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Report Sponsors	Issue Date
Nova Hardware Pty. Ltd. Unit 11/899 Wellington Road, Rowville, VIC, 3178  Pyropanel Technologies PTY LTD, Melba Industrial Park 122-124 Beresford Road, Lilydale, VIC 3140, AUSTRALIA	26/8/2011
	Validity Date
	30/8/2016

**The Fire Resistance Performance of Pyropanel Doorsets with Nominated Variation to the Door Hardware**

**Variations Considered in this Report**  
 Fitting of a Novas1500 BC EV 300 or 1300BC/EV200 or 1003BC/ES100BC closer to the nominated doorset.

Referenced Test Reports		
Test Report	Doorset Description	Test Standard
FR 1618	Single Leaf Pyropanel Doorset nominally 48mm thick.	AS 1530.4-1990
FR 1645	Two Leaf Pyropanel Doorset nominally 48mm thick.	AS 1530.4-1990

Additional Supporting Data			
Report Reference	Test Date	Test Duration	Test Standard
WFRA 41160b	23/12/2004	121 minutes	AS 1530.4-1997
A pilot fire resistance test on a representative section of a doorset including a Novas 1500 BC Series Door Closer/EV 300 fitted to the doorset. The closer did not initiate failure of the pilot doorset during the 121 minute fire resistance test.			

<b>TESTING AUTHORITY</b>	Exova Warringtonfire Aus Pty Ltd		
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<b>Authorisation</b>	Prepared By:  C.M. McLean	Revised By:  K. Nicholls	Reviewed By:  M, Kamal

### Discussion

The manufacturer confirmed the Novas 1500 BC Series Door Closer/EV 300, 1300BC/EV200 and 1003BC/ES100BC door closers are made from the same materials, use the same operation mechanism and the design and include the same hydraulic fluids.

When fitted to doorset the closer must be adjusted such that the requirements of AS 1905.1-1997 are satisfied.

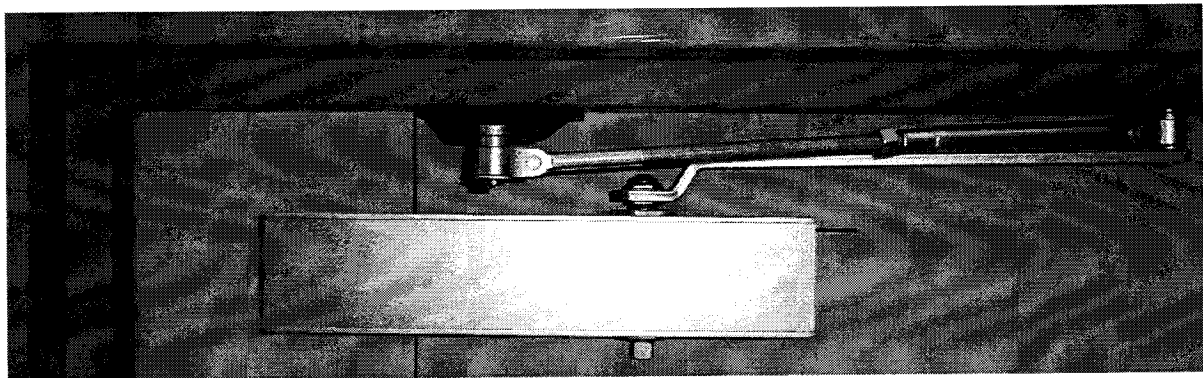
The pilot test 41160b demonstrated that the Novas 1500 BC Series Door Closer/EV 300 fitted to the doorset would be unlikely to initiate failure for a period of 120 minutes if tested in accordance with AS 1530.4-1997.

Based on the above discussion it is considered that the 1300BC/EV200 and 1003BC/ES100BC closers if fitted to the target doorset would also be unlikely to initiate failure for a period of 120 minutes if tested in accordance with AS 1530.4-1997.

### Conclusions

On the basis of the above data and discussion it is the opinion of this laboratory that the doorsets listed below would be likely to achieve the following FRLs if they had been fitted with a Novas 1500 BC Series Door Closer/EV 300 on the doorset.

