Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com

Testing. Advising. Assuring.

Title:

The Fire Resistance Performance Of Timber Or Mineral Composite Based Insulated Doorsets And Uninsulated Metallic Based Doorsets When Fitted With 'Briton' Leversets, Escutcheons and Pull Handles

Report No:

WF No. 143440, Issue 3

Prepared for:

Ingersoll Rand Security Technologies

Bescot Crescent
Walsall
West Midlands
WS1 4DL

Date: 13th January 2005

TABLE OF CONTENTS

Executive Summary

Objective

This report presents an appraisal of the fire resistance performance of timber or mineral composite based doorsets and uninsulated metallic based doorsets when fitted with 'Briton' leversets, escutcheons and pull handles, if tested in accordance with BS EN 1634-1: 2000.

Report Sponsor

Ingersoll Rand Security Technologies

Address

Bescot Crescent,
Walsall,
West Midlands,
WS1 4DL.

Summary of Conclusions

Should the recommendations given in this report be followed, it can be concluded that the 'Briton' leversets, escutcheons and pull handles, when included within a previously tested lockset, may be fitted to previously tested or assessed (by Bodycote **warrington**fire) insulated timber or mineral composite based doorsets, to provide up to 120 minutes integrity performance and uninsulated metallic based doorsets, to provide up to 240 minutes integrity performance if tested in accordance with BS EN 1634-1: 2000.

Valid until

1st May 2012

Introduction

This report presents an appraisal of the fire resistance performance of single-acting insulated (timber or mineral composite) doorsets and uninsulated metallic based doorsets when fitted with a lockset including 'Briton' leversets, escutcheons and/or 'Briton' pull handles. The doorset, onto which the proposed hardware is to be fitted may be of single-leaf or double-leaf configuration.

The proposed doorsets are required to provide a fire resistance performance of up to 120 minutes (timber or mineral composite) or 240 minutes (metallic) integrity with respect to BS EN 1634-1: 2000.

FTSG

The data referred to in the supporting data section has been considered for the purpose of this appraisal which has been prepared in accordance with the Fire Test Study Group Resolution No. 82: 2001.

Assumptions

It is assumed that the 'Briton' leversets, escutcheons will be fitted in conjunction with a previously tested lockset, (lockset not required for pull handles) to a doorset which has also been previously shown to be capable of providing the required fire resistance performance when tested in accordance with BS EN 1634-1: 2000 in the proposed configuration i.e. single-leaf or double-leaf.

Supporting wall

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.

Clearance gaps

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. In addition, it is assumed that the door leaves will be in the closed position.

Proposals

It is proposed that 'Briton' leversets, escutcheons, in conjunction with a previously tested lockset, and pull handles may be fitted to a previously tested (in accordance with BS EN 1634-1: 2000) insulated (timber or mineral composite) doorset or uninsulated (metallic based) doorset which has been shown to be capable of providing up to 60/120 minutes (timber or mineral composite) integrity or 240 minutes (metallic based) integrity in the same configuration as that proposed i.e. single-leaf or double-leaf.

Basic Test Evidence

The test referenced WARRES No. 137145 included two single-acting, single-leaf timber based doorsets, each door leaf was of nominal thickness 52 mm and was fitted with two locksets.

The tested locksets were fitted with various leversets and escutcheons as detailed below:

Specimen Ref.	Leverset Ref.	Escutcheon Ref.
Doorset A (lower lockset)	59.5000.SS	5402.SS
Doorset B (upper lockset)	59.5000.PA	5401.PA

The doorsets achieved in excess of their intended 60 minutes integrity performances, the test eventually being discontinued after 66 minutes with integrity still intact.

The test referenced WARRES No. 142517 included two single-acting, single-leaf timber based doorsets. Doorset A was of nominal thickness 44 mm whilst doorset B was nominally 52 mm thick. Each doorset was fitted with two locksets and a pull handle referenced 0443.02 (Doorset A) and 0310.07.11 / 0310.17 (Doorset B).

The doorsets achieved in excess of their intended 30/60 minutes integrity performances, the test eventually being discontinued after 36 and 66 minutes respectively with integrity still intact.

The test referenced WF No. 155157 included two single-acting, single-leaf uninsulated steel based doorsets. The doorsets were fitted with various items of hardware including 4140 type lever handles and 4020 escutcheons attached to the surface of the door leaves.

