### **Features**

- Patented Conforming Material Technology uses body heat to adapt to the individual shape of each wearer's ear canal.
- Delivers superior comfort and a truly individual fit.
- Simplifies inventory control a single product fits almost every wearer.
- Detachable cord system.

MATERIAL	SIZE	NRR
CMT	One Size Fits All	25

#### Banded Ear Plug

MODEL NO: PPM-MX404

### Dispenser Ear Plug

#### **Features**

- Smooth, ergonomic pods fit in the ear for maximum protection.
- Patented band design prevents ear pods from touching dirty or contaminated surfaces.
- Lightweight and portable designed especially for environments with intermittent noise hazards.
- Includes pair of replacement pods.



MATERIAL	SIZE	NRR
Molded	One Size Fits All	27

#### **Features**

- Durable plastic design is an economical choice for dispensing earplugs.
- Mounts to wall or stands as table-top dispenser with balanced footing.
- Twist knob to dispense earplugs.
- Catch basin prevents earplugs from falling to the ground.



MATERIAL	STYLE	COLOR
Plastic	Dispenser	Black/Clear

### **Headband Type Ear Muff**

MODEL NO: PPM-3461

hearing protection .....

#### **Helmet Type Ear Muff**

### **Features**

- Robust steel headband withstands demanding use, especially in tough environments.

- Snap-in ear cushions make replacement quick and
- Padded foam headband delivers long-wearing comfort with minimal pressure on the head.
- Three attenuation levels allow for targeted attenuation for a variety of applications.



MATERIAL	STYLE	NRR
Metal	Folding	23

- Bright green earcups provide high visibility and
- Reflective padded headband illuminates under light for increased visibility and safety.
- Ideal to wear at night, during the day, in low light and under inclement weather conditions.
- Patented Air Flow Control technology provides optimal attenuation across all frequencies.

MATERIAL	STYLE	NRR
Metal	Helmet	23





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#### Adjustable Positioning Ear Muff MODEL NO: PPM-0925

- Multiple-position headband allows for a variety of wearing styles; a great alternative to cap-mounted earmuffs.
- Wear when using other PPE
- Patented Air Flow Control™ technology delivers optimal attenuation across all frequencies, without increasing earcup size or weight.
- Inner-ventilated headband reduces pressure on head; breathes easier in warm/humid climates.



MATERIAL	STYLE	COLOR
Plastic	Multiple-Position	Light Blue

### **NBC Suit**

body protection .....

#### **Features**

- The fabrics provide excellent chemical and biological protection while reducing heat stress.
- The NBC protective garments are designed to enable specialized units to operate in NBC-contaminated environments for extended periods of time.
- Compatible with all Shalon's NBC protective masks and hoods.



MODEL NO: PPM-2590

AFTER FLAME	AFTER GLOW	TEAR LENGTH
0 sec. maximum	25 sec. maximum	90 mm maximum

MODEL NO: PPM-2112

#### **Features**

- Flame Resistant Anti-Static Winter Coverall.
- Composition: 100% cotton.
- Feature: Fire retardant + Anti static.

Fire Retardant Suit

- Closure: Concealed two-way, heavy-duty brass zipper.
- Collar: One-piece top stitched.

MATERIAL

100% Cotton



#### **Gas Tight Suit**

#### **Features**

- Carefree breathing even in tough environments.
- Get more done with more safety.
- Easy to don, easy to wear.
- Quality you can see and feel.
- Provides cooling airflow to the wearer's torso.



MATERIAL	STORAGE TIME	WEIGHT
Tychem® F (grey)/ Tychem® C (yellow)	5 years	0.7 to 1.0 kg

#### Splash Suit

body protection .....

## **Features**

- It is a light and comfortable, liquid-tight protective suit.
- The grey version is equipped with heat-sealed laminated safety gloves.
- The handling and wearing comfort is provided by the thin flexible form.
- These coveralls provide protection against ultra-fine dusts and powders.



MODEL NO: PPM-S3800

ABRASION RESISTANCE	BURSTING RESISTANCE	PUNCTURE RESISTANCE
2,000 cycles	240 kPa	24 N

### **Reusable Paintshop Coverall**

MODEL NO: PPM-0425 body protection

- Lightweight and comfortable.
- Easy to put on and take off.
- Integrated knee pads and hood.
- Robust zip with storm flap.
- Antistatic coating.
- Washable.



SIZE	HEIGHT	CHEST
M - XXL	167 - 194 cm	92 - 124 cm



We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### Reflective Jacket

body protection ......

#### **Features**

- This classic safety vest meets EN ISO 20471:2013 and ANSI/ISEA 107-2010 class 2 requirements for visibility.
- The two horizontal and vertical reflective tape will ensure your visibility on roads or other potentially hazarous work place.
- The polyester knitted fabric is breathable and light weighted, which will keep you cool and comfortable at work.



SIZE	STANDARD	ISO
S - XXXL	EN ISO 20471:2013 ANSI/ISEA 107-2010	Class 2

**PVC Apron** MODEL NO: PPM-MX471

#### **Features**

- Universal fittings, prevents body and clothing from contact with dust and liquid.
- Most protective with economic cost, stops migration of skin cell and virtually lint free.
- Disposable Plastic Apron is made from HMHD / LDPE plastic. This plastic material is a blend of HMHD & LLDPE granual.



MATERIAL	THICKNESS	COLOR
HMHD / LDPE / Plastic	100 gsm	Milky White, Blue & Green

#### **Un-valved**

disposable respirator .....

MODEL NO: PPM-8210

#### **Features**

- NIOSH approved for at least 95 percent filtration efficiency against certain non-oil based particles.
- Two-strap design with welded dual point attachment helps provide a secure seal.
- Cushioning nose foam.
- Adjustable noseclip helps provide a custom fit and secure seal.



AEROSOL TYPE	RESPIRATOR STYLE	STANDARDS
Non-Oil	Cup	N95

#### Reflective Coverall

#### **Features**

- High quality, unisex long sleeve Coverall is great for any industry and any application.
- Relaxed fit work coverall in stain release fabric featuring bi-swing back and elastic at waist.
- Made of 100% Cotton material, this coverall is breathable and is perfect to wear for long time.
- Enhanced Visibility, Heavy Duty Construction Coveralls with Utility Pockets.



MATERIAL	SIZE	COLOR
C, TC, Cotton,	European Size or Asia Size	Any color is available

#### Aluminized Apron

#### 

#### **Features**

- National Safety AR39 Apparel Bib Apron is made of 16 oz., aluminized rayon.
- The flexible fabric withstands moderate exposure to molten metal splash.
- Aluminized rayon construction.
- 95% effective against radiant heat up to 2950°F.



MODEL NO: PPM-MX472

MATERIAL	MATERIAL WEIGHT	COLOR
Aluminized Rayon	16 oz.	Aluminized

#### **Mask With Valve**

disposable respirator .....

- NIOSH approved for at least 95 percent filtration efficiency against certain oil and non-oil based particles.
- Carbon layer reduces exposure to nuisance levels of organic vapors.
- Braided headbands and soft inner material provide comfort.
- Advanced Electret Media is designed for ease of breathing.



STANDARD	NUISANCE ODOR RELIEF	EFFICIENCY
P95	Organic Vapors	95%



We satisfy the requirements of industrial standards and the expectations of comfort and ergonomic of the users in their workplaces with no compromise on safety.

