DORMA TS 93

Cam action
door closer system
DORMA TS 93 – Cam action door closer system

More compact, lighter and more elegant

DORMA has set new standards with its TS 93 cam-action door closer system. Offering further technical refinements and enhanced sophistication, it constitutes an even more impressive specification – thanks to

- smaller dimensions
- concealed fixings
- height-adjustable standard (N) slide channel
- 30 mm high EMF, EMR and GSR slide channels
- mechanically secured cover
- delayed action feature as standard
- simple, fast installation
- low weight

Rapidly decreasing opening force

Unlike rack and pinion slide-channel door closers, the DORMA TS 93 system with its the linear drive mechanism and heart-shaped cam ensures that the resistance encountered when opening the door decreases almost instantly with the opening action. So even children, the elderly and handicapped people have no problem in opening the door.

Force profile

DORMA TS 93
(Spring strength: EN 5)

- Opening force
- Closing force
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Further information, specification texts
Additional information e.g. specification texts, drawings, installation instructions on many products can be accessed via electronic media (Internet, CD ROM, floppy disk). The codes beside the computer symbol are the search terms. The specification texts are also available in printed form.
**For every door and application – the best in aesthetics and function**

With its TS 93, DORMA has developed an aesthetically elegant generation of door closers offering unbeatable ease of use. The TS 93 series comprises a modular system which enables just a few door closer models to be combined with a number of different slide channels to meet virtually every conceivable functional requirement. Doors of varying designs can be equipped for a wide range of different applications.

**Plus points...**

- **...for the trade**
  - Low inventory costs and reduced stocking requirements thanks to streamlined modular system and separate packaging of closer body and slide channel assemblies.
  - Practical solutions to satisfy special requirements and fixing situations.

- **...for the specifier/architect**
  - Harmony and compatibility with the architectural environment.
  - All models feature the same, fully matching "Softline" styling.
  - Available in a wide range of colours and finishes.

- **...for the installer**
  - Suitable for all fixing positions.
  - Universal fixing hole pattern for perfect alignment every time.
  - Same fixing hole pattern for both clockwise-closing (ISO 5) and anticlockwise-closing (ISO 6) doors.
  - Simple spring strength adjustment – in just a matter of seconds with a ratchet wrench.

- **...for the user**
  - The perfect combination of aesthetic elegance, technical refinement and affordability.
  - Wide spectrum of user-friendly and safety functions.
  - Easy opening action, fully controlled closing.

**Data and features**

<table>
<thead>
<tr>
<th>Feature</th>
<th>TS 93 B/G&lt;sup&gt;1&lt;/sup&gt;</th>
</tr>
</thead>
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<td>Variable closing force</td>
<td>EN 2–5</td>
</tr>
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<td>Standard doors&lt;sup&gt;2)&lt;/sup&gt;</td>
<td>EN 5–7</td>
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<td>External doors, outward opening&lt;sup&gt;2)&lt;/sup&gt;</td>
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<td>To EN 1154 A, for fire and smoke doors&lt;sup&gt;2)&lt;/sup&gt;</td>
<td>EN 5–7</td>
</tr>
<tr>
<td>Non-handed</td>
<td></td>
</tr>
<tr>
<td>Arm assembly type</td>
<td>Standard</td>
</tr>
<tr>
<td>Slide channel</td>
<td></td>
</tr>
<tr>
<td>Closing force variable by means of adjustment screw</td>
<td></td>
</tr>
<tr>
<td>Closing speed adjustable by valve</td>
<td></td>
</tr>
<tr>
<td>Latching speed adjustable at arm</td>
<td></td>
</tr>
<tr>
<td>Latching speed adjustable at valve</td>
<td></td>
</tr>
<tr>
<td>Backcheck (BC/ÖD)</td>
<td>self-adjusting</td>
</tr>
<tr>
<td>Delayed action (DC/SV)</td>
<td>adjustable at valve</td>
</tr>
<tr>
<td>Hold-open</td>
<td>yes – no</td>
</tr>
<tr>
<td>Weight in kg</td>
<td>3.5 5.2</td>
</tr>
<tr>
<td>Dimensions in mm</td>
<td>Length (L) 275 285</td>
</tr>
<tr>
<td></td>
<td>Overall depth (B) 53 62</td>
</tr>
<tr>
<td></td>
<td>Height (H) 60 71</td>
</tr>
</tbody>
</table>

<sup>1</sup> B = Standard model for pull-side door leaf fixing/push-side transom fixing; G = Special model for push-side door leaf fixing/pull-side transom fixing.

<sup>2)</sup> For applications involving particularly heavy or wide doors, and doors which have to close against wind resistance, the next highest door closer size should be selected, or the closing force adjusted to a higher setting.
Standard mounting backplate with universal fixing hole system
This mounting backplate with its universal hole system, including hole pattern to supplementary sheet 1 of DIN EN 1154 A, ensures ideal fixing whatever the conditions and irrespective of the door type. The fixing hole patterns are the same for both sizes of the DORMA TS 93. Additional mounting plates/brackets are no longer required. Alignment dowels on the mounting backplate facilitate location of the closer body.

Backcheck
The backcheck feature ensures the safe deceleration and restraint of a door which has been flung open or caught by a gust of wind. This effectively reduces the danger of the door and adjacent wall being damaged.

Delayed action
The delayed action feature retards the closing cycle between 120° and 70° (approximate values for pull-side door leaf fixing). The extra time allowed for passage through the doorway can be essential for people with luggage or bulky items: mothers with prams, personnel with tea trolleys, post trolleys, hospital beds, etc.; and also for disabled people.
Pull-side door leaf fixing

Door leaf fixing (standard arrangement) of the DORMA TS 93 B on the pull side. Structural conditions permitting, an opening angle of 180° is possible with this fixing method. In most cases, a wall recess may have to be provided for the door closer. Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

Approval certification
The DORMA TS 93 B is CERTIFIRE approved (Certificate No. CF 119) for door types ITT 120.

