
Title

The Fire Resistance Performance
of Doorsets When Fitted Carlisle
Brass Locks or Cylinders

WF Assessment Report No.:

532388 Issue 2

Original Issue Date:

3rd May 2024

Issue Date:

22nd November 2024

Valid Until:

3rd May 2029

Prepared for:

Carlisle Brass Limited

Parkhouse Road


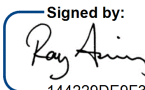
Carlisle

CA3 0JU

United Kingdom

The issue/revision number stated on the front of this report supersedes all previous issues/revisions, if applicable. Previous issues/revisions of the report, if applicable, cannot be used once an updated report has been issued/revised under a new revision.

Signatories and Revision History

Issue No.	Date	FM No.	Report scope and Signatures
1	3 rd May 2024	532338	Initial report issued to Carlisle Brass Limited
2	22 nd November 2024	545937	Addition of lock group 7 – fire brigade locks (LFB1 and LFB2)
Assessor		Reviewer	
Name: *A. Green-Morris		Name: *R. Anning	
Signature:  Signed by: E988A69B8C424DA...		Signature:  Signed by: 144229DE9F3343A...	

*For and on behalf of Warringtonfire

Executive summary

This report presents an assessment of the fire resistance performance of the morticed locksets as fire tested and described in report appendix, with additional scope as detailed in Section 3 of this report.

The proposed modification includes consideration of the associated family of products.

This assessment report is subject to the requirements and limitations described in Sections 2 and 8.

The assessment in Section 5 of this report found that if the mortice locksets and cylinders as tested and described in the appendix had been modified as proposed, it is expected that it would have been capable of up to e.g. 60 minutes of integrity and insulation if tested in a similar manner to EN 1634-1:2014+A1:2018.

This report represents our opinion as to the performance likely to be demonstrated on a test in accordance with the test standard specified above, on the basis of the test evidence referred to in this report. We express no opinion as to whether that evidence, and/or this report would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.

Contents

Signatories and Revision History	2
Executive summary	3
1. Introduction	5
2. Assessment framework	5
3. Description of the mortice locksets & Cylinders	6
3.1 Lock Group 1 – Architectural Sashlocks	6
3.2 Lock Group 2 – DIN Locks	7
3.3 Lock Group 7 – Fire Brigade Locks – Added in Issue 2	8
3.4 Lock Group 10 - Residential Sashlocks	9
3.5 Lock Group 11 - Mortice Nightlatches	10
3.6 Lock Group 12 - Architectural Tubular Latches	11
3.7 Lock Group 13 - Residential Tubular Latches	12
3.8 Lock Group 22 - Roller Catch	13
3.9 Cylinders	13
4. General requirements and assumptions	14
5. Assessment of proposed modifications	16
5.1 Mortice Locksets & Cylinders	16
5.1.1 Proposal	16
5.1.2 General requirements – Locks & Cylinders	16
5.1.3 Lock group 1 – Architectural Sashlocks	17
5.1.4 Lock group 2 – DIN Locks	18
5.1.5 Lock group 7 – Fire Brigade Lock - Added in Issue 2	19
5.1.6 Lock group 10 – Residential Sashlocks	20
5.1.7 Lock group 11 – Mortice Nightlatches	22
5.1.8 Lock group 12 – Architectural Tubular Latches	23
5.1.9 Lock group 13 – Residential Tubular Latches	23
5.1.10 Lock group 22 – Roller Catch	25
5.1.11 Euro profile cylinders	26
5.2 Proposed Doorsets	30
6. Conclusions	32
7. Declaration	33
8. Limitations	34
9. Validity	36
Appendix A Summary of supporting data	37
A.1 Primary Evidence	37
A.2 Secondary Evidence	50
Appendix B	52

1. Introduction

This report presents an assessment of the fire resistance performance of the morticed locksets as fire tested and described in the appendix and when modified as detailed in Section 3 of this report.

2. Assessment framework

An assessment is an opinion of the likely performance of a component or element of structure if it was subjected to a standard fire test.

This assessment report has been carried out in accordance with the Passive Fire Protection Forum (PFPF) 'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence - 2021' and has been written in accordance with the general principles outlined in BS EN 15725: 2023; *Extended application reports on the fire performance of construction products and building elements, as applicable*.

This scope document cannot be used as supporting documentation for either a CE or UKCA marking application for doorsets, nor can the conclusion be used to establish a formal classification against EN13501-2).

The scope presented in this report relates to the behaviour of the element under the particular conditions of the test; they are not intended to be the sole criterion for considering the potential fire hazard of the door assembly in use.

This report has been prepared and checked by product assessors with the necessary competence, who subscribe to the principles outlined in the Passive Fire Protection Forum (PFPF) 'Guide to Undertaking Technical Assessments of the Fire Performance of Construction Products Based on Fire Test Evidence - 2021'. The aim of the PFPF guidelines is to give confidence to end-users that assessments that exist in the UK are of a satisfactory standard to be used for building control and other purposes.

This report uses established empirical methods of extrapolation and experience of fire testing similar elements, in order to extend the scope of application by determining the limits for the designs based on the tested constructions and performances obtained. The scope is an evaluation of the potential fire resistance performance, if the variations specified herein were to be tested in accordance with test standard specified.

This report has been written using appropriate test evidence generated at UKAS accredited laboratories, to the relevant test standard. The supporting test evidence has been deemed appropriate to support the stated design and is summarised in Section 3 and Appendix A.

3. Description of the mortice locksets & Cylinders

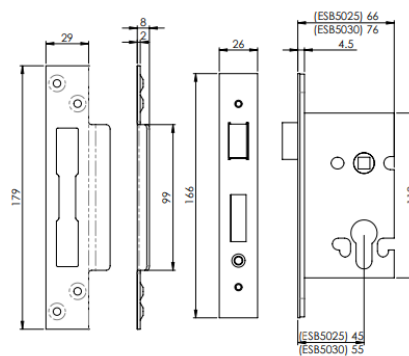
3.1 Lock Group 1 – Architectural Sashlocks

All locks have the same basic construction, all comprising of steel cases, with brass latch bolts with 11.2 mm projection. All locksets have the same latch with the exception of the deadbolt variant. The variations are the change in case depth and a slight change in case width and some locks are supplied with cylinders and turns or keys. The strike plates are all of the same material and vary in thickness between 2-3 mm. The locks are manufactured at J/198.

The approval applies to the following configurations for use with 60 minute predominately steel based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material
ESB5025	Easi-T Euro Profile BS Cylinder Sashlock 2.5"	Sashlock	Euro	Steel
ESB5025CT	Easi-T Euro Profile BS Cylinder Sashlock 2.5" Cyl/Turn	Sashlock	Euro	Steel
ESB5030	Easi-T Euro Profile BS Cylinder Sashlock 3"	Sashlock	Euro	Steel
ESB5030CT	Easi-T Euro Profile BS Cylinder Sashlock 3" Cyl/Turn	Sashlock	Euro	Steel
LSB5525	Easi-T 5 Lever Sashlock 2.5"	Sashlock	Key	Steel
LSB5530	Easi-T 5 Lever Sashlock 3"	Sashlock	Key	Steel
LSS5325	Easi-T 3 Lever Sashlock 2.5"	Sashlock	Key	Steel
LSS5330	Easi-T 3 Lever Sashlock 3"	Sashlock	Key	Steel
LSS5525	Easi-T 5 Lever Sashlock 2.5"	Sashlock	Key	Steel
LSS5530	Easi-T 5 Lever Sashlock 3"	Sashlock	Key	Steel
LDS5325	Easi-T 3 Lever Deadlock 2.5"	Deadlock	n/a	Steel
LDS5330	Easi-T 3 Lever Deadlock 3"	Deadlock	n/a	Steel
LDS5525	Easi-T 5 Lever Deadlock 2.5"	Deadlock	n/a	Steel
LDS5530	Easi-T 5 Lever Deadlock 3"	Deadlock	n/a	Steel
RSL5030	Easi-T Roller Bolt Euro Deadlock	Deadlock	Euro	Steel
BAS5025	Easi-T Bathroom Lock 5mm Follower 2.5"	Bathroom	n/a	Steel
BAS5030	Easi-T Bathroom Lock 5mm Follower 3"	Bathroom	n/a	Steel
ULS5025	Easi-T Upright Latch 2.5"	Latch	Key	Steel
ULS5030	Easi-T Upright Latch 3"	Latch	Key	Steel
FLL5025	Easi-T Flat Latch 2.5"	Latch	n/a	Steel
FLL5030	Easi-T Flat Latch 3"	Latch	n/a	Steel
ESS5025	Easi-T Euro Profile Sashlock - 2.5"	Sashlock	Euro	Steel
ESS5030	Easi-T Euro Profile Sashlock - 3"	Sashlock	Euro	Steel

EDB5025	Easi-T Euro Profile BS Cylinder Deadlock 2.5"	Deadlock	Euro	Steel
EDB5025CT	Easi-T Euro Profile BS Cylinder Deadlock 2.5" Cyl/Turn	Deadlock	Euro	Steel
EDB5030	Easi-T Euro Profile BS Cylinder Deadlock 3"	Deadlock	Euro	Steel
EDB5030CT	Easi-T Euro Profile BS Cylinder Deadlock 3" Cyl/Turn	Deadlock	Euro	Steel
LDB5525	Easi-T 5 Lever Deadlock 2.5"	Deadlock	n/a	Steel
LDB5530	Easi-T 5 Lever Deadlock 3"	Deadlock	n/a	Steel
EDS5025	Easi-T Euro Profile Deadlock 2.5"	Deadlock	Euro	Steel
EDS5030	Easi-T Euro Profile Deadlock 3"	Deadlock	Euro	Steel



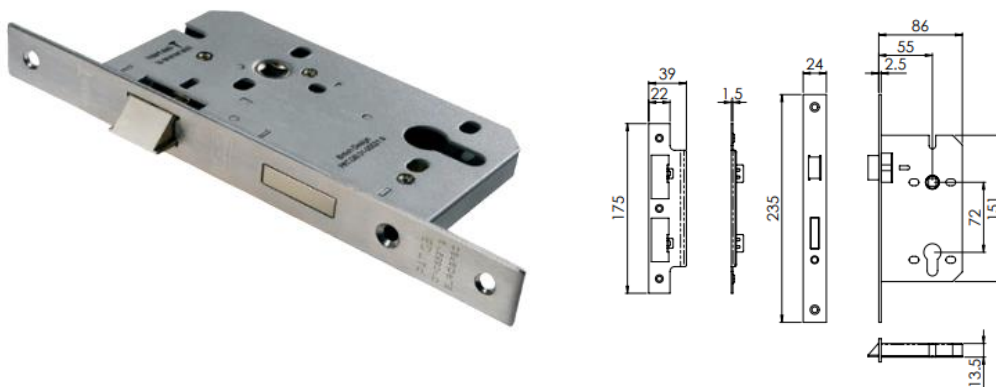
3.2 Lock Group 2 – DIN Locks

All locks have the same basic construction, all comprising of steel cases, with steel deadbolts and steel latch bolts with 11.2 mm projection latch with the exception of the deadbolt variant. The variations are the change in case depth and a slight change in case width and some locks are supplied with cylinders and turns or keys. The strike plates are all of the same material. The locks are manufactured at J/198.

The approval applies to the following configurations for use with 240 minute predominately steel based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material
DLE0055EP	Contract DIN Euro Deadlock 55mm	Deadlock	Euro	Steel
DLS0060EP	Easi-T DIN Euro Profile Deadlock 60mm Backset	Deadlock	Euro	Steel
DLE0055L	Contract DIN Latch 55mm	Latch	Key	Steel
DLE7255EP	Contract DIN Euro Profile Sashlock 55mm	Sashlock	Euro	Steel
DLE7255NL	Contract DIN Euro Profile Nightlatch 55mm	Nightlatch	Euro	Steel
DLE7855WC	Contract DIN Bathroom Lock 55mm	Bathroom	n/a	Steel
DLS0060L	Easi-T DIN Latch 60mm Backset	Latch	Key	Steel
DLS7260ESC	Easi-T DIN Euro Profile Escape Lock 60mm	Escape	Euro	Steel

	Backset			
DLS7260EP	Easi-T DIN Euro Profile Sashlock 60mm Backset	Sashlock	Euro	Steel
DLS7260NL	Easi-T DIN Euro Profile Nightlatch 60mm Backset	Nightlatch	Euro	Steel
DLS7260NLA	Easi-T DIN Euro Profile Anti Thrust Nightlatch 60mm Backset	Nightlatch	Euro	Steel
DLS7860WC	Easi-T DIN Bathroom Lock 60mm Backset	Bathroom	n/a	Steel
DLS7860LL	Easi-T DIN Lift to Lock Rollerbolt Lock 60mm Backset	Bathroom	n/a	Steel
DLE7260EP	Contract DIN Euro Profile Sashlock 60mm	Sashlock	Euro	Steel
DLE0060L	Contract DIN Latch 60mm	Latch	Key	Steel
DLE0060EP	Contract DIN Euro Deadlock 60mm	Deadlock	Euro	Steel
DLE7260NL	Contract DIN Euro Profile Nightlatch 60mm	Nightlatch	Euro	Steel
DLE7860WC	Contract DIN Bathroom Lock 60mm	Bathroom	n/a	Steel

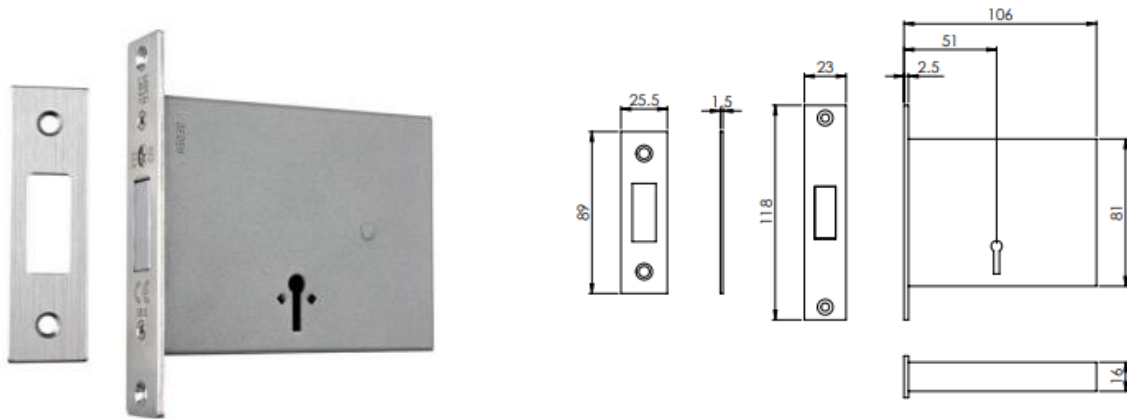


3.3 Lock Group 7 – Fire Brigade Locks – Added in Issue 2

All locks have the same basic construction, all comprising of steel cases with steel deadbolts with 13.5 mm projection and have the same overall dimensions. The variation is a change in key design.