#### Flat Fold Mask

#### **Features**

- N95 Approved filtering facepiece particulate respirator.
- Designed to direct exhaled air away from the nose panel, helping reduce eyewear fogging.
- Comfortable braided headbands help keep respirator securely in place and minimizes pulling of hair.
- Curved low profile design conforms well to nose and eye contours, allowing more room for eyewear.



AEROSOL TYPE	SIZE	COLOR
Non-Oil	Standard	White

#### **Dual Filter Face Mask**

reusable respirator .....

#### **Features**

- Double filters dust respirator.
- With soft, durable and reusable PVC face piece.
- Elastic adjustable headbands.
- Head harness assembly and spare parts available.
- Chemical cartridge RC101 can be bought separately



MATERIAL	CARTRIDGE	COLOR
Soft PVC half facepeice	Double filters	Customizable

#### PAPR System

respiratory protection .....

#### **Features**

- Lightweight unit will not slow worker efficiency
- Low cost High Efficiency (HE) filter that consolidates inventory and reduces inventory costs.
- The battery pack is water resistant, and contoured for wearer comfort.
- Silicone facepiece offers high durability and unmatched comfort.



MODEL NO: PPM-5205

BLOWER LIFE	BATTERY DURATION	BATTERY CHARGE TIME
1000 hour life	Up to 8 hours	14 to 16 hours

#### Single Filter Face Mask

#### **Features**

- Durable, lightweight silicone half face mask, it's reusable.
- Four-point fixed design, reducing stress, wearing firmly.
- The mask can be taken off and hanged on the neck during
- With low-nose design and wide, comfortable, tight seal silicone skirt.
- Replacement parts available, cartridges sold separately.



MATERIAL	CARTRIDGE QUANTITY	COLOR
Silicone Mask Body	1	Black, Blue or Customized

#### **Full Face Mask**

reusable respirator .....

#### **Features**

- Superior design to provide excellent comfort, fit, and optics.
- With distortion-free lens to guarantee wide viewing and optical clarity.
- Made of durable silicone skirt.
- Straps are attached to the rim to reduce stress to pressure points and distortion of sealing surface.
- Facepiece nosecup prevents fogging.



LENS MATERIAL	MATERIAL	COLOR
Polycarbonate	Silicone	Black

#### SCBA System

respiratory protection .....

MODEL NO: PPM-S4000

- Light, robust and simple to use.
- Enhanced carrying system.
- Maximum performance harness material.
- Easy to maintain and service.
- Integrated hoses.



INPUT PRESSURE	OUTPUT PRESSURE	OUTPUT FLOW
0 to 300 bar	7.5 bar	> 1,000 l/min



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#### Refrigeration Safety Shoe

MODEL NO: PPM-Z0401

#### **Features**

- Ultralight Boots.
- Extra thick microfoam PU compound.
- Flexible and warm below -40 degree C.
- Extra wide toe, vamp and shaft. Washable, moisture absorbing, cold insulating insoles.
- CSA class 1 steel toe and plate.



GENDER	HEIGHT	COLOR
Unisex	16"	Green

#### **Non-Slip Safety Boot**

rubber safety boot ·····

#### **Features**

- Neoprene Insulation provides a level of padding between the toes and steel toe cap.
- Designed to be resistant to animal fats, fish oils, ketone, paint solvents, fuel oils and oil and grease.
- Slip Resistant non-slip chevron style outsole.
- Steel Shank for arch support and shovel work.
- Neoprene Insulated lining and removable contoured insole.



MODEL NO: PPM-SS22

HEIGHT	FLEX RATING	MATERIAL
16"	305,000	NBR with Neoprene lining

foot protection .....

- Special lining, breathable and moisture absorbing.
- Soft PU midsole.
- Meet EN ISO 20345 : 2011 STANDARD.
- Comfortable cushioning effect and high flexibility.
- Resistant to oil and fuel.

**ESD Safety Shoe** 

- Uses polyurethane as under-sole material, not easy to come unglued, excellent hydrolysis resistance, Strong oil resistance, Pollution -free.



SIZE	STATIC DECAY (5k – 0.5k)	STANDARDS
225-290 mm	< 0.5 Sec	1.0 < RTG < 35 Ohms

#### Chemical Resistance Boot

**MODEL NO: PPM-18050** 

#### **Features**

- Offers superior chemical protection and superb grip provided by a unique oil resistant vulcanized nitrile rubber sole which gives a 30% better slip resistance than a similar sole in PVC/Nitrile material.
- Special sole gives 2 to 3 times longer service life and is highly cut and hot contact resistant.
- Washable polyester lining Comfortable, durable and lightweight.



TOE CAP	HEAT RESISTANCE	MID SOLE
Epoxy coated Steel	300°C	Stainless Steel

#### Insulating Safety Shoe

#### Features

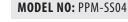
- Each boot, left and right, carries a unique and permanent serial number on the inside of the upper leg area allowing for easy tracking throughout the service life of the boot.
- Designed and hand crafted for all day comfort.
- Lightweight fiberglass shank.
- Extra stiff counter for ankle support.
- Additional Tuff-Guard rubber toe protector.



ELECTRICAL RESISTANCE	CONSTRUCTION	DRIPPING
20kV for 3 minutes	Vulcanized rubber	40 cal/cm <sup>2</sup>

#### MODEL NO: PPM-SS02







MODEL NO: PPM-SS05



MODEL NO: PPM-SS06





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#### **ESD SPU Slipper**

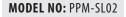
foot protection .....

#### **Features**

- Comfortable, durable and are ideal for rugged use.
- Slippers prevent the agglomeration of static electricity.
- Colors: Blue, Black & White (for cleanroom use).
- Easy to wash and dry, reusable.
- Anti-slip, shock absorption, abrasion resistance, energy absorbent, high temperature resistant, flexibility at low temperature, impact and shock resistance.

MODEL NO: PPM-SLO
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SIZE	SURFACE RESISTANCE	STANDARD
-290 mm	< 10 <sup>5</sup> 0hms	ASTM 9.1





MODEL NO: PPM-SL05



MODEL NO: PPM-SL04



MODEL NO: PPM-SL06



#### **Body Harness**

. fall protection .....

230

#### **Features**

- Offer highend durability, maximum movement and easy-to-wear comfort.
- Tested to meet the rigorous requirements of OSHA regulations and ANSI Z359 standards.
- Designed for high-heat applications.
- Polyurethane coating helps to protect webbing in extreme environments such as tar, oil and paint applications.



MODEL NO: PPM-EN358

CAPACITY	SIZE	RESISTS CHAR SPATTER
400lbs	S - XXL	up to 700°F

#### **Rope Lanyards**

#### **Features**

- Restraint lanyards keep workers from reaching an unprotected edge and help prevent falls.
- Positioning assembly provides support for workers on vertical surfaces.
- Meet OSHA, ANSI, and CSA standards.
- Available in various lengths.



LENGTH	LINE MATERIAL	TENSILE STRENGTH
6 ft.	Polyester Rope	5000 lb.

#### Fall Arrestor

.. fall protection .....

#### MODEL NO: PPM-2547

### **Features**

- Retractable mini web fall arrest block ideal for personal issue for working at height.
- The unit is designed to be connected to an overhead vertical anchor point and worn directly onto a fall arrest harness.
- It has a working length of 2.5M.
- Instant 'lock off' in the event of a fall.



MAX. ARREST FORCE	STANDARD	APPROX. ARREST DIST
< 6 kN	EN360	0.1 M

### Tripod Kit

fall protection .....

#### **Features**

- Three steel head plates provide added strength and durability.
- Extruded aluminum legs with cast aluminum head and feet provide light weight strength.
- Slip-resistant foot belting keeps tripod position secure.
- Integral composite pulley within tripod head.
- Cable detent pins secure telescoping leg adjustment.