Specification text
Cam-action overhead door closer tested to EN 1154, CERTIFIRE approved, Softline design, with rapidly decreasing opening torque/force. Closing speed, latching speed, backcheck and delayed action adjustable at the valve. Mounting backplate with universal fixing hole pattern. Non-handed, with slide channel... (see pages 8 – 21)

Model
☐ for pull-side door leaf fixing

Size
☐ EN 2 – 5
☐ EN 5 – 7

Colour
☐ silver white, like RAL 9010 9016
☐ stainless steel
☐ polished brass
☐ special colour (like RAL _)

Make
☐ DORMA TS 93 B

( ) = TS 93 5–7

Push-side transom fixing

Transom fixing (overhead frame fixing) of the DORMA TS 93 B on the push side. Backcheck and delayed action non-operative with this fixing arrangement. The door opening angle is limited to approx. 120° to 145°, depending on the structural conditions. In order to prevent damage to the wall and door, a door stop should be installed to limit the maximum angle of door opening. Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

Approval certification
The DORMA TS 93 B is CERTIFIRE approved (Certificate No. CF 119) for door types ITT 120.

Specification text
Cam-action overhead door closer tested to EN 1154, CERTIFIRE approved, Softline design, with rapidly decreasing opening torque/force. Closing speed and latching speed adjustable at the valve. Mounting backplate with universal fixing hole system. Non-handed, with slide channel... (see pages 8 – 21)

Model
☐ for push-side transom fixing

Size
☐ EN 2 – 5
☐ EN 5 – 7

Colour
☐ silver white, like RAL 9010 9016
☐ stainless steel
☐ polished brass
☐ special colour (like RAL _)

Make
☐ DORMA TS 93 B

( ) = TS 93 5–7
**Push-side door leaf fixing**

Door leaf fixing (standard installation) of the DORMA TS 93 G on the push side. The door opening angle is limited to approx. 120° to 145°, depending on the structural conditions. In order to prevent damage to the wall and door, a door stop should be installed to limit the maximum angle of door opening. A door stop must be installed for fire and smoke doors.

Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

**Specification text**
Cam-action overhead door closer tested to EN 1154, CERTIFIRE approved, Softline design, with rapidly decreasing opening torque/force. Closing speed, latching speed, backcheck and delayed action adjustable at the valve. Mounting backplate with universal fixing hole system. Non-handed, with slide channel... (see pages 8 – 21)

**Approval certification**
The DORMA TS 93 B is CERTIFIRE approved (Certificate No. CF 119) for door types ITT 120.

**Model**
- for push-side door leaf fixing

**Size**
- EN 2 – 5
- EN 5 – 7

**Colour**
- silver, white, like RAL 9010 9016
- stainless steel
- polished brass
- special colour (like RAL _)

**Make** DORMA TS 93 G
- TS93G/N/2-5
- TS93G/N/5-7

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**Pull-side transom fixing**

Transom fixing (overhead frame fixing) of the DORMA TS 93 G on the pull side. Structural conditions permitting, an opening angle of 180° is possible with this fixing method. Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

**Approval certification**
The DORMA TS 93 B is CERTIFIRE approved (Certificate No. CF 119) for door types ITT 120.

**Specification text**
Cam-action overhead door closer tested to EN 1154, CERTIFIRE approved, Softline design, with rapidly decreasing opening torque/force. Closing speed, latching speed, backcheck and delayed action adjustable at the valve. Mounting backplate with universal fixing hole system. Non-handed, with slide channel... (see pages 8 – 21)

**Model**
- for pull-side transom fixing

**Size**
- EN 2 – 5
- EN 5 – 7

**Colour**
- silver, white, like RAL 9010 9016
- stainless steel
- polished brass
- special colour (like RAL _)

**Make** DORMA TS 93 G
- TS93G/N/2-5
- TS93G/N/5-7
Standard model

The DORMA G-N slide channel assembly incorporates the slide arm, slide channel, slide block, fixing adapters, screws and end caps. The DORMA G-N slide channel assembly is non-handed and can be combined with all door closer models.

Thanks to oblong holes in the fixing adapters, the slide channel can be effectively adjusted to variations in the drill hole pattern while keeping the gap between door closer body and slide channel aligned and parallel.

Hold-open unit

The DORMA RF hold-open unit enables doors to be securely held without any fall-back at precisely the required position up to an opening angle of approx. 150°. The hold-open function can be easily switched on and off by the user, and the release force can be adjusted to the door type concerned. The DORMA RF mechanism is non-handed and has been specifically designed for retrofitting to the G-N type standard slide channel.

The suitability of the hold-open unit may be limited where the closer unit is fixed to the door leaf on the push side, in combination with outward-opening doors, and also in the case of large, heavy doors.

Cushioned limit stay

Accessories for the DORMA G-N, RF slide channel: Cushioned limit stay for retrofitting to the slide channel. Adjustable between 80° and max. 120°.

The cushioned limit stay prevents the door from hitting the adjacent wall when opened normally. The cushioned limit stay is not a heavy-duty protective device and in many applications cannot substitute for a door stop.

F  Approval certification

The DORMA G-N has been successfully type-tested to EN 1154 in conjunction with the DORMA TS 93. Certificates are available on request.

Specification text

DORMA TS 93 ... door closer (see pages 6 and 7) with slide channel G-N, standard model.

Colour
- silver
- white, like RAL 9016
- stainless steel
- polished chrome
- polished brass
- special colour (like RAL)

Make DORMA TS 93 N
- TS93N/2-5
- TS93N/5-7
- TS93G/RF/2-5
- TS93G/RF/5-7

Accessories

- DORMA RF hold-open unit
- TS93RF/2-5
- TS93G/RF/2-5

Accessories

- Cushioned limit stay
- TS 93 GB
DORMA TS 93 B door closer with DORMA G-N slide channel assembly, door leaf fixing on the pull side and transom fixing on the push side. Examples: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

DORMA TS 93 G door closer with DORMA G-N slide channel assembly, door leaf fixing on the push side and transom fixing on the pull side. Examples: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.
The DORMA G-EMF slide channel assembly enables the door to be held open securely at a preselected position without fall-back. The hold-open point can be adjusted within an opening angle of approx. 80° and 120°.

