



CERTIFICATE OF APPROVAL

No CF 336

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

FRISCO UK SALES LIMITED

Unit 14, Pindar Road, Essex Road, Hoddesdon
Hertfordshire EN11 0DE

Tel: 01992 443 010 Fax: 01992 443 020

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

Eclipse Series, Insignia Series
and Parliament Steel Hinges

TECHNICAL SCHEDULE

TS24 The Contribution of
Single Axis Hinges to the
Performance of Fire Resisting
Door Assemblies

Signed and sealed for and on behalf of Warringtonfire Testing and Certification Limited

Paul Duggan
Certification Manager



Issued: 12th February 2004
Revised: 09th January 2020
Valid to: 13th February 2024

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Eclipse Series and Insignia Series of Hinges

1. This certification is provided to the client for its own purposes and we cannot opine on whether it will be accepted by Building Control authorities or any other third parties for any purpose.
2. This approval relates to the use of the following Eclipse Ball Bearing, Insignia Thrust Bearing steel and Parliament, single axis hinges:

Ref.	Type	size mm	Finish	Radiused	EN1935 Grade
14853	2 Ball Bearing	102 x 76 x 3	PSS		13
14854	2 Ball Bearing	102 x 76 x 3	SSS		13
14858	2 Ball Bearing	102 x 76 x 3	SSS		11
14860	2 Ball Bearing	102 x 76 x 3	PSS		11
14866	2 Ball Bearing Security	102 x 76 x 3	SSS		13
14869	2 Ball Bearing	102 x 76 x 3	SSS	Yes	13
14872	2 Ball Bearing	102 x 76 x 3	PSS	Yes	13
14879	2 Ball Bearing	102 x 76 x 3	EBP	Yes	13
14882	2 Ball Bearing	102 x 76 x 3	EBP		13
14882g11	2 Ball Bearing	102 x 76 x 3	EBP		11
14883	2 Ball Bearing	102 x 76 x 3	SSS		13
14884	2 Ball Bearing	102 x 76 x 3	PSS		13
14920	2 Ball Bearing	102 x 76 x 3	Black		13
14929	Thrust Bearing	102 x 76 x 3	SSS		14
14930	Thrust Bearing	102 x 76 x 3	PSS		14
14931	Thrust Bearing	102 x 76 x 3	SSS	Yes	14
14932	Thrust Bearing	102 x 76 x 3	PSS	Yes	14
14989*	Parliament Hinge	102 x 102 x 3	SSS		13
14990*	Parliament Hinge	102 x 102 x 3	PSS		13
14991*	Parliament Hinge	102 x 102 x 3	EBP		13
14998	Thrust Bearing Anti-Ligature	102 x 76 x 3	PSS	Yes	14
14999	Thrust Bearing Anti-Ligature	102 x 76 x 3	SSS	Yes	14

**14989, 14990 and 14991 which are approved for up to 30 minute timber based doorsets only.*

3. The approval also covers the product references PK929, PK930, PK931 and PK932 which are 1.5 pair packs of the Insignia 14929, 14930, 14931 and 14932 respectively.

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4. This approval relates to their use with the following door assemblies:-

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 120 minutes (Code ITT)*.

Latched and unlatched, door assemblies consisting of uninsulated or insulated metal door assemblies in metal frames with or without intumescent seals having a fire resistance up to 240 minutes (Code IMM/MM)*.

*14989, 14990 and 14991 which are approved for up to 30 minute timber-based doorsets only.

5. This approval relates to the use of the above single axis hinges in contributing to the fire resistance performance of timber based doorsets and metallic based doorsets, as defined in BS EN 1634-1 or BS 476: Part 22: 1987.

6. The hinges are approved on the basis of:

- i) Initial type testing to EN1935 and EN 1634-1
- ii) An appraisal against TS24
- iii) Certification of quality management system to ISO 9001: 2008.
- iv) Inspection and surveillance of factory production control
- v) On-going audit testing in accordance with TS24 requirements

7. The door assembly shall be a CERTIFIRE approved product or have achieved the appropriate fire resistance performance when tested at a UKAS accredited laboratory in accordance with BS 476: Part 22: 1987 and/or BS EN 1634:1.

8. The hinges should only be used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987), the critical aspects of the doorset construction are considered to be the material of the door frame, the leaf to frame clearance gaps and the lipping material. Attention should be paid to these details and these should not be amended from that previously fire tested. Where this information is not known the following minimum specification will be followed:

- a. 30 and 60 minute timber and mineral-based assemblies (ITT):

- i) Door frame density - 460 kg/m³ (30 minutes), 640 kg/m³ (60 minutes)
- ii) Door leaves shall have a minimum thickness of 44 mm for 30 minute applications and 54 mm for 60 minute applications.
- iii) Lipping density - 640 kg/m³.