Although instances of integrity failure occurred on both doorsets, in neither case was the occurrence due to the 4140 type lever handles or 4020 escutcheons for the test duration of 260 minutes.

Assessed Performance

General

It is proposed that previously fire tested (or assessed by Bodycote **warrington**fire) timber or mineral composite based insulated doorsets may be fitted with Briton pull handles and/or a lockset including ‘Briton’ leversets and escutcheons in order to provide up to 60 minutes integrity (pull handles) or 120 minutes integrity (leversets and escutcheons), without detracting from the performance of the doorset.

It is further proposed that previously fire tested (or assessed by Bodycote **warringtonfire**) uninsulated metallic doorsets may be fitted with Briton pull handles and/or a lockset including 'Briton' leversets and escutcheons in order to provide up to 240 minutes integrity, without detracting from the performance of the doorset.

Insulated doorsets

The performances of the respective doorsets during the tests referenced WARRES No 137145 and WFRC No.142517 are cited to display the ability of the proposed items to contribute towards the required fire resistance performance of timber or mineral composite based insulated doorsets when used in conjunction with a suitable lockset and doorset.

The test included insulated (timber based) door leaves and upon examination of the test reports it can be seen that there were no modes of integrity failure, which were either attributable to or co-incident with the performance or presence of the proposed items.

As the proposed items are of the same basic construction (in terms of materials), the range listed within Annex A are deemed acceptable.

The proposed leversets and escutcheons are predominantly surface mounted and therefore would not be expected to adversely affect the performance of an insulated doorset for periods up to 120 minutes integrity when used in conjunction with a previously tested lockset.

Where the proposed pull handles require bolt through fixings they shall include 1 mm thick Interdens (Lorient mono-ammonium phosphate) material to the through fixing hole (wrapping the bolt/bar) for 30 minute doorset constructions. For 60 minute doorset constructions this shall be increased to 2 mm thick Interdens (Lorient mono-ammonium phosphate) as tested under reference WARRES No. 142517.

Leversets and escutcheons mounted on uninsulated doorsets

Examples of the proposed leversets and escutcheons were included in the test referenced WF No. 155157 mounted to uninsulated steel based doorsets. The items referenced as 8, 13, 16 and 21 were all variants of the 4140 type levers and 4020 escutcheons.

Although instances of integrity failure occurred on both doorsets, the mode of integrity failure in both cases was attributed to other items of hardware fitted to the doorsets.

Those items of hardware included in the test and considered here did not contribute toward the integrity failure, nor did they detract from the overall performance of the doorsets. The integrity performance of these components was maintained for the full 260 minute test duration.

All of the proposed items are of the same basic construction (in terms of materials) as those included in the test. The range of items listed within Annex A are deemed acceptable.

Examples of the proposed leversets and escutcheons have been proven by test, so would not be expected to adversely affect the performance of an uninsulated metallic based doorset for periods up to 240 minutes integrity when used in conjunction with a previously tested lockset.

Pull handles mounted on uninsulated doorsets

It is proposed that the 'Briton' pull handles be fitted to previously proven uninsulated steel doorsets. The handles are of an all steel construction. In assessing the performance of the handles a reasonable comparison can be made with the lever handles included in the test referenced WF No. 155157 in terms of fixing method and exposure conditions.

Items 8 and 13 were both leversets in a back to back configuration. Items 16 and 21 were both fixed to the unexposed side of the door leaf. Whilst the proposed handles do not give any great concern as to their inclusion, the addition of this data from the test adds to the confidence that they can be included without detracting from the fire resistance performance of uninsulated metallic based doorsets.

It is therefore reasonable to consider that the proposed handles would not be expected to adversely affect the performance of uninsulated metallic based doorsets for periods up to 240 minutes integrity.

Proposed Doorsets

As stated in this report, the doorset, in the required configuration, will be previously tested (or assessed by Bodycote **warrington**fire) and its performance is therefore not in doubt.