**Note**

The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly).

In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is triggered by a signal from external smoke detectors (e.g. DORMA RMZ-K/S or DORMA RM).

The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be easily released manually.

The DORMA G-EMF slide channel assembly comprises the slide arm, slide channel, slide block, electro-mechanical hold-open unit, cover, fixing screws and end caps.

The DORMA G-EMF is transom-fixed and non-handed.

In the case of particularly large and heavy doors (over 1250 mm), or doors in which the hold-open point required exceeds 120°, we recommend that DORMA EM hold-open magnets in conjunction with the DORMA RMZ-K/S central smoke detector be employed instead of the electro-mechanical hold-open unit.

### Technical data

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<th>Feature</th>
<th>Specification</th>
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<tr>
<td>Operating voltage</td>
<td>24 vDC, ± 15%</td>
</tr>
<tr>
<td>Power input</td>
<td>1.4 W</td>
</tr>
<tr>
<td>Rated for continuous duty</td>
<td>(100%)</td>
</tr>
<tr>
<td>Release force (adjustable)</td>
<td></td>
</tr>
</tbody>
</table>

### Approval certification

The DORMA TS 93 EMF has been successfully type-tested to EN 1155, Electrically Powered Hold-Open Devices. Certificates are available on request.

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**DORMA TS 93 B** closer with DORMA G-EMF slide channel assembly, pull-side fixing

Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

**DORMA TS 93 G** closer with DORMA G-EMF slide channel assembly, push-side fixing

Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.
**Specification text**

DORMA TS 93 ... door closer (see pages 6 and 7) G-EMF slide channel assembly, with integrated 24 vDC electro-mechanical hold-open, tested to EN 1155. Hold-open point (80° – 120°) and release force adjustable.

**Colour**
- silver white, like RAL 9010
- stainless steel
- polished brass
- special colour (like RAL)

**Make** DORMA TS 93 EMF
- TS93EMF/2-5
- TS93G/EMF/2-5

**Example application**

Hold-open system on a fire and smoke door, comprising: DORMA TS 93 B door closer, DORMA G-EMF slide channel assembly, DORMA RMZ-K (smoke sensor, release switching unit and stabilised power pack for 24 vDC) as frame-mounted smoke detector, plus one DORMA RM smoke detector on both sides of the door. (See also page 22.)

**Regulations/Information**

The use of hold-open devices may be subject to certain conditions – see page 27.
The DORMA G-EMR slide channel assembly enables fire and smoke doors to be held open securely at precisely the angle required, and monitored and controlled completely independently of other systems. The hold-open point can be adjusted to opening angles between approx. 80° and 120°.

**Note**
The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly). In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be easily released manually.

The DORMA G-EMR slide channel assembly comprises the slide arm, slide channel, slide block, electro-mechanical hold-open unit, smoke detector, power pack, cover, fixing screws and end caps.

The DORMA G-EMR is non-handed and is available as an Easy-action or Standard model. Both models offer the option of fitting additional detectors (RMZ-S – only available as a two-wire system). An additional manual release mechanism can be fitted to the Easy-action model, and a volt-free changeover contact is also optionally available.

In the case of particularly large and heavy doors (over 1250 mm), or doors in which the hold-open point required exceeds 120°, we recommend that DORMA EM hold-open magnets be employed instead of the electro-mechanical hold-open unit, in conjunction with the DORMA RMZ-K/S frame-mounted smoke detector.

**Technical data**

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Specification</th>
</tr>
</thead>
<tbody>
<tr>
<td>Power supply</td>
<td>230 VAC, ± 10%</td>
</tr>
<tr>
<td>Operating voltage (internal)</td>
<td>24 VDC</td>
</tr>
<tr>
<td>Max. output rating</td>
<td>4.4 W</td>
</tr>
<tr>
<td>Rated for continuous duty</td>
<td>100%</td>
</tr>
<tr>
<td>Release torque/force</td>
<td>adjustable</td>
</tr>
</tbody>
</table>

**Electro-mechanical hold-open and integral smoke detector**

The DORMA TS 93 EMR has been successfully type-tested to EN 1155, Electrically Powered Hold-Open Devices. Certificates are available on request.

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**DORMA TS 93 B** closer with DORMA G-EMR slide channel assembly, pull-side fixing
Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.

**DORMA TS 93 G** door closer with DORMA G-EMR slide channel assembly, push-side fixing
Example: Anticlockwise-closing (ISO 6) door; mirrored arrangements apply to clockwise-closing (ISO 5) doors.
DORMA TS 93 ... door closer (see pages 6 and 7) G-EMR slide channel assembly, with integrated electro-mechanical hold-open (tested to EN 1155), power pack, smoke detector and one-piece cover. Hold-open point (80° – 120°) and release force adjustable. Power supply 230 vAC Operating voltage 24 vDC

**Colour**
- silver
- white, like RAL 9010, 9016
- stainless steel
- polished brass
- special colour (like RAL)

**Model**
- Easy-action model with optional fitting of additional detectors, external manual release and volt-free alarm contact.
- Make DORMA TS 93 EMR-K
- Standard model with optional fitting of two additional two-wire detectors
- Make DORMA TS 93 EMR-S

**Example application**
Hold-open system on a fire and smoke door, comprising: DORMA TS 93 B door closer, DORMA G-EMR slide channel assembly, plus one DORMA RM smoke detector on both sides of the door. (See also page 22.)

**Regulations/Information**
The use of hold-open devices may be subject to certain conditions – see page 27.

TS93EMR/K/2-5
TS93EMR/S/2-5
TS93EMR/K/G/2-5
TS93EMR/S/G/2-5
For pull-side fixing

The DORMA G-SR slide channel with integral door co-ordinator for double doors ensures that the active leaf always closes after the inactive leaf.

A slide channel with an integral door co-ordinator of this system design always consists of an active leaf slide channel, an inactive leaf slide channel and a set of covers.