MODEL NO: PPM-F7275

MATERIAL	SAFE WORKING LOAD	DIAMETER
Aluminum	800 lbs	51.5" between legs

We provide tapes for a wide range of market's application needs using the industry specific information to evaluate how application requirements can be met.

#### **Aluminium Tapes**

**MODEL NO: PPM-AT956** 

#### **Features**

- Suitable for many sealing, holding, splicing or masking applications requiring the protection offered by a foil backing.
- A three-way dead soft malleable aluminum foil coated with an aggressive synthetic rubber pressure sensitive adhesive Carried on a removable paper release liner.
- They can also be used in thermally conductive, heat and light reflective applications.



THICKNESS	ADHESION VALUE	TEMP RESISTANCE
0.06mm	18 N/25mm	100°C

### Adhesive Transfer Tapes

MODEL NO: PPM-SA969

## **Features**

- No solvent used at coating process. UV curable manufacturing method.
- Both adhesive and release paper resist heat deterioration during the reflow process (Top:260°C).
- Excellent workability for punching and bonding.
- Ideal for bonding FPC materials such as polyimide, stainless steel, glass epoxies, etc.



THICKNESS	ADHESION VALUE	COLOR
240 μm	9 N/20mm	Translucent

### **High Voltage Insulation Tapes**

#### tapes ·····

#### **Features**

- Excellent physical and electrical properties with a high degree of stability under conditions of use.
- The tape amalgamates rapidly when applied under tension to provide a void-free homogeneous wrapping, without the need for external heat or pressure.
- The tape will remove cleanly when cut, allowing it to be used as temporary insulation or protection.



THICKNESS	TENSILE STRENGTH	VOLUME RESISTIVITY
0.75mm	3 MPa	1 x 10 <sup>13</sup> 0hm.m

#### **Duct Tapes**

tapes .....

#### **Features**

- Duct tape is made of three different layers that give the tape its distinct properties.
- The top layer is a polyethylene (plastic) film that protects the tape from moisture.
- The middle layer is a cloth mesh that makes the tape strong but still easily tearable.



TENSILE STRENGTH	THICKNESS	COLOR
72.2 N/25mm	0.15 mm	Silver / Black

### Filament Tapes

#### **Features**

- Available in both mono and biaxial (cross) filament patterns with very high tensile strength and adhesion.
- Preventing components from abrasion and scuff.
- Hold modular parts of appliance and electronic stationary.
- Good for bundling, fixing and packaging.



TENSILE STRENGTH	THICKNESS	TEMP RESISTANCE
400 N/25mm	0.13 mm	80°C

#### **Cotton Friction Tapes**

• tapes

- Provide abrasion and cut-through protection on wire and cable splices.
- Provide mechanical protection for rubber electrical
- Provide bundling, binding and spot holding on wire harnesses.
- Provide protection on sharp edges, to prevent scratching or cut through.



MODEL NO: PPM-CT25

TENSILE STRENGTH	THICKNESS	COLOR
210 N/25mm	0.33 mm	Black



We provide tapes for a wide range of market's application needs using the industry specific information to evaluate how application requirements can be met.

#### **Polyester Tapes**

#### **Features**

- A superior quality Polyester film with Rubber adhesive system.
- Excellent temperature resistance over a range of temperature (-10°C - 130°C).
- Good adhesion and tearing resistance.
- Good electrical insulation.



THICKNESS	ADHESION VALUE	TEMP RESISTANCE
0.055mm	900 gf/inch	130°C

### **Rubber Tapes**

#### **Features**

- High quality application tape with specially formulated adhesive to deliver high bonding tack, uniform & enhanced a safe, permanent seal, which also ensures tamper proof & security protection to applied item.
- Having good resistance to humidity, it also has a longer shelf life.



THICKNESS	TENSILE STRENGTH	ADHESIVE MATERIAL
55 μm	30 N/CMS	Solvent Base

### ESD Floor Marking Tape

### **Features**

- Available in multiple colors for floor, tool and safety marking.
- Printed and overlaminated for extra durability and solvent resistance.
- Anti-static and cleanroom compatible.
- An excellent awareness raising aid.



ADHESIVE THICKNESS	OPERATING TEMP	ADHESIVE
0.25mm	32°F to 176°F	Rubber

#### Polymide Tapes / Films

#### **Features**

- Manufactured by coating a polyimide backing film with a specially formulated, highly cross linked silicone adhesive.
- Excellent adhesion on all substrates.
- High cohesion within the adhesive.
- Excellent heat resistance.
- Perfect anchorage of adhesive to the backing.



TENSILE STRENGTH	THICKNESS	ADHESIVE
70 N/25mm	55 μm	Silicone

#### PVC Floor Marking Tapes

### **Features**

- For marking lanes and corridors in factories, warehouse & hospitals.
- Marking hazardous or No-Go areas.
- Excellent conformability.
- Water resistant.
- Good abrasion resistance.



TENSILE STRENGTH	THICKNESS	PEEL ADHESION
≥20 N/cm	0.15 ± 0.01 mm	≥1.5 N/cm

#### Masking Tape

- Rubber adhesive and instant adhesion.
- Sticks easily/helps reduce labor.
- Helps resist lifting or curling/helps reduce rework.
- Easy handling/helps reduce time involved.
- Good holding power.
- Crepe paper backing and conformability.



TENSILE STRENGTH	THICKNESS	ADHESION
350 N/100mm	0.14 mm	Rubber



We provide tapes for a wide range of market's application needs using the industry specific information to evaluate how application requirements can be met.

#### **BOPP Tapes**

#### **Features**

- Excellent adhesion and shear properties
- Resistance to cold, heat and aging
- UV stabilised.
- High mechanical strength and good impact resistance
- Ideal for use in dispensers



THICKNESS	TENSILE STRENGTH	ELONGATION
35mic - 65mic	≥30 N/cm	≤180%

#### **Strapping Tapes**

MODEL NO: PPM-ML43

#### **Features**

- The reinforced fiber glass yarn provides the filament tapes high tensile strength; the PET film backing provides excellent abrasion and moisture resistance.
- The proper packaging-grade adhesive is specially to provide good initial adhesion.
- The laminated adhesion depends on the contact area therefore a proper pressure & time helps improve the adhesion strength.



TENSILE STRENGTH	THICKNESS	ELONGATION
480 N/inch	135µm	5%

### Teflon & Silicon Tapes

#### · tapes ·····

**Features** 

- Non-stick PTFE film provides an exceptionally slick surface for easy clean-up.
- Silicone adhesive provides clean removal from a variety of surfaces.
- Wide temperature range for performance on heated machinery and equipment.
- Excellent chemical resistance enables tape to withstand challenging applications.



THICKNESS	TENSILE STRENGTH	ELONGATION AT BREAK
0.17 mm	1039 N/100 mm	290%

### Surface Protection Tapes/Films

**Features** 

- No need for film peeling-off work that was previously required before processing; this can lead to shortened
- High-strength adhesive types designed with an emphasis on film peel-off prevention with assist gas.
- No chlorine-based gas emissions during laser
- Finer finishing by twice cutting pierced parts or cut sections.



#### **Double Sided Adhesive Tape**

tapes ·····

#### **Features**

- High adhesive with smooth surface, high resistant of humidity, solvent, water, chemical, ageing, vibration reducing.
- Excellent thickness, easy tear, eco-friendly, strong holding force.
- Ultraviolet radiation, double-stick, convenient to use durable.