This approval applies to the following configurations for use with 30 or 60 minute timber based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material
LFB1	Fire Brigade Lock	Deadlock	Key only	Steel
LFB2	Fire Brigade Lock	Deadlock	Key only	Steel

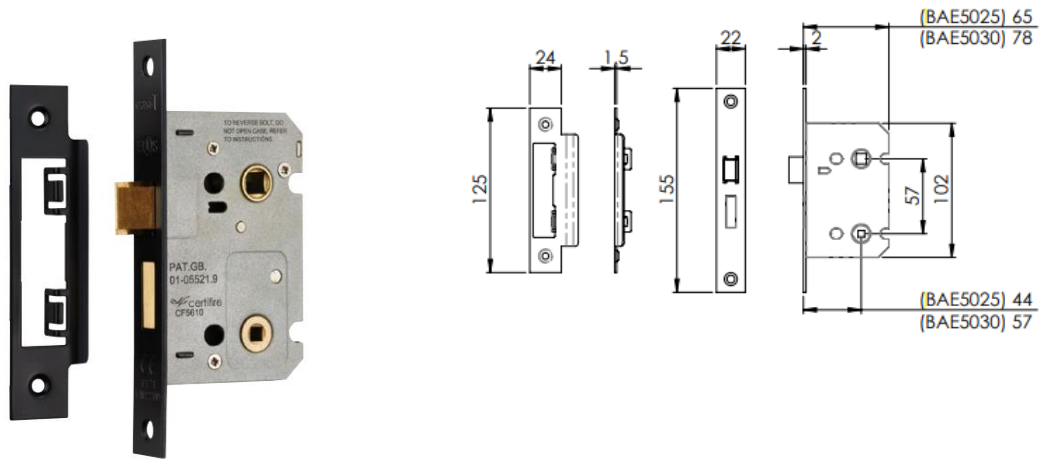


3.4 Lock Group 10 - Residential Sashlocks

All locks have the same basic construction, all comprising of steel cases, with brass latch bolts with 11 mm projection. All locksets have the same latch with the exception of the deadbolt variant. All locksets have the same dead bolt projections. The variations are the change in case depth and internal mechanisms. The strike plates are all of the same size and material. The locks are manufactured at J/085.

The approval applies to the following configurations for use with 30 and 60 minute timber based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material
BAE5025	Contract Bathroom Lock 2.5"	Bathroom	n/a	Steel
BAE5030	Contract Bathroom Lock 3"	Bathroom	n/a	Steel
LSE5325	Contract 3 Lever Sashlock 2.5"	Sashlock	Key	Steel
LSE5330	Contract 3 Lever Sashlock 3"	Sashlock	Key	Steel
ESE5025	Contract Euro Profile Sashlock 2.5"	Sashlock	Euro	Steel
ESE5030	Contract Euro Profile Sashlock 3"	Sashlock	Euro	Steel
EDE5025	Contract Euro Profile Deadlock 2.5"	Deadlock	Euro	Steel
EDE5030	Contract Euro Profile Deadlock 3"	Deadlock	Euro	Steel
ULE5025	Contract Upright Latch 2.5"	Latch	n/a	Steel
ULE5030	Contract Upright Latch 3"	Latch	n/a	Steel
LDE5325	Contract 3 Lever Deadlock 2.5"	Deadlock	n/a	Steel
LDE5330	Contract 3 Lever Deadlock 3"	Deadlock	n/a	Steel

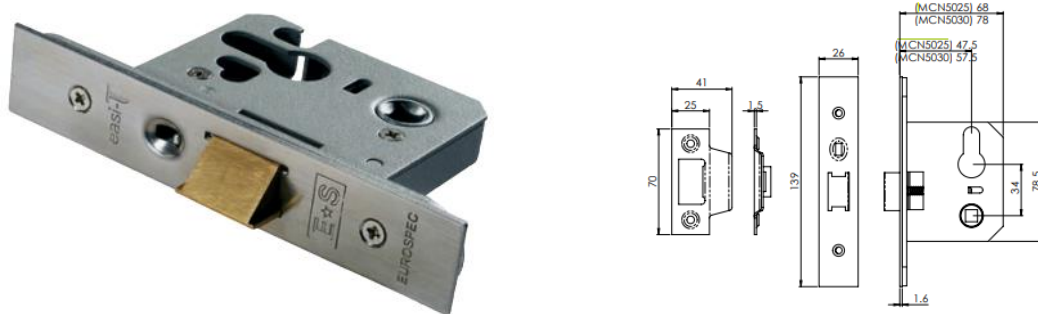


3.5 Lock Group 11 - Mortice Nightlatches

All locks have the same basic construction, all comprising of steel cases, with steel latch bolts with 11.5 mm projection. All locksets have the same dead bolt projections. The variations are the change in case depth. The strike plates are all of the same size and material. The locks are manufactured at J/198.

The approval applies to the following configurations for use with 30 minute timber based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material
MCN5025	easi-T Mortice Cylinder Nightlatch 68mm	Nightlatch	Euro	Steel
MCN5030	easi-T Mortice Cylinder Nightlatch 76mm	Nightlatch	Euro	Steel

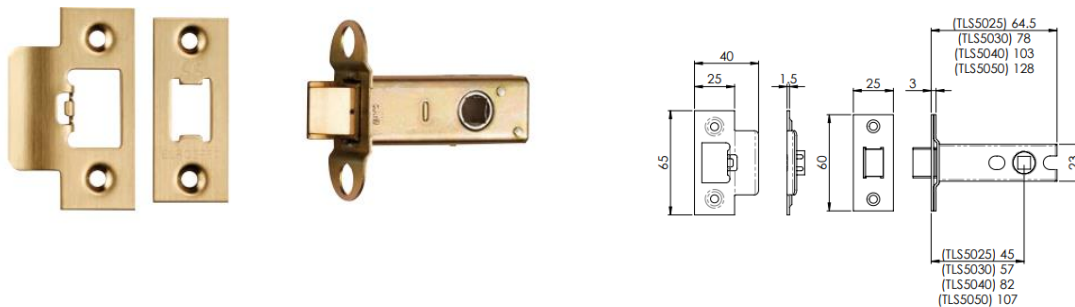


3.6 Lock Group 12 - Architectural Tubular Latches

All locks have the same basic construction, all comprising of steel cases, with either copper latch bolts with 10 mm projection or copper deadbolts. A variation is a change in case depth. The strike plates are all of the same material. The locks are manufactured at J/198.

The approval applies to the following configurations for use with 30 minute timber based doorsets:

Reference	Description	Lock Type	Cylinder Operated	Case Material																													
TLD5025	Easi-T Tubular Dead Bolt c/w 5mm Follower 2.5"	Deadlock	n/a	Steel																													
TLD5030	Easi-T Tubular Dead Bolt c/w 5mm Follower 3"	Deadlock	n/a	Steel																													
TLD5040	Easi-T Tubular Dead Bolt c/w 5mm Follower 4"	Deadlock	n/a	Steel																													
TLD5825	Easi-T Tubular Dead Bolt c/w 8mm Follower 2.5"	Deadlock	n/a	Steel																													
TLD5830	Easi-T Tubular Dead Bolt c/w 8mm Follower 3"	Deadlock	n/a	Steel																													
TLD5840	Easi-T Tubular Dead Bolt c/w 8mm Follower 4"	Deadlock	n/a	Steel																													
TLS5025	Easi-T Heavy Sprung Tubular Latch 2.5"	Latch	n/a	Steel																													
TLS5030	Easi-T Heavy Sprung Tubular Latch 3"	Latch	n/a	Steel																													
TLS5040	Easi-T Heavy Sprung Tubular Latch 4"	Latch	n/a </tr <tr> <td>TLS8025</td> <td>Easi-T Tubular Latch 2.5"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr> <tr> <td>TLS8030</td> <td>Easi-T Tubular Latch 3"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr> <tr> <td>TLS8040</td> <td>Easi-T Tubular Latch 4"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr> <tr> <td>DL5025</td> <td>Delemain Heavy Sprung Tubular Latch 2.5"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr> <tr> <td>DL5030</td> <td>Delemain Heavy Sprung Tubular Latch 3"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr> <tr> <td>DL5040</td> <td>Delemain Heavy Sprung Tubular Latch 4"</td> <td>Latch</td> <td>n/a</td> <td>Steel</td> </tr>	TLS8025	Easi-T Tubular Latch 2.5"	Latch	n/a	Steel	TLS8030	Easi-T Tubular Latch 3"	Latch	n/a	Steel	TLS8040	Easi-T Tubular Latch 4"	Latch	n/a	Steel	DL5025	Delemain Heavy Sprung Tubular Latch 2.5"	Latch	n/a	Steel	DL5030	Delemain Heavy Sprung Tubular Latch 3"	Latch	n/a	Steel	DL5040	Delemain Heavy Sprung Tubular Latch 4"	Latch	n/a	Steel
TLS8025	Easi-T Tubular Latch 2.5"	Latch	n/a	Steel																													
TLS8030	Easi-T Tubular Latch 3"	Latch	n/a	Steel																													
TLS8040	Easi-T Tubular Latch 4"	Latch	n/a	Steel																													
DL5025	Delemain Heavy Sprung Tubular Latch 2.5"	Latch	n/a	Steel																													
DL5030	Delemain Heavy Sprung Tubular Latch 3"	Latch	n/a	Steel																													
DL5040	Delemain Heavy Sprung Tubular Latch 4"	Latch	n/a	Steel																													

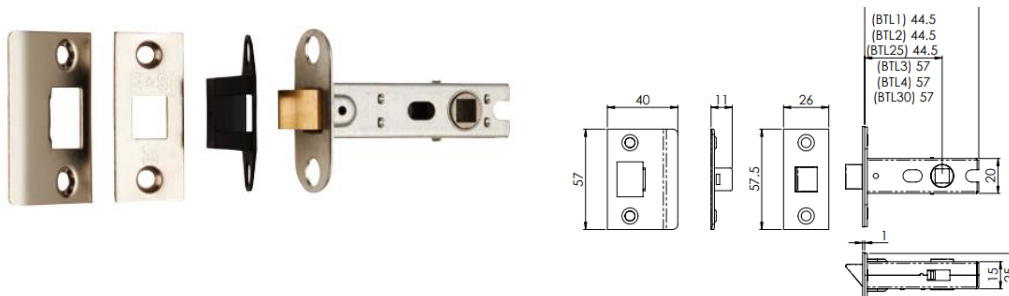


3.7 Lock Group 13 - Residential Tubular Latches

All locks have the same basic construction, all comprising of steel cases, with brass latch bolts with 10 mm projection. The variations are the change in case depth or surface finish. The strike plates are all of the same material. The locks are manufactured at J/158.

The approval applies to the following configurations for use with 30 and 60 minute timber based doorsets:

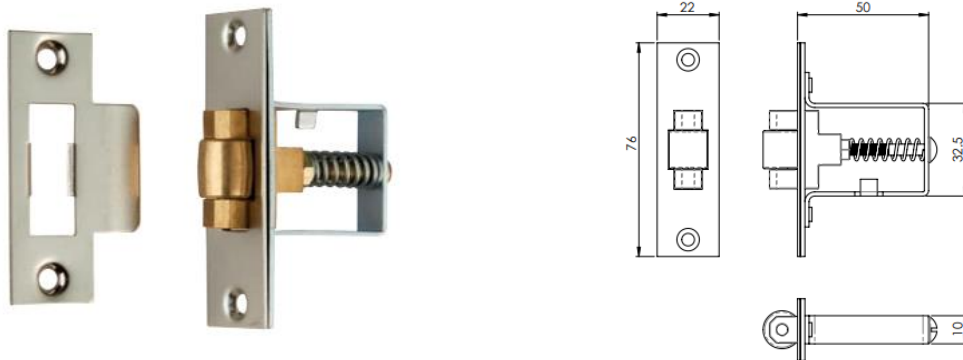
Reference	Description	Lock Type	Cylinder Operated	Case Material
BTL1	Tubular Latch 2.5"	Latch	n/a	Steel
BTL2	Tubular Latch 2.5"	Latch	n/a	Steel
BTL3	Tubular Latch 3"	Latch	n/a	Steel
BTL4	Tubular Latch 3"	Latch	n/a	Steel
BTL25	Tubular Latch 2.5"	Latch	n/a	Steel
BTL30	Tubular Latch 3"	Latch </td <td>n/a</td> <td>Steel</td>	n/a	Steel
TLE5025	Tubular Latch 2.5"	Latch	n/a	Steel
TLE5030	Tubular Latch 3"	Latch	n/a	Steel



3.8 Lock Group 22 - Roller Catch

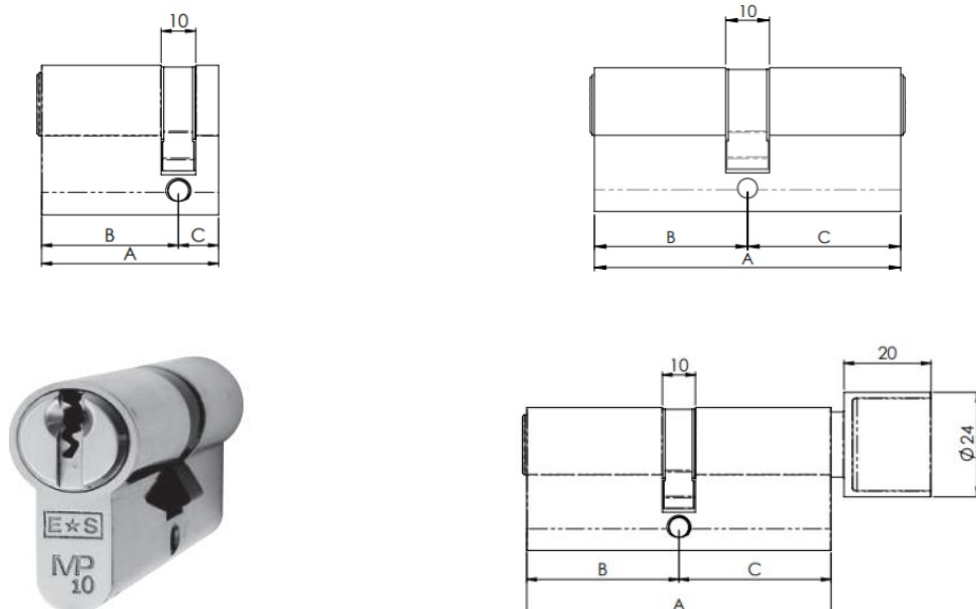
The approval applies to the following configurations for use with 30 minute timber based doorsets and 240 minute predominately steel based doorsets, The locks are manufactured at J/085:

Reference	Description	Lock Type	Cylinder Operated	Case Material
RCA5511	Roller Catch	Latch	n/a	Steel



3.9 Cylinders

All the cylinders have the same typical euro profile and are manufactured from the same material (Brass), a full list of models are listed within the appendix for use with 30 and 60 minute timber based doorsets and 240 minute predominately steel based doorsets:



4. General requirements and assumptions

- It is also assumed that the construction of the wall, which supports the proposed doorsets, will have been the subject of a separate test and the performance of the wall is such that it will not influence the performance of the doorset for the required period.
- It is also assumed that the doorsets will fully comply with any certification scope or assessed modifications, apart from the modifications specified in this report.
- It is also assumed that the Carlisle Brass cylinders will be fitted, in conjunction with a previously tested lockset, to a doorset which has also been previously shown to be capable of providing the required fire resistance performance when fitted with a cylinder lock and tested in accordance with BS EN 1634-1 in the proposed configuration i.e. single-leaf or double-leaf.
- Door leaf to frame clearance gaps can have a significant effect on the overall fire performance of a doorset. It is therefore assumed that the leaf to leaf and leaf to frame clearance gaps will not exceed those measured for the relevant fire tested doorset. The application of increased perimeter gaps in accordance with the Field of Direct application of test results, in accordance with BS EN 1634-1: 2014 + A1: 2018 is therefore not permitted in conjunction with this assessment report. It is assumed that the door leaves will be in the closed position.
- It is assumed that the doorsets will be installed in a similar manner to that of the previously tested assembly by competent installers.
- The locks/latches shall not be fitted higher than 1100 mm from the centre of the lock to the finished floor level of the surrounding floors.
- Recessing of any type that may be required for any of the specified hardware shall result in a tight fit, allowing for any intumescent protection where required.
- The spindle hole through the door shall be a maximum of 16 mm diameter unless the doorset has test evidence that proves spindle holes of a greater size than this.
- Where a lock considered by this report does not incorporate a self latching mechanism e.g. deadlocks and dead bolts, then either the lock must be engaged or the doorsets must have been proven for the required period without the restraint of a latch/lock.
- It is assumed that single-acting doorsets will be fitted with a CE marked surface mounted closing device which is capable of fully closing the doorset from any position and overcoming the latch mechanism. It is further assumed that the doorsets will be in the fully closed position.
- 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. forend, case size, latchbolt, strikeplate, fixing specification, 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.