Active leaf

Inactive leaf

The DORMA G-SR door co-ordinator slide channel features a push rod clamping system. As this system operates independently of the door closer hydraulics, it offers maximum safety and reliability (doors prevented from "creeping closed"). An overload release protects both the door co-ordinator and the door set from damage. The DORMA G-SR door co-ordinator is non-handed and can be combined with DORMA TS 93 B door closers.

Specification text

DORMA G-SR door co-ordinator slide channel

Make DORMA TS 93 GSR

Options:
- Silver white, like RAL 9010/9016
- Stainless steel
- Polished brass
- Special colour (like RAL)

Approval certification

The DORMA TS 93 GSR has been successfully type-tested to EN 1158, Door Co-ordinator Devices. Certificates are available on request.

Colour
- Silver white, like RAL 9010/9016
- Stainless steel
- Polished brass
- Special colour (like RAL)
These door co-ordinators not only ensure the correct closing sequence of double doors, but also allow the door leaves to be individually held open in various combinations depending on the slide channel type employed (see page 16).

In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is triggered by a signal from external smoke detectors (e.g. DORMA RMZ-K/S or DORMA RM).

The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be effortlessly released manually.

DORMA G-SR-EMF door co-ordinators are non-handed and are combined with DORMA TS 93 B door closers.

This door co-ordinator enables the active leaf to be held open independently in special door sets involving, for example, fixed side screens, narrow inactive leaves (“penny farthing” doors), etc. The hold-open point lies between approx. 80° and 130°.

Note: The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly).

Technical data
- Operating voltage: 24 VDC ± 15%
- Power input: 1.4 W (GSR EMF 2 = 2.8 W)
- Rated for continuous duty: 100%
- Release torque/force: adjustable

In the case of doors in which the hold-open point required exceeds 130°, we recommend that DORMA EM hold-open magnets be employed instead of the electro-mechanical hold-open unit.
Components and combinations

G-SR-G/O
Slide channel for active leaf without connection for hold-open

G-SR-G
Slide channel for active leaf with connection for hold-open

G-SR-G/EMF
Slide channel for active leaf with electro-mechanical hold-open

G-SR-V (VK/VL)
Cover set with slide arms and connection tube

G-SR-S
Slide channel for inactive leaf

G-SR-S/EMF
Slide channel for inactive leaf with electro-mechanical hold-open

Active leaf

( ) = TS 93 5 – 7

max. 16

37,5

84 (80)
A DORMA G-SR door co-ordinator slide channel generally comprises the following: Active leaf slide channel, inactive leaf slide channel and cover set with slide arms and connection tube.

<table>
<thead>
<tr>
<th>Model/Function</th>
<th>Door width A (mm)</th>
<th>TS 93 Closer size</th>
<th>Cover set 1)</th>
<th>Slide channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSR</td>
<td>1220 – 1350</td>
<td>2 – 5</td>
<td>G-SR-VK 2)</td>
<td>G-SR-G/0</td>
</tr>
<tr>
<td></td>
<td>1350 – 2500</td>
<td>2 – 5</td>
<td>G-SR-V</td>
<td>G-SR-G</td>
</tr>
<tr>
<td></td>
<td>2500 – 3200</td>
<td>5 – 7</td>
<td>G-SR-VL</td>
<td>G-SR-S</td>
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<tr>
<td>GSR-EMF 1</td>
<td>1220 – 1350</td>
<td>2 – 5</td>
<td>G-SR-VK 2)</td>
<td>G-SR-G</td>
</tr>
<tr>
<td></td>
<td>1350 – 2500</td>
<td>2 – 5</td>
<td>G-SR-V</td>
<td>G-SR-G/EMF</td>
</tr>
<tr>
<td></td>
<td>2500 – 3200 3)</td>
<td>5 – 7</td>
<td>G-SR-VL</td>
<td>G-SR-S/EMF</td>
</tr>
<tr>
<td></td>
<td>1350 – 2500</td>
<td>2 – 5</td>
<td>G-SR-V</td>
<td>G-SR-G/EMF</td>
</tr>
<tr>
<td></td>
<td>2500 – 3200 3)</td>
<td>5 – 7</td>
<td>G-SR-VL</td>
<td>G-SR-S/EMF</td>
</tr>
<tr>
<td>GSR-EMF 1G</td>
<td>1220 – 1350</td>
<td>2 – 5</td>
<td>G-SR-VK 2)</td>
<td>G-SR-G</td>
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<tr>
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<td>1350 – 2500</td>
<td>2 – 5</td>
<td>G-SR-V</td>
<td>G-SR-G/EMF</td>
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<tr>
<td></td>
<td>2500 – 3200 3)</td>
<td>5 – 7</td>
<td>G-SR-VL</td>
<td>G-SR-S</td>
</tr>
</tbody>
</table>

1) The covers should be cut to length on site where they meet in the middle, to suit the door size.
2) With short slide arms, 320 mm long.
3) In the case of particularly large and heavy doors (over 2500 mm), we recommend that DORMA EM hold-open magnets be employed instead of the electro-mechanical hold-open unit.

**Regulations/Information**

The use of hold-open devices may be subject to certain conditions – see page 27.
**For push-side fixing**

The DORMA G-SR/BG slide channel with integral door co-ordinator for double doors ensures that the active leaf always closes after the inactive leaf (max. door opening angle 120°; door stop to be positioned accordingly).

A slide channel with an integral door co-ordinator of this system design always consists of an active leaf slide channel, an inactive leaf slide channel and a set of covers.

Not suitable for emergency exit doors which are opened at the inactive leaf.

---

**Specification text**

The DORMA G-SR/BG door co-ordinator slide channel features a push rod clamping system. As this system operates independently of the door closer hydraulics, it offers maximum safety and reliability (doors prevented from "creeping closed"). An overload release protects both the door co-ordinator and the door set from damage. The DORMA G-SR/BG is a handed system with ISO 5 and ISO 6 models, and can be combined with TS 93 G door closers.

DORMA G-SR/BG

The DORMA TS 93 GSR/BG has been successfully type-tested to EN 1158. Door Co-ordinator Devices. Certificates are available on request.

