







<p>Datum: 22.02.2021          Bearbeiter: Wladick Hartmann          Arbeitsbereich:          Schichtabscheidung          Arbeitsplatz: CenTech I 00.19</p>	<h1>Safety Instruction</h1> <h2>Electron-beam evaporator</h2> <h3>EB M-8 II</h3>	<p>WWU          Münster Nanofabrication          Facility (MNF)          Center for Nanotechnology          (CeNTech)          Heisenbergstraße 11          48149 Münster</p>
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<b>Range of Application</b>		
Operation Dry Etching Machine		
<b>Hazard for People and the environment</b>		
	<ul style="list-style-type: none"> <li>• Risk of injury from electric shock: Never remove or open the housing or protective parts, never remove the grounding cable.</li> <li>• Never open the evaporator controller</li> <li>• Risk of flashover: Never turn on the high voltage when there is no vacuum.</li> <li>• Be careful not to get your fingers caught in the loadlock door.</li> <li>• There are potential hazards regarding the high voltage and magnetic field that may occur while a service technician is disassembling or replacing the unit for service. Keep your distance from the unit when doing so.</li> <li>• Be careful not to inhale fine metal dusts.</li> </ul>	
<b>Safety Measures and Rules of Behavior</b>		
	<ul style="list-style-type: none"> <li>• Work only after prior instruction and knowledge of the operating instructions EB M-8 II.</li> <li>• Suitable personal protective equipment must be worn.</li> <li>• A person wearing a medical device such as a pacemaker may be affected by magnetic fields and must therefore keep his distance from the machine.</li> <li>• Before using the machine, make sure that the pressure in the main chamber as well as the loadlock is according to the instruction.</li> <li>• Do not open the barrier between the loadlock and the main chamber until the required pressure has been reached.</li> <li>• Do not start evaporation until the jet is properly aligned with the crucible.</li> <li>• When opening the unit, the metal dusts that occur are harmful to health. Observe the instructions of the material manufacturers from the data sheets of hazardous materials. Wear protective gloves and a dust mask.</li> <li>• Discharge the residual charges with the discharging device before touching the system parts, sputtering source, etc.</li> <li>• Do not exceed the specified values of maximum voltage and maximum power. In case of unanswered questions, consult the responsible Dr. Abasahl.</li> </ul>	
<b>Action in Failure</b>		
<ul style="list-style-type: none"> <li>• In case of any malfunction or abnormality turn off the machine and secure against starting up and inform your direct supervisor.</li> </ul>		
<b>Action in Accident, First Aid</b>		
	<ul style="list-style-type: none"> <li>• After contact with clothes: immediately disrobe and wash out with water. After contact with the skin: wash out with much water, in case of skin reaction consult a doctor. After contact with the eye: wash out for 10 minutes with floating water and open lid slit, immediately consult an eye doctor. After inhalation: get fresh air, immediately consult a doctor.</li> <li>• Inform appointed first aider.</li> <li>• Immediately treat small injuries.</li> <li>• Enter data in the accident book.</li> <li>• In case of severe injuries call an emergency doctor (phone 112).</li> <li>• Inform your superior.</li> </ul>	
<b>Maintenance and Disposal</b>		
<ul style="list-style-type: none"> <li>• Maintenance work may only be carried out by qualified and instructed staff.</li> </ul>		