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- b. Steel-based assemblies (MM/IMM)
- i) Door leaves shall have a minimum thickness of 44 mm for up to 240 minute applications.
9. For 90 minute and 120 minute timber and mineral-based assemblies (ITT), Frisco hinges shall only be fitted to doorsets which have previously been tested with hinges of a similar size, subject to the following requirements:
- i) The required intumescent protection shall be as tested by the chosen door manufacturer. In all cases this shall be a minimum of a 2 mm thick 'Interdens' or graphite based intumescent sheet material incorporated beneath each hinge blade, however, this protection shall be increased as required based on the chosen doorset manufacturers test data.
- ii) Where the perimeter intumescent fire seal tested within the chosen doorset by-passes the hinge, this detail shall be maintained.
- iii) The critical dimensions of the Frisco hinge to be used shall be based on the size of the hinge tested originally by the chosen doorset manufacturer, with the following tolerance:

Hinge specification of chosen doorset	
Component/dimension	Tolerance/Rule
Hinge blade	
Width	+0/-5% of tested hinge
Height	+/-10% of tested hinge
Thickness	+/-15% of tested hinge
Knuckle	
Diameter	Minimum 11 mm
Fixings	
Quantity	Maximum 4No. fixings tested
Size	4.5 mm dia. Minimum
Length	No shorter than that tested
Position (width)	+/-10% from the positions of the fixings in the tested hinge when measured with respect to the centre lines of the blade

Note: Where the Frisco hinge does not comply with the parameters identified above it shall not be used in conjunction with the chosen 90 minute and 120 minute timber and mineral-based assemblies (ITT).



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10. When fitted to insulated timber or mineral composite door assemblies, the required additional intumescent protection will be as follows:
- i) The required protection for 30 minute ITT applications will be 1 mm thickness of mono ammonium phosphate or graphite-based intumescent sheet material (see 'Scope of Approval' below) behind both blades.
 - ii) The required protection for 60 minute ITT applications will be 2 mm thickness of mono ammonium phosphate or graphite-based intumescent sheet material (see 'Scope of Approval' below) behind both blades.
 - iii) The required intumescent protection for 90 and 120 minute ITT applications shall be as tested by the chosen door manufacturer. In all cases this shall be a minimum of a 2 mm thick mono ammonium phosphate tested, or graphite based intumescent sheet material (see 'Scope of Approval' below) incorporated beneath each hinge blade, however, this protection shall be increased as required based on the chosen doorset manufacturers test data.

Failure to install the protection will invalidate this certificate

11. The hinges may only be fitted in the manner described in this certificate and subject to any limitations on the inclusion of hinges specified for the door leaf. This approval is applicable only to the specified hinges used with door assemblies of proven fire resistance (as defined in BS EN 1634-1 or BS 476: Part 22: 1987) and when using appropriate intumescent protection.
12. Regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).
13. For ITT timber and mineral-based doorsets the hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
14. The ITT doorsets shall be installed in accordance with BS 8214.
15. The approval relates to ongoing production. The 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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14. Matrix of acceptable doorset types

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	✓*	✓*	✗	✗	✗

*Excludes 14989, 14990 and 14991 which are approved for up to 30 minute ITT timber based doorsets only

Key:

- ✓ - Approved
✗ - Not approved

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15. 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.

Scope of Approval:

- The hinges may not be fitted to timber doorsets without leaf/frame edge intumescent protection.
- 14989, 14990 and 14991 which are approved for up to 30 minute timber-based doorsets only.
- Where graphite based intumescent sheet material is to be used in lieu of the mono ammonium phosphate tested, the proposed graphite-based intumescent sheet material, shall have suitable test evidence in the required thickness or less, with timber/mineral-based doorset of the required classification period, in with steel hinges of a minimum size of 100 mm x 75 mm.

Classification codes

The above approval provides the following classifications:

Eclipse 14853, 14854, 14869, 14872, 14879, 14882, 14883, 14884, 148920, 14989, 14990 and 14991 – Maximum leaf weight 120 kg:

4	7	6	1	1	4	0	13
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Classification codes- Continued

Eclipse 14866 – Maximum leaf weight 120 kg:

4	7	6	1	1	4	1	13
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Eclipse 14858, 14860 and 14882g11 – Maximum leaf weight of 80 kg:

4	7	4	1	1	4	0	11
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Insignia 14929 14930, 14931, 14932, 14998, and 14999 – Maximum leaf weight 160 kg:

4	7	7	1	1	4	0	14
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Further Information

Further information regarding the details contained in this certificate may be obtained from Frisco UK Sales Limited (Tel: 01992 443 010).

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