- An appraisal of the hardware variants detailed in this report is based upon product information supplied by the hardware manufacturer, which is retained in the confidential file relating to this report. Warringtonfire have not inspected the devices being appraised and cannot be held responsible for the accuracy of the information provided.
- EN1634-1 was issued originally in 2000, with amended versions issued in 2008, 2014 and 2018. The differences between each version are mainly procedural and are not considered to have a practical impact on the performance of the samples under test. On this basis this evaluation is considered applicable to all versions of EN1634-1 issued prior to the issue of this assessment.
- It is assumed that the end user will have a full understanding of the tested specification as defined in the relevant test report(s) summarised in Appendix A.
- If a design variation or extension to scope is not explicitly detailed within the assessment it should not be assumed to be acceptable by omission.

5. Assessment of proposed modifications

5.1 Mortice Locksets & Cylinders

5.1.1 Proposal

It is proposed to consider the fire resistance performance of timber-based door assemblies, when fitted with the mortice locksets and cylinders outlined above, for 30 and 60 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018.

It is also proposed to consider the fire resistance performance of predominately steel based door assemblies, when fitted with the mortice locksets and cylinders outlined above, for up to 120 minutes fire resistance integrity performance only (and where appropriate insulation performance), if the hardware was to be tested to the requirements of BS EN 1634-1:2014 + A1:2018.

It is also proposed that the doorsets may be of single or double-leaf configuration. Details of the proposed range of handles are as identified in Appendix of this report.

5.1.2 General requirements – Locks & Cylinders

As this appraisal is intended to be used on a general basis and not restricted to any particular manufacturer of fire doors, the following points are given to enable the locks or cylinder to be used safely:

It is critical that the lock dimensions are not increased since the increased mortice required for a large case may lead to an earlier burn through of the leaf or increased strike/forend dimensions may lead to the penetration of flames/hot gases at the leaf edge due to further interruption of intumescent seals and an increase in conducted heat.

With regards the intumescent protection, it is critical that this is not reduced from that tested, as the reaction of this material when subjected to the heating conditions of the test is essential in limiting the burn through of the leaf and at the leaf to frame gap at the lock position.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

Substitution of alternative locksets from the proposed ranges may therefore be considered in terms of the critical aspects discussed and where such locksets fall within the scope of the tested locksets, it is considered reasonable to assume that no reduction in the performance of the doorset would be expected because of their substitution.

Other cylinders may incorporate different internal mechanical processes; however this is considered of little consequence in the contribution of the fire performance. It is also considered that the length of the cylinder has minimal impact on the fire resistance performance, as the length does not require any additional material to be removed from the door leaf.

The proposed cylinders are singles, double cylinders and cylinders and thumbturns, these both penetrate through the thickness of the door leaf as it would be expected for a typical cylinder when fitted within a lockset.

This appraisal does not consider the implications of installing a specific lock within a specific timber/mineral-based fire door construction and only considers the influence of cylinders, the suitability of the door leaf and latch/lock should be demonstrated by separate test/assessment evidence.

5.1.3 Lock group 1 – Architectural Sashlocks

Predominately Steel-Based Doorsets

The performance of Doorset B during the test referenced WF 341094 is cited to display the ability of the 'ESS5030' UK Architectural BS Sashlock to contribute towards the required resistance performance for 60 minute predominately steel based doorsets.

Doorset B in WF test Report No. 341094 was a 2090 mm high by 990 mm wide doorset and incorporated a door leaf of overall nominal dimensions of 2040 mm high by 903 mm wide by 45 mm thick. The door leaf comprised of a 1.2 mm Zintec Steel facings encasing a "dufaylite" honeycomb core hung within a mild steel frame. The Doorset was installed so that it opened away from the heating conditions of the test. The Doorset was fitted with a 'ESS5030' lockset complete with lever handles and a Europrofile cylinder, which was unlatched for the duration of the test.

Doorset B satisfied the failure criteria of up to 54 minutes. At 54 minutes sustained flaming issues from the perimeter sealant which cannot be attributed to the 'ESS5030' lockset. At 67 minutes sustained flaming was recorded at the lockset position, as this lock surpassed the fire resistance period of 60 minutes and is unlikely to demonstrate a failure prior to 60 minutes. The test was discontinued after a period of 270 minutes. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch bolts. All locksets have latch and/or dead bolt projections at least equal to that of the tested model. The nominal dimensions of all the locks considered by this report are either the same size or smaller than those tested those tested in terms of case and strikeplate dimensions.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may lead to a premature integrity failure.

Substitution of alternative locks may therefore be considered in terms of the critical aspects discussed and where such locks fall within the scope of the tested locks, it is considered reasonable to assume that no reduction in the performance of the doorset would be expected as a consequence of their substitution.

The modifications of the locksets relate to the mechanical performance of the locks to EN12209, and are not expected to have any detrimental impact on the ability to retain the door in the closed position under fire test conditions, and do not introduce any flammable components.

All locksets have latch and/or dead bolt projections at least equal to that of the tested model. The nominal dimensions of all the locks considered by this report are the same as those tested in terms of forend and case dimensions.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range (no plastic dustbox),

Plastic dustboxes are not approved for use with steel doorsets.

The full range of mortice locks proposed is therefore deemed acceptable for use with predominately steel based doorsets of up to 60 minute integrity. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset and the locks are approved for use with previously proven unlatched predominately steel based doorsets only.

5.1.4 Lock group 2 – DIN Locks

Predominately Steel-Based Doorsets

The performance of Doorset A during the test referenced WF 341094 is cited to display the ability of the 'DLE7255EP' Din Euro sashlock to contribute towards the required resistance performance for 240 minute predominately steel based doorsets.

Doorset A in WF test Report No. 341094 was a 2090 mm high by 990 mm wide doorset and incorporated a door leaf of overall nominal dimensions of 2040 mm high by 903 mm wide by 45 mm thick. The door leaf comprised of a 1.2 mm Zintec Steel facings encasing a "dufaylite" honeycomb core hung within a mild steel frame. The Doorset was installed so that it opened away from the heating conditions of the test. The Doorset was fitted with a 'DLE7255EP' lockset complete with lever handles and a Europrofile cylinder, which was latched for the duration of the test. An inactive surface mounted closer body was fitted to the unexposed face.

Doorset A satisfied the failure criteria of up to 70 minutes. At 61 minutes a cotton pad test was performed on Doorset A, due to the nature of the specimen being non-combustible and conducting a large amount of heat this failure of the cotton pad is unavoidable. At 124 minutes sustained flaming was recorded at the head of the doorset, which cannot be attributed to the lockset. There were no other instances of sustained flaming recorded during the test duration of 270 minutes.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch bolts. All locksets have latch and/or dead bolt projections at least equal to that of the tested model. The nominal dimensions of all the locks considered by this report are either the same size or smaller than those tested those tested in terms of case and strikeplate dimensions.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may lead to a premature integrity failure.

Substitution of alternative locks may therefore be considered in terms of the critical aspects discussed and where such locks fall within the scope of the tested locks, it is considered reasonable to assume that no reduction in the performance of the doorset would be expected as a consequence of their substitution.

The modifications of the locksets relate to the mechanical performance of the locks to EN12209, and are not expected to have any detrimental impact on the ability to retain the door in the closed position under fire test conditions, and do not introduce any flammable components.

All locksets have latch and/or dead bolt projections at least equal to that of the tested model. The nominal dimensions of all the locks considered by this report are the same as those tested in terms of forend and case dimensions.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range (no plastic dustbox).

Plastic dustboxes are not approved for use with steel doorsets.

The full range of mortice locks proposed is therefore deemed acceptable for use with predominately steel based doorsets of up to 240 minute integrity.

5.1.5 Lock group 7 – Fire Brigade Lock - Added in Issue 2

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 543736 is cited to display the ability of the 'LFB1' fire brigade deadlocks to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 543736 was a 2080 high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 926 mm wide by 44 mm thick graduated density chipboard door with 6 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The LFB1 deadlock was fitted at 975 mm high along the leading edge with escutcheons and was wrapped in a 0.8 mm intercalated graphite kit reference 'ES1275' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate fully interrupted the perimeter intumescent. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 36 minutes; the door was blanked off after 36 minutes to allow the testing of the Doorset B to continue.

The modifications of the deadlocks relating to the key design are not expected to have any impact upon the fire performance and do not introduce any flammable components.

All of the proposed deadlocks are of identical materials and will utilise the same level of intumescent protection and all are of the same critical dimensions and therefore they may be positively appraised for use on 30 minute timber based doorsets.

Timber based doorsets – 60 minutes

The performance of Doorset B during the test referenced WF 543736 is cited to display the ability of the 'LFB1' fire brigade deadlocks to contribute towards the required resistance performance for 60 minute timber based doorsets.

Doorset A included in test report WF 543736 was a 2080 high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 926 mm wide by 54 mm thick graduated density chipboard door with 6 mm hardwood lipping to the vertical edges. The leaf was hung within a hardwood frame with two 15 x 4 mm perimeter intumescent fire seal fitted within the frame rebate. The LFB1 deadlock was fitted at 975 mm high along the leading edge with escutcheons and was wrapped in a 0.8 mm intercalated graphite kit reference 'ES1275' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate interrupted the perimeter intumescent leaving 6 mm of both the intumescent seals uninterrupted. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 68 minutes; the test was discontinued after 68 minutes.

The modifications of the deadlocks relating to the key design are not expected to have any impact upon the fire performance and do not introduce any flammable components.

All of the proposed deadlocks are of identical materials and will utilise the same level of intumescent protection and all are of the same critical dimensions and therefore they may be positively appraised for use on 60 minute timber based doorsets.

5.1.6 Lock group 10 – Residential Sashlocks

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 360230 is cited to display the ability of the 'LSE5225' Lever sashlock to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 360230 was a 2080 high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 933 mm wide by 44 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The LSE5225 lock was fitted at 1020 mm high along the leading edge with lever handles, and was wrapped in a 0.8 mm intercalated graphite kit reference 'FS318' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate fully interrupted the perimeter intumescent. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 36 minutes; the door was blanked off after 36 minutes to allow the testing of the Doorset B to continue.

The performance of Doorset B during the test referenced WF 335637 is cited to display the ability of 'ESE5030' Lever sashlock to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset B included in test report WF 335637 was a 2082 mm high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 931 mm wide by 44 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The 'ESE5030' Lever sashlock was fitted along the leading edge and was wrapped in a 0.8 mm intercalated graphite kit reference 'FS318' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate fully interrupted the perimeter intumescent. The roller latch has no ability to restrain the door.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 37 minutes.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch bolts. All locksets have latch and/or dead bolt projections at least equal to that of the tested model. Some of the lock cases are 13 mm deeper than the tested model, however the increase is considered minimally invasive as the amount of material from each face is not reduced, meaning the amount of essential material that protects the lockset is not increased. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of case and strikeplate dimensions. The locks latch bolt is manufactured of brass and projects 11 mm from the face of the forend plate, based on the empirical evidence available and the melting point of brass it is considered that this would be sufficient to restrain the door in the closed position if required to do so.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range (no plastic dustbox).

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection and all are of the same critical dimensions and therefore they may be positively appraised for use on 30 minute timber based doorsets only.

Timber based doorsets – 60 minutes

The performance of Doorset B during the test referenced WF 360230 is cited to display the ability of the 'LSE5225' Lever sashlock to contribute towards the required resistance performance for 60 minute timber based doorsets.

Doorset A included in test report WF 360230 was a 2085 high by 1005 mm wide single acting single leaf doorset with a 2040 mm high by 933 mm wide by 54 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a hardwood frame with two 15 x 4 mm perimeter intumescent fire seal fitted within the frame rebate. The LSE5225 lock was fitted at 1020 mm high along the leading edge with lever handles, and was wrapped in a 0.8 mm intercalated graphite kit reference 'FS318' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate fully interrupted the perimeter intumescent. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 66 minutes; the test was discontinued after 66 minutes.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch bolts. All locksets have latch and/or dead bolt projections at least equal to that of the tested model. Some of the lock cases are 13 mm deeper than the tested model, however the increase is considered minimally invasive as the amount of material from each face is not reduced, meaning the amount of essential material that protects the lockset is not increased. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of case and strikeplate dimensions. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The lock installation included a key profile lock and so the performance of a lockset with a euro profile is not considered acceptable by this appraisal as the Europrofile cylinder requires more essential material to be removed. The hole in the door face shall follow the shape of the key and be as tight as possible.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range (no plastic dustbox).

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection and all are of the same critical dimensions and therefore they may be positively appraised. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset and the locks are approved for use with previously unlatched 60 minute timber based doorsets only.

5.1.7 Lock group 11 – Mortice Nightlatches

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 141749 is cited to display the ability of the 'MCN5025' mortice cylinder nightlatch to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 141749 was a 2080 mm high by 997 mm wide single acting single leaf doorset with a 2042 mm high by 927 mm wide by 46 mm thick featuring a flaxboard core, softwood stiles and rails, chipboard facings and hardwood lippings to the vertical edges. The leaf was hung within a softwood frame with a single 10 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The 'MCN5025' lock was fitted at 985 mm high along the leading edge with a single euro profile cylinder and a turn operated latch and was bedded upon a layer of intumescent mastic applied all around the casing and behind the strike plate. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the tests report, there was a cotton pad failure at the top hinge position at 32 minutes and sustained flaming across the head of the doorset at 34 minutes, both of these failures cannot be attributed to the lockset, the door was blanked off after 35 minutes to allow the testing of the Doorset B to continue.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch bolts. All locksets have latch bolt projections at least equal to that of the tested model. Some of the lock cases are 10 mm deeper than the tested model, however the increase is considered minimally invasive as the amount of material from each face is not reduced, meaning the amount of essential material that protects the lockset is not increased. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of case and strikeplate dimensions. The locks latch bolt is manufactured of brass and projects 11.5 mm from the face of the forend plate, based on the empirical evidence available and the melting point of brass it is considered that this would be sufficient to restrain the door in the closed position if required to do so.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The lock installation included a single euro profile cylinder and therefore the as additional material is required for a double euro profile cylinder it is not permitted for use in conjunction with the locksets. The hole in the door face shall follow the shape of the cylinders and be as tight as possible; furthermore the single cylinders door preparation will penetrate through only half the thickness of the door leaf.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range (no plastic dustbox).

