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**CERTIFICATE OF APPROVAL**  
**No CF 5852**

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

**RUTLAND TRADING CO LIMITED**

**Unit 4, Holmeswood Business Park,  
Chesterfield Road,  
Holmewood  
Chesterfield  
S42 5US  
United Kingdom  
Tel: 01246 261491**

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

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**CERTIFIED PRODUCT**  
**Rutland Steel Hinges**

**TECHNICAL SCHEDULE**  
**TS24 The Contribution of  
Single Axis Hinges to the Fire  
Resistance of Door Assemblies**

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

**Paul Duggan**  
**Certification Manager**



Issued: 24<sup>th</sup> November 2009  
Reissued: 25<sup>th</sup> April 2025  
Valid to: 23<sup>rd</sup> November 2029



## CERTIFICATE No CF 5852 RUTLAND TRADING CO LIMITED

1. This certification is provided to the client for their 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 Rutland steel, single axis hinges with either square or radiused corners. This approval relates to the following specific hinges:

<b>Grade 13 – Stainless Steel Ball Bearing Hinges 2BB</b>			
<b>Rutland Code</b>	<b>Sparka Code</b>	<b>Material</b>	<b>Description</b>
50576	HG1010	Stainless Steel	101 x 76 x 3mm square corners
50577		Stainless Steel	101 x 90 x 3mm square corners
50578*		Stainless Steel	101 x 101 x 3mm square corners
50579*		Stainless Steel	114 x 101 x 3.4mm square corners
50580		Stainless Steel	125 x 76 x 3mm square corners
50581		Stainless Steel	150 x 76 x 3mm square corners
50582	HG1017	Stainless Steel	101 x 76 x 3mm radiused corners
50583		Stainless Steel	101 x 90 x 3mm radiused corners
50584*		Stainless Steel	101 x 101 x 3mm radiused corners
50585*		Stainless Steel	114 x 101 x 3.4mm radiused corners
50586		Stainless Steel	125 x 76 x 3mm radiused corners
50587		Stainless Steel	150 x 76 x 3mm radiused corners

\* Suitable for use on minimum 54 mm thick doors only

<b>Grade 7 - Steel Ball Bearing Hinges (2BB)</b>			
<b>Rutland Code</b>	<b>Sparka Code</b>	<b>Material</b>	<b>Description</b>
50588*		Mild steel	76 x 101 x 2 mm square corners
50589	HG1022	Mild steel	76 x 50 x 2 mm square corners
50590		Mild steel	76 x 62 x 2 mm square corners
50591		Mild steel	76 x 76 x 2 mm square corners
50592	HG1018	Mild steel	101 x 76 x 2.6 mm square corners
50593	HG1019	Mild steel	101 x 76 x 3 mm square corners
50594		Mild steel	101 x 88 x 3 mm square corners
50595*		Mild steel	101 x 101 x 3.2 mm square corners
50596*		Mild steel	114 x 101 x 3.2 mm square corners
50597		Mild steel	76 x 50 x 2 mm radiused corners
50598		Mild steel	76 x 62 x 2 mm radiused corners
50599		Mild steel	76 x 76 x 2 mm radiused corners
50600	HG1020	Mild steel	101 x 76 x 2.6 mm radiused corners