180° PEELING ADHESION	TEMP RESISTANCE	ADHESIVE
≥12N/mm	90°c	Pressure Sensitive

#### Cleanroom Adhesive Tape

- Constructed of a Low Density Polyethylene (LDPE) backing with an acrylic adhesive.
- Construction is low in halogens, leachable chlorides and heavy metals, providing users with the ideal cleanroom tape solution.
- High conformability, adhesion and cohesion.
- Latex Free.
- Color coding and product identification.



TENSILE STRENGTH	THICKNESS	ELONGATION
11 lbs./in avg	0.14 mm	430%



We provide tapes for a wide range of market's application needs using the industry specific information to evaluate how application requirements can be met.

#### Static Shielding Tape

#### **Features**

- Non corrosive and durable to chemical.
- Used to shield electromagnetic waves and low static charge build-up.
- Low charge when removed or unrolled from surface.
- Use in cleanroom or electronic industry.



THICKNESS	ADHESION VALUE	ELONGATION
50 μm	50 Gf/25mm	50%

### Brown Conductive Grid Tape

#### **Features**

- Easy tear and smooth dispensing with good finger tack and adhesion.
- Recommended for use in cleanroom and static safe workstation.
- It come in standard length, various width available upon request.
- Non-Corrosive, Anti-Static, Grid Type.



THICKNESS	TENSILE STRENGTH	PEELING FORCE
30 Mic	160 N/mm sq.	12N

### EMI Shielding Tape

#### **Features**

- Copper, aluminum and tin-plated copper foil backings.
- Conformable copper-plated fabric backing.
- Smooth and embossed foil surfaces.
- Conductive and nonconductive acrylic adhesives.
- Liners on all tapes for diecutting and handling ease.



THICKNESS	BREAKING STRENGTH	ADHESIVE
0.07 - 0.13 mm	35 - 44 N/10 mm	Acrylic

#### Antistatic Cellulose Acetate Tape

#### **Features**

- Excellent release layer antistatic property.
- Excellent copolymer layer anti-static property.
- Low peeling static voltage.
- Excellent durability (No migration).
- Sealing semi-conduct wafer containers.



180° PEELING ADHESION	THICKNESS	ADHESIVE
550 g/25 mm	0.033mm	Antistatic Grade

#### **ESD Caution Tape**

· tapes ·····

#### **Features**

- A self-adhesive warning tape for use in the identification and separation of the static sensitive areas.
- This product can also be used for caution signs.
- Apply the tape to floors, walls, tote boxes, or to any area containing static sensitive parts.
- Bright yellow background makes the black text easy to read.



POLYESTER COAT	ADHESIVE	MATERIAL
1 mil	1 mil	Vinyl

#### Stretch Film

. tapes .....

**MODEL NO: PPM-TF97** 

- It enables the reduction of film consumption during pallet wrapping, and thereby the reduction of packing unit costs.
- Large tensioning of pre-stretch film is achieved through only a minute stretching which results in the stability of load during transport.
- It takes less effort to tension the film, which has a positive effect onto the efficiency of packing.



TENSILE STRENGTH	THICKNESS	ELONGATION
350 kg/cm <sup>2</sup>	0.012 - 0.04mm	500%



### **Abrasives**

We manufacture the finest quality abrasives such as Resin & Vitrified Bonded Abrasives, Coated Abrasives and Non-Woven Abrasives. We mainly focus on quality and customer satisfaction. We supply the top most quality of abrasive products which are made up of specially processed raw materials, at well monitored process conditions and also by fait-safe process equipments. We have different material & different Grit meeting different industrial needs.

#### **Grinding Wheels**

bonded abrasives ......

#### **Features**

- Commonly used in weld shops, fabrication industries, metal working industries and foundry divisions for deburring, grinding, polishing and finishing.
- Available in 2 different grade Fast Cut and Long Life
- Long Life wheels are made up of high performance alumina and resin bond.
- Ensures extended life along with high material removal.



**MAX OPERATING SPEED (RPM)** 

**GRIT** 

6500/8500/12500/15200

A24/C24

**Cutting Wheels** 

- Used for cutting and designed to cut all types of steel and various hard alloys.

bonded abrasives .....

- Advanced and clean resin bond provides quick cutting action with minimal kerf loss.



**MAX OPERATING SPEED (RPM)** 

3800/4400/5100/6500/8500 12500/15200

GRIT

A30

#### Rail Cutting Wheels

bonded abrasives .....

Nut Inserted Wheels

MODEL NO: PPM-B013

**Features** 

- Especially used for grinding rail.
- Improves the contact between the train wheels and rail.

bonded abrasives .....

- Extends the life of the rail and it reduces the travelling noise of the train.
- Removes the wave pattern of the rail so that the good contact can be controlled and crack & chips can be avoided.



**MAX OPERATING SPEED (RPM)** 

4400/4580/5730/7640

**GRIT** 

#### Features

- Enhanced life with exceptional cut rate.
- Free Cutting without reduction in wheel life.
- Less operator fatigue and less machine maintanence.



**MAX OPERATING SPEED (RPM)** 

4400/5100

A16

Coated Discs

coated abrasives ·····

**MODEL NO: PPM-CA75** 

A36

#### Flap Discs

coated abrasives .....

**MODEL NO: PPM-IK47** 

#### **Features**

- Mainly used for deburring, grinding and polishing.
- Widely used in Vessel manufacturing, Metallurgical industries, Automobile industries
- Enhanced life with excellent cut rate.
- No burning of work piece.



**ABRASIVE MATERIALS** 

A/O, SC, ZA

**GRIT** 

16, 24, 36, 40, 60,80, 100, 120, 150,220

#### **Features**

- Used for rapid and aggressive stock removal on a variety of welds, castings and other metal fabrication applications.
- Are suitable for alloyed steel, unalloyed steel, structural steel, high speed steel, non ferrous metals, plastic and wood.
- Free Cutting without a reduction in wheel life.



**MAX OPERATING SPEED (RPM)** 

13700/11900/10900/9100/7600

**GRIT** 

24/36/40/60/80/100/120/ 150/180/220/360/400



### **Abrasives**

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#### Flap Wheels

coated abrasives ·····

#### MODEL NO: PPM-WH75

#### **Features**

- Installed in special grinders and used for polishing and reshaping of the various irregular profiles and work pieces.
- Widely used in automobile industries, ship building industries and heavy fabrication industries.



MAX OPERATING SPEED

2700/2800/4000 6500/8000

**GRIT** 

24, 36, 40, 60,80, 100, 120 150, 180, 220, 360, 400

**ABRASIVE MATERIALS** 

A/O, ZA

#### Flap Wheels with Shaft

coated abrasives .....

#### **Features**

- Made up of specially processed resins and squama style abrasive cloth hanged on a steel soft
- High stock removal.
- Short machining times.
- Cool grinding properties prevent thermal damages.



**GRIT** 

24, 36, 40, 60, 120, 150, 180

**ABRASIVE MATERIALS** 

A/0 & ZA

#### Velcro Discs

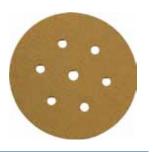
MODEL NO: PPM-JU97



MODEL NO: PPM-SP23

## **Features**

- Made up of flannel coated on the abrasive paper or cloth backing.
- Widely used for polishing wood, stone, metal etc.



24, 36, 40, 60, 80,100, 120, 150 220, 280, 320, 400

#### **Features**

- Silicon Carbide.
- Latex Paper Backing.

GRIT

240/320/400/600/800

1000/1200/2000

- Flexible.
- Waterproof
- ElectroCoated.