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection outlined above and all are of the same critical dimensions and therefore they may be positively appraised for use on 30 minute timber based doorsets only.

5.1.8 Lock group 12 – Architectural Tubular Latches

The performance of Doorset A during the test referenced WF 195144 is cited to display the ability of the 'TLS5030' tubular latch to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 195144 was a 2078 mm high by 1003 mm wide single acting single leaf doorset with a 2032 mm high by 932 mm wide by 44 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. 'TLS5030' tubular latch was fitted at 1000 mm high along the leading edge with a set of lever handles and was bedded on a layer of 1 mm interdens fitted around the lock body and behind the forend and strikeplate. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the test report, there were no integrity failures for the test duration of 42 minutes.

The proposed locksets are of the same basic construction as those tested comprising of steel lockcases with brass latch or dead bolts. All locksets that incorporate latches have latch bolt projections at least equal to that of the tested model. Some of the lock cases are 25 mm deeper than the tested model or are 13 mm shorter, however the increase is considered minimally invasive as the amount of material from each face is not reduced, meaning the amount of essential material that protects the lockset is not increased, as the shorter models require less material to be removed from the doorset they are considered less onerous. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of lock case. The largest strikeplate has been tested and the other proposed strikeplates are either the same size or are considerably smaller and are therefore considered less onerous. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The other variation of the tubular is a change from the latch to a deadbolt, and are not expected to have any detrimental impact upon the fire performance as well as not introducing any flammable components.

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection and all are of the same critical dimensions and therefore they may be positively appraised for use with 30 minute timber based doorsets only. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

5.1.9 Lock group 13 – Residential Tubular Latches

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 341842 is cited to display the ability of the 'BTL3' tubular latch to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 341842 was a 2085 mm high by 1010 mm wide single acting single leaf doorset with a 2040 mm high by 935 mm wide by 45 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. A 'BTL3' tubular latch was fitted at 1140 mm high along the leading edge with a set of lever handles and was not bedded on any intumescent material. The lock was disengaged during the test and the door was restrained by a surface mounted closer fitted to the exposed face.

On reviewing the observations taken from the test report, there was a sustained flaming integrity failure at the bottom hinge position at 27 minutes, this failure cannot be attributed to the lockset, there were no other recorded failures for the test duration of 36 minutes.

The proposed locksets are of the same basic construction as those tested, comprising of steel lockcases with brass latch bolts. All locksets have latch bolt projections at least equal to that of the tested model. Some of the lock cases are 10 mm smaller than the tested model, however, the decrease is considered less onerous as the total amount of material removed from the leaf is reduced. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of case, the strikeplate tested represent the largest strikeplate proposed and all other variants are smaller but made from the same material. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range, and all other variants are smaller but made from the same material and are therefore approved.

The tubular latch was not fitted with any intumescent material and fully interrupted the perimeter intumescent.

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection outlined above and all are of the same critical dimensions and therefore they may be positively appraised for use on 30 minute timber based doorsets only. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

Timber based doorsets – 60 minutes

The performance of the small scale Doorset B during the test referenced WF 385354 is cited to display the ability of the 'TLE5025' & 'TLE5030' tubular latch to contribute towards the required fire resistance performance for 60 minute timber based doorsets.

Small scale Doorset B included in test report WF 385354 was a 1492 mm high by 668 mm wide door jambs fitted with a 1492 mm high by 589 mm wide by 54 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The jambs were hardwood with two 15 x 4 mm perimeter intumescent fire seal fitted within the frame rebate. A 'TLE5025' tubular latch was fitted with a set of lever handles and was bedded on 2 mm thick graphite intumescent wrapped around the lock case and bedded behind the forend and strikeplate. A 'TLE5030' tubular latch was fitted with a set of knob handles and was bedded on 2 mm thick graphite intumescent wrapped around the lock case and bedded behind the forend and strikeplate. The strikeplate fully interrupted the first perimeter intumescent seal and left 8.5 mm of the second intumescent uninterrupted. The small scale doorset was not operable and could not be opened.

On reviewing the observations taken from the test report, there were sustained flaming integrity failures at the other lockset positions at 61 and 64 minutes, these failures can be directly attributed to the other locksets and not attributed to 'TLE5025' & 'TLE5030', there were no other recorded failures for the test duration of 68 minutes.

The proposed locksets are of the same basic construction as those tested, comprising of steel lockcases with brass latch bolts. The 'TLE5025' model is the 2.5" version of the tubular latch and the 'TLE5030' model is the 3" version of the tubular latch. All locksets have latch bolt projections at least equal to that of the tested model. The rest of the nominal dimensions of all the locks considered by this report are the same size as those tested those tested in terms of case, the strikeplate tested represent the largest strikeplate proposed and all other variants are smaller but made from the same material. As the door was inoperable no claim should be made regarding the locks ability to be able to provide restraint to the doorset.

In terms of the lock material, it is critical that materials which are combustible or have a lower melting point are not utilised since materials which melt or ignite may advance the burn through of the leaf and therefore lead to a premature integrity failure.

The tested strikeplate represented the tallest and widest strikeplate for use with the lock range, and all other variants are smaller but made from the same material and are therefore approved.

All of the proposed locks required are of identical materials and will utilise the same level of intumescent protection including a minimum of 8.5 mm perimeter intumescent fire seal by-passing the strikeplate, all locks are of the same critical dimensions and therefore they may be positively appraised. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset and the locks are approved for use with previously proven unlatched 60 minute timber based doorsets only.

5.1.10 Lock group 22 – Roller Catch

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 335637 is cited to display the ability of 'RCA5511' roller latch to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 335637 was a 2082 mm high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 931 mm wide by 44 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The 'RCA5511' roller latch was fitted along the leading edge and was wrapped in a 0.8 mm intercalated graphite kit reference 'FS318' fitted to all faces of the lock case and behind the forend and strike plate. The strikeplate fully interrupted the perimeter intumescent. The roller latch has no ability to restrain the door.

On reviewing the observations taken from the tests report, there were no integrity failures for the test duration of 37 minutes.

The 'RCA5511' will utilise the same level of intumescent protection and will be fitted the same way as tested. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset and the locks are approved for use with previously proven unlatched 30 minute timber based doorsets only.

Predominately Steel-Based Doorsets

The performance of Doorset A during the test referenced WF 334019 is cited to display the ability of the 'RCA5511' roller latch to contribute towards the required resistance performance for 240 minute predominately steel based doorsets.

Doorset A in WF test Report No. 334019 was a 2090 mm high by 1190 mm wide doorset and incorporated a door leaf of overall nominal dimensions of 2040 mm high by 1103 mm wide by 45 mm thick. The door leaf comprised of a 1.2 mm Zintec Steel facings encasing a "dufaylite" honeycomb core hung within a mild steel frame. The Doorset was installed so that it opened away from the heating conditions of the test. The Doorset was fitted with a 'RCA5511' roller latch. The roller lock has no ability to restrain the door.

Doorset A satisfied the failure criteria of up to 13 minutes. At 13 minutes sustained flaming issues from the around the glass panel which cannot be attributed to the roller latch. The test was discontinued at 270 minutes, as this lock surpassed the fire resistance period of 240 minutes and is unlikely to demonstrate a failure prior to 240 minutes. The roller latch has no ability to restrain the door.

The 'RCA5511' will be fitted the same way as tested. As the door was unlatched no claim should be made regarding the locks ability to be able to provide restraint to the doorset and the locks are approved for use with previously proven unlatched steel-based doorsets only.

5.1.11 Euro profile cylinders

Timber based doorsets – 30 minutes

The performance of Doorset A during the test referenced WF 356836 is cited to display the ability of the cylinder to contribute towards the required resistance performance for 30 minute timber based doorsets.

Doorset A included in test report WF 356836 was a 2078 mm high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 932 mm wide by 44 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The 'ELK13001RE' multi point lock was fitted along the leading edge and bedded on a 0.8 mm intercalated graphite kit referenced FS318, the kit was fitted to all face of the lock cases and behind the strike plate as well as being fitted behind the strike plates, the multi point lockset also incorporated a 'CYX712' Europrofile cylinder as well as a set of lever handles, the strike plates fully interrupted the perimeter intumescent. The lockset was unlatched for the duration of the test and the door was restrained by a surface mounted closer to the exposed face.

On reviewing the observations taken from the test report, there was a sustained flaming failure at 35 minutes at the top corner of the trailing edge, at 37 minutes the doorset was blanked off to allow the test to continue, there were no other recorded failures during this time. As this lock and its components (Europrofile cylinder) surpassed the fire resistance performance period of 30 minutes and in doing so it is unlikely to demonstrate a failure prior to 30 minutes.

The proposed Europrofile cylinders can all be described as "typical" Europrofile cylinders, with the same shape and materials just different variations on length, either being longer or shorter or being a single euro profile cylinder. As the reason for the different cylinder lengths is primarily to suit the thickness of the door into which the lockset is installed, it is reasonable to consider that the alternative cylinders will perform in a similar manner to the tested model. The proposed range includes single cylinders, double cylinders and cylinder/thumbturn options. However, as the tested products were double cylinders, this configuration is considered to represent the most onerous application, requiring the body of the cylinder to pass completely through the entire door thickness and lock case, therefore this provides a high degree of confidence that the single cylinders, double cylinders and cylinder/thumbturns will perform for the required periods of fire resistance.

Cylinders shall only be fitted to doors which have previously been shown capable of accommodating the installation of cylinder locks without detriment to the doorset's performance.

The hole in the door face shall follow the shape of the cylinders and be as tight as possible; furthermore the single cylinders door preparation will penetrate through only half the thickness of the door leaf.

The other cylinder incorporates different internal mechanical mechanisms however this is considered of little consequence in the contribution of the fire performance, therefore the proposed cylinders outlined within the appendixes are positively appraised. It is also considered that the length of the euro profile cylinder has minimal impact on the fire resistance performance, as the length does not require any additional material to be removed from the door leaf.

Timber based doorsets – 60 minutes

The performance of Doorset B during the test referenced WF 356836 is cited to display the ability of the cylinder to contribute towards the required resistance performance for 60 minute timber based doorsets.

Doorset B included in test report WF 356836 was a 2078 mm high by 1000 mm wide single acting single leaf doorset with a 2040 mm high by 932 mm wide by 54 mm thick graduated density chipboard door with 8 mm hardwood lipping to the vertical edges. The leaf was hung within a softwood frame with a single 15 x 4 mm perimeter intumescent fire seal fitted centrally with the frame rebate. The 'ELK13001RE' multi point lock was fitted along the leading edge and bedded on a 0.8 mm intercalated graphite kit referenced FS318, the kit was fitted to all face of the lock cases and behind the strike plate as well as being fitted behind the strike plates, the multi point lockset also incorporated a 'CYM7126' Europrofile cylinder as well as a set of lever handles, the strike plates fully interrupted the perimeter intumescent. The lockset was unlatched for the duration of the test and the door was restrained by a surface mounted closer to the exposed face.

On reviewing the observations taken from the test report, there was a sustained flaming failure at 39 minutes at 100 mm in from the top corner of the leading edge, at 62 minutes there was sustained flaming at the top corner of the trailing edge, the test was discontinued at 66 minutes. As this lock and its components (Europrofile cylinder) surpassed the fire resistance performance period of 60 minutes and in doing so it is unlikely to demonstrate a failure prior to 60 minutes.

The proposed Europrofile cylinders can all be described as "typical" Europrofile cylinders, with the same shape and materials just different variations on length, either being longer or shorter or being a single euro profile cylinder. As the reason for the different cylinder lengths is primarily to suit the thickness of the door into which the lockset is installed, it is reasonable to consider that the alternative cylinders will perform in a similar manner to the tested model. The proposed range includes single cylinders, double cylinders and cylinder/thumbturn options. However, as the tested products were double cylinders, this configuration is considered to represent the most onerous application, requiring the body of the cylinder to pass completely through the entire door thickness and lock case, therefore this provides a high degree of confidence that the single cylinders, double cylinders and cylinder/thumbturns will perform for the required periods of fire resistance.

Cylinders shall only be fitted to doors which have previously been shown capable of accommodating the installation of cylinder locks without detriment to the doorset's performance.

The hole in the door face shall follow the shape of the cylinders and be as tight as possible; furthermore the single cylinders door preparation will penetrate through only half the thickness of the door leaf.

The other cylinder incorporates different internal mechanical mechanisms however this is considered of little consequence in the contribution of the fire performance, therefore the proposed cylinders outlined within the appendixes are positively appraised. It is also considered that the length of the euro profile cylinder has minimal impact on the fire resistance performance, as the length does not require any additional material to be removed from the door leaf.

Predominately Steel-Based Doorsets

The performance of Doorset A during the test referenced WF 334019 is cited to display the ability of the cylinder roller latch to contribute towards the required resistance performance for 240 minute predominately steel based doorsets.

Doorset A in WF test Report No. 334019 was a 2090 mm high by 1190 mm wide doorset and incorporated a door leaf of overall nominal dimensions of 2040 mm high by 1103 mm wide by 45 mm thick. The door leaf comprised of a 1.2 mm Zintec Steel facings encasing a “dufaylite” honeycomb core hung within a mild steel frame. The Doorset was installed so that it opened away from the heating conditions of the test. The Doorset was fitted with a sashlock fitted with lever handles and a ‘CYX71370’ Europrofile cylinder

Doorset A satisfied the failure criteria of up to 13 minutes. At 13 minutes sustained flaming issues from the around the glass panel which cannot be attributed to the sashlock or cylinder. The test was discontinued at 270 minutes, as this lock surpassed the fire resistance period of 240 minutes and is unlikely to demonstrate a failure prior to 240 minutes.

The proposed Europrofile cylinders can all be described as “typical” Europrofile cylinders, with the same shape and materials just different variations on length, either being longer or shorter or being a single euro profile cylinder. As the reason for the different cylinder lengths is primarily to suit the thickness of the door into which the lockset is installed, it is reasonable to consider that the alternative cylinders will perform in a similar manner to the tested model. The proposed range includes single cylinders, double cylinders and cylinder/thumbturn options. However, as the tested products were double cylinders, this configuration is considered to represent the most onerous application, requiring the body of the cylinder to pass completely through the entire door thickness and lock case, therefore this provides a high degree of confidence that the single cylinders, double cylinders and cylinder/thumbturns will perform for the required periods of fire resistance.

Cylinders shall only be fitted to doors which have previously been shown capable of accommodating the installation of cylinder locks without detriment to the doorset’s performance.

The hole in the door face shall follow the shape of the cylinders and be as tight as possible; furthermore the single cylinders door preparation will penetrate through only half the thickness of the door leaf.

The other cylinder incorporates different internal mechanical mechanisms however this is considered of little consequence in the contribution of the fire performance, therefore the proposed cylinders outlined within the appendixes are positively appraised. It is also considered that the length of the euro profile cylinder has minimal impact on the fire resistance performance, as the length does not require any additional material to be removed from the door leaf.

