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UKAS TESTING
2223

Technical Report – R21264
BS EN 13049:2003 - Soft and heavy body impact - Test method, safety requirements and classification

Renson Fabrications Ltd
431RC2 Louvre

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1. Introduction

This report describes tests carried in order to determine the impact resistance of the sample supplied as follows:

Test Details	
Customer:	Renson Fabrications Ltd Fairfax Units 1-5 Bircholt Road Maidstone ME15 9SF
Product Tested:	431RC2 Louvre
Date of Test:	29th November 2019
Test Conducted at:	Wintech Engineering Limited Halesfield 2 Telford Shropshire TF7 4QH
Test Conducted by:	D Knight - Senior Laboratory Technician D Adams – Engineering Technician S Ward – Laboratory Technician

Report Authorisation	
Report Compiled by:	D Price Senior Engineering Associate
Authorised by:	M Witkowska Engineering Associate Lead

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This report and the results shown within are based upon the information, drawings, samples and tests referred to in the report. The results obtained do not necessarily relate to samples from the production line of the above-named company and in no way constitute any form of representation or warranty as to the performance or quality of any products supplied or to be supplied by them. Wintech Engineering Ltd or its employees accept no liability for any damages, charges, cost or expenses in respect of or in relation to any damage to any property or other loss whatsoever arising either directly or indirectly from the use of the report.

2. Summary of Results

The following summarises the results of testing carried out in accordance with the BS EN 13049:2003.

The performance of the sample tested has been assessed against the criteria described in below standards. The results as reported will be used to determine the conformance or non-conformance with the specification without making any consideration of the uncertainty.

Test Description	***Result***
BS EN 13049 – Soft and Heavy Body Impact	***Class 5***

More comprehensive details are reported in Section 6.

These results are valid only for the conditions under which the test was conducted.

All measurement devices, instruments and other relevant equipment were calibrated and traceable to National Standards.

3. Description of Test Sample

The description of the test sample in this section has been supplied by the customer and has not been verified by Wintech Engineering Limited.

See Section 7 for test sample drawings as supplied by Renson Fabrications Ltd.

Project number:	
Product range name:	431RC2
Project name to appear on front page of the test report:	431RC2
Configuration:	/
Opening direction:	/
Product manufacturer:	Renson Ventilation
Is the sample typical of normal production?	Normal production
Please define the closing condition of the sample: i.e. closed, fastened, latched, locked and secured etc.	/
Weight of Sample including subframe (kg):	Louvre 55 kg + 25 kg wooden frame
Weight of Sash (kg)- applicable for sample tested with accordance with BS 6375-2:	/

Outer Frame

Outer frame width:	3000 mm	**Outer frame material:**	Aluminium
Outer frame height:	3000 mm	**Outer frame gasket**	/
Outer frame Part Numbers	P0708110	Gasket type:	/
Top:	P0708110	Manufacturer:	/
Bottom:	P0708110	Product name:	/
Lock side:	/	Product code:	/
Hinge side:	/	**Threshold**	/
Outer frame section size	/	Manufacturer:	/
Width:	/	Product name:	/
Depth:	/	Product code:	/
Reinforcing:	/	Material:	/
Manufacturer:	/	**Outer frame joint method**	/
Product name:	/	Head:	/
Product code:	/	Foot:	/

Material:	Aluminium	**Surface Finish**	Bare aluminium

Leaf

Leaf/Casement width:	Leaf → blades	**Leaf/ Casement material:**	Aluminium
Leaf/ Casement height:	/	**Leaf/ Casement gasket**	/
Leaf/ Casement Part Numbers	P0201130	Gasket type:	/
Top:	/	Manufacturer:	/
Bottom:	/	Product name:	/
Lock side:	/	Product code:	/
Hinge side:	/	**Leaf midrail:**	/
Leaf/ Casement section size	/	Manufacturer:	/
Width:	/	Product name:	/
Depth:	/	Product code:	/
Reinforcing:	/	Material:	/
Manufacturer:	Renson	**Leaf/Casement joint method**	/
Product name:	/	Head:	/
Product code:	/	Foot:	/
Material:	Aluminium	**Surface Finish**	Bare aluminium

