
CERTIFICATE OF APPROVAL

No CF 849

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

ZOO HARDWARE LTD

Unit B, Dukes Drive, Kingmoor Park North,
Carlisle, Cumbria CA6 4SH

Tel: 01228 672900 Fax: 01228 672928

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

Zoo Hardware Ltd Stainless Steel
Ball Bearing 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 Exova (UK) Limited trading as
Warrington Certification



Sir Ken Knight
Chairman
Impartiality Committee



Paul Duggan
Certification Manager



Issued: 20th July 2011
Revised: 28th November 2016
Valid to: 21st July 2021

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ZOO HARDWARE LTD

Zoo Hardware Ltd Stainless Steel Ball Bearing Hinges

- 1) This approval relates to the use of Zoo Hardware Ltd stainless steel, ball bearing single axis hinges.
- 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) 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.
- 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 of up to 60 minutes (Code ITT).
- 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 to ISO 9001: 2008.
 - iv) Inspection and surveillance of factory production control
 - v) Ongoing audit testing in accordance with TS24 requirements
- 6) The hinges approved are stainless steel, ball bearing single axis, class 11 or 13. Hinges referenced ZHSS244 and ZHSS243.5 are currently approved for use with 60 minute doorsets only, incorporating a minimum 54 mm thick door leaf. The hinges are of various finishes, grades of stainless steel and have square or radius corners. Only those hinges referenced below are approved by this certificate:

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Hinges approved for 30 minutes and 60 minutes	
Reference	Description
ZHSS243P	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm
ZHSS243P3	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm (pair and a half)
ZHSS243PVD	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm
ZHSS243PVD3	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm (pair and a half)
ZHSS243RP	Grade 13 Stainless Steel Radius - Grade 201 - 102 x 76 x 3mm Radius
ZHSS243RPVD	Grade 13 Stainless Steel Radius Grade 201 - 102 x 76 x 3mm Radius
ZHSS243RS	Grade 13 Stainless Steel Radius - Grade 201 - 102 x 76 x 3mm
ZHSS243S	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm
ZHSS243S3	Grade 13 Stainless Steel - Grade 201 - 102 x 76 x 3mm (pair and a half)
ZHSS43P	Grade 13 Stainless Steel - Grade 304 - 102 x 76 x 3mm
ZHSS43RP	Grade 13 Stainless Steel Radius - Grade 304 102 x 76 x 3mm
ZHSS43RS	Grade 13 Stainless Steel Radius - Grade 304 102 x 76 x 3mm
ZHSS43S	Grade 13 Stainless Steel - Grade 304 - 102 x 76 x 3mm
ZHSSDB243S	Grade 13 Stainless Steel Dog Bolt Door Hinge 102 x 76 x 3mm
ZHSS7667	Grade 11 Stainless Steel - 76 x 67 x 2.5mm

Hinges approved for 60 minutes only	
Reference	Description
ZHSS244S	Grade 13 Stainless Steel - Grade 201 - 102 x 102 x 3mm
ZHSS244P	Grade 13 Stainless Steel - Grade 201 - 102 x 102 x 3mm
ZHSS244PVD	Grade 13 Stainless Steel - Grade 201 - 102 x 102 x 3mm
ZHSS243.5S	Grade 13 Stainless Steel - Grade 201 - 102 x 89 x 3mm
ZHSS243.5P	Grade 13 Stainless Steel Radius - Grade 201 - 102 x 89 x 3mm
ZHSS243.5PVD	Grade 13 Stainless Steel Radius Grade 201 - 102 x 89 x 3mm

- 7) This approval relates to the above hinges 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:
- a) FD30, E30 and EI30 applications (Code ITT) – Door leaves shall not less than 44 mm thick doors. The door frame shall consist of timber with a minimum density of 450 kg/m³ (with leaf to frame gaps not greater than 3 mm).
 - (i) All hinges must be bedded onto a 1 mm thickness of mono ammonium phosphate intumescent material behind both blades.

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- b) FD60, E60 and EI60 applications (Code ITT) – Door leaves shall not less than 54 mm thick doors. The door frame shall consist of timber with a minimum density of 640 kg/m³ (with leaf to frame gaps not greater than 3 mm).
 - i) All hinges must be bedded onto a 2 mm thickness of mono ammonium phosphate intumescent material behind both blades.
- 8) The above hinges 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.
- 9) Hinges shall only be fitted using the fixings supplied by the hinge manufacturer.
- 10) 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 30 or 60 minutes fire resistance performance 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 classification).
- 11) The doorset shall be installed in accordance with BS 8214.
- 12) The approval relates to ongoing 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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13) The following table show acceptable doorset types and fire resistance periods:

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

Key:

- ✓ - approved
- x - Not approved

* The ZHSS244 and ZHSS243.5 are approved for use with 60 minute doorsets only.

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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.

Classification codes

The above approval provides the following classifications:

All hinge models except ZHSSDB243S and ZHSS7667.

4	7	6	1	1	4	0	13
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ZHSSDB243S - Stainless Steel Dog Bolt Hinge 102 mm x 76 mm x 3 mm

4	7	6	1	1	4	1	13
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ZHSS7667- Stainless Steel Hinge 76 x 67 x 2.5mm

3	7	4	1	1	4	0	11
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Further Information

Further information regarding the details contained in this certificate may be obtained from Zoo Hardware Ltd (Tel: 01228 672900).

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

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J/064

Two handwritten signatures in black ink, one appearing to be "Paul" and the other "Hogg".

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