EM

Hold-open magnets
A modular system for fire and smoke doors  
Setting new standards for hold-open magnets

DORMA’s new range of EM hold-open magnets provides the perfect complement to a technically and aesthetically advanced range of fire and smoke door products. These new market-orientated developments are characterised by their ease of fixing and functional elegance. And thanks to comprehensive quality assurance, they also offer maximum reliability and service life. 
Certified to ISO 9001

Plus points ...

... for the trade  
- Cost-effective modular system offering the advantages of maximum flexibility with minimal stocking levels.
- A further component in the DORMA range for single-source supply.

... for the specifier/architect  
- Uniform appearance common to all models.
- Modular system for application flexibility.

... for the installer  
- Quick and easy to fix.
- Sophisticated accessories suitable for a wide range of applications.

... for the user  
- Unobtrusive.
- Concealed cable run.
- Optimum holding force with minimum power consumption.

Hold-open magnets

Hold-open magnets tested to EN 1155

Class of protection IP 43

1) Floor angle bracket required (accessory)
2) EM 500 A in conjunction with floor angle bracket: Class of protection IP 43

DORMA EM

Data and features  

<table>
<thead>
<tr>
<th></th>
<th>500 G</th>
<th>500 U</th>
<th>500 A</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fixing</td>
<td>Surface-mounted</td>
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<tr>
<td></td>
<td>Flush-mounted</td>
<td>–</td>
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<tr>
<td></td>
<td>Floor-mounted(1)</td>
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<tr>
<td>Holding force</td>
<td>400 N</td>
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<tr>
<td>Anti-remanence pin</td>
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</tr>
<tr>
<td>Test pushbutton</td>
<td>–</td>
<td>–</td>
<td>●</td>
</tr>
<tr>
<td>Polarity reversal protection</td>
<td>●</td>
<td>●</td>
<td>•</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>24 V AC/DC</td>
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<tr>
<td>Power consumption in W</td>
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<td>On-load factor in %</td>
<td>100 (rated for continuous service)</td>
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<tr>
<td>Class of protection</td>
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<td>Ambient temperature in °C</td>
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<td>Weight in kg</td>
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<td>Depth</td>
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<td>Hold-open devices tested to EN 1155</td>
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<tr>
<td>CE mark for building products</td>
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</table>

1) Floor angle bracket required (accessory)
2) EM 500 A in conjunction with floor angle bracket: Class of protection IP 43
Electro-magnets of the series DORMA EM 500 for 24v AC/DC are tested and third-party verified by the Verband der Sachversicherer (VdS) e.V., Cologne (Association of Property Insurers), and have been approved by the German Institute for Building Technology (DIBt), Berlin, for use in combination with the DORMA RMZ smoke detector and other reputable smoke detector systems, (e.g. with DORMA RMZ: approval certificate No. Z-6.5-1890). In Germany, inspection and approval of the hold-open system is additionally required.

**Approval certification**

Electro-magnets of the series DORMA EM 500 for 24v AC/DC are tested and third-party verified by the Verband der Sachversicherer (VdS) e.V., Cologne (Association of Property Insurers), and have been approved by the German Institute for Building Technology (DIBt), Berlin, for use in combination with the DORMA RMZ smoke detector and other reputable smoke detector systems, (e.g. with DORMA RMZ: approval certificate No. Z-6.5-1890).

In Germany, inspection and approval of the hold-open system is additionally required.

**Electro-magnets for hold-open systems**

The statutory regulations which apply in many countries allow fire and smoke doors to be held open for a limited period of time by electro-magnetic hold-open devices which, in the event of a fire, are de-energised to release the door so as to enable automatic closing. Such systems consist of a hold-open device, fire/smoke detection and alarm system, power supply and release device, and generally have to be approved by an accredited institute or building authority (in Germany: the German Institute for Building Technology, Berlin).

Electro-magnets are devices which hold open fire and smoke doors. In the event of a fire, the hold-open magnet is de-energised by the release device responding to a signal from the fire detector. The automatic closing action is provided by door closers which, in Germany, must correspond to DIN EN 1154 and be third-party verified. It must also be possible to manually release the hold-open device. According to the guidelines for hold-open systems applicable to Germany, a manual release pushbutton is necessary when employing electro-magnets in such applications. The pushbutton employed must be red, carry the wording “Close door”, be located in the immediate vicinity of the door, and must not be hidden when the door is in its hold-open position.

**Abbreviations**

- **EM** = Electro-magnet
- **HT** = Manual release pushbutton
- **MAG** = Armature plate
- **RM-N** = Smoke detector (ceiling-mounted)
- **RMZ** = Smoke detector (lintel-mounted)
- **G-SR-EMR** = Door co-ordinator with integral smoke detector
**Specification text**

**EM 500 G**
Hold-open magnet with pole reversal protection for wall or floor mounting*
Holding force 400 N
24v AC/DC
Generally approved by DIBt-Berlin for use in hold-open systems.
(System acceptance inspection may be necessary.)
Requisite accessories:
Armature plate

**EM 500 U**
Hold-open magnet with pole reversal protection for flush fixing
Holding force 400 N
24v AC/DC
Generally approved by DIBt-Berlin for use in hold-open systems.
(System acceptance inspection may be necessary.)
Requisite accessories:
Armature plate

**EM 500 A**
Hold-open magnet with pole reversal protection and integral test pushbutton, for wall or floor mounting*
Holding force 400 N
24v AC/DC
Generally approved by DIBt-Berlin for use in hold-open systems.
(System acceptance inspection may be necessary.)
Requisite accessories:
Armature plate

*Math in conjunction with floor angle bracket, see Page 5*
**Floor angle bracket**

For installation of hold-open magnets EM 500 G and EM 500 A as floor-mounted units.

**Adapter frame**

A DORMA EM 500 B hold-open magnet for floor mounting comprises an EM 500 G or EM 500 A hold-open magnet and an associated floor angle bracket.

**Specification text:**
see Page 4

**Separate manual release switch**

Close door

For releasing the hold-open device by hand.

When employing electro-magnets in hold-open systems for fire and smoke doors, a manual switch may have to be provided in accordance with local or national regulations (e.g. the guidelines of the German Institute for Building Technology (DIBt), Berlin, for German applications).
Hold-open magnets

Special models EM 500 H for floor, ceiling and wall mounting, with integral test pushbutton

Specification text:
24v DC hold-open magnet with pole reversal protection and integral test pushbutton for floor, ceiling and wall mounting. Holding force 490 N. Generally approved by the DIBt-Berlin for use in hold-open systems (in Germany). (System acceptance inspection may be necessary.)

Size:
- 150/175 mm
- 300/325 mm
- 450/475 mm

Requisite accessories:
• Armature plate

Make: DORMA EM 500 H

EM + RMZ + 2x RM-N

Recommended cabling:
I - (St) Y 2 x 2 x 0.6
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**Standard equipment and accessories**

<table>
<thead>
<tr>
<th></th>
<th>MAG</th>
<th>MAW</th>
<th>MAT</th>
<th>MAG I</th>
<th>Floor angle bracket</th>
<th>Adapter frame</th>
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</table>

**Separate manual release switch**

- HT-UP
  - 35901531
- HT-AP
  - 35901532

**Note:**

A hold-open magnet for floor mounting comprises an electro-magnet of the type EM 500 G or EM 500 A and the floor angle bracket.

- **Hold open magnet separate**
- **Armature plate separate**
- **Accessory**

**Colour**

- **XX**
  - white: 11
  - stainless steel finish: 12
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