Glazing

Glass unit	/	**Glazing gasket**	/
Manufacturer:	/	Gasket type:	/
Inner thickness:	/	Manufacturer:	/
Spacer material:	/	Product name:	/
Outer thickness:	/	Product code:	/
Unit sizes:	/	**Glazing clip**	/
Bead	/	Manufacturer:	/
Manufacturer:	/	Product name:	/
Product name:	/	Product code:	/
Product code:	/	**Glazing tape details**	/
Bead size:	/	Manufacturer:	/
Bead material:	/	Product name:	/
	/	Product code:	/

Hardware

	Manufacturer:	Product description:	Product code:	Quantity:
Hinges:	/	/	/	/
Hinge fixing:	/	/	/	/
Hinge protectors:	/	/	/	/
Hinge protector fixings:	/	/	/	/
Locking hardware:	/	/	/	/
Locking hardware fixing:	/	/	/	/
Cylinder:	/	/	/	/
Cylinder fixing:	/	/	/	/
Handle:	/	/	/	/
Handle fixings:	/	/	/	/
Touch Bar	/	/	/	/
Cylinder Support	/	/	/	/
Cylinder Escutcheon	/	/	/	/
Keeps:	Screws used on wooden frame	DIN7981 4.2 x 38 TX-PIN 15 A2 (912024238) Buttonhead security screws sixlobe drive + pin	G0002572	Each 266 mm
Keep fixings:	/	/	/	/
Drip bar:	/	/	/	/
Drip bar fixings:	/	/	/	/
Additional Hardware:	/	/	/	/

Confirmation

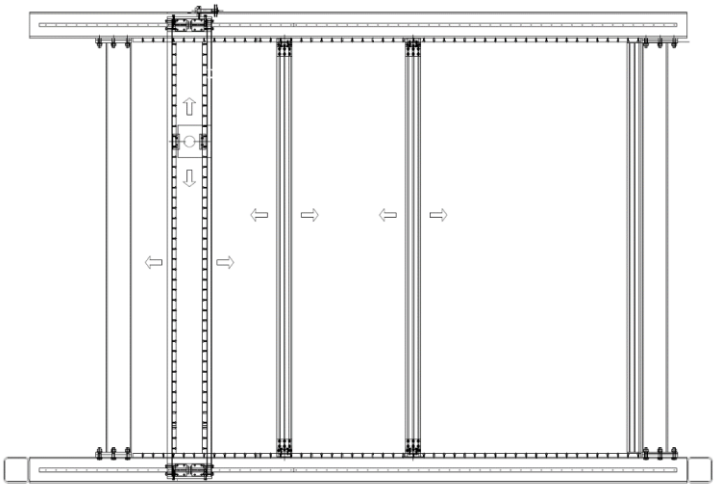
Please confirm that the samples provided for testing are representative of standard production?	Standard production

4. Test Arrangement

4.1 Test Rig

The test sample was supplied mounted in 100 x 50 mm timber sub-frame in accordance with manufacturer's installation requirements. It was fitted into the test rig, shown below which was constructed to meet the requirements of the test specification and was fitted plumb, square and without twist or bends.

Figure 1 – Test rig used for testing



4.2 Temperature

A digital data logger capable of measuring temperature with an accuracy of ± 1°C was used.

4.3 Impactor

An impactor consisting of two pneumatic tyres as specified in BS EN 12600:2002 together with two steel weights of equal mass and a total mass of 50 kg ± 0.1 kg was used for impacting.

5. Test Procedures

5.1 Impact Resistance

The test sample was subject to 1 impact using a drop height which corresponded with the required classification.

The Impactor, as defined in section 4.3, was suspended on a wire cord and allowed to swing freely, without initial velocity, in a pendulum motion until it hit the sample normal to its face. The test was carried out at the impact points shown on Figure 2.