**Approval certification**

DORMA TS 93 G door closer (see page 7) with G-SR/BG slide channel, with integral mechanical door co-ordinator employing a push rod clamping system with overload release, which operates independently of the closer hydraulics. With single cover extending over the top of both door leaves. For push-side fixing.

**Colour**

- silver
- white, like RAL 9010
- 9016
- stainless steel
- polished brass
- special colour (like RAL ___)

**Make**

DORMA TS 93 GSR/BG

TS93GSR/BG/2-5
With integral electro-mechanical hold-open, for push-side fixing

These door co-ordinators not only ensure the correct closing sequence of double doors, but also allow the door leaves to be individually held open in various combinations depending on the slide channel type employed (see page 20). In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is triggered by a signal from external smoke detectors (e.g. DORMA RMZ-K/S or DORMA RM).

The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be effortlessly released manually. DORMA G-SR-EMF/BG door co-ordinator slide channels are non-handed and are combined with DORMA TS 93 G door closers.

In the event of an alarm or a fault in the power supply, the hold-open is released and the door is closed by the door closer. The release is triggered by a signal from external smoke detectors (e.g. DORMA RMZ-K/S or DORMA RM). The release force for the hold-open mechanism can be adjusted without tools and is rated to ensure that the door can also be effortlessly released manually. DORMA G-SR-EMF/BG door co-ordinator slide channels are non-handed and are combined with DORMA TS 93 G door closers.

<table>
<thead>
<tr>
<th>Specification text</th>
<th>DORMA TS 93 G door closer (see page 7) with G-SR/BG slide channel, with integral mechanical door co-ordinator employing a push rod clamping system with overload release, which operates independently of the closer hydraulics. With single cover extending over the top of both door leaves. For push-side fixing.</th>
</tr>
</thead>
</table>
| DORMA G-SR-EMF 1/BG | This door co-ordinator contains just one hold-open mechanism, located in the inactive leaf slide channel, for holding open both door leaves. The single-point hold-open position is adjustable between approx. 80° and 120°.
| Note               | The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly). The active leaf can be held open by the door co-ordinator at any angle up to max. 120°. |
| DORMA G-SR-EMF 2/BG | With this door co-ordinator, the active leaf can be held open independently of the inactive leaf. The hold-open points for each leaf lie between approx. 80° and 120°.
| Note               | The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly). |
| DORMA G-SR-EMF 1G/BG| This door co-ordinator enables the active leaf to be held open independently in special door sets involving, for example, fixed side screens, narrow inactive leaves (asymmetrical double doors), etc. The hold-open point lies between approx. 80° and 120°.
| Note               | The active leaf can be opened up to the maximum selected hold-open point (door stop to be positioned accordingly). |
| Approval certification | The DORMA TS 93 GSR-EMF 1/BG, EMF 2/BG and EMF 1G/BG have been successfully type-tested to EN 1155, Electrically Powered Hold-Open Devices. Certificates are available on request. |
| Technical data     | Operating voltage 24 vDC ± 15 %
|                    | Power input 1.4 W (GSR EMF 2/BG = 2.8 W) Rated for continuous duty 100%
|                    | Release torque/force adjustable |
| Colour             | silver white, like RAL 9010 9016 stainless steel polished brass special colour (like RAL _)}
**Components and combinations**

*Use angle bracket for larger reveal depths*

- **G-SR-S/BG** Slide channel for inactive leaf
- **G-SR-G/O** Slide channel for active leaf without connection for hold-open
- **G-SR-G** Slide channel for active leaf with connection for hold-open
- **G-SR-S/EMF/BG** Slide channel for inactive leaf with electro-mechanical hold-open
- **G-SR-G/EMF/BG** Slide channel for active leaf with electro-mechanical hold-open
- **G-SR-V/BG** Cover set with slide arms and connection tube

Inactive leaf
Minimum width 600 mm with unequal leaves

---

**Dimensions**

- Max. 5°
- 30
- 43
- 28
- 81
- 37.5
- 49
- (45)
- 123
- 470
- 51
- 25
- 42
- 35
- 160
- 127
- 107
- 160
- 49

---

**Notes**

- *Use angle bracket for larger reveal depths*

---

**G-SR-V/BG**
Cover set with slide arms and connection tube
A DORMA G-SR/BG door co-ordinator slide channel generally comprises the following: Active leaf slide channel, inactive leaf slide channel and cover set with slide arms and connection tube.

<table>
<thead>
<tr>
<th>Model/Function</th>
<th>Door width A (mm)</th>
<th>TS 93 Closer size</th>
<th>Cover set1)</th>
<th>Slide channels</th>
</tr>
</thead>
<tbody>
<tr>
<td>GSR/BG Door co-ordinator</td>
<td>1500 – 2500</td>
<td>2 – 5</td>
<td>G-SR-V/BG</td>
<td>G-SR-G/0</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G-SR-S/BG</td>
</tr>
<tr>
<td>GSR-EMF 1/BG Door co-ordinator and hold-open of the inactive leaf</td>
<td>1500 – 25002)</td>
<td>2 – 5</td>
<td>G-SR-V/BG</td>
<td>G-SR-G</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G-SR-S/EMF/BG</td>
</tr>
<tr>
<td>GSR-EMF 2/BG Door co-ordinator and hold-open of both leaves</td>
<td>1500 – 25002)</td>
<td>2 – 5</td>
<td>G-SR-V/BG</td>
<td>G-SR-G/EMF/BG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G-SR-S/EMF/BG</td>
</tr>
<tr>
<td>GSR-EMF 1G/BG Door co-ordinator and hold-open of the active leaf</td>
<td>1500 – 25002)</td>
<td>2 – 5</td>
<td>G-SR-V/BG</td>
<td>G-SR-G/EMF/BG</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>G-SR-S/EMF/BG</td>
</tr>
</tbody>
</table>

1) The covers should be cut to length on site where the ends meet in the middle, to suit the door size.
2) In the case of particularly large and heavy doors, we recommend that DORMA EM hold-open magnets be employed instead of the electro-mechanical hold-open unit.

