



Postal Address:  
 PO Box 4282  
 Dandenong South, Victoria 3164  
 Australia

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<b>Test Sponsor</b> Pyropanel Developments Pty Ltd Unit 1, 97 Lewis Rd Wantirna South VIC 3152	<b>Re-Issue Date</b> 05/04/2018
<b>Hardware Sponsor</b> Salto Systems Australia 191 Botany Rd Waterloo NSW 2017	<b>Validity Date</b> 22/03/2023

**The Fire Resistance Performance of Pyropanel Pandor Maxi Doorsets with nominated variation to the door lockset**

**Variations Considered in this Report**




Tested: Fitting a Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) onto the door leaf in lieu of the door lockset tested in the referenced tests.

Proposed: Fitting a Salto XS4 One lockset with a Z lever (with Alcom 5000 Mortice lock) onto the door leaf in lieu of the door lockset tested in the referenced tests.

<b>Referenced Test Reports</b>		
<b>Test Report</b>	<b>Doorset Description</b>	<b>Test Standard</b>
FR 2482	Single Leaf Maxi Pyropanel Pandor Core Doorset nominally 48mm thick	BS 476: Part 22: 1987
FR 2485	Maxi Pyropanel Pandor Core Double Doorset nominally 48mm thick	BS 476: Part 22: 1987

<b>Additional Supporting Data</b>			
<b>Test Reference</b>	<b>Doorset Description</b>	<b>Test Duration</b>	<b>Test Standard</b>
EWFA 54077100	Single Leaf Maxi Pyropanel Pandor Core Doorset nominally 48mm thick	61 minutes	AS 1530.4-2014

A pilot scale fire resistance test in accordance with Appendix B11 of AS 1530.4-2014 was conducted on a pilot doorset on the 12 February 2018. It included a Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) fitted onto the door leaf.





<b>TESTING AUTHORITY</b>	Exova Warringtonfire Aus Pty Ltd		
<b>Address</b>	PO Box 4282 DANDENONG SOUTH VIC 3164 Unit 2, 409-411 Hammond Road DANDENONG VIC 3175		
<b>Phone</b>	61 (0)3 9767 1000		
<b>ABN</b>	81 050 241 524		
<b>Email / Home Page</b>	<a href="http://www.exova.com">www.exova.com</a>		
<b>Authorisation</b>	Prepared By:	Reviewed By:	Reviewed By:
			
	Anthony Rosamilia	Kai Loh	Patrick Chan

Variations Considered in this Report (Cont'd)

Table 1 – Alternative Salto Levers

	
<p>Model O Lever</p>	<p>Model Z Lever</p>

Tested Hardware Description

	
<p>Unexposed side</p>	<p>Exposed Side</p>
	
<p>Latch Side</p>	<p>Strike Plate</p>
	
<p>Alcom 5000 Mortice Lock</p>	<p>Alcom 5000 Mortice Lock</p>

### Tested Hardware Description Continued

**Product name:** Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock)

**Door system properties:**

**Door leaf thickness:** 47mm

**Backset :** 60mm

**Lockset type:** Mortice

**Location:** 53mm from the bottom of the lock to the bottom of the door leaf

**Cut-out size for lockset:** To fit mortice

**Turning Moment (single lever):** 0.103Nm

**Function verification:**

**Opening force:** 1.7N

**Closing force:** 1.8N

**Latching force:** 14.5N

**50 opening and closing cycle:** Completed prior to test

**Average door gap clearance:** Top edge: 1.1mm  
Latch edge: 1.2mm  
Hinge edge: 1.3mm

### Discussion

It is expected that if the proposed Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) does not initiate failure of the pilot doorset before failure occurred on the referenced doorsets, then substituting the lockset in the referenced test with the proposed lockset will not be detrimental to the performance of the referenced doorsets.

AS 1530.4-2014 states that sustained flaming on the surface of the unexposed face for 10 seconds or longer constitutes integrity failure. AS 1530.4-2014 also states that a latching mechanism ceasing to be engaged constitutes integrity failure. During the referenced test EWFA 54077100 the Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) did not initiate failure of the doorset for the duration of the test.

Results from pilot scale test EWFA 54077100 show that the Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) is positively assessed for the test periods as indicated below.

#### Lever Variation

The proposed lever modules summarised in Tables 1 & 2 are generally similar to the tested lockset and have a similar method of construction. The principle variations from the tested hardware are the shape and physical properties of the two levers. The moment of the tested lever is greater than the alternative lever. The alternative lever is slightly heavier than the tested lever. The same rose and escutcheon are used on both locksets.

AS1530.4-2014, clause 7.9.7 (l) states: **Where locksets or latchsets are operated by a steel shaft, their surface-mounted furniture may be varied provided—**

**(ii) any replacement handle or knob is not so massive or asymmetrical as to introduce a turning moment about the operating shaft which exceeds 0.07 Nm.** Table 2 shows that the proposed Z lever has a moment less than 0.07Nm

**(iii) any replacement lever handle is not so massive or asymmetrical as to increase the turning moment about the operating shaft by more than 10%;**

The moment introduced by the alternative lever does not increase the turning moment by more than 10%.

**Table 2 – Turning Moments of Proposed Lockwood Levers**

Model Number	Lever	
	Mass (kg)	Moment (Nm)
Model O Lever	0.293	0.103Nm
Model Z Lever	0.121	0.036Nm

Based on the discussion above it is considered that Salto XS4 One lockset (with Alcom 5000 Mortice lock) fitted with either a Z or O lever is positively assessed for the for the test periods as indicated below.

### Conclusions

On the basis of the above discussion, it is the opinion of this laboratory that the doorsets listed below will achieve the FRL listed below if they are fitted with a Salto XS4 E9750 lockset with an O lever (with Alcom 5000 Mortice lock) on the doorsets as described in this assessment report.

This assessment has been prepared in accordance with Section 4.5 of AS 1905.1-2015 and is conditional upon the operational characteristics and materials of the doorset complying with Section 2 of AS 1905.1-2015. The field of application of the door lockset is defined by the field of application of the doorset the door lockset is installed upon.

Test Ref	Description	FRL
FR 2482	Single Leaf Maxi Pyropanel Pandor Core Doorset nominally 48mm thick	-/60/30
FR 2485	Maxi Pyropanel Pandor Core Double Doorset nominally 48mm thick	-/60/30

### Conditions/Validity

The conclusions of this assessment may be used to directly assess the fire hazard, but it should be recognised that a single test method will not provide a full assessment of fire hazard under all conditions.

Because of the nature of fire resistance testing, and the consequent difficulty in quantifying the uncertainty of measurement, it is not possible to provide a stated degree of accuracy. The inherent variability in test procedures, materials and methods of construction, and installation may lead to variations in performance between elements of similar construction.

The assessment can therefore only relate only to the actual prototype test specimens, testing conditions, and methodology described in the supporting data, and does not imply any performance abilities of constructions of subsequent manufacture.

This assessment is based on information and experience available at the time of preparation. The published procedures for the conduct of tests and the assessment of test results are the subject of constant review and improvement and it is recommended that this report be reviewed by the validity date by Exova Warringtonfire Aus Pty. Ltd.

The information contained in this report shall not be used for the assessment of variations other than those stated in the conclusions above. The assessment is valid provided no modifications are made to the systems detailed in this report. All details of construction should be consistent with the requirements stated in the relevant test reports and all referenced documents.