pantograph services

Incorporating Newing-Hall Ltd and Riggs Engraving Services Ltd

SALES & SERVICE TO THE ENGRAVING & SIGN TRADE

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An extract from a letter written by the manufacturers of our magnetic Badge Fastenings in reply to a question put by Pantograph Services as to any risk involved with Magnets.

It is almost impossible to get information on all types of instruments, which could be affected by Magnets. Any recording media such as Tape, Disc or Credit Card strips are sensitive. The minimum field which could destroy data is about 500 Gauss, the face of a 1500SMBF (the single magnet that Pantograph Services supplies) is 1600-1800 Gauss, however at .250" Gap it is 227 Gauss at 1" Gap this drops to 6 Gauss. When the Badge Holder is in use this drops to 1 Gauss. There would be no hazard to devices such as motors, solenoids or other electro magnetic devices, as these usually have magnetising fields of 10000 + Gauss.

Reed switches and hall effect devices are activated by magnetic fields, these would typically be found inside machinery as position or speed sensing devices. There would be no hazard beyond 1" to 1.5" and even then the field would have to have the correct polarity and orientation to affect the device.

It is our understanding that some, if not all, pacemakers are turned on and off by magnetically activated reed switches. We understand that they use a relatively large magnet. We are assured that our Gauss reading at 6" is a very conservative reading. Some Gauss readings for common items that you would not necessarily consider dangerous are as follows:

Battery operated Razor	42 Gauss
Small Portable Radio	40 Gauss
Used Drill Bit after drilling Steel	48 Gauss

Pantograph Services have carried out a Non-technical test on a computer disc and the only way were able to disrupt data on the disc was to stick a magnet on either side of it. We should point out that this test was purely an experiment in the office and in no way carries any scientific significance.

In view of the possible consequences we would recommend that a magnetic badge be not worn by anyone with a Heart Pacemaker