To enable the use of the hardware on a range of doorsets, it is necessary to address the available information on the proposed doorset. As this appraisal is intended to be used on a general basis and not restricted to any particular manufacturer of fire resisting doorsets, the following points are given to enable the hardware to be used safely:

a) The doorset shall carry valid certification or the doorset, including the door frame and associated ironmongery should have achieved up to 120 minutes, (timber/mineral composite based) or 240 minutes (metallic) integrity, when tested by a NAMAS/UKAS approved laboratory (or assessed by Bodycote **warrington**fire) to BS EN 1634-1: 2000.

b) If the proposed doorset is to be used in double-leaf configuration the test or assessment evidence should be applicable to double-leaf configurations.

Conclusions

Doorsets that have previously been successfully fire tested by a NAMAS/UKAS accredited laboratory (or assessed by Bodycote **warringtonfire**) which have achieved up to 120 minutes integrity, (timber/mineral composite based) or 240 minutes integrity (steel) as discussed in this report, may be fitted with a lockset including Briton leversets and escutcheons without detracting from the overall performance of the doorset.

Doorsets that have previously been successfully fire tested by a NAMAS/UKAS accredited laboratory (or assessed by Bodycote **warringtonfire**) which have achieved up to 60 minutes integrity, (timber/mineral composite based) or 240 minutes integrity (steel) as discussed in this report, may be fitted with 'Briton' pull handles without detracting from the overall performance of the doorset.

Validity

This assessment is issued on the basis of test data and information available at the time of issue. If contradictory evidence becomes available to Bodycote **warringtonfire** the assessment will be unconditionally withdrawn and Ingersoll Rand Security Technologies will be notified in writing. Similarly the assessment is invalidated if the assessed construction is subsequently tested because actual test data is deemed to take precedence over an expressed opinion. The assessment is valid initially for a period of five years i.e. until 1st May 2012, after which time it is recommended that it be returned for re-appraisal.

The appraisal is only valid provided that no other modifications are made to the tested construction other than those described in this report.

Summary of Primary Supporting Data

WARRES No. 137145

Test report relating to the performance of two fully insulated, single-acting, single-leaf, timber doorsets incorporating various building hardware surface, when subjected to a test in accordance with BS EN 1634-1: 2000 to determine their fire resistance performance.

For the purpose of the test the specimens were referenced Doorset A and Doorset B. Each doorset had overall dimensions of 2080 mm high by 1010 mm wide and incorporated a door leaf of overall dimensions 2035 mm high by 925 mm wide by 52 mm thick. Each doorset included a hardwood door frame and a door leaf comprising softwood stiles and rails, a flaxboard core, with non-combustible board sub facings, hardwood lippings to the vertical edges and MDF outer facings.

The tested locksets were fitted with various leversets and escutcheons as detailed below:

Specimen Ref.	Leverset Ref.	Escutcheon Ref.
Doorset A (lower lockset)	59.5000.SS	5402.SS
Doorset B (upper lockset)	59.5000.PA	5401.PA

Each doorset also included 'back to back' fitted pull handles referenced 22.300.F2.PA (Doorset A) and 22.225.F2.SS (Doorset B).

The doorsets were installed such that they opened towards the heating conditions of the test.

The specimens satisfied the test requirements for the following periods:

		Doorset A	Doorset B
Integrity	Sustained Flames	66 minutes*	66 minutes*
	Gap Gauge	66 minutes*	66 minutes*
	Cotton Pad	66 minutes*	66 minutes*
Insulation		66 minutes*	66 minutes*

* The test duration.

Test date : 26th January 2004

Test sponsor : IR Security and Safety Limited

WFRC No. 142517

Test report relating to the performance of two fully insulated, single-acting, single-leaf, timber doorsets incorporating various building hardware surface, when subjected to a test in accordance with BS EN 1634-1: 2000 to determine their fire resistance performance.

For the purpose of the test the specimens were referenced Doorset A and Doorset B. Doorset A had overall nominal dimensions of 2080 mm high by 1010 mm wide and incorporated a door leaf of overall nominal dimensions 2048 mm high by 938 mm wide by 44 mm thick. The doorset included a softwood door frame and a door leaf comprising softwood stiles and rails, a flaxboard core, MDF facings and was lipped with hardwood on the vertical edges.

Doorset B had overall dimensions of 2155 mm high by 1014 mm wide and incorporated a door leaf of overall dimensions 2038 mm high by 928 mm wide by 52 mm thick. The doorset included a hardwood door frame and a door leaf comprising softwood stiles and rails, a flaxboard core, with non-combustible board sub facings, hardwood lippings to the vertical edges and MDF outer facings.

