



CERTIFICATE OF APPROVAL

No CF 209

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

ROYDE & TUCKER LIMITED

Bilton Road, Cadwell Lane, Hitchin, Hertfordshire, SG4 0SB
Tel: 01462 444444 Fax: 01462 444433

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

**Hi-Load Hinges
Traditional Series**

TECHNICAL SCHEDULE

**TS24 The Contribution of
Single Action 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: 7th February 2000
Reissued: 21st March 2019
Valid to: 20th March 2024



CERTIFICATE No CF 209 ROYDE & TUCKER LIMITED

HI-LOAD HINGES - TRADITIONAL SERIES

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 certification relates to the following variants of Hi-load traditional series steel hinges:

Ref.	Dimension	Description	EN1935 Grade
H086	85 x 76 x 2.64 mm	Lift-off hinge	10
H100	100 x 94 x 2.64 mm	Three knuckle butt hinge	12
H101	100 x 88 x 3 mm	Lift-off hinge	11
H102	100 x 88 x 3 mm	Three knuckle butt hinge	13
H102-0	100 x 88 x 3 mm	Three knuckle butt hinge – Conductor hinge (2 wires)	13
H102-1	100 x 88 x 3 mm	Three knuckle butt hinge – Conductor hinge (4 wires)	13
H102-5	100 x 88 x 3 mm	Three knuckle butt hinge – Security dog bolt	13
H103	100 x 86 x 2.64 mm	Three knuckle butt hinge	12
H104	100 x 75 x 2.3 mm	Three knuckle butt hinge	11
H105	98 x 82 x 3 mm	Lift-off hinge	11
H107	110 x 98 x 3.2 mm	Lift-off hinge	13
H1254-A	125 x 111 x 3.25 mm	Three knuckle projection hinge 20mm projection	12
H1254-B	125 x 129 x 3.25 mm	Three knuckle projection hinge 29mm projection	12
H1254	125 x 93 x 3.25 mm	Three knuckle butt hinge	12
H1250	125 x 93 x 3.25 mm	Three knuckle butt hinge	12
H102-A	100 x 106 x 3 mm	Three knuckle projection hinge 20mm projection	13
H102-B	100 x 124 x 3 mm	Three knuckle projection hinge 29mm projection	13
H102-300	100 x 71 x 5 mm	Three knuckle butt hinge – anti-ligature	13
H125-300	125 x 76 x 6.75 mm	Three knuckle butt hinge – anti-ligature	12



CERTIFICATE No CF 209 ROYDE & TUCKER LIMITED

3. The traditional series hinges comprise a range of single axis, self-lubricating hinges, which may be of various sizes for use on various classes of doorsets. The hinges are a minimum of Class 10 in accordance with BS EN 1935. Hinges are certificated with both square and radiused corners.

HI-LOAD HINGES - TRADITIONAL SERIES

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 60 minutes (Code ITT)*.

**H1254-A, H1254-B, H102A & H102B hinges are not approved for FD60, E60 or EI60 applications.*

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 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.

7. When fitted to insulated timber or mineral composite door assemblies, the required additional intumescent protection will be as follows:





CERTIFICATE No CF 209

ROYDE & TUCKER LIMITED

- 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 1 mm thickness of mono ammonium phosphate or graphite-based intumescent sheet material (see 'Scope of Approval' below) behind both blades.

Failure to install the protection will invalidate this certificate

HI-LOAD HINGES - TRADITIONAL SERIES

- 8. 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.
- 9. Regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).
- 10. Hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
- 11. The ITT doorsets shall be installed in accordance with BS 8214.
- 12. 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.

Page 4 of 8 Signed
E/004

Issued: 7th February 2000
Reissued: 21st March 2019
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CERTIFICATE No CF 209 ROYDE & TUCKER LIMITED

HI-LOAD HINGES - TRADITIONAL SERIES

13. The following table show acceptable doorset types and fire resistance periods:

Class	Approved Door Type				
	IMM	MM	ITT	ITM	ITC
FD20	x	x	✓	x	x
FD30	x	x	✓	x	x
FD60	x	x	✓*	x	x
FD90	x	x	x	x	x
FD120	x	x	x	x	x
FD240	x	x	x	x	x
E 20	x	x	✓	x	x
EI 20	x	x	✓	x	x
E 30	x	x	✓	x	x
EI 30	x	x	✓	x	x
E 60	x	x	✓*	x	x
EI 60	x	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

* H1254-A, H1254-B, H102A & H102B hinges are not approved for FD60, E60 or EI60 applications.





CERTIFICATE No CF 209 ROYDE & TUCKER LIMITED

HI-LOAD HINGES - TRADITIONAL SERIES

14. 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:

- H1254-A, H1254-B, H102A & H102B hinges are only approved for applications up to FD30, E30 and EI30 with ITT doorsets.
- The hinges may not be fitted to timber doorsets without leaf/frame edge intumescent protection.
- 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 conjunction with steel hinges of a minimum size of 100 mm x 35 mm.

Classification codes

The approval provides the following classifications:

H086 – Maximum leaf weight 60 kg:

2	7	3	1	1	2	0	10
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**CERTIFICATE No CF 209
ROYDE & TUCKER LIMITED**

HI-LOAD HINGES - TRADITIONAL SERIES

Classification codes - Continued

H100 – Maximum leaf weight 100 kg:

4	7	5	1	1	2	0	12
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H101 – Maximum leaf weight 80 kg

3	7	4	1	1	4	0	11
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H102, H102-0, H102-1, H102-5, H102A, H102-B & H102-300 – Maximum leaf weight 120 kg:

4	7	6	1	1	2	0	13
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H103 – Maximum leaf weight 100 kg:

4	7	5	1	1	2	0	12
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H104 – Maximum leaf weight 80 kg:

3	7	4	1	1	2	0	11
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H105 – Maximum leaf weight 80 kg:

3	7	4	1	1	2	0	11
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H107 – Maximum leaf weight 120 kg:

4	7	6	1	1	2	0	13
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H1254B & H1254A – Maximum leaf weight 100 kg:

4	7	5	1	1	2	0	12
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**CERTIFICATE No CF 209
ROYDE & TUCKER LIMITED**

HI-LOAD HINGES - TRADITIONAL SERIES

Classification codes - Continued

H1254 & H1250– Maximum leaf weight 100 kg:

4	7	5	1	1	2	0	12
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H125-300 – Maximum leaf weight 100 kg:

4	7	6	1	1	2	0	12
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Further Information

Further information regarding the details contained in this certificate may be obtained from Royde & Tucker Limited (Tel: 01462 444444).

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

Page 8 of 8 Signed
E/004

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