Test Ref	Description	FRL
FR 1618	Single Leaf Pyropanel Doorset nominally 48mm thick.	-/120/30
FR 1645	Two Leaf Pyropanel Doorset nominally 48mm thick.	-/120/30



*Typical installation of a Novas 1500 BC Series Door Closer/EV 300 on the doorset.*

### 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.

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Test Sponsors	Issue Date
Nova Hardware Pty Ltd, Unit 4, 5-7 Becon Court Hallam, VIC and Pyropanel Technologies PTY LTD, Melba Industrial Park 122-124 Beresford Road, Lilydale, VIC 3140, AUSTRALIA	4/06/10
	Validity Date
	4/06/15

**The Fire Resistance Performance of Pyropanel Doorsets with nominated variation to the door closer**

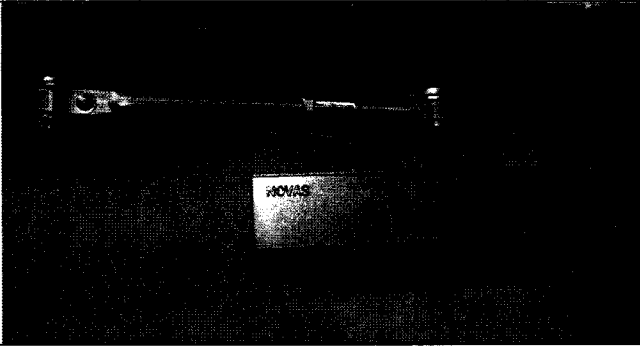
Variations Considered in this Report
Fitting Nova 1500BC door closer on the door leaf in lieu of the door closer in the referenced test.

Referenced Test Reports		
Test Report	Doorset Description	Test Standard
FR 2482	Single Leaf Pyropanel Pandor Core Doorset nominally 48 mm thick	AS 1530.4-1997

Additional Supporting Data			
Test Report	Doorset Description	Test Duration	Test Standard
EWFA 2431301	Single Leaf Pyropanel Pandor Core Doorset nominally 48 mm thick	62 minutes	AS 1530.4-2005
A pilot fire resistance test in accordance with Appendix B11 of AS 1530.4 2005 was conducted on a pilot doorset on 9 <sup>th</sup> April 2010. It included a Nova 1500BC door closer fitted to the door leaf on the unexposed side.			

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<b>Authorisation</b>	Prepared By:  C. M. McLean	Reviewed By:  K. G. Nicholls	

#### Hardware Description

<b>Product name(s) and manufacturer:</b>	Nova 1500BC door closer. Manufacturer details held on confidential file.
<b>Leaf Thickness</b>	48 mm
	
Typical installation of a Nova 1500BC door closer on the door leaf	

#### Discussion

It is expected if a proposed closer does not initiate failure of the pilot doorset before failure occurred on the referenced doorsets, that substituting the proposed closer with the one tested on the reference doorsets will not be detrimental to the performance of the reference doorsets.

AS 1530.4-2005 states that sustained flaming on the surface of the unexposed face for 10 seconds or longer constitutes integrity failure. During the referenced test EWFA 2431301, the door closer did not initiate failure of the doorset during the 62 minutes test period.

Results from Pilot scale test EWFA 2431301 show that Nova 1500BC door closer is positively assessed for a period of 60 minutes integrity.

#### Conclusions

On the basis of the above discussion, it is the opinion of this laboratory that the doorsets listed below would be likely to achieve the FRL listed below if they are fitted with a Nova 1500BC door closer on the doorset as described in this assessment report.

This assessment has been prepared in accordance with Section 4.2 of AS 1905.1:2005 and is conditional upon the operational characteristics and materials of the doorset complying with Section 2 of AS 1905.1:2005. The field of application of the door closer is defined by the field of application of the doorset the door closer is installed upon.

Test Ref	Description	FRL
FR 2482	Single Leaf Pyropanel Pandor Core Doorset nominally 48 mm 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 4<sup>th</sup> June 2015 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.