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Preconal System AB
Box 4014
300 04 HALMSTAD

Testing of burglary resistance according to SS-EN 1627:2021 RC3

(1 appendix)

Summary

A burglar resistance test of Preconal systems AB's side light set 66 has been performed according to SS-EN 1627:2021 RC3.

The test object fulfilled the requirements according to SS-EN 1627:2021 RC3.

This report is not and should not be invoked as an approval of certification of the product.

1 Introduction

By commission of Preconal systems AB a burglar resistance test of side light sets has been performed according to SS-EN 1627:2021 RC3. The purpose of the test was to evaluate if the test object fulfilled the requirements for classification RC3.

2 Test object

Manufacturer:	Preconal systems AB.
Tested object:	Side light.
Description of the sample:	Side light classed as a group 1 product according to SS-EN 1627:2021.
Technical documentation:	See appendix 1.
Description of samples:	See appendix 1.
Drawings:	See appendix 1.
Test object arrival at RISE:	2022-01-28.
Selection of test object:	The test object has been selected by the client without RISE's assistance.
Tested object:	The side light sets were designated 66 and was manufactured of aluminium profiles with window, see drawing in appendix 1.
Width:	800 mm.
Height:	2180 mm.

3 Test Method and performance

RISE Research Institutes of Sweden AB

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Accred. No. 1002
Testing
ISO/IEC 17025

Test method: Burglary resistance test according to:

- SS-EN 1628:2021 “Pedestrian door sets, windows, curtain walling, grilles and shutters – Burglar Resistance – Test method for the determination of resistance under static load”.
- SS-EN 1629:2021 “Pedestrian door sets, windows, curtain walling, grilles and shutters – Burglar Resistance – Test method for the determination of resistance under dynamic loading.
- SS-EN 1630:2021 “Pedestrian door sets, windows, curtain walling, grilles and shutters – Burglar Resistance – Test method for the determination of resistance to manual burglary attempts”.

Test date: 2022-01-28.

Test facility: RISE – Safety – Mechanics research laboratory in Borås.

Test leader: Peter Blomgren.

Time keeper: Christian Larsson and Peter Blomgren.

Tester: Peter Blomgren, Christian Larsson.

Ambient temperature: 20.5° C.

Relative humidity: 27 %.

Film camera: Yes.

Photographs: N/A.

Assessment of documents: The documents in appendix 1 fulfil the requirement in SS-EN 1627:2021.

4 Test results

The results reported relate only to the tested object and are valid only in conditions in which the test was performed.

4.1 Static load in accordance with SS-EN 1628:2021

Table 1. Static load in accordance with SS-EN 1628:2021

Position	Pressure type	Test load [kN]	Gap gauge type	Result
F3 Side light	In upper corner	6	A	OK
F3 Side light	In lower corner	6	A	OK

The requirements in SS-EN 1627 for static load, resistance class RC3, were fulfilled.

4.2 Dynamic load in accordance with SS-EN 1629:2021

Table 2. Dynamic load in accordance with SS-EN 1629:2021

Mass of the impactor:	50 kg
Drop height [mm]	750 mm

A pendulum impactor, with a mass of 50 kg, in accordance with SS EN 1629:2011+A1:2016 was dropped from a height of 750 mm once to each corner and three times to the centre of the glass and filling. The impact direction was towards the attack side of the door. Gap gauge D could during the testing not pass through any aperture of the product when using a force of 200 N applied directly to the glass. The requirements in SS-EN 1627:2021 for dynamic load, resistance class RC3, are fulfilled.

4.3 Manual burglary attempts in accordance with SS-EN 1630:2021

Table 3. Manual burglary attempts in accordance with SS-EN 1630:2021

Zone of attack	Used tools	Operative time [min' s'']	Description
Glass	Knife and crowbar	5.32/<20.00	Side light not forced. Passed.
Glass frame	Knife and crowbar	5.15/<20.00	Side light not forced. Passed.

The requirements in SS-EN 1627:2021 for manual burglary attempts, resistance class RC3, were fulfilled.

4.4 Classification

The test specimen was subjected to the described tests defined in SS-EN 1627:2021 and was judged to fulfil the requirements of the resistance class given below. The side light is classified when constructed according to drawings in appendix 1.

EN 1627:2021 RC3

Any additional change in design / construction is only allowed upon written permission and/or testing by the testing laboratory (see SS-EN 1627:2021, Annex D). The test results showed in this report refer only to the tested object.

5 Measurement uncertainty

The measurement uncertainty of load $\leq 1.3 \%$ and measuring of deformation $\leq 1.6 \%$. Reported uncertainty corresponds to an approximate 95 % confidence interval around the measured value. The interval has been calculated in accordance with EA-4/16 (EA guidelines on the expression of uncertainty in quantitative testing), which is normally accomplished by quadratic addition of the actual standard uncertainties and multiplication of the resulting combined standard uncertainty by the coverage factor $k=2$.

RISE Research Institutes of Sweden AB
Chemistry and Applied Mechanics - Transport and Product Safety

Examined by



Peter Blomgren



Anna Ehn

Appendix

1. Drawing