
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 UK 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:

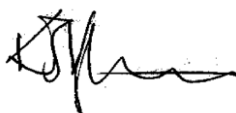
CERTIFIED PRODUCT

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 Exova (UK) Limited trading as
Warrington Certification



Sir Ken Knight
Chairman
Impartiality Committee



Paul Duggan
Certification Manager

Issued: 13th February 2002
Reissued: 12th May 2017
Next audit test due: 11/05/2018
Frequency: Annually
Valid to: 11th May 2022



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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. The approval relates to the specific door closer units and configurations:

	Floor spring		Transom closer	
	<i>single-action</i>	<i>double-action</i>	<i>single-action</i>	<i>double-action</i>
TS500 N	✓	✓	✗	✗
TS500N EN3	✓	✓	✗	✓
TS500 NV	✓	✓	✗	✓
TS550	✓	✓	✗	✗
TS550 F-G	✓	✗	✗	✗
TS550 E	✓	✗	✗	✗
TS550 ER	✗	✓	✗	✓
TS550 IS	✓	✗	✗	✗
TS550 E-IS	✓	✗	✗	✗
TS550 NV F P	✗	✓	✗	✗
TS550 NV F	✓	✗	✗	✗
TS550 E-G	✓	✗	✗	✗
TS550 E IS-G	✓	✗	✗	✗

Key: ✓ - approved ✗ - Not approved

2. This approval relates to their use with the following door assemblies where the closer assembly is floor mounted: -

Single-action and 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 up to 60 minutes where the closer assembly is floor mounted (CERTIFIRE Code - ITT).

Single-action and 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 up to 60 minutes where the closer assembly is floor mounted (CERTIFIRE Code - ITM).

Single-action 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 where the closer assembly is floor mounted (Code MM and IMM).

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3. This approval relates to their use with the following door assemblies where the closer assembly is transom mounted: -

Double action only, 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 only, 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).

4. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), the Technical Handbooks (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.
5. The floor springs are approved on the basis of:
- i) Initial type testing to EN1154 and BS EN 1634-1: 2000
 - ii) An appraisal against TS34
 - iii) Inspection of quality management system
 - iv) Inspection and surveillance of factory production control
 - v) Ongoing audit testing in accordance with EN 1154 requirements
6. 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).
7. 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.
8. 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.

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9. The following table shows the acceptable doorset types and fire resistance periods for use of single-action floor mounted variants:

Class	Approved Door Type				
	IMM	MM	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	✓	✓	✗	✗	✗

Key:

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- ✗ - Not approved

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10. The following table shows the acceptable doorset types and fire resistance periods for use of double-action floor mounted variants:

Class	Approved Door Type				
	IMM	MM	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	✓	✓	✗	✗	✗

Key:

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✗ - Not approved

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11. The following table shows the acceptable doorset types and fire resistance periods for use of double-action transom mounted variants:

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

Key:

- ✓ - approved
x - Not approved

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12. Doors are classified as the following types:

Type MM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that do not contain intumescent materials in the frame to leaf gap.

Type IMM - 20 minute to 240 minute doorsets that consist of metallic leaves in metallic frames that contain intumescent materials in the frame to leaf gap.

Type ITT - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in timber frames

Type ITM - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in metal frames.

Type ITC - 20 minute to 120 minute doorsets containing intumescent seals and consisting of non-metallic faced and edged leaves hung in proprietary composite frames, of which the principal material is other than timber or metal but which may include any other materials.

13. This approval relates to the above **floor mounted** units used with latched or unlatched single-leaf or double-leaf, assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber or steel frames:

- a. 30 minute single-action doorsets of the following specification (Code ITT and ITM):
 - i. Door leaves shall not be less than 44 mm thick doors.
 - ii. ITT door frame shall consist of softwood or hardwood with a minimum density of 460 kg/m³.
 - iii. ITM frames shall be of steel.
 - iv. The bottom strap and top strap are to be bedded into intumescent mastic of a minimum 1 mm thickness, or shall be fitted with intumescent protection in the form of 1 mm mono ammonium phosphate sheet material, as supplied by the manufacturer, fully lining the mortices cut into the top edge and bottom edge of the door leaf, and frame head for ITT applications.
 - v. In addition, where the perimeter intumescent fire seal is included within the top edge 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 strap position.
 - vi. Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

