

## 1.4.10 ACCIDENT PREVENTION AND HEALTH AND SAFETY FOR MAGNETIC FIELDS

- Surface grinding machines with electro magnetic workholding fixture and machine feed must be set up in such a way that the feed drive can only be moved in after the magnetic current has been activated.
- The switched-on position must be indicated with a signal lamp for electro magnetic workholding fixtures and with a corresponding visual marker for permanent magnet workholding fixtures.
- The following exposure limits for high static magnetic fields apply for working in the exposed area as per BGV (Regulation issued by the German Social Accident Insurance Institutions) B11, Annex Z:

Peak value for head or torso	2.000 T
Mean value for 8 h full-body exposure	0.212 T
Peak value for extremities	5.000 T

As the magnetic saturation for steel 1.0037 is 1.6 – 1.9 T and the magnetic field is concentrated in the area near the pole plate, the limits stated above are not exceeded in the range > 10 cm.

- For persons with active implants or ferromagnetic foreign bodies, decisions on usage must be taken for the individual cases ("no pacemaker" sign). For magnetic chucks, the basic exposure limit of 0.5 mT is not reached at a distance of 500 mm. For alternating fields of demagnetisers, please observe the operating instructions provided. In any case, consult a medical doctor. If needed, measurements has to be made.
- Personnel must be instructed in the specific effect of magnetic fields on electronic/medical devices, computers, clocks, data carriers or credit cards.
- The use of non-magnetic tools can exclude the risk of crushing or similar injuries.
- As per the Bavarian Environment Agency (LfU) and the German Federal Occupational Health and Safety Regulation (EMFV) of 15/11/2016, constant magnetic fields < 2 T have no adverse effect on health.



Warning – magnetic field



No access for persons with pace-makers or implanted defibrillators



No access for persons with metal implants



No metal parts or watches



No magnetic and electric data carriers