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SIA "Stali" Kingas, Priekulu pagasts, Priekulu novads LV-4126 Latvia

# Determination of air permeability, watertightness, resistance to wind load and operating forces

(1 appendix)

### Test object

(See figures in appendix 1)

Manufacturer: SIA "Stali"

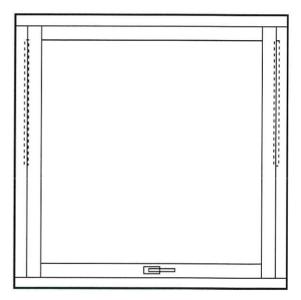
Type: 12/12 VFAV wood/aluminium window

Size: 1180 x 1180 mm

Condition at arrival: No visible damage

Date of arrival: 2017-01-05 Date of testing: 2017-01-09 SP's serial number: 2162

The test object was chosen by the client in agreement with SP's representative during the production inspection control for P-marked windows, see report 6F001317.



## Watertightness according to SS-EN 1027:2016 method A up to 600 Pa

No leakage.

The window meets the requirements for class 9A according to SS-EN 12208:2000

Resistance to wind load according to SS-EN 12211:2016 class 3 Repeated pressure test up to 600 Pa

No damage noted.

The window meets the requirements for class 3, test P2 according to SS-EN 12210.

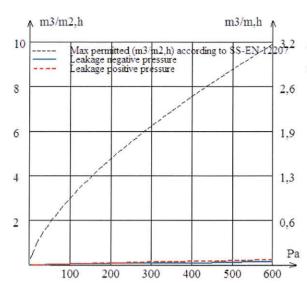
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### Air permeability according to SS-EN 1026:2016 up to 600 Pa



The window meets the requirements for class 4 according to SS-EN 12207:2000.

## Operating forces according to SS-EN 12046-1:2003

#### Hand operated hardware:

Opening torque (mean of 3 measurements) = 2.8 Nm.

Closing torque (mean of 3 measurements) = 5.2 Nm.

The window meets the requirements for class 1 according to SS-EN 13115:2001. (Opening and closing torque shall be maximum 10 Nm).



#### Conditions of test

The test results refer only to the tested object.

Equipment used:

Test rig invnr 900912 and measuring equipment invnr

200746

Air tightening to the test rig:

On the test objects inside

Estimated error margin:

Air pressure difference ±2 Pa, air flow ±5 % and

operating forces ±10 %

Test climate:

Air temperature 20.5 °C, RH 34 %, air pressure 992 hPa

Water temperature:

According to the standard

Conditioning:

Laboratory climate after arrival to SP

SP Technical Research Institute of Sweden Sustainable Built Environment - Building Physics and Indoor Environment

Performed by

Examined by

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Börje Gustavsson

**Appendix**