The drop height was set to an accuracy of ± 10 mm.

6. Test Results

6.1 Lab Conditions

The conditions measured inside the laboratory were as follows:

Temperature °C	Humidity %rh
20.0	32.4

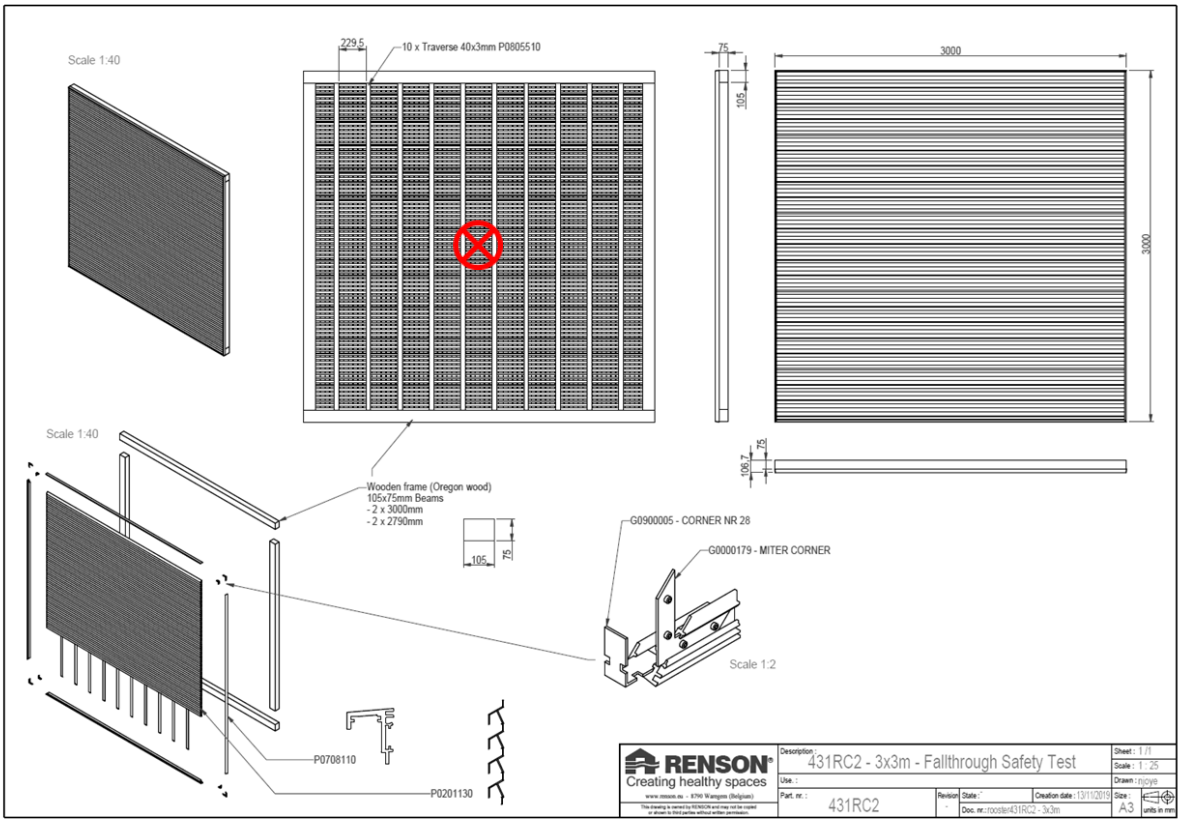
6.2 Impact Resistance

The test sample was subjected to an Impact at the required classification in accordance with BS EN 13049:2003. The results are as follows:

