



CERTIFICATE OF APPROVAL

No CF 259

This is to certify that, in accordance with
TS00 General Requirements for Certification of Fire Protection Products
The undermentioned products of

GEZE LIMITED

Blenheim Way, Fradley Park, Lichfield, WS13 8SY
Tel: 01543 443000 Fax: 01543 443021

Have been assessed against the requirements of the Technical Schedule(s)
denoted below and are approved for use subject to the conditions
appended hereto:

CERTIFIED PRODUCTS

**TS500/550 Series Floor
Springs**

TECHNICAL SCHEDULE

**TS 34 - The Contribution Of
Controlled Door Closing
Devices And Accessories
To Fire Resisting Doorsets**

Signed and sealed for and on behalf of CERTIFIRE

Sir Ken Knight
Chairman - Management Council

Issued: 13th February 2002
Revised: 15th January 2013
Valid to: 11th December 2016

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Only valid when authentic
CERTIFIRE Seal is in place



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TS500/550 SERIES FLOOR SPRINGS

1. This approval relates to Geze TS500/550 series floor spring closers which are floor mounted, or optionally transom mounted with specific doorset types detailed later, door closing devices. The approval relates to the specific door closer units:
TS500, TS500S, TS500N EN3, TS500NV, TS550, TS550S, TS550F, TS550F-G, TS550E, TS550ER, TS550IS, TS550E-IS, TS550NV F P, TS550NV F, TS550E-G, TS520, TS550NV E, TS550NV EP, TS550IS-G, TS550E-IS-G and TS490, including transom mounted variants.
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section 2 of the Technical Standards (Scotland) and Technical Booklet E (N. Ireland). If compliance is required to other regulatory or guidance documents there may be additional considerations or conflict to be taken into account.
3. This approval relates to their use with the following door assemblies: -

Single action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance up to 30 minutes (CERTIFIRE Code - ITT).

Single action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance up to 60 minutes (CERTIFIRE Code - ITT).

Single action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in steel frames having a fire resistance up to 30 minutes (CERTIFIRE Code - ITM).

Single action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in steel frames having a fire resistance up to 60 minutes (CERTIFIRE Code - ITM).

Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance of up to 30 minutes (CERTIFIRE Code - ITT).

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Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance of up to 60 minutes (CERTIFIRE Code - ITT).

Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in steel frames having a fire resistance of up to 30 minutes (CERTIFIRE Code - ITM).

Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in steel frames having a fire resistance of up to 60 minutes (CERTIFIRE Code - ITM).

Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance of up to 30 minutes where the closer assembly is transom mounted (CERTIFIRE Code - ITT).

Double action, latched and unlatched, intumescent sealed door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores in timber frames having a fire resistance of up to 60 minutes where the closer assembly is transom mounted (CERTIFIRE Code - ITT).

Single and double action latched and unlatched door assemblies consisting of metallic faced and edged leaves in metallic frames having a fire resistance up to 240 minutes (Code MM and IMM).

4. The floor springs are approved on the basis of:

- i) Initial type testing to EN1154, EN1155 and BS EN 1634-1: 2000
- ii) An appraisal against TS34
- iii) Certification of quality management system to ISO 9001: 2008.
- iv) Inspection and surveillance of factory production control
- v) Ongoing audit testing in accordance with EN 1154 requirements

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5. This approval is applicable only to the specified floor springs used in the specific type of doorsets and with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) and having power ratings appropriate to the leaf sizes subject to a minimum size 3 (as specified in BS EN 1154).
6. The approval relates to on-going production. Product and/or its immediate packaging is identified with the manufacturer's name, the product name or number, the CERTIFIRE name or name and mark, together with the CERTIFIRE certificate number and application where appropriate.
7. The following table shows the acceptable doorset types and fire resistance periods. This table must be read in conjunction with the 'Limitations of Approval' detailed later:

Class	Approved Door Type					
	IMM	MM	TT	ITT	ITM	ITC
FD20	✓	✓	✗	✓	✓	✓
FD30	✓	✓	✗	✓	✓	✓
FD60	✓	✓	✗	✓	✓	✗
FD120	✓	✓	✗	✗	✗	✗
FD240	✓	✓	✗	✗	✗	✗
E 20	✓	✓	✗	✓	✓	✓
EI 20	✓	✓	✗	✓	✓	✓
E 30	✓	✓	✗	✓	✓	✓
EI 30	✓	✓	✗	✓	✓	✓
E 60	✓	✓	✗	✗	✗	✗
EI 60	✓	✓	✗	✓	✗	✗
E 90	✓	✓	✗	✗	✗	✗
EI 90	✓	✓	✗	✗	✗	✗
E 120	✓	✓	✗	✗	✗	✗
EI 120	✓	✓	✗	✗	✗	✗
E 240	✓	✓	✗	✗	✗	✗
EI 240	✓	✓	✗	✗	✗	✗

See CERTIFIRE Technical Schedules for designation of doorset types i.e. IMM etc.