**Regulations/Information**

The use of hold-open devices may be subject to certain conditions – see page 27.
The DORMA RMZ-K/S frame-mounted smoke detector and the DORMA RM frame and ceiling-mounted smoke detector provide the ideal complement to the successful, service-proven DORMA TS 93 range of preventive fire protection products. They are designed in accordance with the latest codes issued by the German Institute for Building Technology, and ensure perfect interaction between all the devices employed for holding open fire and smoke doors – whatever the situation.

### DORMA RMZ-K/S

Frame-mounted smoke detector with stabilised power supply unit. This detector is available as an Enhanced or Standard model.

### DORMA RM

Designed as a smoke switch; actuates a floating (volt-free) change-over contact in the event of an alarm or power failure. Also suitable as an add-on smoke detector for the DORMA TS 73 EMR, TS 93 EMR and RMZ. Tested by VdS Cologne to EN 54, Part 7.

### Data and features

<table>
<thead>
<tr>
<th></th>
<th>RMZ-K</th>
<th>RMZ-S</th>
<th>RM</th>
</tr>
</thead>
<tbody>
<tr>
<td>Functions</td>
<td>Smoke detector</td>
<td>Release device</td>
<td>Power supply unit</td>
</tr>
<tr>
<td>Smoke</td>
<td>Scattered light principle detection (optical sensor)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Fixing</td>
<td>Frame-mounted</td>
<td>Ceiling-mounted</td>
<td></td>
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<tr>
<td>Connection</td>
<td>2-wire change-over of other smoke switches detectors</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total installed load (max.)</td>
<td>for hold-open device and other detectors in W</td>
<td></td>
<td>Depends on power supply unit</td>
</tr>
<tr>
<td>Power input of internal detectors in W</td>
<td>0.5</td>
<td>0.5</td>
<td>0.6</td>
</tr>
<tr>
<td>Indicators</td>
<td>Alarm – red LED</td>
<td>Armed – green LED</td>
<td></td>
</tr>
<tr>
<td>Input voltage</td>
<td>230 V AC</td>
<td>230 V AC</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Output voltage</td>
<td>24 V DC</td>
<td>24 V DC</td>
<td>24 V DC</td>
</tr>
<tr>
<td>Detector operating voltage</td>
<td>24 V DC</td>
<td>24 V DC</td>
<td>+15%, –10%</td>
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<tr>
<td>Input current (max.) in mA</td>
<td>111</td>
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<td>2</td>
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<tr>
<td>Floating change-over voltage (max.) in V AC</td>
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<td>25</td>
<td>2</td>
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<tr>
<td>Switching capacity (max.) in W</td>
<td>60</td>
<td>60</td>
<td>60</td>
</tr>
<tr>
<td>Automatic reset</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Test port for functional checking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Connection terminals for external manual release</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Degree of protection</td>
<td>IP 20</td>
<td>IP 20</td>
<td>IP 20</td>
</tr>
<tr>
<td>Ambient temperature in °C</td>
<td>–15, +60</td>
<td>–15, +60</td>
<td>–20, +50</td>
</tr>
<tr>
<td>Weight in kg</td>
<td>0.6</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>Dimensions in mm</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Length</td>
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<td>336</td>
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<td>Overall depth</td>
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<td>52</td>
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<tr>
<td>Height</td>
<td>195</td>
<td>50</td>
<td>53</td>
</tr>
</tbody>
</table>

### Specification texts

#### RMZ-K/S

Smoke detector for frame mounting with integrated power supply unit and optical smoke sensor. For release of DORMA hold-open devices. With connections for further smoke detectors. Floating (volt-free) change-over contact and connection terminals for external manual release. Approved by the Institute for Building Technology in Berlin as a hold-open release device.

**Colour**
- Silver, like RAL 9010, 9016
- Stainless steel
- Polished brass
- Special colour (like RAL_)

**Model**
- Enhanced model with optional connection of additional detectors, external manual release and floating (volt-free) alarm contact.

**Make**
- DORMA RMZ-K

#### RM

Non-directional, universal optical smoke detector (24 VDC) for frame and ceiling installation. Can be employed as smoke switch and monitoring device for hold-open devices. With connections for further smoke detectors, floating (volt-free) change-over contact and connection terminals for external manual release. Approved by the Institute for Building Technology, Berlin for general use as a hold-open release device and tested by the VdS Cologne to EN 54 Part 7.

**Colour**
- Silver, like RAL 9010, 9016
- Stainless steel
- Polished brass
- Special colour (like RAL_)

**Make**
- DORMA RMZ-S
- RM
RMZ-K/S frame-mounted smoke detector on the push side connected to a G-SR on the pull side.

RMZ-K/S frame-mounted smoke detector on the pull side connected to a G-SR on the pull side (use mounting bracket).

Mounting bracket for RMZ-K/S frame-mounted smoke detector.
**Accessories Single doors**

**30 mm mounting backplate for G-N**
For fixing the slide channel to the door frame where direct fixing is not possible.

**40 mm mounting backplate for G-N, EMF, EMR**
For fixing the slide channel to the door frame where direct fixing is not possible.

**Angle bracket for G-N**
For push-side fixing of the slide channel to door frames with a deep reveal.

**Angle bracket for G-EMF**
For push-side fixing of the slide channel to door frames with a deep reveal.
40 mm mounting backplate for G-SR
For fixing the slide channels to the door frame where direct fixing is not possible.

40 mm mounting backplate for RMZ-K/S base unit in conjunction with a G-SR (also as filler between the two G 93 GSR mounting backplates)

40 mm mounting backplate for G-SR/BG
For fixing the slide channels to the door frame where direct fixing is not possible.

Angle bracket for G-SR/BG
For fixing the slide channels to door frames with a deep reveal.
If the DORMA GSR door co-ordinator is to operate independently of the TS 93 door closer, for example, in combination with the ED 200 automatic swing door operator, the connection between the door co-ordinator and the door leaf is provided by means of GSR pivot blocks.

**Approval certification**

The DORMA GSR door co-ordinator with pivot blocks has been approved by e.g. the State Material Testing Authority, Dortmund/Germany, for use on double fire and smoke doors.

**Specification text**

Pivot blocks for closer-independent door co-ordination with DORMA G-SR door co-ordinators.