5.2 Proposed Doorsets

- As stated in this report, the doorset, in the required configuration, will be previously tested and its performance is therefore not in doubt.
- The doorset shall carry valid certification or the doorset, including the door frame and associated hardware should have achieved 30 or 60 minutes integrity where applicable, when tested by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), to BS EN 1634-1.
- As this appraisal is intended to be used on a general basis and not restricted to any particular manufacturer of fire doors, the following points are given to enable the door hardware to be used safely:
 - 30 Minute timber-based doorsets
 - Door frame minimum density - 460 kg/m³
 - Door leaves shall have a minimum thickness of 44 mm for 30 minute applications.
 - Leaf to frame clearance gaps not to exceed 3 mm maximum.
 - Lipping density - 640 kg/m³.
 - 60 Minute timber-based doorsets
 - Door frame minimum density - 640 kg/m³
 - Door leaves shall have a minimum thickness of 54 mm for 60 minute applications.
 - Leaf to frame clearance gaps not to exceed 3 mm maximum.
 - Lipping density - 640 kg/m³.
 - Predominately steel based doorsets
 - The doorset shall carry valid certification or the doorset, including the door frame and associated hardware should have achieved up to 120 or 240 minutes integrity and where applicable insulation, when tested by a UKAS approved to EN 1634-1.
 - If the proposed doorset is to be used in double-leaf configuration the test or assessment evidence should be applicable to double-leaf configurations.
 - The leaves of the proposed doorset shall be of a minimum thickness of 44 mm.
 - No additional intumescent protection is required.

- Plastic dust boxes are not permitted with steel-based doorsets
- General
 - The size and weight of the door leaf shall be appropriate to the maximum door mass permitted under EN1935.
 - The doorset, onto which the proposed hardware is to be fitted, may be of single-leaf or double-leaf configuration, on the basis the scope is supported by the test data/Field of Application for the doorset proposed.
 - Likewise, if the proposed doorset is to be used in unlatched configurations then the available test evidence should be applicable to unlatched doorsets.
 - 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. forend, case size, latchbolt, strikeplate, fixing specification, 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.

6. Conclusions

Should the recommendations given in this report be followed, it can be concluded that timber doorsets, which have previously been successfully fire tested to EN 1634-1 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved up to 60 minutes, as discussed in this report, may be fitted with mortice locksets or cylinders, without detracting from the overall integrity performance (and insulation where relevant) of the doorset..

Additionally should the recommendations given in this report be followed, it can be concluded that predominantly steel-based doorsets, which have previously been successfully fire tested to EN 1634-1 by a laboratory accredited to IS/IEC 17025 (under International Laboratory accreditation Cooperation (ILAC) membership), and have achieved up to 120 minutes, as discussed in this report, may be fitted with mortice locksets or cylinders, without detracting from the overall integrity performance (and insulation where relevant) of the doorset..

7. Declaration

We the undersigned confirm that we have read and comply with obligations placed on us by the Passive Fire Protection Forum (PFPF) Guide to undertaking technical assessments and engineering evaluations based on fire test evidence 2021 Industry Standard Procedure

We confirm that any changes to a component or element of structure which are the subject of this assessment have not to our knowledge been tested to the standard against which this assessment has been made.

We agree to withdraw this assessment from circulation should the component or element of structure, or any of its component parts be the subject of a failed fire resistance test to the standard against which this assessment is being made.

We understand that this assessment is based on test evidence and will be withdrawn should evidence become available that causes the conclusion to be questioned. In that case, we accept that new test evidence may be required.

We are not aware of any information that could affect the conclusions of this assessment. If we subsequently become aware of any such information, we agree to ask the assessing authority to withdraw the assessment.

(in accordance with the principles of FTSG Resolution No. 82: 2001)

Signed by:
Signed: 
03AE49B4F80A424...

Name: Adam Bridges

Position: Product Manager

Date: 25-Nov-2024

For and on behalf of: Carlisle Brass Limited

8. Limitations

This assessment report:

- Does not provide an endorsement by Warringtonfire of actual products supplied.
- Has been prepared based on information provided by the Applicant. Warringtonfire has not verified the accuracy or completeness of that information and will not be responsible for any errors or omissions that might be incorporated into this report as a result.
- Any figures included in this report are provided for illustrative purposes only and may not fully reflect the actual scope being assessed. Warringtonfire cannot guarantee the accuracy of the drawings against the scope being assessed. The scope of this report is limited to assessments of the modifications to the tested systems as described in Section 3.
- This report addresses itself solely to the elements and subjects discussed and do not cover any other criteria or modifications. All other details not specifically referred to should remain as tested or assessed.
- This report is issued on the basis of test data and information to hand at the time of issue. If contradictory evidence becomes available to Warringtonfire, the assessment will be unconditionally withdrawn, and the applicant will be notified in writing. Similarly, the assessment should be re-evaluated if the assessed construction is subsequently tested since actual test data is deemed to take precedence.
- This assessment has been carried out in accordance with Fire Test Study Group Resolution No. 82: 2001.
- Opinions and interpretation expressed herein are outside the scope of UKAS accreditation.
- This assessment report relates only to those aspects of design, materials and construction that influence the performance of the element(s) under fire resistance test conditions that are stipulated in the standard this assessment concludes to. It does not purport to be a complete specification ensuring fitness for purpose and long-term serviceability. It is the responsibility of the client to ensure that the element conforms to recognised good practice in all other respects and that, with the incorporation of the guidance given in this assessment, the element is suitable for its intended purpose.
- This report represents our opinion as to the performance likely to be demonstrated on a test in accordance with the standard to which this assessment concludes, on the basis of the test evidence referred to in this report. We express no opinion as to whether that evidence, and/or this report would be regarded by any Building Control authorities or any other third parties as sufficient for that or any other purpose.
- This report may only be reproduced in full. Extracts or abridgements of reports shall not be published without permission of Warringtonfire. All work and services carried out by Warringtonfire Testing and Certification Limited are subject to, and conducted in accordance with, the Standard Terms and Conditions of Warringtonfire Testing and Certification Limited, which are available at <https://www.element.com/terms/terms-and-conditions> or upon request.

- Previous versions of the report(s), if applicable, are withdrawn from the date of the up-issued assessment report with immediate effect. That means that they may no longer be relied upon in support of any products being placed on the market (or for the stated project/address where applicable) from the issue date stated on the front cover of this report. The withdrawal of an assessment report does not affect any reliance placed on the report up to the issue date stated on the front cover of this assessment; however, going forward, the up-issued report must be referenced in any literature or product specifications in place of the previous versions of the assessment.

9. Validity

This assessment report is not valid unless signed by all signatories identified within the Signatories and Revision History section of this report.

This assessment report is not valid unless it incorporates the declaration given in Section 7 duly signed by the applicant.

The assessment is valid initially for a period of five years after which time it is recommended that it be submitted to the assessing authority for re-evaluation.

Appendix A Summary of supporting data

The summaries in this section are for information only. It is assumed that the end user will have a full understanding of the tested specification as defined in the relevant test report.

Where the test evidence used in the evaluation is over 5 years old, in accordance with industry guidance, the evidence has been reviewed to consider its suitability. Warringtonfire are satisfied that there have been no significant revisions to the relevant test standards which would render the evidence irrelevant.

A.1 Primary Evidence

Test Report Reference 341094	
Report sponsor	Carlisle Brass Limited
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	24 th July 2014
Test standard	BS EN 1634-1: 2014
Specimen summary	<p>For the purposes of the test the doorsets were referenced Doorset A and Doorset B.</p> <p>Doorset A had overall dimensions of 2090 mm high by 990 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 903 mm wide by 45 mm thick. The door leaf was hung within a mild steel door frame on three stainless steel hinges referenced 'HIN1433P'. The doorset was fitted on its unexposed face with an inactive surface mounted overhead, 'easi-exit' door closer body referenced 'DCT2024'. A mortice lock referenced 'DLE7255EP' complete with a lever handle on back plate set referenced 'CSL1220BPY' and, double euro profile lock cylinder referenced 'CYA1260' were also fitted to the doorset.</p> <p>The doorset was installed so it opened away from the heating conditions of the test and was latched for the duration of the test.</p> <p>Doorset B had overall dimensions of 2090 mm high by 990 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 903 mm wide by 45 mm thick. The door leaf was hung within a mild steel door frame on three stainless steel hinges referenced: 'H3N1102A'. The doorset was fitted on its unexposed face with an inactive surface mounted 'easi-exit' overhead door closer body referenced 'DCT2024' complete with 'DCX2024F mounting plate. The doorset incorporated an 'easi-T' euro sash lock referenced: 'ESS5030' complete with lever handles referenced 'SZ500CP', a double euro profile cylinder referenced 'CYH71264' and escutcheons referenced 'SWL102'. The doorset also incorporated a mortice latch referenced 'DLE0055L' and a lever handle on rose referenced 'SSL1405' and a knob on rose referenced 'SSK1062'.</p> <p>The doorset was installed so it opened away from the heating conditions of the test and was latched for the duration of the test.</p> <p>*The test duration. The test was discontinued after a period of 270 minutes.</p> <p>Representatives of Warrington Certification Limited sampled the building hardware</p>

Test Report Reference 341094

	incorporated within the test.		
Test results		Doorset A	Doorset B
	Integrity	70 minutes	54 minutes
	Insulation	37 minutes	7 minutes

Test Report Reference 360230

Report sponsor	Carlisle Brass Limited																																						
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom																																						
Test date	22 nd January 2016																																						
Test standard	BS EN 1634-1: 2014																																						
Specimen summary	<p>Doorset A had overall nominal dimensions 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 933 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame on three Eurospec spring type hinges referenced, SPH1433 (item 6). The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>7</td> <td>Size 2-4 Surface Mounted Closer</td> <td>CDG2024</td> </tr> <tr> <td>9</td> <td>Lever Sashlock</td> <td>LSE5225EB/B</td> </tr> <tr> <td>12</td> <td>Serozzetta Cinco Lever Handle</td> <td>SZC051SC</td> </tr> <tr> <td>11</td> <td>Stainless Steel Pull Handle</td> <td>SWP1134SSS</td> </tr> </tbody> </table> <p>Doorset B had overall nominal dimensions 2085 mm high by 1005 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 933 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a hardwood frame on three Eurospec spring type hinges referenced, SPH1433 (item 6) The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>8</td> <td>Size 2-5 Surface Mounted Closer</td> <td>CDG2025</td> </tr> <tr> <td>9</td> <td>Lever Sashlock</td> <td>LSE5225EB/B</td> </tr> <tr> <td>13</td> <td>Arched Lever on Blade Round Rose</td> <td>SWB1198SSS</td> </tr> <tr> <td>14</td> <td>Blade Escutcheon Set</td> <td>SWB103BB/SSS</td> </tr> <tr> <td>16</td> <td>Lever Action Flush Bolt</td> <td>FBT1008SSS</td> </tr> <tr> <td>15</td> <td>C/Crank B2B Stainless Steel Pull Handle</td> <td>PCG1350SSS</td> </tr> </tbody> </table>			Item Number	Item	Reference	7	Size 2-4 Surface Mounted Closer	CDG2024	9	Lever Sashlock	LSE5225EB/B	12	Serozzetta Cinco Lever Handle	SZC051SC	11	Stainless Steel Pull Handle	SWP1134SSS	Item Number	Item	Reference	8	Size 2-5 Surface Mounted Closer	CDG2025	9	Lever Sashlock	LSE5225EB/B	13	Arched Lever on Blade Round Rose	SWB1198SSS	14	Blade Escutcheon Set	SWB103BB/SSS	16	Lever Action Flush Bolt	FBT1008SSS	15	C/Crank B2B Stainless Steel Pull Handle	PCG1350SSS
Item Number	Item	Reference																																					
7	Size 2-4 Surface Mounted Closer	CDG2024																																					
9	Lever Sashlock	LSE5225EB/B																																					
12	Serozzetta Cinco Lever Handle	SZC051SC																																					
11	Stainless Steel Pull Handle	SWP1134SSS																																					
Item Number	Item	Reference																																					
8	Size 2-5 Surface Mounted Closer	CDG2025																																					
9	Lever Sashlock	LSE5225EB/B																																					
13	Arched Lever on Blade Round Rose	SWB1198SSS																																					
14	Blade Escutcheon Set	SWB103BB/SSS																																					
16	Lever Action Flush Bolt	FBT1008SSS																																					
15	C/Crank B2B Stainless Steel Pull Handle	PCG1350SSS																																					

Test Report Reference 360230

	<p>The doorsets were installed so that they opened towards the heating conditions of the test and were un-latched for the purpose of the test.</p> <p>*The test was discontinued after a period of 66 minutes.</p> <p>The surface mounted closers for this test were sample selected by a representative of Warrington Certification Limited on 28th October 2015. Warringtonfire was not involved in any selection or sampling procedures of any of the other hardware incorporated within the test.</p>		
Test results		Doorset A	Doorset B
	Integrity	36 minutes*	66 minutes*
	Insulation	36 minutes*	66 minutes*

Test Report Reference 141749

Report sponsor	Carlisle Brass Limited
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	2 nd September 2004
Test standard	BS EN 1634-1: 2000
Specimen summary	<p>The WF Report No. 141749 describes a test conducted in accordance with BS EN 1634-1: 2000 on two specimens of unlatched, single-acting, single-leaf, timber based doorset.</p> <p>Doorset A had overall nominal dimensions of 2080 mm high by 997 mm wide and incorporated a door leaf of overall nominal dimensions 2042 mm high by 927 mm wide by 46 mm thick. The doorset included a softwood door frame and a door leaf comprising softwood stiles and rails, a flaxboard core, chipboard facings and hardwood lippings on the vertical edges.</p> <p>Doorset A incorporated a lock mechanism referenced 'MCN5025SSS' which was bedded on acrylic based intumescent mastic. The door leaf was hung on three stainless steel hinges referenced 'HIN13225 CEN' which were bedded on acrylic based intumescent mastic.</p> <p>Doorset B had overall nominal dimensions of 2085 mm high by 1006 mm wide and incorporated a door leaf of overall nominal dimensions 2037 mm high by 925 mm wide by 54 mm thick. The doorset included a hardwood door frame and a door leaf comprising softwood stiles and rails, a flaxboard core, non-combustible board sub-facings, chipboard outer facings and hardwood lippings on the vertical edges.</p> <p>Doorset B incorporated a lock mechanism referenced 'DLS7260EPSSS' which was protected around the lock case and behind the strike plate via 2 mm thick Interdens intumescent material. The door leaf was hung on three stainless steel hinges referenced 'HIN14325 CEN' which were bedded on 2 mm thick Interdens intumescent material.</p> <p>Both door leaves were orientated such that they opened towards the heating conditions of the test. Each doorset was rendered unlatched for the duration of the test.</p>

Test Report Reference 141749

Test results		Doorset A	Doorset B
	Integrity	32 minutes	57 minutes
	Insulation	32 minutes	57 minutes