Each doorset included pull handles referenced 0443.02 (Doorset A) and 0310.07.11 / 0310.17 (Doorset B).

The doorsets were installed such that they opened towards the heating conditions of the test.

The specimens satisfied the test requirements for the following periods:

		Doorset A	Doorset B
Integrity	Sustained Flames	36 minutes*	66 minutes*
	Gap Gauge	36 minutes*	66 minutes*
	Cotton Pad	36 minutes*	66 minutes*
Insulation		36 minutes*	66 minutes*

* The test duration.

The specimens satisfied the test requirements for the following periods:

Test date : 18th October 2004

Test sponsor : IR Security and Safety Limited

WF No. 155157

Test report relating to the performance of uninsulated, single-acting, single-leaf, steel doorsets incorporating various building hardware surface, when subjected to a test in accordance with BS EN 1634-1: 2000 to determine their fire resistance performance.

Both doorsets had overall dimensions of 2310 mm high by 1082 mm wide and each incorporated a door leaf of overall dimensions 2250 mm high by 1000 mm wide by 50 mm thick. Both doorsets comprised a door leaf formed from 1.2 mm thick mild steel sheet skins with a paper honeycomb core. The door leaves were hung within a profiled mild steel frame on three stainless steel hinges.

Doorset A incorporated two sets of 4140.R.SS lever handles mounted to the door leaf skins on both faces and two 4020.8.SS escutcheons mounted on the unexposed face skin only.

Doorset B incorporated two half sets of 4140.R.SS lever handles and two 4020.8.SS escutcheons all mounted on the unexposed face skin only.

The doorsets were installed such that doorset A opened towards and doorset B opened away from the heating conditions of the test.

The specimens satisfied the test requirements for the following periods:

		Doorset A	Doorset B
Integrity	Sustained Flames	30 minutes	31 minutes
	Gap Gauge	260 minutes*	260 minutes*
	Cotton Pad	30 minutes	31 minutes
Insulation		6 minutes	6 minutes

*The test duration. The test was discontinued after a period of 260 minutes.

Test date : 6th July 2006

Test sponsor : Ingersoll Rand Security Technologies

Declaration by Ingersoll Rand Security Technologies

We the undersigned confirm that we have read and complied with the obligations placed on us by the UK Fire Test Study Group Resolution No. 82: 2001.

We confirm that the component or element of structure, which is the subject of this assessment, has not to our knowledge been subjected to a fire test to the Standard against which the assessment is being made.

We agree to withdraw this assessment from circulation should the component or element of structure be the subject of a fire test to the Standard against which this assessment is being made.

We are not aware of any information that could adversely affect the conclusions of this assessment.

If we subsequently become aware of any such information we agree to cease using the assessment and ask Bodycote **warrington**fire to withdraw the assessment.

Signed:

For and on behalf of:

Signatories

Responsible Officer

D. Forshaw* - Senior Technical Officer

Approved

C Johnson* - Technical Consultant

* For and on behalf of Bodycote **warringtonfire**.

Report Issued: 13th January 2005

Issue 2: Addition of ½ leversets plus modification to existing references (16th May 2005)

Issue 3: Addition of new pull handle references plus inclusion of test evidence for uninsulated doorsets (10th May 2007)

The assessment report is not valid unless it incorporates the declaration duly signed by the applicant.

