

**FACULTY/DEPARTMENT:**  
Faculty IV, Physics department

**WORKING GROUP:**  
NANO-OPTICS, PROF MARIO AGIO

**APPLICATION RANGE**

Working with box column drills.

**RISKS FOR HUMANS AND ENVIRONMENT**


Danger of cuts caused by chippings, rotating workpieces and tools.  
 Danger of injury due to flying chippings.  
 Possible contact with cooling lubricant.  
 Risk of hair, clothes and jewellery etc. getting caught in rotating tools.  
 Noise during the drilling process and when blowing off workpieces with compressed air.


**SECURITY MEASURES AND RULES OF CONDUCT**


Usage is only permitted to instructed persons.  
 The operating instructions of the manufacturer must be observed.  
 Before starting work, check the drill for any obvious defects.  
 Protective devices (e.g. protective shields, safety switches, covers) are to be used and must not be manipulated.



The following personal protective equipment must be worn:

- Safety shoes
- Ear protection (on longer drilling jobs)
- Safety goggles
- Do not use protective gloves during normal operation, risk of entanglement!



The necessary, personal protective clothing is available in the locker on the corridor.

Wear tightly fitted clothing with tight sleeve cuffs or roll up the sleeves on the inside. Tie long hair back and take off watches, rings, armbands, long necklaces and such.



Clamp workpieces firmly in the vice.

In operation:



Limit the amount of cooling lubricant to the necessary minimum.

Remove chippings only with a hand brush or chip removing hook.

After changing the tool, set the speed according to the tool specification.

Do not eat, drink or smoke at the work place and don't store food.

Bevor a break and after finishing, wash hands and keep to the skin protection protocol.

Switch off the machine and secure it against unintentional switching on before cleaning work, maintenance work, tool changes and after work. Wear protective gloves for cleaning.

 During Cleaning  
(Machine off!):

**BEHAVIOUR IN CASE OF MALFUNCTIONS**

For all damage and malfunctions on the machine: Switch off (main switch), secure against restart and inform Dieter Gebauer (Tel.-No.: 0271/740 3550).

**CONDUCT IN CASE OF ACCIDENT, HAZARD, FIRST AID**

**Ensure Self-protection!**

Secure the dangerous area and make sure people are removed from area.  
 Consult first responder/paramedic, if necessary call the Emergency Services.  
 Provide first aid, take care of the injured person. Inform your supervisor.

**Emergency  
number:  
(0271/740-)  
2111**

Assist the emergency services.

All injuries must be documented in the first aid book!

Use the portable fire extinguisher to put out small fires.

In case of a large fire: Emergency call, exit the danger area, warn your colleagues.

**MAINTENANCE, DISPOSAL**

Repairs may only be initiated by Prof. Agio

Date: 20.03.2018

 Signature: 