Test Report Reference 195144

Report sponsor	Carlisle Brass Limited
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	20 th July 2010
Test standard	BS EN 1634-1: 2008
Specimen summary	<p>To determine the fire resistance performance of two single-acting, single-leaf timber based doorsets incorporating various building hardware, mounted within a low-density rigid supporting construction, when tested in accordance with BS EN 1634-1: 2008.</p> <p>For the purposes of the test, the doorsets were referenced Doorset A and Doorset B.</p> <p>Both doorsets had overall dimensions of 2078 mm high by 1003 mm wide and incorporated a door leaf of overall dimensions 2032 mm high by 932 mm wide by 44 mm thick. Both door leaves comprised a graduated density chipboard core with hardwood lippings to the vertical edge. The door leaves were hung within a softwood door frame on three stainless steel Parliament hinges referenced 'H2N1446SSS' for Doorset A and three Triple Knuckle Butt hinges referenced 'H3N1102/13/SZP' for Doorset B. The hinges to Doorset A bedded onto a pad of 1 mm thick "Interdens" intumescent material. There was no intumescent material used to protect the hinges fitted to Doorset B.</p> <p>Doorset A was fitted with an Easi-T Heavy Sprung Tubular Latch with lever handles referenced 'TLS5030SC' and 'CSL1220SSS' respectively, a Rim Cylinder Nightlatch referenced 'RCN8260SC', a Rim Cylinder Rollerball referenced 'RCB8260SC', top and bottom flush bolts referenced 'FBT1008SSS', and a Flush Pull Handle referenced 'FPH1004SSS'</p> <p>The Tubular latch was provided with a 1 mm thick layer of "Interdens" material wrapped around the body of the casing. The Rim Cylinder Nightlatch, the Rim Cylinder Rollerball and the top and bottom flush bolts were each bedded onto a pad of 1 mm thick "Interdens" intumescent material. The Flush Pull Handle was bedded onto acrylic intumescent mastic.</p> <p>Doorset B was fitted with a DIN Latch with lever handles referenced 'DLE0055LSSS' and 'LRF1190SSS' respectively, a surface mounted shoot bolt referenced 'BBT1200SSS', a door viewer referenced 'SWE1010', a door knocker referenced 'SWE1020', a door knob referenced 'SWE1040', and a cabin hook referenced 'CAB1200SSS'.</p> <p>There was no intumescent material used to protect the hardware fitted to Doorset B.</p> <p>Each doorset was fitted with a surface mounted overhead door closer, mounted on the exposed face.</p> <p>All latches, Rim Cylinder Nightlatch, Rim Cylinder Rollerball, top and bottom flush bolts, surface mounted shoot bolt and cabin hook were rendered disengaged for the duration of the test and were installed such that they opened towards the heating</p>

Test Report Reference 195144

	<p>conditions of the test.</p> <p>Prior to the commencement of the test, the door leaves were cycled open and closed 25 times as specified in EN 14600: 2005.</p> <p>*The test duration. #Doorset sealed with mastic at sponsor's request. The test was discontinued after a period of 42 minutes.</p> <p>Warringtonfire was not involved in any selection or sampling procedures of the specimen or any of the components.</p>		
Test results		Doorset A	Doorset B
	Integrity	42 minutes*	33 minutes
	Insulation	42 minutes*	33 minutes

Test Report Reference 341842

Report sponsor	Carlisle Brass Limited
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	26 th June 2014
Test standard	BS EN 1634-1: 2014
Specimen summary	<p>The WF Report No. 341842 describes a test conducted in accordance with BS EN 1634-1: 2014 on two specimens of unlatched, single-acting, single-leaf, timber based doorset.</p> <p>For the purposes of the test the doorsets were referenced Doorset A and Doorset B.</p> <p>Doorset A had overall dimensions of 2085 mm high by 1010 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 935 mm wide by 45 mm thick. The door leaf was hung within a softwood door frame on three stainless steel hinges referenced: 'HIN1433 SZP'. The door leaf was formed from a graduated density chipboard core with hardwood lippings to the vertical edges. The doorset was fitted on its exposed face with a surface mounted overhead door closer referenced 'DCS2026BC' and a tubular latch referenced: 'BTL3'. A magnetic tubular latch referenced 'TLSM5030' with 0.8 mm intumescent protection was fitted in the leading edge of the door leaf and a lever handle set referenced: 'ZIN3144PC' was fitted just below the tubular latch.</p> <p>The doorset was installed so it opened towards the heating conditions of the test and was unlatched for the duration of the test.</p> <p>Doorset B had overall dimensions of 2085 mm high by 1010 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 935 mm wide by 45 mm thick. The door leaf was hung within a softwood door frame on three stainless steel hinges referenced: HIN1433 SSS. The door leaf was formed from a graduated density chipboard core with hardwood lippings to the vertical edges. The doorset was fitted on its exposed face with a surface mounted overhead door closer referenced 'CDG003' in parallel arm configuration. A sashlock referenced: ESS5030, lever handles referenced: SWL1161 and a cylinder referenced: CYH71264 were included with the doorset along with a rose and escutcheons referenced: SWL1192 and SWL102, respectively.</p>

Test Report Reference 341842

	<p>The doorset was installed so it opened towards the heating conditions of the test and was unlatched for the duration of the test.</p> <p>*The test duration. The test was discontinued after a period of 36 minutes.</p> <p>Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.</p>		
Test results		Doorset A	Doorset B
	Integrity	27 minutes	28 minutes
	Insulation	27 minutes	28 minutes

Test Report Reference 390179

Report sponsor	Carlisle Brass Limited																								
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom																								
Test date	17 th October 2017																								
Test standard	BS EN 1634-1: 2014																								
Specimen summary	<p>The WF Report No. 390179 describes a test conducted in accordance with BS EN 1634-1: 2014 on two specimens of unlatched, single-acting, single-leaf, timber based doorset.</p> <p>For the purpose of the test the doorsets were referenced Doorset A and Doorset B.</p> <p>Doorset A had overall nominal dimensions 2080 mm high by 997 mm wide incorporating a leaf with overall dimensions of 2040 mm high by 930 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame. The Doorset was unlatched for the test duration.</p> <p>The doorset incorporated the following hardware:</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Description</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>9</td> <td>Adjustable 2D hinges (White Powder Coated)</td> <td>HIN16300 2D euro</td> </tr> <tr> <td>7</td> <td>Radius flush pull handles (fitted to both exposed and unexposed faces)</td> <td>FPH1001SSS</td> </tr> <tr> <td>8</td> <td>Circular flush pull handles (fitted to both exposed and unexposed faces)</td> <td>FPH1002BSS</td> </tr> <tr> <td>6</td> <td>Push Pad Emergency Exit Device</td> <td rowspan="2">XIA5002 / SV AL06B</td> </tr> <tr> <td>5</td> <td>External Locking Push Pad</td> <td>XIA5003 / SV AL01A</td> </tr> <tr> <td>4</td> <td>Push Bar mechanism</td> <td>Items 4 and 5 paired, with item 5</td> <td>XDB5760 AL04D</td> </tr> </tbody> </table>			Item Number	Description	Reference	9	Adjustable 2D hinges (White Powder Coated)	HIN16300 2D euro	7	Radius flush pull handles (fitted to both exposed and unexposed faces)	FPH1001SSS	8	Circular flush pull handles (fitted to both exposed and unexposed faces)	FPH1002BSS	6	Push Pad Emergency Exit Device	XIA5002 / SV AL06B	5	External Locking Push Pad	XIA5003 / SV AL01A	4	Push Bar mechanism	Items 4 and 5 paired, with item 5	XDB5760 AL04D
Item Number	Description	Reference																							
9	Adjustable 2D hinges (White Powder Coated)	HIN16300 2D euro																							
7	Radius flush pull handles (fitted to both exposed and unexposed faces)	FPH1001SSS																							
8	Circular flush pull handles (fitted to both exposed and unexposed faces)	FPH1002BSS																							
6	Push Pad Emergency Exit Device	XIA5002 / SV AL06B																							
5	External Locking Push Pad		XIA5003 / SV AL01A																						
4	Push Bar mechanism	Items 4 and 5 paired, with item 5	XDB5760 AL04D																						

Test Report Reference 390179

	5	External Locking Push Pad	fitted to exposed face	XIA5003 / SV AL01A																																						
	15	Surface mount closer fitted in projecting arm configuration on the exposed side		EASI – EXIT DCS2024/25																																						
<p>Doorset B had overall nominal dimensions 2085 mm high by 1000 mm wide incorporating a leaf with overall dimensions of 2040 mm high by 926 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame. The Doorset was latched for the test duration.</p> <p>The doorset incorporated the following hardware:</p>																																										
<table border="1"> <thead> <tr> <th>Item Number</th> <th colspan="2">Description</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>9</td> <td colspan="2">Adjustable 2D hinges (BSS – bright stainless steel)</td> <td>HIN16300 2D euro</td> </tr> <tr> <td>14</td> <td colspan="2">Rectangular flush pull handles (fitted to both exposed and unexposed faces)</td> <td>FPH1000SSS</td> </tr> <tr> <td>13</td> <td colspan="2">Circular flush pull handles (fitted to both exposed and unexposed faces)</td> <td>FPH1003BSS</td> </tr> <tr> <td>12</td> <td colspan="2">Rim cylinder Nightlatch (fitted to exposed face)</td> <td>RCN8360</td> </tr> <tr> <td>10</td> <td>External Access Device</td> <td rowspan="2">Items 10 and 11 paired, with item 10 fitted to unexposed face</td> <td>XIA5003 / SV AL06A</td> </tr> <tr> <td>11</td> <td>Push Pad Emergency Exit Device</td> <td>XIA5003 / SV AL01A</td> </tr> <tr> <td>4</td> <td>Push Bar mechanism</td> <td rowspan="2">Items 4 and 10 paired, with item 10 fitted to exposed face</td> <td>XDB5760 AL04D</td> </tr> <tr> <td>10</td> <td>External Access Device</td> <td>XIA5003 / SV AL06A</td> </tr> <tr> <td>15</td> <td colspan="2">Surface mount closer fitted in projecting arm configuration on the exposed side</td> <td>EASI – EXIT DCS2024/25</td> </tr> </tbody> </table>					Item Number	Description		Reference	9	Adjustable 2D hinges (BSS – bright stainless steel)		HIN16300 2D euro	14	Rectangular flush pull handles (fitted to both exposed and unexposed faces)		FPH1000SSS	13	Circular flush pull handles (fitted to both exposed and unexposed faces)		FPH1003BSS	12	Rim cylinder Nightlatch (fitted to exposed face)		RCN8360	10	External Access Device	Items 10 and 11 paired, with item 10 fitted to unexposed face	XIA5003 / SV AL06A	11	Push Pad Emergency Exit Device	XIA5003 / SV AL01A	4	Push Bar mechanism	Items 4 and 10 paired, with item 10 fitted to exposed face	XDB5760 AL04D	10	External Access Device	XIA5003 / SV AL06A	15	Surface mount closer fitted in projecting arm configuration on the exposed side		EASI – EXIT DCS2024/25
Item Number	Description		Reference																																							
9	Adjustable 2D hinges (BSS – bright stainless steel)		HIN16300 2D euro																																							
14	Rectangular flush pull handles (fitted to both exposed and unexposed faces)		FPH1000SSS																																							
13	Circular flush pull handles (fitted to both exposed and unexposed faces)		FPH1003BSS																																							
12	Rim cylinder Nightlatch (fitted to exposed face)		RCN8360																																							
10	External Access Device	Items 10 and 11 paired, with item 10 fitted to unexposed face	XIA5003 / SV AL06A																																							
11	Push Pad Emergency Exit Device		XIA5003 / SV AL01A																																							
4	Push Bar mechanism	Items 4 and 10 paired, with item 10 fitted to exposed face	XDB5760 AL04D																																							
10	External Access Device		XIA5003 / SV AL06A																																							
15	Surface mount closer fitted in projecting arm configuration on the exposed side		EASI – EXIT DCS2024/25																																							
<p>*The test was discontinued after a period of 36 minutes.</p> <p>Warringtonfire was not involved in any selection or sampling procedures of the specimen or any of the components.</p>																																										
Test results				Doorset A	Doorset B																																					
	Integrity			36 minutes	33 minutes																																					
	Insulation			36 minutes	33 minutes																																					

Test Report Reference 345074

Report sponsor	Carlisle Brass Limited
----------------	------------------------

Test Report Reference 345074

Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom																																																	
Test date	28 th October 2014																																																	
Test standard	BS EN 1634-1: 2008																																																	
Specimen summary	<p>The WF Report No. 345074 describes a test conducted in accordance with BS EN 1634-1: 2008 on two specimens of single-acting, single-leaf, timber based doorset.</p> <p>For the purpose of the test the doorsets were referenced Doorset A and Doorset B.</p> <p>Doorset A had overall nominal dimensions 2085 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 44 mm thick. The door leaf was of a 3-layer particle board construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame on three Eurospec ball bearing butt hinges referenced, HIN1242522P/11 BZP (item 5). The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Concealed door closer</td> <td>DCC2025CF/36</td> </tr> <tr> <td>2</td> <td>Rim cylinder nightlatch</td> <td>RCN8240M</td> </tr> <tr> <td>3</td> <td>3 Star cylinder</td> <td>CYM71270</td> </tr> <tr> <td>4</td> <td>SS Security escutcheon</td> <td>AEB1000SSS</td> </tr> <tr> <td>6</td> <td>Euro profile sashlock</td> <td>ESS5030</td> </tr> <tr> <td>7</td> <td>Serozzetta lever on round rose</td> <td>SZC010SC</td> </tr> <tr> <td>8</td> <td>Sleeved letter plate</td> <td>SWE1050</td> </tr> <tr> <td>9</td> <td>Door viewer with glass lens</td> <td>AA77</td> </tr> <tr> <td>10</td> <td>Bolt through fix pull handle</td> <td>PH500C</td> </tr> </tbody> </table> <p>Doorset B had overall nominal dimensions 2085 mm high by 1005 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 54 mm thick. The door leaf was of a 3-layer particle board construction, with 8 mm hardwood lippings to the vertical edges and was hung within a hardwood frame on three Eurospec ball bearing butt hinges referenced, HIN14322P/11 BZP (item 11). The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>1</td> <td>Concealed door closer</td> <td>DCC02025CF/36</td> </tr> <tr> <td>2</td> <td>Rim cylinder nightlatch</td> <td>RCN8440</td> </tr> <tr> <td>3</td> <td>3 Star cylinder</td> <td>CYM71270</td> </tr> <tr> <td>4</td> <td>SS Security escutcheon</td> <td>AEB1000SSS</td> </tr> <tr> <td>12</td> <td>Din euro profile sashlock</td> <td>DLS7260EP</td> </tr> </tbody> </table>		Item Number	Item	Reference	1	Concealed door closer	DCC2025CF/36	2	Rim cylinder nightlatch	RCN8240M	3	3 Star cylinder	CYM71270	4	SS Security escutcheon	AEB1000SSS	6	Euro profile sashlock	ESS5030	7	Serozzetta lever on round rose	SZC010SC	8	Sleeved letter plate	SWE1050	9	Door viewer with glass lens	AA77	10	Bolt through fix pull handle	PH500C	Item Number	Item	Reference	1	Concealed door closer	DCC02025CF/36	2	Rim cylinder nightlatch	RCN8440	3	3 Star cylinder	CYM71270	4	SS Security escutcheon	AEB1000SSS	12	Din euro profile sashlock	DLS7260EP
Item Number	Item	Reference																																																
1	Concealed door closer	DCC2025CF/36																																																
2	Rim cylinder nightlatch	RCN8240M																																																
3	3 Star cylinder	CYM71270																																																
4	SS Security escutcheon	AEB1000SSS																																																
6	Euro profile sashlock	ESS5030																																																
7	Serozzetta lever on round rose	SZC010SC																																																
8	Sleeved letter plate	SWE1050																																																
9	Door viewer with glass lens	AA77																																																
10	Bolt through fix pull handle	PH500C																																																
Item Number	Item	Reference																																																
1	Concealed door closer	DCC02025CF/36																																																
2	Rim cylinder nightlatch	RCN8440																																																
3	3 Star cylinder	CYM71270																																																
4	SS Security escutcheon	AEB1000SSS																																																
12	Din euro profile sashlock	DLS7260EP																																																

