



CERTIFICATE OF APPROVAL

No CF 882

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

UNISON HARDWARE INC.

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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

**INOX Euro Mortice Hinge HGS
 Series - Ball Bearing Stainless
 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 CERTIFIRE



Sir Ken Knight
 Chairman
WCL Impartiality Committee



Paul Duggan
 Certification Manager
Warrington Certification Ltd



Issued: 13th October 2011
 Revised: 22nd October 2015
 Valid to: 4th May 2020

Page 1 of 6



CERTIFICATE No CF 882 UNISON HARDWARE INC.

Unison Hardware Inc. INOX Euro Mortice Hinge

1. This approval relates to the use of Unison Hardware Inc. ball bearing stainless steel, single axis hinges in contributing to the fire resistance performance of timber based doorsets, as defined by EN 1634-1 or BS 476: Part 22, for periods of 60 minutes integrity. This approval also relates to the use of Unison Hardware Inc. ball bearing stainless steel, single axis hinges in contributing to the fire resistance performance of metallic based doorsets, as defined by EN 1634-1 or BS 476: Part 22, for periods of up to 240 minutes integrity.
2. This certification is designed to demonstrate compliance of the product or system specifically with Approved Document B (England and Wales), Section D 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. The hinges are approved on the basis of:
 - i) Initial type testing to EN1935 and EN 1634-1
 - ii) An appraisal against TS24
 - iii) Inspection of quality management system.
 - iv) Inspection and surveillance of factory production control
 - v) On-going audit testing in accordance with TS24 requirements
4. The hinges are all ball bearing stainless steel, single axis, classes 10 or 13 hinges. Not all hinge models are covered for all scopes of use. Only the hinges detailed below are included in this approval:

Reference	Description
HGS-403025-2BB	4" x 3" x 2.5mm - Square corner - Stainless Steel
HGS-403025R-2BB	4" x 3" x 2.5mm - Radius corner- Stainless Steel
HGS-403525-2BB	4" x 3.5" x 2.5mm - Square corner- Stainless Steel
HGS-403525R-2BB	4" x 3.5" x 2.5mm - Radius corner- Stainless Steel
HGS-404025-2BB	4" x 4" x 2.5mm - Square corner- Stainless Steel
HGS-404025R-2BB	4" x 4" x 2.5mm - Radius corner- Stainless Steel
HGS-403030-2BB	4" x 3" x 3mm - Square corner- Stainless Steel

**CERTIFICATE No CF 882
UNISON HARDWARE INC.**

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Reference	Description
HGS-403030R-2BB	4" x 3" x 3mm - Radius corner- Stainless Steel
HGS-403530-2BB	4" x 3.5" x 3mm - Square corner- Stainless Steel
HGS-403530R-2BB	4" x 3.5" x 3mm - Radius corner- Stainless Steel
HGS-404030-2BB	4" x 4" x 3mm - Square corner- Stainless Steel
HGS-404030R-2BB	4" x 4" x 3mm - Radius corner- Stainless Steel
HGS-503030-2BB	5" x 3" x 3mm - Square corner- Stainless Steel
HGS-503030R-2BB	5" x 3" x 3mm - Radius corner- Stainless Steel
HGS-503025-2BB	5" x 3" x 2.5mm - Square corner- Stainless Steel
HGS-503025R-2BB	5" x 3" x 2.5mm - Radius corner- Stainless Steel
HGS-403030-2BB-DG	4" x 3" x 3mm – With dog bolt- Stainless Steel
HGS-403530-2BB-DG	4" x 3.5" x 3mm – With dog bolt- Stainless Steel
HGS-404030-2BB-DG	4" x 4" x 3mm – With dog bolt- Stainless Steel
HGS-403020-2BB	4" x 3" x 2mm – Square corner- Stainless Steel
HGS-403520-2BB	4" x 3.5" x 2mm – Square corner- Stainless Steel
HGS-404020-2BB	4" x 4" x 2mm – Square corner- Stainless Steel
HGS-4033520-2BB	4" x 3.35" x 2mm – Square corner- Stainless Steel
HG5112-44	4.5" x 4" x 3.4mm - Square corner- Stainless Steel
HG5112R14-44	4.5" x 4" x 3.4mm - Radius corner- Stainless Steel
HG5112-45	4.5" x 4.5" x 3.4mm - Square corner- Stainless Steel
HG5112R14-45	4.5" x 4.5" x 3.4mm - Radius corner- Stainless Steel

Those models where corner type is not stated are approved in square or radius corner options. All hinge models are approved in Satin stainless steel (SSS), Polished stainless steel (PSS) and Brass (PVD) finishes.