\* Suitable for use on minimum 54 mm thick doors only

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<b>Grade 7 - Steel Ball Bearing Hinges (2BB) – Cont'd</b>			
<b>Rutland Code</b>	<b>Sparka Code</b>	<b>Material</b>	<b>Description</b>
50601		Mild steel	101 x 76 x 3 mm radiused corners
50602		Mild steel	101 x 88 x 3 mm radiused corners
50603*		Mild steel	101 x 101 x 3.2 mm radiused corners
50604*		Mild steel	114 x 101 x 3.2 mm radiused corners
50605*		Stainless steel	76 x 101 x 2 mm square corners
50606	HG1016	Stainless steel	76 x 50 x 2 mm square corners
50607	HG1023	Stainless steel	76 x 62 x 2 mm square corners
50608		Stainless steel	76 x 76 x 2 mm square corners
50609		Stainless steel	101 x 76 x 2.6 mm square corners
50610	HG1021	Stainless steel	101 x 76 x 3 mm square corners
50611		Stainless steel	101 x 88 x 3 mm square corners
50612*		Stainless steel	101 x 101 x 3.2 mm square corners
50613*		Stainless steel	114 x 101 x 3.2 mm square corners
50614	HG1024	Stainless steel	76 x 50 x 2 mm radiused corners
50615		Stainless steel	76 x 62 x 2 mm radiused corners
50616		Stainless steel	76 x 76 x 2 mm radiused corners
50617		Stainless steel	101 x 76 x 2.6 mm radiused corners
50618		Stainless steel	101 x 76 x 3 mm radiused corners
50619		Stainless steel	101 x 88 x 3 mm radiused corners
50620*		Stainless steel	101 x 101 x 3.2 mm radiused corners
50621*		Stainless steel	114 x 101 x 3.2 mm radiused corners

\* Suitable for use on minimum 54 mm thick doors only

<b>Grade 7 - Butt Hinge Plain Joint</b>			
<b>Rutland Code</b>	<b>Sparka Code</b>	<b>Material</b>	<b>Description</b>
50622		Mild steel	76 x 76 x 1.9 mm square corners
50623	HG1410	Mild steel	76 x 49 x 1.9 mm square corners
50624	HG1412	Mild steel	101 x 71 x 1.9 mm square corners
50625		Mild steel	76 x 46 x 1.9 mm square corners
50626		Mild steel	101 x 58 x 1.9 mm square corners
50627	HG1411	Mild steel	76 x 64 x 2.35 mm square corners
50628	HG1413	Mild steel	101 x 76 x 2.5 mm square corners
50629		Mild steel	101 x 76 x 2.85 mm square corners
50630		Mild steel	76 x 76 x 1.9 mm radiused corners
50631		Mild steel	76 x 49 x 1.9 mm radiused corners
50632		Mild steel	101 x 71 x 1.9 mm radiused corners

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*Grade 7 - Butt Hinge Plain Joint – Cont'd*

Rutland Code	Sparka Code	Material	Description
50633		Mild steel	76 x 64 x 2.35 mm radiused corners
50634		Mild steel	101 x 76 x 2.5 mm radiused corners
50635		Mild steel	101 x 76 x 2.85 mm radiused corners
50636		Mild steel	90 x 49 x 1.9 mm square corners
50637		Mild steel	90 x 49 x 1.9 mm radiused corners
50638		Mild steel	90 x 46 x 1.9 mm square corners
50639		Mild steel	90 x 64 x 2.35 mm square corners
50640		Mild steel	90 x 64 x 2.35 mm radiused corners
50641		Mild steel	101 x 76 x 2.5 mm square corners
50642		Mild steel	101 x 76 x 2.5 mm radiused corners
50643		Mild steel	101 x 76 x 2.85 mm square corners
50644		Mild steel	101 x 76 x 2.85 mm radiused corners
50645		Stainless steel	76 x 49 x 1.9 mm square corners
50646		Stainless steel	101 x 71 x 1.9 mm square corners
50647		Stainless steel	76 x 64 x 2.35 mm square corners
50648		Stainless steel	101 x 64 x 2.5 mm square corners
50649		Stainless steel	101 x 76 x 2.5 mm square corners
50650		Stainless steel	101 x 76 x 2.85 mm square corners
50651		Stainless steel	76 x 49 x 1.9 mm radiused corners
50652		Stainless steel	101 x 71 x 1.9 mm radiused corners
50653		Stainless steel	76 x 64 x 2.35 mm radiused corners
50654		Stainless steel	101 x 76 x 2.5 mm radiused corners
50655		Stainless steel	101 x 76 x 2.85 mm radiused corners
50656		Stainless steel	90 x 49 x 1.9 mm square corners
50657		Stainless steel	90 x 49 x 1.9 mm radiused corners
50658		Stainless steel	90 x 64 x 2.35 mm square corners
50659		Stainless steel	90 x 64 x 2.35 mm radiused corners
50660		Stainless steel	101 x 76 x 2.5 mm square corners
50661		Stainless steel	101 x 76 x 2.5 mm radiused corners
50662		Stainless steel	101 x 76 x 2.85 mm square corners
50663		Stainless steel	101 x 76 x 2.85 mm radiused corners
50664		Stainless steel	101 x 71 x 1.9 mm square corners
50665		Stainless steel	101 x 64 x 2.5 mm square corners