Annex A

Briton 'Commercial' Range

Levers/Leversets:	
Description	**Briton Ref.**
20 Rtd Lever On Rose	4640.20.R
20 T Mitre Lever On Rose	4740.20.R
20 Str Lever On Rose	4840.20.R
20 Rtd Lever On Lever Key Cov Plate	4610.20.B.57
20 Rtd Lever On 72 Euro Cyl Cov Plate	4620.20.B.72
20 Rtd Lever On 57 Euro Cyl Cov Plate	4620.20.B.57
20 Rtd Lever On 78 Bath'm Cov Plate	4630.20.B.78
20 Rtd Lever On 57 Bath'm Cov Plate	4630.20.B.57
20 Rtd Lever on 78 Bath'm Cov Plate Large Turn	4635.20.B.78
20 Rtd Lever On Long Latch Cov Plate	4640.20.B
20 Rtd Lever On 56 Oval Cy Cov Plate	4650.20.B.56
20 T Mitre Lever On Lever Key Cov Plate	4710.20.B.57
20 T Mitre Lever On 72 Euro Cov Plate	4720.20.B.72
20 T Mitre Lever On 57 Euro Cov Plate	4720.20.B.57
20 T Mitre Lever On 78 Bath'm Cov Plate	4730.20.B.78
20 T Mitre Lever On 57 Bath'm Cov Plate	4730.20.B.57
20 T Mitre Lever on 78 Bathr'm Cov Plate Large Turn	4735.20.B.78
20 T Mitre Lever On Long Latch Cov Pla	4740.20.B
20 T Mitre Lever On 56 Oval Cyl Cov Plat	4750.20.B.56
20 Str Lever On Lever Key Cov Plat	4810.20.B.57
20 Str Lever On 72 Euro Cyl Cov Plat	4820.20.B.72
20 Str Lever On 57 Euro Cyl Cov Plat	4820.20.B.57
20 Str Lever On 78 Bath'm Cov Plat	4830.20.B.78
20 Str Lever On 57 Bath'm Cov Plat	4830.20.B.57
20 Str Lever On Long Latch Cov Plat	4840.20.B
20 Str Lever On 56 Oval Cyl Cov Plat	4850.20.B.56
22 Rtd Lever On Rose	4640.22.R
22 T Mitre Lever On Rose	4740.22.R
22 Rtd Lever On Lever Key Cov Plate	4610.22.B.57
22 Rtd Lever On 72 Euro Cyl Cov Plate	4620.22.B.72
22 Rtd Lever On 57 Euro Cyl Cov Plate	4620.22.B.57

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 120 minutes integrity.
* All items can be used within uninsulated metallic based doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 240 minutes integrity.

Levers/Leversets: continued	
Description	**Briton Ref.**
22 Rtd Lever On 78 Bath'm Cov Plate	4630.22.B.78
22 Rtd Lever On 57 Bath'm Cov Plate	4630.22.B.57
22 Rtd Lever on 78 Bath'm Cov Plate Large Turn	4635.22.B.78
22 Rtd Lever On Long Latch Cov Plate	4640.22.B
22 Rtd Lever On 56 Oval Cy Cov Plate	4650.22.B.56
22 Tmitre Lever On Lever Key Cov Plate	4710.22.B.57
22 Tmitre Lever On 72 Euro Cyl Cov Plat	4720.22.B.72
22 Tmitre Lever On 57 Euro Cyl Cov Plate	4720.22.B.57
22 Tmitre Lever On 78 Bath'm Cov Plate	4730.22.B.78
22 Tmitre Lever On 57 Bath'm Cov Plate	4730.22.B.57
22 T Mitre Lever on 78 Bathr'm Cov Plate Large Turn	4735.22.B.78
22 Tmitre Lever On Long Latch Cov Plate	4740.22.B
22 Tmitre Lever On 56 Oval Cy Cov Plate	4750.22.B.56
1/2 set to operate Latch 20mm RTD Lever On NSL Rose	4640.20.HR
1/2 set to operate Euro Profile Sashlock 20mm RTD Lever On Backplate	4620.20.HB.72
1/2 set to operate Euro Profile Sashlock 20mm RTD Lever On Backplate	4620.20.HB.57
1/2 set to operate Oval 20mm RTD Lever On Backplate	4650.20.HB.56
1/2 set to operate Latch 22mm RTD Lever On Rose	4640.22.HR
1/2 set to operate Euro Profile Sashlock 22mm RTD Lever On Backplate	4620.22.HR.72
1/2 set to operate Euro Profile Sashlock 22mm RTD Lever On Backplate	4620.22.HB.57
1/2 set to operate Oval 22mm RTD Lever On Backplate	4650.22.HB.56
1/2 set to operate Latch 20mm STR Lever On NSL Rose	4840.20.HR
1/2 set to operate Euro Profile Sashlock 20mm STR Lever On Backplate	4820.20.HB.72
1/2 set to operate Euro Profile Sashlock 20mm STR Lever On Backplate	4820.20.HB.57
1/2 set to operate Oval 20mm STR Lever On Backplate	4850.20.HB.56

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 120 minutes integrity.
* All items can be used within uninsulated metallic based doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 240 minutes integrity.