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- b. 60 minute single-action doorsets of the following specification (Code ITT and ITM):
- i. Door leaves shall not be less than 54 mm thick doors.
 - ii. ITT door frame shall consist of hardwood with a minimum density of 640 kg/m³.
 - iii. ITM frames shall be of steel.
 - iv. The bottom strap and top strap shall be fitted with intumescent protection in the form of 2 mm mono ammonium phosphate sheet material, as supplied by the manufacturer, fully lining the mortices cut into the top edge and bottom edge of the door leaf, and frame head for ITT applications.
 - v. In addition, where the perimeter intumescent fire seal is included within the top edge 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 strap position.
 - vi. Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.
- c. 30 minute double-action doorsets of the following specification (Code ITT and ITM):
- i. Door leaves shall not be less than 44 mm thick doors.
 - ii. ITT door frame shall consist of softwood or hardwood with a minimum density of 460 kg/m³.
 - iii. ITM frames shall be of steel.
 - iv. The bottom strap and top strap shall be fitted with intumescent protection in the form of 1 mm mono ammonium phosphate sheet material, as supplied by the manufacturer, fully lining the mortices cut into the top edge and bottom edge of the door leaf, and frame head for ITT applications.
 - v. In addition, where the perimeter intumescent fire seal is included within the top edge 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 door mounted top centre position.
 - vi. Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

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- d. 60 minute double-action doorsets of the following specification (Code ITT and ITM):
- i. Door leaves shall not be less than 54 mm thick doors.
 - ii. 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.
 - iii. ITT door frame shall consist of hardwood with a minimum density of 640 kg/m³.
 - iv. ITM frames shall be of steel.
 - v. The bottom strap and top strap shall be fitted with intumescent protection in the form of 2 mm mono ammonium phosphate sheet material, as supplied by the manufacturer, fully lining the mortices cut into the top edge and bottom edge of the door leaf, and frame head for ITT applications.
 - vi. In addition, where the perimeter intumescent fire seal is included within the top edge 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 door mounted top centre position.
 - vii. Doorsets shall not include flush overpanels unless the application can be substantiated by the door manufacturer's own test evidence.

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14. This approval relates to the above **transom mounted** units used with latched or unlatched single-leaf or double-leaf, assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber frames:
- a. 30 minute double-action doorsets of the following specification (Code ITT):
 - i. Door leaves shall not be less than 44 mm thick doors and be previously proven capable of accommodating a concealed closer or similar item within its head.
 - ii. ITT door frame shall consist of softwood or hardwood with a minimum density of 460 kg/m³ and a minimum section of 130 wide x 75 mm thick.
 - iii. The following intumescent protection kit, as supplied by the closer manufacturer, shall be fitted in conjunction with the closer:

Intumescent Kit
<p><i>1 mm mono ammonium phosphate sheet material:</i></p> <ul style="list-style-type: none"> • <i>lining the mortice within the frame head</i> • <i>under the cover plate</i> • <i>lining the mortice within the door leaf head for the top strap</i>

- b. 60 minute double-action doorsets of the following specification (Code ITT):
 - i. Door leaves shall not be less than 54 mm thick doors and be previously proven capable of accommodating a concealed closer or similar item within its head.
 - ii. ITT door frame shall consist of hardwood with a minimum density of 640 kg/m³ and a minimum section of 130 wide x 75 mm thick.
 - iii. Two different protection options are available and are subject to the following requirements:

Option 1	Option 2
Requirement	Requirement
Where the standard intumescent perimeter fire 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
<p>1 mm Interdens intumescent sheet:</p> <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 	<p>2 mm Interdens intumescent sheet (2 x 1 mm kits):</p> <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

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Scope of Approval:

- The following specific accessories are approved for use with the TS500/550 series floor springs:
 - 'DB' straps and top centres (Single-action)
 - Type B 06371 or Type C 06666 Upper Pivots and Type C 07432 Bottom Straps (double-action).
 - '109621 TS137a' floor pivot for transom mounted applications

Classification codes

This approval provides the following classifications for the closers:

TS500N EN3:

3	8	3	1	1	4
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TS500 NV:

3	8	4 3	1	1	4
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TS500 N:

3	8	4 3	1	1	4
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TS550 ER, TS550 E, TS550 E-G, TS550 IS, TS550 E-IS, TS550 E-IS-G (EN1154):

4	8	6 3	1	1	4
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TS550 E, TS550 E-G, TS550 IS, TS550 E-IS, TS550 E-IS-G (EN1155):

3	8	6 3	1	1	4
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Classification codes

TS550 F-G:

4	8	6 3	1	1	4
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TS550:

3	8	5 3	1	1	4
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TS550 NV F P, TS550 NV F:

4	8	6 3	1	1	4
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:
TS500N EN3 (transom mounted):

3	8	3	1	1	4
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TS500 NV (transom mounted):

3	8	4 3	1	1	4
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TS550 ER (transom mounted):

3	8	5 4	1	1	3
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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).

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