CERTIFICATE No CF 882 UNISON HARDWARE INC.

Unison Hardware Inc. INOX Euro Mortice Hinge

5. This approval relates to the specified hinge models when used with latched or unlatched single-leaf or double-leaf door assemblies consisting of timber faced and edged leaves with timber, cellulosic or mineral cores and in timber frames (Code ITT) not less than 54 mm thick. The door frame shall consist of timber with a minimum density of 650 kg/m³ (with leaf to frame gaps not greater than 3 mm), for FD60, E60 and EI60 applications. The hinges must be bedded onto a 2 mm thickness of mono ammonium phosphate intumescent material behind both blades.
6. This approval also relates to all hinge models used with latched or unlatched single-leaf or double-leaf door assemblies consisting of metallic faced and edged leaves in metallic frames (Codes MM/IMM) not less than 45 mm thick.
7. Those hinge models approved for use with ITT timber based doorsets may only be fitted to previously tested timber door assemblies when fitted in the manner described in this certificate and when particular aspects of the door assembly are maintained.
8. Hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
9. The doorset, including door frame and associated building hardware, should be either CERTIFIRE approved for the relevant application and classification or the doorset, including door frame and associated building hardware, should have achieved at least the required fire resistance when tested, or subsequently assessed to BS 476: Part 22: 1987 or EN 1634-1. In either case regard should be paid to the maximum door mass permitted to be used with the hinge (see classifications).
10. Timber doorsets shall be installed in accordance with BS 8214: 2008.
11. 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.

CERTIFICATE No CF 882 UNISON HARDWARE INC.

Unison Hardware Inc. INOX Euro Mortice Hinge

Matrix of acceptable doorset types

Class	Approved Door Type						
	IMM	MM	TT	ITT	ITM	ITC	TM
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:

- ✓ - approved
- ✗ - Not approved

* Hinge models: HGS-503030-2BB, HGS-503030R-2BB, HGS-503025-2BB, HGS-503025R-2BB, HGS403020-2BB, HGS-403520-2BB, HGS-404020-2BB, HGS-4033520-2BB, HG5112-45 and HG5112R14-45 are not approved for use with ITT timber based doorsets.



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Scope of Approval:

- All applications apply to glazed and unglazed doorsets.
- For all ITT timber doorset applications both blades of all hinges must be bedded onto a 2 mm thickness of mono ammonium phosphate intumescent sheet.
- For all ITT timber doorset applications the door frame shall consist of timber with a minimum density of 650 kg/m³ (with leaf to frame gaps less than 3mm).
- For all ITT timber doorset applications the door leaf shall be a minimum of 54 mm thick and include timber lippings to the vertical edges having a minimum density of 650 kg/m³.

Classification codes

The above approval provides the following classifications:

HGS403025-2BB, HGS403025R-2BB, HGS403525-2BB, HGS403525R-2BB, HGS404025-2BB, HGS404025R-2BB, HGS403030-2BB, HGS403030R-2BB, HGS403530-2BB, HGSB403530R-2BB, HGS404030-2BB, HGSB404030R-2BB, HGS503030-2BB, HGS503030R-2BB, HGS503025-2BB, HGS503025R-2BB, HG5112-44, HG5112R14-44, HG5112-45, HG5112R14-45 – Maximum leaf weight 120 kg

4	7	6	1	1	4	0	13
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HGS403030-2BB-DG, HGS403530-2BB-DG, HGS404030-2BB-DG (Dog Bolts) – Maximum leaf weight 120 kg

4	7	6	1	1	4	1	13
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HGS403020-2BB, HGS403520-2BB, HGS404020-2BB, HGS4033520-2BB – Maximum leaf weight 60kg

4	7	6	1	1	4	0	10
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Further Information

Further information regarding the details contained in this certificate may be obtained from Unison Hardware Inc. (Tel: + 1 916 388 1888).

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