**Colour**

- silver
- white, like RAL 9010
- special colour (like RAL 9016)

**Make**

DORMA GSR pivot block

- GSR
The use of hold-open devices may be subject to certain conditions. These usually deal particularly with the relevant acceptance, routine inspection and maintenance requirements.

The information given on this page is designed to inform all relevant persons of the most important measures to be implemented in order to ensure best practice governing the operation of hold-open systems.

Further details can be found in the following documents:
- Guidelines for hold-open systems, published by the German Institute for Building Technology, Berlin.
- Building Regulations, England and Wales
- Relevant regulations for Scotland and N. Ireland
- EN 1155

1 General

1.1 In respect of doors etc. which are held open by hold-open systems, the area needed for closure must be kept permanently free of obstructions. This area should be clearly indicated by means of lettering, floor markings or similar. If necessary, structural measures may need to be taken in order to ensure that wiring/ducting, stored goods or structural components (e.g. false ceilings or other components) do not fall down into the area to be kept clear.

1.2 As far as possible, smoke detectors should be used for hold-open systems. Smoke detectors should be used for hold-open systems for doors etc. in emergency exits and escape routes.

1.3 All hold-open devices should be able to be released manually without their operational readiness being adversely affected. Door closers with electro-magnetic hold-open systems can be released by pressing lightly on the door leaf. If hold-open magnets or free-swing door closers are used, the release function is triggered by pressing a switch. The switch must be located in the immediate proximity of the door and must not be covered when the door is held open.

2 Commissioning

2.1 After the system has been fitted ready for use on-site, it should be commissioned to check that its operation is problem-free and that its installation complies with all relevant regulations. The commissioning should only be performed by qualified technical personnel.

3 Routine inspection

3.1 The operator should keep the hold-open system in a permanently fit state for use and must inspect it at least once a month to ensure its functional integrity.

3.2 In addition, it is the responsibility of the operator to ensure that all devices are checked and maintained/serviced to ensure their combined functional integrity, this to be performed at least once a year, unless a shorter time period is stipulated in the national regulations. This inspection and servicing activity should only be carried out by a specialist or suitably qualified person.

3.3 The scope, result and time of the routine inspections should be recorded, and these records should be retained by the operator.
### Single doors

#### Range of equipment and optional accessories

<table>
<thead>
<tr>
<th></th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>30 mm mounting backplate for G-N</th>
<th>40 mm mounting backplate for G-N</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>For specification text/product description, see page</strong></td>
<td>6</td>
<td>7</td>
<td>24</td>
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<tr>
<td><strong>G-N</strong></td>
<td></td>
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<tr>
<td>180100xx</td>
<td>8</td>
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<td><strong>G-EMF</strong></td>
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<td><strong>G-EMR-K</strong></td>
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<td>12</td>
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<tr>
<td><strong>G-EMR-S</strong></td>
<td></td>
<td></td>
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</tr>
<tr>
<td>180407xx</td>
<td>12</td>
<td></td>
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<td>#</td>
</tr>
<tr>
<td>40 mm mounting backplate for G-EMF, G-EMR</td>
<td>Angle bracket for G-N</td>
<td>Angle bracket for G-EMF</td>
<td>Cushioned limit stay set for G-N</td>
<td>Add-on hold-open unit for G-N</td>
</tr>
<tr>
<td>---------------------------------------------</td>
<td>-----------------------</td>
<td>------------------------</td>
<td>---------------------------------</td>
<td>------------------------------</td>
</tr>
<tr>
<td>182900xx</td>
<td>183600xx</td>
<td>183000xx</td>
<td>35800093</td>
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<tr>
<td>24</td>
<td>24</td>
<td>24</td>
<td>8</td>
<td>8</td>
</tr>
</tbody>
</table>

- ■ = Closer separate
- □ = Slide channel assembly separate
- # = Optional accessory

**Smoke detector system**

- RMZ-K 180619xx
- RMZ-S 180618xx
- RM 3570xx88

For specification text/product description, see page 22

**Colour xx**
- Silver 01
- White (like RAL 9016) 11
- White (like RAL 9010) 10
- Special colour 09

Also available in matching "Design" finishes:
- Stainless steel 04
- Polished brass 05

"Design" refers to the surface finish of the products
A door co-ordinator slide channel assembly of this system design always comprises an active leaf slide channel, an inactive leaf slide channel and a set of covers.