SIZE

230 x 280 mm

**ABRASIVE MATERIALS** 

A/O, SC, ZA

**Coated Abrasive Belts** MODEL NO: PPM-IB39

- The Coated Abrasive Belts are endless jointed with certain angle and are made in different width and
- Belts are used for mass production work with varied applications and are important component in most workshops.









## **Packaging**

We provide high quality products with a simple & flexible packaging process and an end-to-end packaging solution.

ESD PE Bag

general packaging .....

Conductive PE Bag

general packaging .....

#### **Features**

- Come in various colour.
- Impregnated in the antistatic properties.
- Ziplock and Gazetted is available.
- Customise to all size.



HEATING TEMP	TENSILE STRENGTH	WATER ABSORPTION
82-121 °C	185 Kg/sq.cm	0.01 %

•• general packaging ••••••

## **Features**

- Low volume or surface resistance.
- Surface resistance of Less than 10<sup>5</sup>0hm.
- Shielding from external electrostatic field.
- Consistent is properties.

TENSILE STRENGTH	ELONGATION	VOLUME RESISTIVITY
12.1 Mpa	270%	10 <sup>5</sup> ohm

Amide Free PE Bag

Static Shielding Bag

general packaging .....

#### **Features**

- Made from low density polyethylene PE material.
- Manufacture in cleanroom environment.
- Customise to all sizes.
- Generally transparent but other colour available upon request.



SPECIFIC GRAVITY	ELONGATION	TENSILE STRENGTH
0.92 g/cc	750%	2350 psi

#### **Features**

- Thickness 3.1 mil.
- Safely protect sentivity product.
- Good Conductor of static electricity.
- Consistent in properties.
- Identify product packed.

TENSILE STRENGTH

35 lbs / in Width



18 psi

### Pink Antistatic Single Layer Bubble MODEL NO: PPM-LB83

bubble packaging .....

- **Features** - Carbon and Polyurethane.
- Non corrosive.
- Good cushioning
- Resistace reading: 1.0 E3 to 1.0 E5 Ohm
- Standard size: 1m x 1m x 5mm
- Custom size available



#### **Features**

- Excellent physical and electrical properties with a high degree of stability under conditions of use.
- Exhibits excellent cushioning properties due to the regular dense air bubbles, trapped between two layers of antistatic polyethylene film.
- Excellent shock absorbing and cushioning properties.



TENSILE STRENGTH	DENSITY	ELONGATION
10.4 psi	0.082 g/cm <sup>3</sup>	170%

3.1 +/- 0.3 Mils

Conductive Polyurethane (PU) Foam MODEL NO: PPM-PU02

## **Packaging**

We provide high quality products with a simple & flexible packaging process and an end-to-end packaging solution.

Conductive Polyethylene (PE) Foam MODEL NO: PPM-PE150

ESD Polyethylene (PE) Foam

- 100% Virgin Polyethylene. - Good cushioning.

**Features** 

- Resistivity reading: 1011 Ohm/sq.

- Customize shape and size.

- Various density available.

**TENSILE STRENGTH** 

32 psi



**ELONGATION** 

< 100 %

### **Features**

- Carbon and Polyethylene.
- Non corrosive.
- Good cushioning
- Resistace reading: less than 10<sup>5</sup> 0hm.
- Standard size: 1m x 1m x 5mm
- Custom size available.

TENSILE STRENGTH	DENSITY	ELONGATION
8.4 kgf/cm²	0.066 g/cm <sup>3</sup>	80%

Conductive Velcro Strap

**Features** 

### **Features**

- RoHS compliance.
- Metal or plastic buckle for option.
- Loop hair: flossy type or tidy type for option.
- 1-sided or 2-sided conductive/antistatic for option
- Permanent ESD effect without water wash.
- Standard color: conductive-black; antistatic: bright blue or black.



**TENSILE FORCE TENSILE STRENGTH TEMP RESISTANT**  $650 \,\mathrm{g/cm^2}$ up to 220°C 164 g/cm<sup>2</sup>

**Black Static Dissipative PP Strap** MODEL NO: PPM-0027

#### **Features**

- Quality Polypropylene Strapping works great in table top, semi-automatic strapping machine application.
- Strapping is embossed for reduced splitting, greater flexibility and better seal joint effciency in heat seal machine.



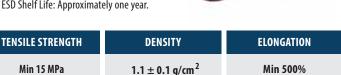
THICKNESS	TENSILE STRENGTH	MELTING POINT
0.65 mm +/- 0.05 mm	60 kg	180 +/- 5°C

**DENSITY** 

1.7 pcf

- Use to bundle and protect ESD sensitive IC tubes, trays, boxes and carriers quickly and safely.
- Vulcanized Natural Rubber.
- Surface Resistivity: 10^9 ohms/sq.
- Static Decay Rate: Less then 2 sec.
- ESD Shelf Life: Approximately one year.

Antistatic Rubber Band



Conductive Rope MODEL NO: PPM-VE81 packaging .....

- Storage of ESD sensitive products.
- Entrance of assembly lines.
- FPA area.
- Designed to make a blind curtain for grounding path of static charges built up on human body and transport equipment.
- It is quick and easy way to remove the static charges by simple touch of the rope.



DIAMETER	SURFACE RESISTIVITIES	WEIGHT
7 mm	10 <sup>3</sup> ~ 10 <sup>5</sup> ohm/sq	9 grams/meter



## **Packaging**

We provide high quality products with a simple & flexible packaging process and an end-to-end packaging solution.

### Vacuum Sealing Machine

#### **Features**

- It transforms AC input into 24 volt DC to output for better safety.
- Wide LCD window displays sealing bar temperature for easier check.
- Self-diagnostics system shows various error message for convenient maintenance.
- Double seal option.



SEALING LENGTH	WEIGHT	DIMENSION (WxDxH)		
600 mm	32 kg	<b>610 x 417 x 262 m</b> m		

#### **Features**

- Equipped with 2 heated 12mm wide and 8" or 12" long serrated jaws.

packaging .....

- Ideal for sealing cellophane, coated aluminum
- Kraft paper and other thick materials. Compact & easy operate.



MAX SEALING	WARM UP TIME	MAX TEMP
150 x 12 mm	5 - 7 min	200 °C

#### MAP Machine

packaging .....

#### **Features**

- Side seal edge trimming device optional for clear up of side sealing burrs.
- Film feeding format option
- M plate device: Single film divides into two separated film through the wrapping process, allowed two sides to have printing design.
- Upper and Lower reels: Twin films could use with different film material (single-sided eye mark tracing only)
- Optional for peelable chevron pouch packaging.

OPERATING SPEED	BAG LENGTH	BAG WIDTH
20 - 120 pack/min	100 - 400 mm	30 - 200 mm



### Semi-Auto Gluing Machine

•• packaging ••••••

#### **Features**

- Gluing head adopts alloy material, acid and alkaline resistant, long use life.
- Simple and reliable operation, whole novel smooth design, quick change sizes.
- Auto lifting, gluing, correction, conveying, pressing, counting, output, etc.



MAX SHEET SIZE	MIN SHEET SIZE	DESIGN SPEED
1515 x 2800 mm	300 x 600 mm	60 m/min

### **Carton Packing Machine**

packaging .....

- Used for carton sealing which also could work with joining production lines.
- Used in home appliance, textile, food, general merchandise, medicine, chemical and so on.
- Flexible cushion prevents box been jammed under the top tapping head.