Escutcheons:	
Description	**Briton Ref.**
Std Lever Key Cov Escutcheon	4010.5
Euro Profile Cyl Cov Escutcheon	4020.5
Bathroom Turn/Release Cov Escut'n	4030.5
Bath'm Large Turn/Release Set	4035.5
Blank Cov Escut'n	4040.5
Oval Profile Cyl Cov Escutcheon	4050.5

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see ‘Proposed Doorsets’ section of this report for further details) for the provision of up to 120 minutes integrity.
* All items can be used within uninsulated metallic based doorsets (see ‘Proposed Doorsets’ section of this report for further details) for the provision of up to 240 minutes integrity.

Pull Handles:	
Description	**Briton Ref.**
Pull Handle 20x150 Btf	4600.20.150.1
Pull Handle 20x150 Bbf	4600.20.150.2
Pull Handle 20x150 Cff On Rose	4600.20.150.3
Pull Handle 20x225 Btf	4600.20.225.1
Pull Handle 20x225 Bbf	4600.20.225.2
Pull Handle 20x225 Cff On Rose	4600.20.225.3
Pull Handle 20x300 Btf	4600.20.300.1
Pull Handle 20x300 Bbf	4600.20.300.2
Pull Handle 20x300 Cffon Rose	4600.20.300.3
Pull Handle 20x400 Btf	4600.20.400.1
Pull Handle 20x400 Bbf	4600.20.400.2
Pull Handle 20x400 Cffon Rose	4600.20.400.3
Pull Handle 20x600mm Btf	4600.20.600.1
Pull Handle 20x600mm Bbf	4600.20.600.2
Pull Handle 20x600mm Cff	4600.20.600.3
Pull Handle 22x150 Btf	4600.22.150.1
Pull Handle 22x150 Bbf	4600.22.150.2
Pull Handle 22x150 Cff On Rose	4600.22.150.3
Pull Handle 22x225 Btf	4600.22.225.1
Pull Handle 22x225 Bbf	4600.22.225.2
Pull Handle 22x1225 Cff On Rose	4600.22.225.3
Pull Handle 22x300 Btf	4600.22.300.1
Pull Handle 22x300 Bbf	4600.22.300.2
Pull Handle 22x300 Cff On Rose	4600.22.300.3
Pull Handle 22x400 Btf	4600.22.400.1
Pull Handle 22x400 Bbf	4600.22.400.2
Pull Handle 22x400 Cff On Rose	4600.22.400.3
Pull Handle 22x600mm Btf	4600.22.600.1
Pull Handle 22x600mm Bbf	4600.22.600.2
Pull Handle 22x600mm Cff	4600.22.600.3

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 60 minutes integrity.
* All items can be used within uninsulated metallic based doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 240 minutes integrity.

Briton 'Contract' Range

Levers/Leversets:	
Description	**Briton Ref.**
Lever on rose - Return to door	4140.R
Lever on rose – straight mitred	4240.R
Lever on rose – straight	4340.R
Lever on rose – curved mitred	4440.R
Lever on rose - coupe	4540.R
Escutcheons:	
Description	**Briton Ref.**
Lever Key Esc	4010.8
Euro Profile	4020.8
Bathroom Turn & Release	4030.8
Blank Esc	4040.8
Oval Profile Esc	4050.8
Pull Handles:	
Description	**Briton Ref.**
Pull Hdle 19x150 C/C Btf	4100.20.150.1
Pull Hdle 19x225 C/C Btf	4100.20.225.1
Pull Hdle 19x300 C/C Btf	4100.20.300.1
Pull Hdle 19x400 C/C Btf	4100.20.400.1
Pull Hdle 19x150 C/C Bbf	4100.20.150.2
Pull Hdle 19x225 C/C Bbf	4100.20.225.2
Pull Hdle 19x300 C/C Bbf	4100.20.300.2
Pull Hdle 19x400 C/C Bbf	4100.20.400.2
Pull Hdle 19x150 Cffon Rose	4100.20.150.3
Pull Hdle 19x225 Cffon Rose	4100.20.225.3
Pull Hdle 19x300 Cffon Rose	4100.20.300.3
Pull Hdle 19x400 Cffon Rose	4100.20.400.3

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 120 minutes integrity, with the exception of pull handles which are limited to 60 minutes.
* All items can be used within uninsulated metallic based doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 240 minutes integrity.