Test Report Reference 345074

	13	Elliptical twist lever on square rose	IT83020CP	
	14	Stainless steel door viewer	SWE1000	
	15	Back to back pull handles	PCT11800BSS	
	16	Door knocker	SWE1020SSS	
	17	Door pull knob	SWE1062	
<p>The doorsets were installed so that they opened towards the heating conditions of the test and were un-latched for the purpose of the test.</p> <p>* The test duration. The test was discontinued after a period of 60 minutes.</p> <p>Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.</p>				
Test results			Doorset A	Doorset B
	Integrity		34 minutes	46 minutes
	Insulation		34 minutes	46 minutes

Test Report Reference 356836

Report sponsor	Carlisle Brass Limited																	
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom																	
Test date	22 nd September 2016																	
Test standard	BS EN 1634-1: 2014																	
Specimen summary	<p>To determine the fire resistance performance of two single-acting, single-leaf timber based doorsets incorporating various items of hardware, mounted within a low density rigid supporting construction in accordance with BS EN 1634-1: 2014.</p> <p>For the purpose of the test the doorsets were referenced Doorset A and Doorset B.</p> <p>Doorset A had overall nominal dimensions 2078 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 932 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame on three Eurospec ball bearing butt hinges referenced, HIN1433/14SSS (item 1). The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>6</td> <td>Hinge bolts</td> <td>AHB1000ZP</td> </tr> <tr> <td>5</td> <td>Surface mounted overhead closer</td> <td>DCF2003</td> </tr> <tr> <td>2</td> <td>Multipoint locking system</td> <td>ELK13001RE</td> </tr> <tr> <td>3</td> <td>Steelworx narrow plate lever</td> <td>SWNP/92SSS</td> </tr> </tbody> </table>			Item Number	Item	Reference	6	Hinge bolts	AHB1000ZP	5	Surface mounted overhead closer	DCF2003	2	Multipoint locking system	ELK13001RE	3	Steelworx narrow plate lever	SWNP/92SSS
Item Number	Item	Reference																
6	Hinge bolts	AHB1000ZP																
5	Surface mounted overhead closer	DCF2003																
2	Multipoint locking system	ELK13001RE																
3	Steelworx narrow plate lever	SWNP/92SSS																

Test Report Reference 356836

	4	Star double cylinder satin chrome	CYX71264SC 1																					
	7	Steelworx door viewer 16 mm	SW1000SSS																					
<p>Doorset B had overall nominal dimensions 2080 mm high by 1010 mm wide incorporating a door leaf with overall dimensions 2038 mm high by 932 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a hardwood frame on three Eurospec ball bearing butt hinges referenced, HIN1433/14SSS (item 8). The doorset incorporated the following hardware/accessories –</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Item</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>13</td> <td>Hinge bolts</td> <td>AHB1000ZP</td> </tr> <tr> <td>10</td> <td>Concealed closer</td> <td>DCC2025CF/36</td> </tr> <tr> <td>9</td> <td>Multipoint locking system</td> <td>ELK13001RE</td> </tr> <tr> <td>11</td> <td>Steelworx narrow plate lever 92 mm</td> <td>SWNP40/92SSS</td> </tr> <tr> <td>12</td> <td>Star double cylinder satin chrome</td> <td>CYM71264SC 3</td> </tr> <tr> <td>14</td> <td>Steelworx door viewer 22 mm</td> <td>SWE1010SSS</td> </tr> </tbody> </table> <p>The doorsets were installed so that they opened towards the heating conditions of the test and were un-latched for the purpose of the test.</p> <p>* The test duration. The test was discontinued after a period of 66 minutes.</p> <p>^ Doorset blanked off</p> <p>Representatives of Warrington Certification Limited sampled the concealed closer, hinges and multipoint lock incorporated within the test.</p>				Item Number	Item	Reference	13	Hinge bolts	AHB1000ZP	10	Concealed closer	DCC2025CF/36	9	Multipoint locking system	ELK13001RE	11	Steelworx narrow plate lever 92 mm	SWNP40/92SSS	12	Star double cylinder satin chrome	CYM71264SC 3	14	Steelworx door viewer 22 mm	SWE1010SSS
Item Number	Item	Reference																						
13	Hinge bolts	AHB1000ZP																						
10	Concealed closer	DCC2025CF/36																						
9	Multipoint locking system	ELK13001RE																						
11	Steelworx narrow plate lever 92 mm	SWNP40/92SSS																						
12	Star double cylinder satin chrome	CYM71264SC 3																						
14	Steelworx door viewer 22 mm	SWE1010SSS																						
Test results		Doorset A	Doorset B																					
	Integrity	35 minutes	39 minutes																					
	Insulation	35 minutes	39 minutes																					

Test Report Reference 335637

Report sponsor	Carlisle Brass Limited
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom
Test date	16 th December 2013
Test standard	BS EN 1634-1: 2008
Specimen summary	The WF Report No. 335637 describes a test conducted in accordance with BS EN 1634-1: 2008 on two specimens of single-acting, single-leaf, timber based doorset. For the purposes of the test, the doorsets were referenced 'Doorset A' and 'Doorset B'.

Test Report Reference 335637

Doorset A had overall dimensions of 2082 mm high by 1000 mm wide and incorporated a door leaf with dimensions of 2040 mm high by 931 mm wide by 45 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame, on three steel hinges referenced 'HIP13225/7SC'. The hinges were bedded onto a 0.8 mm thick intumescent liner, referenced FS318.

The doorset was fitted with a surface mounted closer referenced 'DCF2003SV' in projecting arm configuration on its exposed face. Additional hardware included; an inactive concealed chain closer referenced 'AA45' wrapped in a 0.8 mm thick intumescent liner, installed at mid-height on the trailing edge. Top and bottom flush bolts referenced 'FBT1008', bedded on 0.8 mm thick intumescent liner. A rim cylinder night latch referenced 'RCN8340PC', a roller catch referenced 'RCA5511' and a tubular latch referenced 'BTL1-4' with lever handles referenced 'ZIN3121'. The three locksets were protected with 0.8 mm thick intumescent liner. The doorset was installed so that opened towards the heating conditions of the test and was unlatched for the test duration.

Doorset B had overall dimensions of 2082 mm high by 1000 mm wide and incorporated a door leaf with dimensions of 2040 mm high by 931 mm wide by 45 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was hung within a softwood frame, on three steel hinges referenced 'HIN1433/14SSS'. The hinges were bedded onto a 0.8 mm thick intumescent liner, referenced FS318.

Additional hardware included; Top and bottom flush bolts referenced 'FBT1008', bedded on 0.8 mm thick intumescent liner and fitted to the unexposed face of the doorset. A mortice cylinder night latch referenced 'MCN5030', with a euro cylinder referenced 'CYE71145' and an accessory pack referenced 'LCP1000', a euro profile lock referenced 'ESE5030' with a cylinder referenced 'CSE1005SSS', lever handles referenced 'CSL1190BSS' and escutcheons referenced 'CSE1005SSS'. Both locksets were protected with 0.8 mm thick intumescent liner. The doorset was installed so that opened away from the heating conditions of the test and was latched for the test duration of the test.

Prior to the commencement of the test, the door leaves were cycled open and closed 25 times as specified in EN 14600: 2005.

*The test was discontinued after a duration of 37 minutes

Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.

Test results		Doorset A	Doorset B
	Integrity	37 minutes	37 minutes
	Insulation	37 minutes	37 minutes

Test Report Reference 334019

Report sponsor	Eurospec Architectural Hardware Ltd.
----------------	--------------------------------------

Test Report Reference 334019

Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom		
Test date	25 th October 2013		
Test standard	BS EN 1634-1: 2008		
Specimen summary	<p>The WF Report No. 334019 describes a test conducted in accordance with BS EN 1634-1: 2008 on two specimens of unlatched, single-acting, single-leaf, steel based doorset.</p> <p>Doorset A had overall dimensions of 2090 mm high by 1190 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 1103 mm wide by 45 mm thick. The door leaf was hung within a Zintec frame on three Eurospec Stainless Steel hinges referenced 'H3N1207/14' The door leaf comprised</p> <p>1.2 mm Zintec Steel facings encasing a 'Dufaylite' Honeycomb core. The doorset was fitted with a sashlock referenced 'DLS7260EP' along with lever handles referenced 'SW413', a cylinder referenced 'CYX71370' and escutcheons referenced 'AEB5000'. A roller catch was also installed above the sashlock referenced 'RCA5511'. Top and bottom flush bolts referenced 'FBT1003' and 'FBT1001' respectively along with a surface mount closer referenced 'DCF2003' were also fitted. The closer was mounted on the unexposed face of the doorset. A vision panel with a sight size of 1016 mm by 203 mm wide was fitted in the leaf, glazed with a single pane of laminated Firelite glass with a Zero Seals frame and glazing tape.</p> <p>The leaf was orientated such that it opened away from the heating conditions of the test and was rendered latched for the test duration.</p> <p>Doorset B had overall dimensions of 2090 mm high by 990 mm wide and incorporated a door leaf of overall dimensions 2040 mm high by 903 mm wide by 45 mm thick. The door leaves were hung within a Zintec steel door frame on three Eurospec Stainless Steel hinges referenced 'HIN1433SEC'. The door leaf comprised 1.2 mm Zintec steel facing, encasing a 'Dufaylite' Honeycomb core. The doorset was fitted with a sashlock referenced 'DLE7255EP' along with lever handles referenced 'CSL1220', a cylinder referenced 'CYH71370' and escutcheons referenced 'CSE1005'. A second sashlock referenced 'ESE5030' was fitted above the first lock with lever handles referenced 'SW415', a cylinder referenced 'CYA71370' and escutcheons referenced 'SW102'. The doorset was fitted with an active closer on the fire side referenced 'DCT2040' and an inactive version of the same closer was also fitted to the unexposed side of the doorset.</p> <p>The leaf was orientated such that it opened away from the heating conditions of the test and was rendered unlatched for the test duration.</p> <p>*The test was discontinued after 270 minutes.</p> <p>Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.</p>		
Test results		Doorset A	Doorset B
	Integrity	13 minutes	32 minutes
	Insulation	5 minutes	7 minutes

Test Report Reference 543736

Report sponsor	Carlisle Brass Limited
----------------	------------------------

Test Report Reference 543736											
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom										
Test date	11 th May 2024										
Test standard	BS EN 1634-1: 2014+A1:2018										
Specimen summary	<p>The WF Report No. 543736 describes a test conducted in accordance with BS EN 1634-1: 2014+A1:2018 on two specimens of unlatched, single-acting, single-leaf, timber based doorsets.</p> <p>Doorset A had overall nominal dimensions 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 926 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 6 mm hardwood lippings to the vertical edges and was hung within a softwood frame on three hinges. The doorset incorporated a surface mounted closer, a rim latch and a LFB1 fire brigade deadlock.</p> <p>Doorset B had overall nominal dimensions 2080 mm high by 1000 mm wide incorporating a door leaf with overall dimensions 2040 mm high by 926 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 6 mm hardwood lippings to the vertical edges and was hung within a hardwood frame on three hinges. The doorset incorporated a surface mounted closer, a rim latch and a LFB1 fire brigade deadlock.</p> <p>The doorsets were installed so that they opened towards the heating conditions of the test and were un-latched for the purpose of the test.</p> <p>*Doorset A was blanked off at 36 minutes to allow the continuation of testing on Doorset B.</p> <p>**The test was discontinued after 68 minutes.</p> <p>Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.</p>										
Test results	<table border="1"> <thead> <tr> <th></th> <th>Doorset A</th> <th>Doorset B</th> </tr> </thead> <tbody> <tr> <td>Integrity</td> <td>36 minutes</td> <td>68 minutes</td> </tr> <tr> <td>Insulation</td> <td>36 minutes</td> <td>68 minutes</td> </tr> </tbody> </table>			Doorset A	Doorset B	Integrity	36 minutes	68 minutes	Insulation	36 minutes	68 minutes
	Doorset A	Doorset B									
Integrity	36 minutes	68 minutes									
Insulation	36 minutes	68 minutes									

A.2 Secondary Evidence

Test Report Reference 385354

Report sponsor	Carlisle Brass Limited																																							
Test laboratory	Warringtonfire Holmesfield Road Warrington WA1 2DS United Kingdom																																							
Test date	6 th July 2017																																							
Test standard	Utilising the heating and pressure conditions given in BS EN 1363-1:2012.																																							
Specimen summary	<p>The report referenced WF report No 385354 describes a indicative fire test of two simulated single leaf small scale doorsets utilising the heating and pressure conditions given in BS EN 1363-1:2012.</p> <p>The purpose of the test was to provide an indication of the performance on a range of Carlisle Brass Ltd door furniture when fitted to 30 and 60 minute fire rated timber based doorsets.</p> <p>The test assembly consisted of two small scale simulated doorsets, which for the purposes of the test were reference as Doorset A and Doorset B</p> <p>Doorset A had overall dimensions of 1490 mm high by 665 mm wide incorporating a door leaf with overall dimensions 1490 mm high by 589 mm wide by 44 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was mounted with two vertical softwood jambs. The Doorset incorporated the following items of hardware:</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Description</th> <th>Reference</th> </tr> </thead> <tbody> <tr> <td>10</td> <td>Tubular Latch</td> <td>2.5" Brass TLE5025</td> </tr> <tr> <td>14</td> <td>Steel Lever Handle Set</td> <td>SZA420</td> </tr> <tr> <td>9</td> <td>Tubular Latch</td> <td>2.5" TLE5025</td> </tr> <tr> <td>15</td> <td>Steel Lever Handle Set</td> <td>SZA301YCP</td> </tr> <tr> <td>6</td> <td>Euro Profile Sashlock</td> <td>ESE5030</td> </tr> <tr> <td>12</td> <td>Steel Lever Handle Set</td> <td>CSLP1162E</td> </tr> <tr> <td>11</td> <td>Double Cylinder</td> <td>CYA71270 SC</td> </tr> <tr> <td>7</td> <td>Euro Profile Sashlock</td> <td>LSE5330</td> </tr> <tr> <td>13</td> <td>Brass Lever Handle Set</td> <td>DL54</td> </tr> <tr> <td>21</td> <td>Steel Numeral (to exposed face)</td> <td>NUM0175</td> </tr> <tr> <td>20</td> <td>Recessed Pull Handle (to exposed face)</td> <td>FPH1180</td> </tr> </tbody> </table> <p>Doorset B had overall dimensions of 1492 mm high by 668 mm wide incorporating a door leaf with overall dimensions 1492 mm high by 589 mm wide by 54 mm thick. The door leaf was of a solid graduated density chipboard construction, with 8 mm hardwood lippings to the vertical edges and was mounted with two vertical hardwood jambs. The Doorset incorporated the following hardware:</p> <table border="1"> <thead> <tr> <th>Item Number</th> <th>Description</th> <th>Reference</th> </tr> </thead> <tbody> </tbody> </table>	Item Number	Description	Reference	10	Tubular Latch	2.5" Brass TLE5025	14	Steel Lever Handle Set	SZA420	9	Tubular Latch	2.5" TLE5025	15	Steel Lever Handle Set	SZA301YCP	6	Euro Profile Sashlock	ESE5030	12	Steel Lever Handle Set	CSLP1162E	11	Double Cylinder	CYA71270 SC	7	Euro Profile Sashlock	LSE5330	13	Brass Lever Handle Set	DL54	21	Steel Numeral (to exposed face)	NUM0175	20	Recessed Pull Handle (to exposed face)	FPH1180	Item Number	Description	Reference
Item Number	Description	Reference																																						
10	Tubular Latch	2.5" Brass TLE5025																																						
14	Steel Lever Handle Set	SZA420																																						
9	Tubular Latch	2.5" TLE5025																																						
15	Steel Lever Handle Set	SZA301YCP																																						
6	Euro Profile Sashlock	ESE5030																																						
12	Steel Lever Handle Set	CSLP1162E																																						
11	Double Cylinder	CYA71270 SC																																						
7	Euro Profile Sashlock	LSE5330																																						
13	Brass Lever Handle Set	DL54																																						
21	Steel Numeral (to exposed face)	NUM0175																																						
20	Recessed Pull Handle (to exposed face)	FPH1180																																						
Item Number	Description	Reference																																						

Test Report Reference 385354

9	Tubular Latch	2.5" TLE5025
18	Nickel Plated Lever Handle Set	SR700
8	Tubular Latch	3" TLE5030
19	Brass Door Knob	M35/PB
6	Euro Profile Sashlock	ESE5030
11	Double Cylinder	CYA71270 SC
16	Brass Lever Handle Set	DL54Y
7	Euro Profile Sashlock	LSE5330
17	Steel Lever Handle Set	LPP4004SAA
22	Door Viewer (x2 installed in opposite orientations)	AA77
21	Steel Numeral (to exposed face)	NUM0175
20	Recessed Pull Handle (to exposed face)	FPH1180

Representatives of Warrington Certification Limited sampled the building hardware incorporated within the test.