- This approval relates to the use of the above single axis hinges in contributing to the fire resistance performance of timber based doorsets and predominantly steel based doorsets, as defined in BS EN 1634-1 or BS 476: Part 22: 1987.
- This approval relates to their use with the following door assemblies: -

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**Code ITT - 20 minute to 120\*\* minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in timber or cellulosic frames.**

**Code MM/IMM - 20 minute to 240\* minute door assemblies consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames with or without intumescent seals.**

*\* 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only.*

*\*\*Some hinges restricted to 30 and 60 minute timber-based doorsets only*

5. 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.
  - iv. Inspection and surveillance of factory production control
  - v. On-going audit testing in accordance with TS24 requirements
6. The door assembly shall be a CERTIFIRE approved product or have achieved the appropriate fire resistance performance when tested at a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), in accordance with BS 476: Part 22: 1987 and/or BS EN 1634:1 with hinges of a similar size.
7. 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.
8. For ITT timber-based doorsets the hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
9. Regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).
10. The ITT doorsets shall be installed in accordance with BS 8214.
11. 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.

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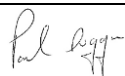
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The following minimum specification shall be followed:

- a. 30 and 60 minute timber-based assemblies (ITT):
    - i) Door frame minimum density - 460 kg/m<sup>3</sup> (30 minutes), 640 kg/m<sup>3</sup> (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 minimum density - 640 kg/m<sup>3</sup>.
  - b. Steel-based assemblies (MM/IMM)
    - i) Door leaves shall have a minimum thickness of 44 mm for up to 240 minute applications.
12. For 90 minute and 120 minute timber-based assemblies (ITT), Rutland 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 mono ammonium phosphate 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) A minimum of 10 mm of perimeter intumescent fire seal shall by-passed the hinges. Where the perimeter intumescent fire seal on the original test of the chosen doorset by-passes the hinge by more than 10 mm, this shall be maintained on the doorset incorporating the Rutland chosen hinges.
  - iii) The critical dimensions of the Rutland 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
<b>Hinge blade</b>	
Width	+0/-5% of tested hinge
Height	+/-5% of tested hinge
Thickness	+/-15% of tested hinge
<b>Knuckle</b>	
Diameter	Minimum 11 mm
<b>Fixings</b>	
Quantity	Maximum 4No. fixings tested
Size	4.8 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

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**Note:** Where the Rutland 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-based assemblies (ITT).

13. When fitted to timber-based door assemblies, the required additional intumescent protection will be as follows:

- i) Mono Ammonium Phosphate sheet intumescent material as follows:
- 1 mm thickness shall be fitted behind each blade for 30 minute applications.
  - 2 mm thickness shall be fitted behind each blade for 60 minute applications.
  - Furthermore, it a requirement that the perimeter intumescent fire seal to by-pass the hinges by a minimum of 4 mm for all 60 minute applications.