CARTON SIZE (L×W×H)	SEALING SPEED	TAPE WIDTH
150~∞×150~500×120~500 mm	700~1200 ctns/hour	48 / 60 / 75 mm



- HANDLING & STORAGE - 2017 - PRODUCT CATALOGUE - 2017

## **Handling & Storage**

We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### **ESD Magazine Rack**





#### **Features**

- Made of volume conductive polypropylene & Metal.
- Used to transport PCB for automated assembly line.
- Strong and robust polypropylene sidewall and Metal frame guarantee long life time of product.
- Surface resistance : 10<sup>4</sup> 10<sup>6</sup> ohm.
- Screw and gear adjustment.
- Base: Conductive plastic or stainless metal.
- Environmentally friendly, RoHS compatible.
- Reversible and stackable type available.

OUTER DIMENSION MODEL NO IN MM		PCB ADJUST	TEMP. RESISTANCE		
	L	w	н	(L * W)	
PPM-SW5301A	355	315	580	355*(80-250mm)	80 deg. C
PPM-SW5301A1	355	315	305	355*(80-250mm)	80 deg. C
PPM-SW5301B1	355	320	563	350*(50-250 mm)	80 deg. C
PPM-SW5301B1G	355	320	563	350*(50-250 mm)	120 deg. C
PPM-SW5301B1H	355	320	563	350*(50-250 mm)	200deg.c
PPM-SW5301B11	355	320	363	350*(50-250 mm)	80 deg. C
PPM-SW5301B11G	355	320	363	350*(50-250 mm)	120 deg. C
PPM-SW5301B2	355	320	563	350*(50-250 mm)	80 deg. C
PPM-SW5301B2G	355	320	565	350*(50-250 mm)	120 deg. C
PPM-SW5301B3	355	320	565	350*(50-250 mm)	80 deg. C
PPM-SW5301B3G	355	320	565	350*(50-250 mm)	120 deg. C
PPM-SW5301B4	355	320	565	350*(50-250 mm)	80 deg. C
PPM-SW5301B4G	355	320	565	350*(50-250 mm)	120 deg. C
PPM-SW5301C	460	400	565	460*(70-330mm)	80 deg. C
PPM-SW5301CG	460	400	565	460*(70-330mm)	120 deg. C
PPM-SW5301D	535	460	570	525*(50-400mm)	80 deg. C
PPM-SW5301DG	535	460	570	525*(50-400mm)	120 deg. C
PPM-SW5301E	535	530	570	530*(70-460mm)	80 deg. C
PPM-SW5301EG	535	530	570	530*(70-460mm)	120 deg. C
PPM-SW5321	355	320	560	350*(50-250 mm)	80 deg. C

PITCH	PCB SLOT	GUIDE SLOT DEPTH	GUIDE SLOT WIDTH
10 mm	25 / 30 / 50	2.8 - 3.5 mm	5 - 7 mm

#### **Features**

- Specially used for collect the PCB and SMT components.
- Excellent anti-static performance, with tenacity wear-resisting, moisture proof and anti-corrosive, heat insulation shockproof.
- Allows our own choice of flexible storage.
- ESD Readings: E4 E9 Ohms.

OUTER SIZE	PITCH	WIDTH & DEPTH
457 x 190 x 546 mm	10 mm	3 & 4 mm

ESD Circulation Rack
MODEL NO: PPM-CR02/CR02A
handling & storage



OUTER SIZE	PITCH	WIDTH & DEPTH
(50-350) x 175 or 350 x 355 mm	10 mm	3.7 & 4.2 mm



We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### **ESD Small Circulation Rack**

handling & storage



OUTER SIZE	PITCH	WIDTH & DEPTH
437 x 160 x 30 mm	16 mm	3 & 8 mm



OUTER SIZE	PITCH	WIDTH & DEPTH
470 x 140 x 35 mm	10 mm	3 & 5 mm

**ESD Flat Circulation Rack** 



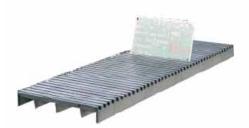
OUTER SIZE	PITCH	WIDTH & DEPTH
410 x 280 x 22 mm	10 mm	3 & 4.5 mm



OUTER SIZE	PITCH	WIDTH & DEPTH
475 x 175 x 50 mm	10 mm	Small - 2mm/Small - 2.5mm Big - 3mm / Big - 7mm



OUTER SIZE	PITCH	WIDTH & DEPTH
270 x 250 x 130 mm	7 mm	2 & 4.5 mm



OUTER SIZE	PITCH	WIDTH & DEPTH
410 x 135 x 22 mm	10 mm	3 & 5 mm



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#### **ESD Circulation Rack**

**NODEL NO:** PPM-CR09

handling & storage .....



OUTER SIZE	PITCH	WIDTH & DEPTH
340 x 130 x 22 mm	9 mm	3 & 5 mm

**ESD Circulation Rack MODEL NO:** PPM-



OUTER SIZE	PITCH	WIDTH & DEPTH
320 x 245 x 36 mm	7 mm	5.5 & 8.5 mm

ESD SMD Reel Storage box MODEL NO: PPM ... handling & storage

#### Features

- Suitable for storing SMD reels in trolleys, storage racks, storage boxes, paternoster magazines.
- Empty boxes can be stacked.
- Material: electrostatically volume conductive polystyrene.
- Surface resistance :  $10^4$   $10^5$  ohm.



SIZE	DIA OF SMT REEL	REEL QUANTITY
410 x 190 x 110 mm	180 & 330 mm	26 - 33 pcs

#### Conductive Circulation Rack

MODEL NO: PPM-CR10

handling & storage



OUTER SIZE	PITCH	WIDTH & DEPTH
410 x 283 x 170 mm	10 mm	2.7 & 5 mm

L Type ESD Circulation Rack

MODEL NO: PPM-CR12



OUTER SIZE	PITCH	WIDTH & DEPTH
100 x 15 x 14 mm	Small - 11mm / Big - 18mm	Small-1.5mm/Small-10mm Big - 2mm / Big - 10mm

#### **ESD Component box**

**MODEL NO:** PPM-RE7

... handling & storage .....

#### Features

CONT

- Made of conductive polypropylene.
- Lightweight, suite for packing, store and transportation the precision electronics.
- Can be stacked or for increased flexibility
- Easily fitted to louvered panel or free standing on a grounded surface.



TOUR SIZE	INNER SIZE

95 x 105 x 55 mm to 520 x 340 x 190 mm 80 x 90 x 40 mm to 460 x 310 x 178 mm **SURFACE RESISTANCE** 

10<sup>4</sup>-10<sup>9</sup> ohm



We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### **Conductive Tray**

#### - Features

- Have excellent resistance to abrasion.
- Provide effective ESD protection (<10<sup>6</sup>) for handling static sensitive products and equipment.
- Used for assembly, transport and storage of sensitive PC boards and devices.
- Excellent transportation capacity.
- Surface durability.
- ECO-friendly, non-toxic, odorless, anti-corrosion.
- Long-term & exterior durability



DESCRIPTIONS	CONDUCTIVE TRAY			
MODELS	PPM-CT101	PPM-CT102	PPM-CT103	PPM-CT104
Size (L) X (W) X (H) mm	485x355x45mm(H)	355x255x45mm(H)	280x215x40mm(H)	200x150x40mm(H)
Surface Resistivity (Ohm/sq)	10 <sup>4</sup> ~10 <sup>6</sup>			
Weight/PC	378g	246g	126g	98g
Material	Conductive PS	Conductive PS	Conductive PS	Conductive PS

ESD Tote Box	MODEL NO: PPM-KC84
· handling & storage · · · · · · · · · · · · · · · · · · ·	• • • • • • • • • • • • • • • • • • • •



- Comes in Conductive range of less than 10<sup>5</sup> ohm.Sq.
- High Impact Strength & Maximum space strength.
- Stackable.
- Comes with & Without cover.
- Heavy duty molded boxes protect contents (typically electronic components) from electromagnetic interface (EMI), electrostatic or induced fields.
- Surface resistivity less than 10<sup>5</sup> ohms per square.