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LIMITATIONS OF APPROVAL:

The doorset manufacturer must always be consulted regarding the specification of any additional intumescent protection and to ensure the compatibility of the floor spring and its accessories with the doorset design.

Single action ITT and ITM configurations may only be used in FD20, FD30 and FD60 applications to BS 476: Part 22: 1987 and E20/EI20 & E30/EI30 applications to BS EN 1634-1.

Single action ITC configurations may only be used in FD20 and FD30 applications to BS 476: Part 22: 1987 and E20/EI20 & E30/EI30 applications to BS EN 1634-1.

Double action ITT and ITM configurations may only be used in FD30, FD60 applications to BS 476: Part 22: 1987 and EI30, EI60 applications to BS EN 1634-1.

All models are only approved for ITM and MM/IMM applications when installed in standard in-line fitting application.

Single action ITT and ITM door assemblies for fire resistance of up to 30 minutes

- The floor springs may not be fitted to ITT or ITM doorsets without intumescent protection.
- For ITT and ITM applications the bottom strap and top pivot are to be bedded into intumescent mastic.
- Where the intumescent is included within the head of the door leaf (as opposed to within the frame), two additional 10 mm wide by 2 mm thick Therm-A-Seal intumescent seals are to be installed adjacent to the pivot position.
- Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

Single action ITT and ITM door assemblies for fire resistance of 60 minutes FD60

- The floor springs may not be fitted to ITT or ITM doorsets without intumescent protection.

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TS500/550 SERIES FLOOR SPRINGS

Single action ITT and ITM door assemblies for fire resistance of 60 minutes FD60 (continued)

- The bottom strap and top pivot are to be bedded on 2 mm thick Interdens intumescent sheet which shall be provided by the manufacturer and referenced within the manufacturer's product data sheet.
- Where the intumescent is included within the head of the door leaf (as opposed to within the frame), two additional 10 mm wide by 2 mm thick Therm-A-Seal intumescent seals are to be installed adjacent to the pivot position.
- The door assembly shall include a door leaf of 54 mm thick minimum, and for ITT type doorsets the door shall be mounted into a door frame of hardwood timber, minimum density 650 kg/m³.
- Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

Double action ITT and ITM door assemblies for fire resistance of 30 minutes FD30/EI30

- The floor springs may not be fitted to ITT or ITM doorsets without intumescent protection.
- The closers may only be fitted with Type B 06371 or Type C 06666 Upper Pivots and Type C 07432 Bottom Straps.
- The upper pivot is to be bedded on to 1 mm thick Interdens to all sides which shall be provided by the manufacturer and referenced within the manufacturer's product data sheet.
- Where the intumescent is included within the head of the door leaf (as opposed to within the frame), two additional 10 mm wide by 2 mm thick Therm-A-Seal intumescent seals are to be installed adjacent to the pivot position.
- For all applications the door assembly shall include a door leaf of 44 mm thick minimum, and for ITT type doorsets the door shall be mounted into a timber door frame, minimum density 460 kg/m³.
- Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

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Double action ITT and ITM door assemblies for fire resistance of 60 minutes FD60/EI60

- The floor springs may not be fitted to ITT or ITM doorsets without intumescent protection.
- The closers may only be fitted with Type B 06371 or type C 06666 Upper Pivots and Type C 07432 Bottom Straps.
- The upper pivot is to be bedded on to 1mm thick Interdens to all sides which shall be provided by the manufacturer and referenced within the manufacturer's product data sheet.
- Where the intumescent is included within the head of the door leaf (as opposed to within the frame), two additional 10 mm wide by 2 mm thick Therm-A-Seal intumescent seals are to be installed adjacent to the pivot position.
- For FD60 applications the door assembly shall include a door leaf of 54 mm thick minimum, and for ITT type doorsets the door shall be mounted into a door frame of hardwood timber, minimum density 650 kg/m³.
- For EI60 applications, in addition to the above requirement, the leaf is to include 4.5 mm thick, non-combustible, mineral based sub-facings of nominal density 1500 kg/m³, bonded to the stiles, rails and core using a resorcinol type adhesive.
- Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

