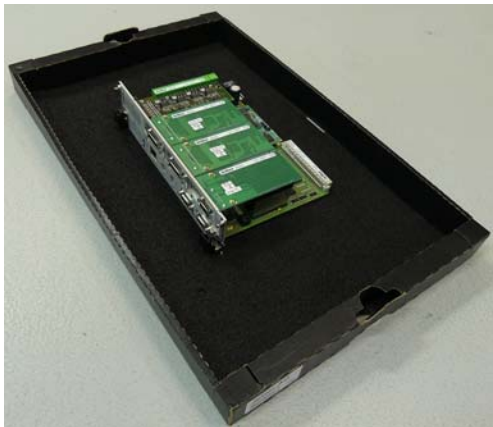




ESD protection measures

We automate your success.




Purpose and application scope

These instructions describe how to handle electronic components/assemblies.

Change history

Index	Type of changes made	Location in the document	Date	Person
0	Original issue		1/20/2017	D. Fichter
1	Notes	1 General information	3/22/2017	D. Fichter
2	Title page		5/30/2017	D. Fichter

Work Instruction AA_AV_1014	<h2>Preventive measures against ESD</h2>	
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1 General information

1.1 Notice!

Due to return deliveries of electronic components which we increasingly receive in packaging not complying with ESD protection, we feel obliged to explicitly point out to you the following:

1.2 Why is prevention of ESD necessary?

Electrostatic discharge is an everyday phenomenon:

You can find it in the **electric shock** you feel touching the door of your car, in your hair standing on end after taking off your cap or also in the **sparks flying** between two people.

But while it is only a brief shock and mostly annoying for us, it can quickly result in a total damage to electronic assemblies consisting of very small semiconductor components.

Especially in dry air, electric discharges with a potential of **10 000 Volt** are no exception.

Therefore, the prevention of ESD is one of the highest priorities for our company.

In the worst case, many damages caused by ESD are noticed by the customer after some time, consequent in high repair or replacement costs. But what is much worse is the damage of the image added to the financial issues when an undiscovered mistake impairs a whole product charge.

If Jetter AG receives electronic components without ESD protection, a damage must be assumed which will take effect in the future. For this reason we regret we have to exclude warranty for the resulting repairs.

1.3 Protection from ESD

Establishing an Electrostatic Protected Area (EPA), in which assemblies endangered by ESD can be handled safely, requires a detailed protective concept. The key issues for this are both internal and external protection of the components, as well as organizational protective measures actively and equally taken by employees, subcontractors and customers.

1.4 Avoidance

There can be no electric discharge to damage components/assemblies where there is no electric charge.

1.4.1 Workplace, machine/electric cabinet

It is very important to make sure that all facilities are able to avoid electric charges and discharge them in a defined way.

1.4.2 Transport

While transporting, it is important to make sure that only ESD containers are used. Even transparent bags for shipping documents which are not made of ESD-safe material can cause damages. Always avoid temporary storage on inappropriate material.

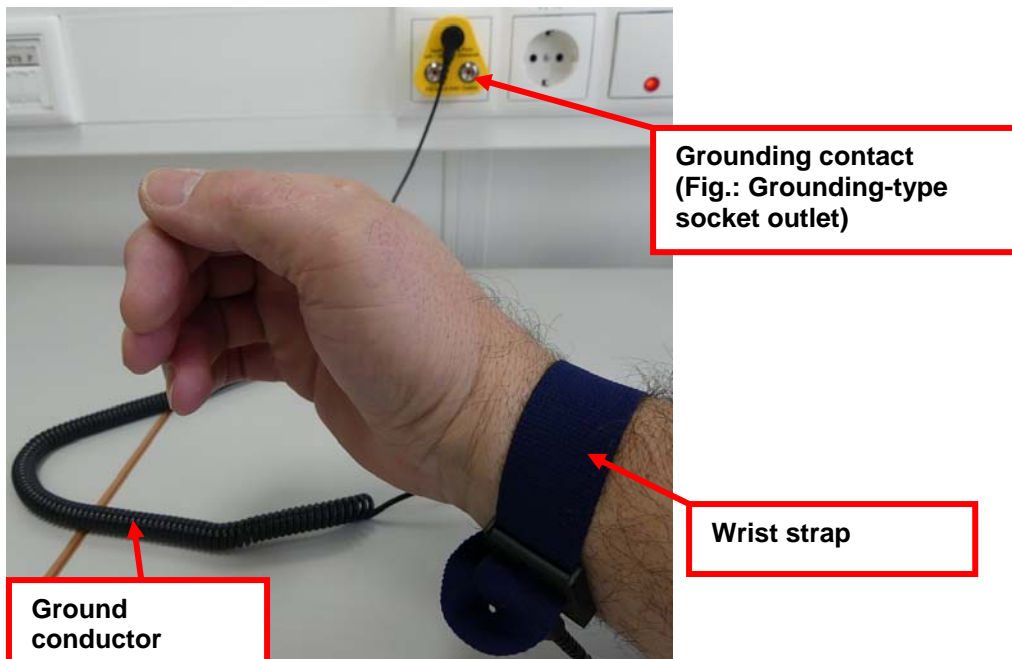
1.4.3 Delivery and packing

Please make sure that there is an ESD reference printed on the packing where it can be seen clearly. Also ensure that ESD-sensitive components/assemblies are always stored and transported in isolated packings while they are outside of an ESD protected zone.

2 Suggestions on how to proceed (DIN EN 61340-5-1)

2.1 Attaching and wearing a wrist strap

- Always wear a wrist strap when handling ESD-sensitive devices



2.2 Replacing/dismounting electronic assemblies

- Immediately after dismounting, put the electronic assembly onto an anti-static tray ...



- ... then put the electronic assembly into an anti-static bag having got an ESD reference
- ... close the ESD bag



2.3 Final packaging and shipment

The electronic assembly in the closed ESD bag can now be packed and shipped as usual.

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