

## USE OF ELECTROMAGNETIC LOCKING DEVICES TO ENHANCE SECURITY

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*Guideline No. 03-02 "Use of Electromagnetic Locking Devices to Enhance Security"  
First supplement to Guideline 00-02 "Hardware Requirements for Access and Egress" (\*)*

### Introduction

This supplement provides building and fire code users with information on the installation and use of electromagnetic locking devices (EMLDs) that do not delay egress. Although this guideline was developed in response to security issues at 24-hour service stations, these principles are applicable to other occupancies where the owner/designer of a building may choose to use EMLDs to enhance security.

### What Is an EMLD?

An "Electromagnetic Locking Device" or "Mag Lock" has an electromagnet body and an armature plate held together by an electromagnetic force. There are no moving parts. The armature plate usually is mounted on the door. A Mag Lock is not an electro-mechanical Device.

### EMLD Use

The following situations are appropriate for EMLD use:

- additional protection for staff;
- hold-up protection;
- intrusion protection.

### Fundamental Requirements

- As long as all BC Building and Fire Code requirements are met, EMLDs can be used to enhance building security.
- The installation of EMLDs must in no way conflict with or compromise basic Code requirements.
- In the event of a component/system failure the EMLD must not impede egress.
- EMLDs and their ancillary devices must be compatible and comply with appropriate recognized standards. Evidence of compatibility, on-site tests, and/or verification by qualified individuals may be required by an Authority Having Jurisdiction.
- It is highly recommended that the installing contractor identify the system with a permanently marked weatherproof label. A label, posted on the premises, indicating the installer's company name, phone number, design/testing company, date of installation and permit number(s), will assist in any verification and inspection.

(\*) "Hardware Requirements for Access and Egress" (HRAE) is a Guideline developed by the Security and Life Safety Task Force, a group of public and private sector stakeholders working in cooperation with the Office of the Fire Commissioner.

The HRAE Guideline defines and enumerates different ways of enhancing security while addressing life safety issues. This is a supplement to that guideline. As such it recognizes and does not conflict with the requirements of the B.C. Building and Fire Codes.

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- The installing contractor should provide the owner with all literature and instructions describing proper operation and maintenance of any installed devices.
- Posting of explanatory information (a legible sign) for the public, is not required for EMLD systems that do not delay egress.
- EMLDs do not replace the positive latching requirements for required fire separation doors.

### **Buildings without Fire Alarm Systems**

Based on BC Building Code Appeal Board Decision #1483, buildings that are not equipped with fire alarm systems are permitted to be equipped with EMLDs provided that the design and installation of the EMLDs do not delay or restrict egress in any way.

Locking systems that control or restrict access into these types of occupancies must maintain safe egress. This means **no delayed egress**.

### **Locking Systems**

Designs may incorporate additional (ancillary) features such as remote switches or buttons that control access into a premise. Location of these switches is not critical; they may be concealed (such as under a counter) and used by staff to control who may or may not enter a premise.

### **Releasing an EMLD**

Within the BC Building Code Appeal Board Decision #1483, the Board has made reference to BC Building Code, Sentence 3.4.6.15.(1), which indicates the following: “devices shall permit the door to be readily opened from the inside without requiring keys, special devices or specialized knowledge of the door opening mechanism”.

Therefore, in order for EMLDs to meet this criterion, they must be released by one of the following:

- motion detector(s),
- touch sensitive panic hardware,
- pressure sensitive pads, or
- approved devices that will not delay egress.

### **Additional Considerations**

You are permitted to LOCK people out of a building at any time provided you **do not lock people in**.

EMLDs, when used instead of conventional mechanical hardware, will not secure a door during a loss of power due to power failure or disrepair.

Contact the local Building Authority, or in their absence, the local Fire Authority, for clarification of specific Code requirements and confirmation of any required permits for EMLD installations.