Transom mounted floor spring for double action door assemblies for fire resistance of 30 minutes FD30/EI30

The floor springs may be inverted and transom mounted within FD30/EI30, ITT doorsets when compliance with the following conditions is met:

- The door leaf shall have a minimum thickness of 44 mm and must be previously proven capable of accommodating a concealed closer or similar item within its head.
- A 1 mm thick Interdens intumescent lining kit, as supplied by the closer manufacturer, shall be fitted in conjunction with the closer, details of the intumescent kit and its application are given on the following page.
- The door frame head section size shall be a minimum of 130 mm by 75 mm with a minimum density of 460 kg/m³.
- The closer assembly shall be used in conjunction with a '109621 TS137a' floor pivot.

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TS500/550 SERIES FLOOR SPRINGS

The inverse TS500 and TS550 and inverse TS500 v2* and TS550 v2* floor spring assemblies, when transom mounted, are required to be provided with the following intumescent protection.

Intumescent Kit
1 mm Interdens intumescent sheet : <ul style="list-style-type: none">• lining the mortice within the frame head• under the cover plate• lining the mortice within the door leaf head for the top strap

* TS500 v2 and TS550 v2 assemblies are installed without the standard cement box.

Transom mounted floor spring for double action door assemblies for fire resistance of 60 minutes FD60/EI60

The floor springs may be inverted and transom mounted within FD60/EI60, ITT doorsets when compliance with the following conditions is met:

- The door leaf shall have a minimum thickness of 54 mm and must be previously proven capable of accommodating a concealed closer or similar item within its head.
- Where the 'standard' intumescent configuration at the head of the doorset does not provide the same level of bypassing as required with the 1 mm Interdens lining (option 1) detailed below, then the second option (option 2) for full interruption using a 2 mm Interdens lining shall be used.
The door frame head section size shall be a minimum of 130 mm by 75 mm with a minimum density of 650 kg/m³.
- The closer assembly shall be used in conjunction with a '109621 TS137a' floor pivot.



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The inverse TS500 and TS550 and inverse TS500 v2* and TS550 v2* floor spring assemblies, when transom mounted, are required to be provided with additional intumescent protection. Two different protection options are available and are subject to the following requirements:

Option 1 Requirement	Option 2 Requirement
Where the standard intumescent perimeter seals for the doorset comprise 2 No. 15 mm by 4 mm seals fitted into the head of the door leaf and these are to remain continuous across the head of the door leaf	Where the standard intumescent perimeter seals do not comply with the description given for option 1 and the standard seal(s) are interrupted by the installation of the closer accessories.
Intumescent Kit	Intumescent Kit
1 mm Interdens intumescent sheet: <ul style="list-style-type: none"> • lining the mortice within the frame head • under the cover plate • lining the mortice within the door leaf head for the top strap 	2 mm Interdens intumescent sheet (2 x 1mm kits): <ul style="list-style-type: none"> • lining the mortice within the frame head • under the cover plate • lining the mortice within the door leaf head for the top strap

* TS500 v2 and TS550 v2 assemblies are installed without the standard cement box.

Classification codes

This approval provides the following classifications for the closers:

TS500N EN3

3	8	3	1	1	4
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TS500NV

3	8	4-3	1	1	4
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TS500/550 SERIES FLOOR SPRINGS

Classification codes continued

TS490, TS500 and TS500S

3	8	4	1	1	4
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TS550NV-EP, TS550NV-E, TS550E, TS550E-G, TS550IS, TS550IS-G, TS550E-IS, TS550E-IS-G and TS550ER

3	8	6-3	1	1	4
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TS550F and TS550F-G

4	8	6-3	1	1	4
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TS550, TS550S and TS520

3	8	5-3	1	1	4
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TS550NV F P, TS550NV F

3	8	6-3	1	1	4
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Further Information

Further information regarding the details contained in this data sheet may be obtained from GEZE UK (Tel: 01543 443000).

Further information regarding the CERTIFIRE certification and other approved products can be obtained from CERTIFIRE (Tel: 01925 646777).