<table>
<thead>
<tr>
<th>GSR</th>
<th>14</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-SR-G/0</td>
<td>18400000</td>
<td>2x</td>
<td>EN 2 – 5</td>
<td>120200xx(1)</td>
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<td>G-SR-S</td>
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<td>EN 5 – 7</td>
<td>125200xx(1)</td>
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<thead>
<tr>
<th>GSR-EMF 1</th>
<th>15</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
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<tbody>
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<td>G-SR-G</td>
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<td>EN 2 – 5</td>
<td>120200xx(1)</td>
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<td>G-SR-S/EMF</td>
<td>18440000</td>
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<td>125200xx(1)</td>
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<table>
<thead>
<tr>
<th>GSR-EMF 2</th>
<th>15</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
</tr>
</thead>
<tbody>
<tr>
<td>G-SR-G/EMF</td>
<td>18420000</td>
<td>2x</td>
<td>EN 2 – 5</td>
<td>120200xx(1)</td>
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<td>G-SR-S/EMF</td>
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<table>
<thead>
<tr>
<th>GSR-EMF 1G</th>
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<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
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<tbody>
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<td>G-SR-G/EMF</td>
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<thead>
<tr>
<th>GSR/BG</th>
<th>18</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
</tr>
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<tbody>
<tr>
<td>G-SR-G/0</td>
<td>18400000</td>
<td>2x</td>
<td>EN 2 – 5</td>
<td>120200xx(1)</td>
<td>EN 2 – 5</td>
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<tr>
<td>G-SR-S/BG</td>
<td>18170000</td>
<td>#</td>
<td>EN 5 – 7</td>
<td>125200xx(1)</td>
<td>EN 5 – 7</td>
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<table>
<thead>
<tr>
<th>GSR-EMF 1/BG</th>
<th>19</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
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<td>2x</td>
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<tr>
<td>G-SR-S/EMF/BG</td>
<td>18180000</td>
<td>#</td>
<td>EN 5 – 7</td>
<td>125200xx(1)</td>
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<tr>
<th>GSR-EMF 2/BG</th>
<th>19</th>
<th>TS 93 B</th>
<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
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</thead>
<tbody>
<tr>
<td>G-SR-G/EMF/BG</td>
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<td>2x</td>
<td>EN 2 – 5</td>
<td>120200xx(1)</td>
<td>EN 2 – 5</td>
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<tr>
<td>G-SR-S/EMF/BG</td>
<td>18180000</td>
<td>#</td>
<td>EN 5 – 7</td>
<td>125200xx(1)</td>
<td>EN 5 – 7</td>
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<thead>
<tr>
<th>GSR-EMF 1G/BG</th>
<th>19</th>
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<th>TS 93 G</th>
<th>Mounting backplate for G-SR</th>
<th>Mounting backplate for G-SR/BG</th>
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<tbody>
<tr>
<td>G-SR-G/EMF/BG</td>
<td>18200000</td>
<td>2x</td>
<td>EN 2 – 5</td>
<td>120200xx(1)</td>
<td>EN 2 – 5</td>
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<td>G-SR-S/BG</td>
<td>18170000</td>
<td>#</td>
<td>EN 5 – 7</td>
<td>125200xx(1)</td>
<td>EN 5 – 7</td>
</tr>
<tr>
<td>Angle bracket for G-SR/BG</td>
<td>RMZ-K/S base unit</td>
<td>Mounting back-plate for RMZ-K/S base unit</td>
<td>Pivot block</td>
<td>Cushioned limit stay</td>
<td></td>
</tr>
<tr>
<td>---------------------------</td>
<td>-------------------</td>
<td>------------------------------------------</td>
<td>------------</td>
<td>---------------------</td>
<td></td>
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<tr>
<td>183200xx</td>
<td>180700xx</td>
<td>184600xx</td>
<td>3590xx07</td>
<td>18020000</td>
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<td>25</td>
<td>23</td>
<td>25</td>
<td>26</td>
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**Cover sets with arms**

<table>
<thead>
<tr>
<th>Door width mm</th>
<th>GSR-VK(2)</th>
<th>Order No.</th>
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<tbody>
<tr>
<td>1220–1350</td>
<td>G-SR-VK</td>
<td>182110xx1</td>
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<tr>
<td>1350–2500</td>
<td>G-SR-V</td>
<td>182111xx1</td>
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<tr>
<td>2500–3200</td>
<td>G-SR-VL</td>
<td>182112xx1</td>
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(2)With short slide arms, 320 mm long

<table>
<thead>
<tr>
<th>Door width mm</th>
<th>GSR-V/BG</th>
<th>Order No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>1500–2500</td>
<td>G-SR-V/BG</td>
<td>182200xx1</td>
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**Smile detector system**

<table>
<thead>
<tr>
<th>Smoke detector system</th>
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<tbody>
<tr>
<td>RMZ-K</td>
</tr>
<tr>
<td>180619xx1</td>
</tr>
<tr>
<td>RMZ-S</td>
</tr>
<tr>
<td>180618xx1</td>
</tr>
<tr>
<td>RM</td>
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<tr>
<td>3570xx881</td>
</tr>
</tbody>
</table>

For specification text/product description, see page 22

For matching finishes:

- **= Closer separate**
- **= Slide channel assembly separate**
- # = Optional accessory

**Colour xx**

<table>
<thead>
<tr>
<th>Colour</th>
<th>Code</th>
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<tbody>
<tr>
<td>Silver</td>
<td>01</td>
</tr>
<tr>
<td>White (like RAL 9016)</td>
<td>11</td>
</tr>
<tr>
<td>White (like RAL 9010)</td>
<td>10</td>
</tr>
<tr>
<td>Special colour</td>
<td>09</td>
</tr>
<tr>
<td>Stainless steel</td>
<td>04</td>
</tr>
<tr>
<td>Polished brass</td>
<td>05</td>
</tr>
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</table>

(1) Also available in matching "Design" finishes:

"Design" refers to the surface finish of the products
### Division Door Control worldwide

<table>
<thead>
<tr>
<th>Region</th>
<th>Contact Details</th>
</tr>
</thead>
</table>
| **Central Europe** | DORMA GmbH + Co. KG  
Breckerfelder Str. 42–48  
D-58256 Ennepetal  
Tel. +49 23 33/7 93-0  
Fax +49 23 33/7 93-4 95 |
| **Scanbalt**     | DORMA Danmark A/S  
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DK-2610 Rødovre  
Tel. +45 44/54 3 000  
Fax +49 44/94 95 04 |
| **Australia**    | DORMA Door Controls Pty. Ltd.  
52 Abbott Road  
Hallam/Victoria 3803  
Australia  
Tel. +61 3/97 96 3 55  
Fax +61 3/97 96 3 95 55 |
| **South Africa** | DORMA Door Controls (Pty.) Ltd.  
Kings Court, 4A Mineral Crescent  
ZA-2000 Crown/Gauteng  
Johannesburg  
Tel. +27 11/8 30 02 80  
Fax +27 11/8 30 02 91 |
| **Emerging Markets** | DORMA GmbH + Co. KG  
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Fax +49 23 33/7 93-4 95 |
| **Far East**     | DORMA Door Controls Pte. Ltd.  
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Singapore 619285  
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Fax +65 62 65/79 14 |
| **South America** | DORMA Sistemas de Controles para Portas Ltda.  
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Tel. +55 11/41 91 32 44  
Fax +55 11/41 91 21 93 |
| **South-East Europe** | DORMA AUSTRIA GmbH  
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Fax +43 62 25/2 84 91 |
| **South Europe** | DORMA Italiana S.r.l.  
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Fax +39 039/24 40 33 10 |
| **UK/Ireland**   | DORMA UK Ltd.  
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Fax +44 14 62/47 76 01 |