MODEL NO	OUTER DIMENSION (MM)	INNER DIMENSION (MM)	LOAD BEARING CAPACITY (KG)
PPM-WX-001	400*300*110	365*265*110	
PPM-WX-002	400*300*148	365*265*135	
PPM-WX-003	400*300*160	365*265*160	15
PPM-WX-004	400*300*200	365*265*200	13
PPM-WX-005	400*300*220	365*265*220	
PPM-WX-006	400*300*280	365*265*270	
PPM-WX-007	300*200*148	265*165*140	10
PPM-WX-008	300*200*110	265*165*110	10
PPM-WX-009	600*400*110	565*365*105	
PPM-WX-010	600*400*148	565*365*137	
PPM-WX-012	600*400*160	565*365*150	
PPM-WX-013	600*400*230	565*356*220	
PPM-WX-014	600*400*280	565*365*270	
PPM-WX-015	600*500*350	560*460*340	
PPM-WX-016	600*500*300	560*460*290	25
PPM-WX-017	600*500*250	560*460*240	
PPM-WX-018	600*500*160	560*460*150	
PPM-WX-019	620*420*310	580*390*300	
PPM-WX-020	620*420*250	580*390*240	
PPM-WX-021	620*420*200	580*390*190	
PPM-WX-022	620*420*150	580*390*140	
PPM-WX-023	545*420*380	510*390*375	
PPM-WX-024	545*420*310	510*390*300	20
PPM-WX-025	495*380*230	465*360*220	20
PPM-WX-026	495*380*170	465*350*160	



We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### Conductive Corrugated Box

#### **Features**

- High Impact strength.
- Maximum space strength.
- Easy and efficient storage.
- Provides easy identification.
- Easy to affix labels and bar codes.
- Stackable with and without covers.
- Customize multiple height divider.



WALL THICKNESS	SUBSTANCE	WIDTH & DEPTH
4 mm	700 gm/m <sup>2</sup>	<10 <sup>5</sup> 0hm/Sq

#### Chrome Plated Trollev

#### **Features**

- Standard wire shelving features four steel poles / uprights, 1 to 10 feet in height, with rubber levellers.
- Rubber levellers allow adjustments to accommodate uneven floors.
- Customization of other sizes are also available.



LOAD CAPACITY	MATERIAL	FINISHING
200 kg per tier	Carbon Steel	Chrome Plated

## ESD Stainless Steel PCB Trolley

#### **Features**

- Provides safety and convenience.
- Fitted with conductive castors for ESD-safe operation and mobility.
- Adjustable panels to accommodate different PCB sizes.
- Allows airflow and have slides that accepts boards up to 3mm thick.
- Any other size can be customized made.



SIZE	PITCH	SLOTS PER PANEL
900 x 540 x 1300 mm	10 mm	100

#### **Conductive Vacuum Forming Tray**

#### **Features**

- Permanent static dissipative.
- Humidity insensitive.
- Ultra-clean: Low off-gassing, low ionic contamination.
- Electronic assembly packaging.
- Medical device packaging.
- Hard disk packaging.



HOST POLYMER	SPECIFIC GRAVITY	COLOR
PETG	1.25 g/cc	LIGHT BLACK

#### **ESD PCB Plate Trolley**

#### **Features**

- Easy adjustable for most produced PCB sizes
- Conductive type
- Keep in 200, 400 PCB plates.
- Customized Sizes can be supported.
- Surface resistance :  $<1 \times 10^6 \Omega/\text{Sq}$ .



SIZE (L×W×H)	PITCH	SLOTS PER PANEL
900x550x138 mm 1200x550x1380 mm	10mm	100

#### **ESD SMT Reel Trolley**

- Heavy duty structure with excellent quality finish, it can loading 100kg-150kg/layer of shelf.
- Freely adding on shelves and adjusting each shelf's height.
- Easy assemble and dismantle, no tools required.



CONTOUR SIZE	INNER SIZE	SURFACE RESISTANCE
457 x 609 x 1030 mm	Carbon Stainess Steel	10 <sup>7</sup> - 10 <sup>8</sup> ohm



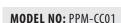
We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### Conductive Caster

handling & storage

#### **Features**

Housing: Zinc or Chrome Plated | Resistant to humidity, corrosion & wear | Available With & Without Brake | Surface Resistance: E2-5 Ohm | Available Colors: Black, Grey, Red.





WHEEL DIAMETER

SAFETY LOAD

125 mm 110 kgs/pc

110 kgc/nc

MODEL NO: PPM-CC05



WHEEL DIAMETER

100 mm

SAFETY LOAD

100 kgs/pc

MODEL NO: PPM-CC02



WHEEL DIAMETER

125 mm 110 kgs/pc

**SAFETY LOAD** 

MODEL NO: PPM-CC06



WHEEL DIAMETER

100 mm 100

SAFETY LOAD

100 kgs/pc

MODEL NO: PPM-CC03



WHEEL DIAMETER

125 mm

SAFETY LOAD

125 MM

110 kgs/pc

MODEL NO: PPM-CC07



WHEEL DIAMETER

75 mm

SAFETY LOAD
40 kgs/pc

MODEL NO: PPM-CC04



WHEEL DIAMETER

METER SAFETY LOAD

75 mm

80 kgs/pc

MODEL NO: PPM-CC08



WHEEL DIAMETER
50 mm

SAFETY LOAD
40 kgs/pc

#### Conductive Pallet

**Features** 

MODEL NO: PPM-CP1280

## - Reliably protects electrostatically sensitive components from charging and facilitates secure transport and storage processes.

- All runners have chamfered edges on both sides for ideal use with fork lift trucks.
- Welded runners for running smoothness on roller conveyors.
- Integration of RFID transponders.
- Varying data may result from different conditions of usage such as loading method, prevailing temperature and length of storage time.





DIMENSIONS L  $\times$  W  $\times$  H (mm)

1200 x 800 x 160

MATERIAL

PP, Virgin material, Conductive

**TEMPERATURE STABILITY** 

-30 °C to +40 °C, briefly up to +90 °C



- HANDLING & STORAGE PRODUCT CATALOGUE - 2017 —

## **Handling & Storage**

We provide Storage Solutions and Material Handling serve our customers ergonometric logistic solutions with high reliability and inflexible quality control.

#### Conductive Component Organizer MODEL NO: PPM-RG79

#### **Features**

- A small part magazine consists of housings, floors, small drawers and labels.
- The frame consists of semiconducting polypropylene (PP), the drawers of semicon ducting polystyrene (PS) and the floors of galvanized sheet steel.
- The magazines are equipped as standard with a connection for a ground cable.



DIMENSIONS (WxDxH)	MATERIAL HOUSING	NO. OF DRAWYERS
310 x 180 x 290 mm	Polypropylene	24 pcs

#### **Conductive Foam Tray**

handling & storage

#### **Features**

- Shockproof and shock resistant.
- Non-toxic.
- Waterproof and corrosion-resistant.
- Temperature and humidity resistant, large load ability.
- Light weight and high tensile strength.