Appendix B

Range	Off-Shelf KTD	Workshop KTD	Workshop KA	Workshop UNK	Description	Dim A	Dim B	Dim C	Body Material
<p>The diagram shows a cross-section of a cylinder with a diameter of 10. Dimension A is the total length, B is the length of the first section, and C is the length of the second section. A small circle is shown at the bottom center of the cylinder.</p>									
MP15		CYP71141	CYP74141	CYP77141	Euro Profile Single Cylinder	41	31	10	Brass
		CYP71145	CYP74145	CYP77145	Euro Profile Single Cylinder	45	31	10	
		CYP71262	CYP74262	CYP77262	Euro Profile Double Cylinder	62	31	31	
		CYP71270	CYP74270	CYP77270	Euro Profile Double Cylinder	70	35	35	
		CYP71282	CYP74282	CYP77282	Euro Profile Double Cylinder	82	41	41	
		CYP71362	CYP74362	CYP77362	Euro Profile Cylinder & Turn	62	31	31	
		CYP71370	CYP74370	CYP77370	Euro Profile Cylinder & Turn	70	35	35	
		CYP71382	CYP74382	CYP77382	Euro Profile Cylinder & Turn	82	41	41	
MP10		CYG71142	CYG74142	CYG77142	Euro Profile Single Cylinder	42	32	10	Brass
		CYG71146	CYG74146	CYG77146	Euro Profile Single Cylinder	46	36	10	
		CYG71150	CYG74150	CYG77150	Euro Profile Single Cylinder	50	40	10	
		CYG71155	CYG74155	CYG77155	Euro Profile Single Cylinder	55	45	10	
	CYH71264	CYG71264	CYG74264	CYG77264	Euro Profile Double Cylinder	64	32	32	
	CYH71270	CYG71270	CYG74270	CYG77270	Euro Profile Double Cylinder	70	35	35	
	CYH71280	CYG71280	CYG74280	CYG77280	Euro Profile Double Cylinder	80	40	40	
		CYG71290	CYG74290	CYG77290	Euro Profile Double Cylinder	90	45	45	
		CYG712100	CYG742100	CYG772100	Euro Profile Double Cylinder	100	50	50	
		CYG7123240	CYG7423240	CYG7723240	Euro Profile Double Cylinder	72	32	40	
		CYG7123250	CYG7423250	CYG7723250	Euro Profile Double Cylinder	82	32	50	
		CYG7123540	CYG7423540	CYG7723540	Euro Profile Double Cylinder	75	35	40	
		CYG7123545	CYG7423545	CYG7723545	Euro Profile Double Cylinder	80	40	40	
		CYG7123550	CYG7423550	CYG7723550	Euro Profile Double Cylinder	85	35	50	
		CYG7123555	CYG7423555	CYG7723555	Euro Profile Double Cylinder	90	35	55	
	CYG7124045	CYG7424045	CYG7724045	Euro Profile Double Cylinder	85	40	45		

		CYG7124050	CYG7424050	CYG7724050	Euro Profile Double Cylinder	90	40	50	
		CYG7124055	CYG7424055	CYG7724055	Euro Profile Double Cylinder	95	40	55	
		CYG7124060	CYG7424060	CYG7724060	Euro Profile Double Cylinder	100	40	60	
		CYG7124550	CYG7424550	CYG7724550	Euro Profile Double Cylinder	95	45	50	
		CYG7124555	CYG7424555	CYG7724555	Euro Profile Double Cylinder	100	45	55	
	CYH71364	CYG71364	CYG74364	CYG77364	Euro Profile Cylinder & Turn	64	32	32	
	CYH71370	CYG71370	CYG74370	CYG77370	Euro Profile Cylinder & Turn	70	35	35	
	CYH71380	CYG71380	CYG74380	CYG77380	Euro Profile Cylinder & Turn	80	40	40	
		CYG71390	CYG74390	CYG77390	Euro Profile Cylinder & Turn	90	45	45	
		CYG713100	CYG743100	CYG773100	Euro Profile Cylinder & Turn	100	50	50	
		CYG7133240	CYG7433240	CYG7733240	Euro Profile Cylinder & Turn	72	32	40	
		CYG7133545	CYG7433545	CYG7733545	Euro Profile Cylinder & Turn	80	35	45	
		CYG7134032	CYG7434032	CYG7734032	Euro Profile Cylinder & Turn	72	40	32	
		CYG7134050	CYG7434050	CYG7734050	Euro Profile Cylinder & Turn	90	40	50	
		CYG7134060	CYG7434060	CYG7734060	Euro Profile Cylinder & Turn	100	40	60	
		CYG7134535	CYG7434535	CYG7734535	Euro Profile Cylinder & Turn	80	45	35	
		CYG7134550	CYG7434550	CYG7734550	Euro Profile Cylinder & Turn	95	45	50	
		CYG7134555	CYG7434555	CYG7734555	Euro Profile Cylinder & Turn	100	45	55	
		CYG7135040	CYG7435040	CYG7735040	Euro Profile Cylinder & Turn	90	50	40	
		CYG7135045	CYG7435045	CYG7735045	Euro Profile Cylinder & Turn	95	50	45	
		CYG7135545	CYG7435545	CYG7735545	Euro Profile Cylinder & Turn	100	55	45	
		CYG7136040	CYG7436040	CYG7736040	Euro Profile Cylinder & Turn	100	60	40	
		CYG71370CR	CYG74370CR	CYG77370CR	Euro Profile Classroom Cylinder	70	35	35	
		CYG71380CR	CYG74380CR	CYG77380CR	Euro Profile Classroom Cylinder	80	40	40	
MPx6		CYF71146	CYF74146	CYF77146	Euro Profile Single Cylinder	46	36	10	Brass
		CYF71150	CYF74150	CYF77150	Euro Profile Single Cylinder	50	40	10	
	CYX71270	CYF71270	CYF74270	CYF77270	Euro Profile Double Cylinder	70	35	35	
	CYX71280	CYF71280	CYF74280	CYF77280	Euro Profile Double Cylinder	80	40	40	
	CYX71290	CYF71290	CYF74290	CYF77290	Euro Profile Double Cylinder	90	45	45	
	CYX712100	CYF712100	CYF742100	CYF772100	Euro Profile Double Cylinder	100	50	50	
	CYX712110	CYF712110	CYF742110	CYF772110	Euro Profile Double Cylinder	110	55	55	
	CYX7123540	CYF7123540	CYF7423540	CYF7723540	Euro Profile Double Cylinder	75	35	40	

	CYX7123545	CYF7123545	CYF7423545	CYF7723545	Euro Profile Double Cylinder	80	40	40	
	CYX7123550	CYF7123550	CYF7423550	CYF7723550	Euro Profile Double Cylinder	85	35	50	
	CYX7124045	CYF7124045	CYF7424045	CYF7724045	Euro Profile Double Cylinder	85	40	45	
	CYX7124050	CYF7124050	CYF7424050	CYF7724050	Euro Profile Double Cylinder	90	40	50	
	CYX7124060	CYF7124060	CYF7424060	CYF7724060	Euro Profile Double Cylinder	100	40	60	
	CYX7124550	CYF7124550	CYF7424550	CYF7724550	Euro Profile Double Cylinder	95	45	50	
	CYX71370	CYF71370	CYF74370	CYF77370	Euro Profile Cylinder & Turn	70	35	35	
	CYX71380	CYF71380	CYF74380	CYF77380	Euro Profile Cylinder & Turn	80	40	40	
	CYX71390	CYF71390	CYF74390	CYF77390	Euro Profile Cylinder & Turn	90	45	45	
	CYX713100	CYF713100	CYF743100	CYF773100	Euro Profile Cylinder & Turn	100	50	50	
	CYX7133545	CYF7133545	CYF7433545	CYF7733545	Euro Profile Cylinder & Turn	80	35	45	
	CYX7134060	CYF7134060	CYF7434060	CYF7734060	Euro Profile Cylinder & Turn	100	40	60	
	CYX7134535	CYF7134535	CYF7434535	CYF7734535	Euro Profile Cylinder & Turn	80	45	35	
	CYX7136040	CYF7136040	CYF7436040	CYF7736040	Euro Profile Cylinder & Turn	100	60	40	
	CYA71140	CYB71140	CYB74140	CYB77140	Euro Profile Single Cylinder	40	30	10	
	CYA71145	CYB71145	CYB74145	CYB77145	Euro Profile Single Cylinder	45	35	10	
	CYA71150	CYB71150	CYB74150	CYB77150	Euro Profile Single Cylinder	50	40	10	
		CYB71155	CYB74155	CYB77155	Euro Profile Single Cylinder	55	45	10	
		CYB71160	CYB74160	CYB77160	Euro Profile Single Cylinder	60	50	10	
		CYB71165	CYB74165	CYB77165	Euro Profile Single Cylinder	65	55	10	
		CYB71170	CYB74170	CYB77170	Euro Profile Single Cylinder	70	60	10	
		CYB71175	CYB74175	CYB77175	Euro Profile Single Cylinder	75	65	10	
	CYA71260	CYB71260	CYB74260	CYB77260	Euro Profile Double Cylinder	60	30	30	
MP5	CYA71270	CYB71270	CYB74270	CYB77270	Euro Profile Double Cylinder	70	35	35	Brass
	CYA71280	CYB71280	CYB74280	CYB77280	Euro Profile Double Cylinder	80	40	40	
	CYA71290	CYB71290	CYB74290	CYB77290	Euro Profile Double Cylinder	90	45	45	
	CYA712100	CYB712100	CYB742100	CYB772100	Euro Profile Double Cylinder	100	50	50	
		CYB712110	CYB742110	CYB772110	Euro Profile Double Cylinder	110	55	55	
	CYA7123050	CYB7123050	CYB7423050	CYB7723050	Euro Profile Double Cylinder	80	30	50	
		CYB7123070	CYB7423070	CYB7723070	Euro Profile Double Cylinder	100	30	70	
	CYA7123545	CYB7123545	CYB7423545	CYB7723545	Euro Profile Double Cylinder	80	35	45	
		CYB7123555	CYB7423555	CYB7723555	Euro Profile Double Cylinder	90	35	55	
		CYB7124045	CYB7424045	CYB7724045	Euro Profile Double Cylinder	85	40	45	

CYA7124050	CYB7124050	CYB7424050	CYB7724050	Euro Profile Double Cylinder	90	40	50
	CYB7124055	CYB7424055	CYB7724055	Euro Profile Double Cylinder	95	40	55
CYA7124060	CYB7124060	CYB7424060	CYB7724060	Euro Profile Double Cylinder	100	40	60
CYA7124550	CYB7124550	CYB7424550	CYB7724550	Euro Profile Double Cylinder	95	45	50
	CYB7124555	CYB7424555	CYB7724555	Euro Profile Double Cylinder	100	45	55
CYA71360	CYB71360	CYB74360	CYB77360	Euro Profile Cylinder & Turn	60	30	30
CYA71370	CYB71370	CYB74370	CYB77370	Euro Profile Cylinder & Turn	70	35	35
	CYB7137030	CYB7437030	CYB7737030	Euro Profile Cylinder & Turn	100	70	30
CYA71380	CYB71380	CYB74380	CYB77380	Euro Profile Cylinder & Turn	80	40	40
CYA71390	CYB71390	CYB74390	CYB77390	Euro Profile Cylinder & Turn	90	45	45
CYA713100	CYB71300	CYB74300	CYB77300	Euro Profile Cylinder & Turn	100	50	50
	CYB713110	CYB743110	CYB773110	Euro Profile Cylinder & Turn	110	55	55
	CYB7133040	CYB7433040	CYB7733040	Euro Profile Cylinder & Turn	70	30	40
	CYB7133050	CYB7433050	CYB7733050	Euro Profile Cylinder & Turn	80	30	50
	CYB7133070	CYB7433070	CYB7733070	Euro Profile Cylinder & Turn	100	30	70
	CYB7133540	CYB7433540	CYB7733540	Euro Profile Cylinder & Turn	75	35	40
	CYB7133545	CYB7433545	CYB7733545	Euro Profile Cylinder & Turn	80	35	45
	CYB7133555	CYB7433555	CYB7733555	Euro Profile Cylinder & Turn	90	35	55
CYA7134030	CYB7134030	CYB7434030	CYB7734030	Euro Profile Cylinder & Turn	70	40	30
	CYB7134035	CYB7434035	CYB7734035	Euro Profile Cylinder & Turn	75	40	35
	CYB7134045	CYB7434045	CYB7734045	Euro Profile Cylinder & Turn	85	40	45
	CYB7134050	CYB7434050	CYB7734050	Euro Profile Cylinder & Turn	90	40	50
CYA7134535	CYB7134535	CYB7434535	CYB7734535	Euro Profile Cylinder & Turn	80	45	35
	CYB7134540	CYB7434540	CYB7734540	Euro Profile Cylinder & Turn	85	45	40
	CYB7135030	CYB7435030	CYB7735030	Euro Profile Cylinder & Turn	80	50	30
	CYB7135040	CYB7435040	CYB7735040	Euro Profile Cylinder & Turn	90	50	40
	CYB7135535	CYB7435535	CYB7735535	Euro Profile Cylinder & Turn	90	55	35
	CYB7135545	CYB7435545	CYB7735545	Euro Profile Cylinder & Turn	100	55	45
CYA7134060	CYB7134060	CYB7434060	CYB7734060	Euro Profile Cylinder & Turn	100	40	60
CYA7136040	CYB7136040	CYB7436040	CYB7736040	Euro Profile Cylinder & Turn	100	60	40
	CYB71370CR	CYB74370CR	CYB77370CR	Euro Profile Classroom Cylinder	70	35	35
	CYB71380CR	CYB74380CR	CYB77380CR	Euro Profile Classroom Cylinder	80	40	40