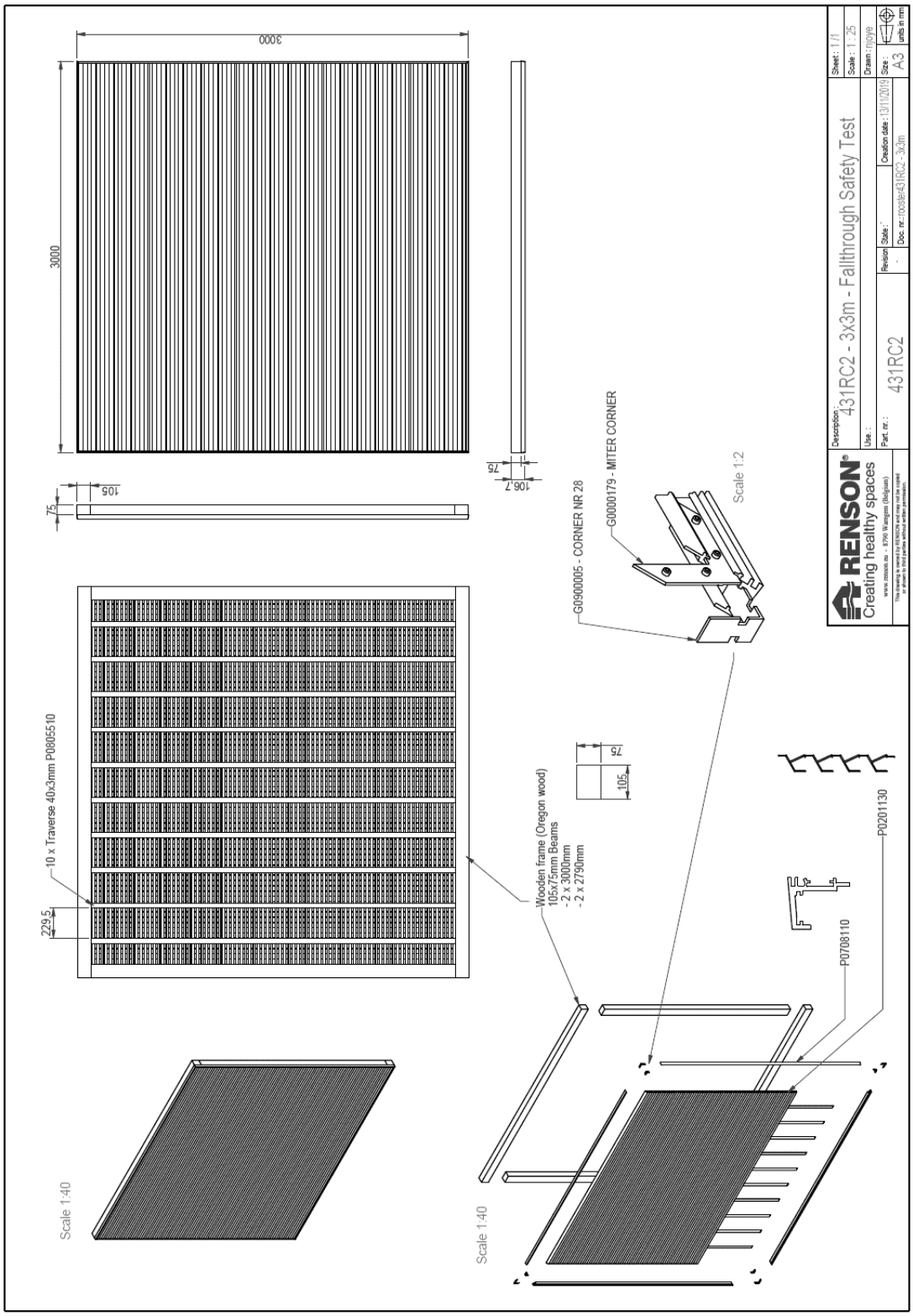
Table 1

Location	Direction of Impact	Observations	Drop Height (mm)	Class Achieved
Centre of Louvre	Internal	Small deformation	950	5

Figure 2 – Impact Locations



7. System Drawings



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WINTECH

TESTING & CERTIFICATION

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