

Vermason		Product Information No: PIS 147		
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WORK STATION KIT

Code J753M
FEC Code 3026632

Description

This kit is designed to create an ESD Protected Area (EPA), i.e. a working space where static-sensitive electronic components may be unpacked and handled with the minimum risk of being damaged by static electricity.

It is suitable for general use - in stores, assembly and packing areas. It can be used where powered electrical equipment is to be used, as the mat is static dissipative. The bench mat offers a surface resistivity of approximately 10^7 ohm/square and a resistance to ground of similar magnitude.

The kit comprises the following parts:

	Code	Qty
Bench mat approximately 0.6m x 0.9m with four 10mm press studs	J063BS	1
Adjustable elasticated wristband with 10mm press stud	JA48R	1
Coiled cord with two 10mm press socket	J4222	1
Straight mat grounding cord with one 10mm press socket and M5 ring terminal	J4713	1
Earth facility bracket with M5 binding post	J6796	1
Earth bonding point (EBP) with two 10mm studs and built-in tester.		
Power supply, fixing screws, etc.	H580	1
Calibration Certificate for H580	Verm105	1
Self-adhesive "caution" sign 150 x 300mm	J2412	1
Instructions for Use of Wristbands	RJ31IN	1
Booklet – About ESD	M2104	1
Product Information Sheet	PIS147	1

Instructions for installation and use

1. Lay the mat on the workbench or table. It forms the working surface and determines the boundaries of the EPA.
2. Mount the earth facility bracket conveniently out of the way, usually on a wall at the rear of the work bench. Connect the bracket to earth, either electrical mains earth or to metal piping, such as a heating system or the frame of the building.
3. Mount the EBP tester (H580) on the work surface or onto the side of the bench, and route its ground cord to the earth facility. The latter should be checked for correct path to earth.
4. Connect one end of the straight mat ground cord to a press stud on the mat and the other end to the earth facility.
5. Connect the power supply to the mains supply and the DC plug to the tester, H580. This should power the unit and the 'Fail High' LED should come on.
6. Connect one end of the coiled cord to the free 10mm press stud on the EBP tester.
7. Connect the other end of the coiled cord to the press stud on the wristband. Fit the band snugly around the wrist. The operator is then also connected to Earth potential.
8. Mount the "caution" sign in such a position that it can clearly be seen by anyone approaching the ESD protected area.
9. Test the assembled kit for resistance to Earth: that of the mat should be approximately 10^6 to $5 \times 10^7 \Omega$ at 100V test voltage, that of the operator $\geq 0.75 \leq 35 \text{ M}\Omega$ at <30Volt.

Important points on use of the ESD Protected Area (EPA)

1. An operator using the EPA must at all times wear a wrist band, adjusted so that it is a snug fit and connected by the coiled cord to the EBP.
2. Components and assemblies that are static sensitive must not be touched or exposed outside an EPA. They may only leave it when protected in appropriate packaging.
3. No materials capable of causing static damage to unprotected devices may be taken into the EPA. Therefore sensitive devices must always be unpacked down to their special ESD packaging outside the area.

Operator safety in an EPA

1. To ensure that the EPA does not increase the risk of serious shock to an operator who accidentally comes in contact with a live conductor a 1 megohm resistor is fitted between the connectors on the ends of each cord. It is important to check that no low resistance path to Earth is within the operator's reach e.g. through earthed metalwork or low resistance of the floor to Earth.

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