Or:

- ii) 0.8 mm Flexifire graphite-based intumescent sheet material as follows:
- 0.8 mm thickness shall be fitted behind each blade for 30 minute applications.
  - 0.8 mm thickness shall be fitted behind each blade for 60 minute applications.
  - Furthermore, it a requirement that the perimeter intumescent fire seal to by-pass the hinges by a minimum of 15 mm for all 60 minute applications.
- 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 Interdens mono ammonium phosphate based 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.
- iv) Additionally or 90 and 120 minute ITT applications only, a minimum of 10 mm of perimeter intumescent fire seal shall by-passed the hinges. Where the perimeter intumescent fire seal on the original test of the chosen doorset by-passes the hinge by more than 10 mm, this shall be maintained on the doorset incorporating the Rutland chosen hinges.

Failure to install the intumescent protection will invalidate this certificate

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14. All door hardware is subject to the acceptance by the chosen door assembly supplier's tested, assessed, or certificated scope, which generally identifies the types of hardware approved, the required specification/design based on the key materials/ maximum size (e.g. Blade, knuckle, etc.), and the application of any additional intumescent protection.

On this basis, approval should be sought from the specific door assembly supplier to ensure compliance based on this assessed/certificated scope.

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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16. The following tables show acceptable doorsets types and fire resistance periods:

Class	Approved Door Type			
	IMM	MM	ITT	ITM
<b>BS476-22</b>				
FD20	✓	✓	✓	✗
FD30	✓	✓	✓	✗
FD60	✓	✓	✓	✗
FD90	✓	✓	✓	✗
FD120	✓	✓	✓	✗
FD240	✓*	✓*	✗	✗
<b>EN1634-1</b>				
<b>Integrity</b>	<b>IMM</b>	<b>MM</b>	<b>ITT</b>	<b>ITM</b>
20	✓	✓	✓	✗
30	✓	✓	✓	✗
60	✓	✓	✓	✗
90	✓	✓	✓	✗
120	✓	✓	✓	✗
240	✓*	✓*	✗	✗
<b>Integrity/insulation</b>	<b>IMM</b>	<b>MM</b>	<b>ITT</b>	<b>ITM</b>
20	✓	✓	✓	✗
30	✓	✓	✓	✗
60	✓	✓	✓	✗
90	✓	✓	✓	✗
120	✓	✓	✓	✗
240	✓*	✓*	✗	✗

**Key:**

✓ - approved

✗ - Not approved

✓\* Note: 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only

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17. Doors are categorised as the following types:

**Code ITT** - 20 minute to 120 minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in timber or cellulosic frames.

**Code ITM** - 20 minute to 120 minute door assemblies door assemblies incorporating intumescent perimeter seals and consisting of timber faced and edged leaves with timber or cellulosic cores, hung in steel frames.

**Code MM** - 20 to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames without intumescent seals.

**Code IMM** - 20 to 240 minute doorsets consisting of uninsulated or insulated predominantly steel leaves, hung in steel frames with intumescent seals.

**Scope of Approval:**

- The hinges may not be fitted to timber doorsets without perimeter intumescent fire seals within the frame rebate or edge of the door leaf.
- 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-based doorset of the required classification period, with steel hinges of a minimum size of 100 mm x 75 mm.
- The following hinges are approved for use on minimum 54 mm thick doors only:

50578	50603
50579	50604
50584	50605
50585	50612
50588	50613
50595	50620
50596	50621

- 240 minute MM/IMM approval relates to Grade 13 Stainless Steel Ball Bearing Hinges only



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#### Classification codes

The above approval provides the following classifications:

Grade 13 - Stainless Steel Ball Bearing hinges (2BB):

Category of duty	Number of test cycles	Test door mass	Fire resistance	Safety	Corrosion resistance	Security	Hinge grade
4	7	6	1	1	4	0	13

Grade 7 - Steel Ball Bearing Hinges (2BB) and Grade 7 - Butt Hinge Plain Joint:

Category of duty	Number of test cycles	Test door mass	Fire resistance	Safety	Corrosion resistance	Security	Hinge grade
2	7	2	1	1	2	0	7

#### Further Information

Further information regarding the details contained in this certificate may be obtained from Rutland Trading Co Limited (Tel: 01246 261491).

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

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