Briton 'Premium' Range

Levers/Leversets:	
Description	**Briton Ref.**
20mm Round Bar On Rose	6220.R
20mm Round Bar On Rose	6230.R
20mm Round Bar On Rose	6240.R
20mm Round Bar On Backplate	6220.B
20mm Round Bar On Backplate	6230.B
20mm Round Bar On Backplate	6240.B
20mm Mitred Bar On Rose	6320.R
20mm Mitred Bar On Rose	6330.R
20mm Mitred Bar On Rose	6340.R
20mm Mitred Bar On Backplate	6320.B
20mm Mitred Bar On Backplate	6330.B
20mm Mitred Bar On Backplate	6340.B
20mm Butted Bar On Rose	6420.R
20mm Butted Bar On Rose	6430.R
20mm Butted Bar On Rose	6440.R
20mm Butted Bar On Backplate	6420.B
20mm Butted Bar On Backplate	6430.B
20mm Butted Bar On Backplate	6440.B
20mm Pierced Bar On Rose	6520.R
20mm Pierced Bar On Rose	6530.R
20mm Pierced Bar On Rose	6540.R
20mm Pierced Bar On Backplate	6520.B
20mm Pierced Bar On Backplate	6530.B
20mm Pierced Bar On Backplate	6540.B
Escutcheons:	
Description	**Briton Ref.**
10x55mm Escutcheon	6010.10
10x55mm Escutcheon	6020.10
10x55mm Turn & Release	6030.10
10x55mm Escutcheon	6040.10
10x55mm Escutcheon	6050.10

* Fire may be from either side/direction.
* All finishes are acceptable.
* All items can be used within timber based or mineral composite insulated doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 120 minutes integrity.
* All items can be used within uninsulated metallic based doorsets (see 'Proposed Doorsets' section of this report for further details) for the provision of up to 240 minutes integrity.

Exova Warringtonfire
Holmesfield Road
Warrington
WA1 2DS
United Kingdom

T : +44 (0) 1925 655 116
F : +44 (0) 1925 655 419
E : warrington@exova.com
W: www.exova.com

Testing. Advising. Assuring.

25th September 2012

Mr. S. Deeming
Ingersoll Rand Security Technologies Limited
Bescott Crescent
Walsall
West Midlands
WS1 4NF

WF No. 322244B Review of Assessment Report Referenced WF No. 143440 Issue 3

1 Introduction

The assessment report referenced WF No. 143440 issue 3 presented an appraisal of the fire resistance performance of timber or mineral composite based doorsets and uninsulated metallic based doorsets when fitted with 'Briton' leversets, escutcheons and pull handles, if tested in accordance with BS EN 1634-1: 2000.

The report concluded that, following its recommendations, when included within a previously tested lockset, the 'Briton' leversets, escutcheons and pull handles could be fitted to previously tested or assessed (by Exova Warringtonfire) insulated timber or mineral composite based doorsets, to provide up to 120 minutes integrity and insulation performance if tested in accordance with BS EN 1634-1: 2000.

The report also concluded that, following its recommendations, when included within a previously tested lockset, the 'Briton' leversets, escutcheons and pull handles could be fitted to previously tested or assessed (by Exova Warringtonfire) metallic based doorsets, to provide up to 240 minutes integrity and insulation performance if tested in accordance with BS EN 1634-1: 2000.

2 Confirmation of Specification

It has been confirmed by Ingersoll Rand Security Technologies that there have been no changes, to the specification of the closer units considered in the original appraisal referenced WF No. 143440 issue 3.

3 Conclusions

The procedures adopted for the original assessment have also been re-examined and are similar to those currently in use.

Therefore, with respect to the assessment of performance given in WF No. 143440 issue 3, the contents should remain valid until the 1st October 2017.

4 Validity

This review is based on information used to formulate the original assessment. No other information or data has been provided by Ingersoll Rand Security Technologies which could affect this review.

The original appraisal report was performed in accordance with the principles of the UK Fire Test Study Group Resolution 82: 2001.

Performed by:

D. Forshaw
Principal Certification Engineer

Reviewed By:

A. Kearns
Technical Manager
Exova Warringtonfire