SIZE	SURFACE RESISTIVITY	ELECTROSTATIC DECAY
Customizable	10 <sup>3</sup> -10 <sup>5</sup> ; 10 <sup>6</sup> -10 <sup>9</sup> 0hm	<15 secs

#### Conductive Hindae Box

handling & storage .....

#### **Features**

- Conductive boxes are marked with the ESD protective symbol.
- Contain one piece of high density foam for insertion of component leads and one piece of low density foam which acts as a cushioning material.



MATERIAL	RESISTANCE	TEMP LIMITS
Black conductive PP	< 1 x10 <sup>5</sup> ohms	0° to 120° F

#### **Dry Cabinet**



- LED display, Honeywell humidity sensor with error as  $\pm 3\% RH$
- Quality 1mm and 1.2mm cold rolled steel, reinforced structure, high intensity bearing,
- Every shelf can bear over 40kg load.
- 3.2mm tempered glass.
- Zinc alloy lock with air press.
- Coating: Normal or Antistatic
- High intensity truckle with brake.
- High anti-erosion performance to avoid your stored goods from pollution, static shock, and oxidation.

OUTER DIMENSION W x D x H IN mm	CONTROLLED HUMIDITY (RH)	MAXIMUM POWER RANGE (W)	AIR FLOW RANGES (LPM)
448 x 400 x 688	1%~5% 1%~10% 10%~20% 20%~60%		
448 x 450 x 1010			
598 x 400 x 1310			
900 x 450 x 1010			5~25/
900 x 600 x 1010		91 - 420	5~60/
598 x 710 x 1465			5~300
598 x 710 x 1910			
900 x 600 x 1890			
1200 x 710 x 1910			



### **Services**

Our Company is focused on delivering value through integrated solutions leverage innovations in technology, knowledge of business processes, and domain expertise to provide clients a competitive edge.

#### Cleanroom Laundry Services

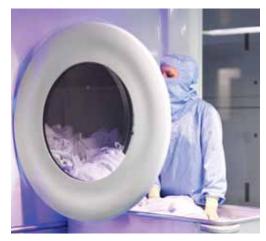
service

Being one of the pioneer in the cleanroom laundry industry, our class 100 cleanroom laundry in both Singapore and Batam offer a highly professional package to industries where attention to detail is of utmost importance. It also ensures complete compatibility with the operations of your cleanroom. Currently, our laundry is capable of supporting filtered water requirements and DI water requirements.

At Pro-Pack, we take an uncompromising attitude to cleanliness and garment tracking for our cleanroom services. We manage our customers garments through barcoding and have reports on number of washes to allow monitoring of garments lifespan.

We make use of high quality ESD chemicals to wash all garments and footwear. The amide silicon free bags used for product packaging are of the highest quality available and are approved by our customers, so as to assure our customers of the highest product quality possible.

From our daily pickups to emergency deliveries on weekends, Pro-Pack is dedicated to provide the best possible service to our customers. We can make special arrangement of daily pickups and deliveries to your facilities. Once cleaned, we package and box the garments according to your specification.







#### **Process**

#### Sorting and barcode system

Scanning incoming soiled garments and shoes. Soiled garments and shoes are inspected before being sorted into groups of similar items for washing, and damaged uniforms and shoes are weeded out for repair or replacement.

#### **Pre-treatment**

Garments and Shoes are pre-treated by general washer to reduce soil and dust before loading into barrier washer (cleanroom washing)

#### Washer

Garments and shoes are loaded into large capacity (200 lb.) barrier pass-thru washers, washed with a solution of purified water and special non-ionic surfactants with Micro processor controlling to ensure the stable quality processing.

#### Dryer

Unloading dedicated cleanroom pass thru dryer HEPA filtered system to guarantee the cleanest air for the drying

#### Particle test

Measuring the number of particles per minute. Testing of the surface resistivity of garments and shoes (Optional)

#### **Inspection & Folding**

After particle testing, garments and shoes are inspected for defects such as split seams and broken zippers or snaps, and then folded, packed and sealed in polyethylene bags

#### **Packing & Delivery**

Once sealed, the garments and shoes are placed in a pass-thru and sent out of the clean-room to the shipping area, which is itself often Class 100.



## Services

Our Company is focused on delivering value through integrated solutions leverage innovations in technology, knowledge of business processes, and domain expertise to provide clients a competitive edge.

#### **Calibration and Repair Services**

service

### Pro-Pack Calibration and Repair Services Includes

Resistance Meter	Electrostatic Voltmeter
Resistivity Meter	Charge Plate Monitor
Wrist Strap And Footwear tester	Bench Top Ionizer
Wrist Strap Monitor	Overhead Ionizer
Electrostatic Fieldmeter	Static Decay Meter





Pro-Pack Calibration Service Center provide quality services in the field of Electrostatic Discharge (ESD) Test and Measurement instrument.

We have a team of engineers who have gone through product and calibration training in the States. We are fully staffed and equipped to provide calibration services traceable to the National Institute of Standards & Technology (NIST).

#### **Our ESD Laboratory**

Meet ESD environment requirement. Relative Humidity at 55% +/-10%. Temperature is 23 degree Celsius +/- 3 Deg Celsius.

- In House and On Site Calibration Services provided as per requirement.
- Calibration certificates and service records available.
- Computer generated Certificates for Calibration.
- Precise and Accurate calibration with adequate traceability.
- Fast turn around time and reasonable pricing.
- Calibration Recall Service System to customer informing them 1 month ahead of time.
- Our Calibration Service for ionizers, ESD monitor and checker, workstation testing, etc. We provide Installation of workstations that comply with ESD requirement.
- Calibration contract services Quarterly, half-yearly or yearly.



### **Services**

Our Company is focused on delivering value through integrated solutions leverage innovations in technology, knowledge of business processes, and domain expertise to provide clients a competitive edge.

#### Total Integrated Solution

service



Having served the cleanroom industry for more than 24 years, the name of Pro-Pack has been synonymous with excellence in providing high quality products. We are continuously introducing new innovative programs and superior service so as to serve our customer better.

We understand that while each customer has a unique facility to operate and a different problem to solve, all our customers share one common requirement: when they need Pro-Pack's products or services, they often need it right away.

Therefore, fully equipped with a vast global network, experience and the knowledge of understanding what our customers need, Pro-Pack is proud to provide a one-stop Total Integrated System.

#### Innovation

Pro-Pack has more than just the quality products needed to minimize downtime and improve your company's operations. We provide added value through innovative solutions and knowledgeable recommendations, creating customer success.

#### **Expertise**

More than just order takers, Pro-Pack's sales force works closely with customers to better understand their challenges and provide cost-saving solutions. Besides that, we also have a group of dedicated and well-trained administrative and quality control staff as well as in-house testing lab to do:

- Static control testing adhering to S20.20 standards
- Particle checks
- Cleanliness test reports

#### Support

Our Total Integrated System ensures that you save on logistics cost from managing different suppliers. Pro-Pack can do one time delivery of all the materials to you whenever you require. Automatic replenishment of stock is also managed by Pro-Pack to safeguard that stock is always at a safe level for consumption. Pro-Pack also controls manufacturing for some of the products which means better cost offering and control of raw materials for shorter lead time.

Therefore, you can be assured that helps our Total Integrated System helps save time and money by providing them the right products and the right services to keep your facilities up and running!





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# "YOUR RELIABLE PARTNER FOR CONTROLLED **ENVIRONMENTS"**



**HEAD QUARTERS** Singapore

GLOBAL LOCATION Malaysia, Indonesia, Thailand, Philippines, China, India