INSTITUTE OF ARCHITECTURE AND CONSTRUCTION OF KAUNAS UNIVERSITY OF TECHNOLOGY
LABORATORY OF BUILDING PHYSICS

LIETUVOS NACIONALINIS AKREDITACIJOS BIURAS

Notified Body number: 2018

BANDYMAI ISO/IEC 17025 Nr. LA.01.031

TEST REPORT Nr. 042 SF/21 VAO en
13th of April 2021

Window water tightness measurements

(designation of the test)

Test methods: LST EN 1027:2016 Windows and doors – Water tightness – Test method.

(number of normative document)

Specimen description: VEKA 82 Softline window. Product dimensions: 788x1888mm. Product frame material: PVC profile VEKA Softline 82 101 294 / 103341. System: VEKA Softline 82. Type of opening: fix frame and opening window. Fittings: SIEGENIA TITAN AF. Fixations and places of fixation: 6. Gaskets: VEKA 112 468 / 112 458. Glazing: 6Low-16AR-6Low. Date of glazing unit production: 2020-10-27. Date of specimen production: 2021-03-01. Other details: - drainage and ventilation openings.

(name, description and identification details of a specimen; information submitted by the customer)

Customer: UAB „Plus Windows“, Aviacijos str. 26, LT-77103 Šiauliai

(the name and address)

Manufacturer: UAB „Plus Windows“, Aviacijos str. 26, LT-77103 Šiauliai

(the name and address)

Results of test:

Name of the indicator and unit	Method reference no.	Test result
Water tighness, class	LST EN 12208:2002	**AE1500**
Note. 1) The testing are carried out in purpose for conformity assessment of the product according to LST EN 14351-1:2006+A2:2016; 2) Conformity of test results is evaluated using the decision rule in accordance with ILAC-G8: 09/2019 point 4.2.1.		

Place of test: Laboratory of Building Physics, Institute of Architecture and Construction of Kaunas University of Technology

(name of the test laboratory)

Specimen delivery date: 2021-04-13 Date of test: 2021-04-13

Sampling: The test specimen sampled by customer. Order description: No. 042/21, 2021-03-03

Additions information: Application 2021-03-02, drawing

(other deviations, other tests and any information related to the test)

Annex: 1– Test photos, 2– schematical view of the test rig, 3– measurement results (+3 pages)

(the numbers of the annexes should be pointed out)

Technical manager: K. Banionis
(approving test results) (signature) (n., surname)

Test performed by: R. Rauckis
(person responsible for a test) (signature) (n., surname)

S.P.

Lietuvos Respublika DOKUMENTAI Architektūros ir statybos institutas Kauno technologijos universitetas

Installation of the sample

Sample has been installed into test rig KS 3035/650 PC Nr. P2130 opening by workers of the laboratory. An opening of the test rig was adjusted that it size would meet the dimensions of the sample.

The ambient temperature and humidity close to the specimen shall be within the range 10 ^{0}C to 30 ^{0}C and 25 % to 75 % RH and the specimen shall be conditioned thus for at least 4 h immediately before test.

Methods and equipment

Air **p**ermeability has been tested in accordance with requirements of *test method* standard.

Test rig KS 3035/650 PC includes:

1. Test wall,
2. Air flow control block,
3. Water sprinkling system,
4. Indication and control equipment,
5. Deflection sensors.

Technical data of test rig:

1. Max size of the sample should be tested: width – 2400 mm, height – 2350 mm,
2. Max developed test pressure: ± 3000 Pa,
3. Ranges of measurement: I – (0,5…50) m^3/h II – (0,5…300) m^3/h,
4. Range of displacement sensors +/- 25 mm.

Test rig KS 3035/650 PC Nr.P2130 tried LEI Nr. 30/20-D; 31/20-D; 85/20-B; 119/20-S 2020-10-20 ir MC KRL Nr.085981 2020-12-01

Sources [1] *LST EN 1027:2016 Windows and doors – Water tightness – Test method.*
[2] *LST EN 12208:2002 Windows and doors – Water tightness - Classification.*
[3] *LST EN 14351-1:2006+A2:2016 Windows and doors - Product standard, performance characteristics - Part 1: Windows and external pedestrian doorsets.*

Distribution: Customer — Original
Laboratory of Building Physics,
Institute of Architecture and Construction of Kaunas
University of Technology — Copy

Designation of the product tested:
VEKA 82 Softline window. Product dimensions: 788x1888mm. Product frame material: PVC profile VEKA Softline 82 101 294 / 103341. System: VEKA Softline 82. Type of opening: fix frame and opening window. Fittings: SIEGENIA TITAN AF. Fixations and places of fixation: 6. Gaskets: VEKA 112 468 / 112 458. Glazing: 6Low-16AR-6Low. Date of glazing unit production: 2020-10-27. Date of specimen production: 2021-03-01. Other details: - drainage and ventilation openings.

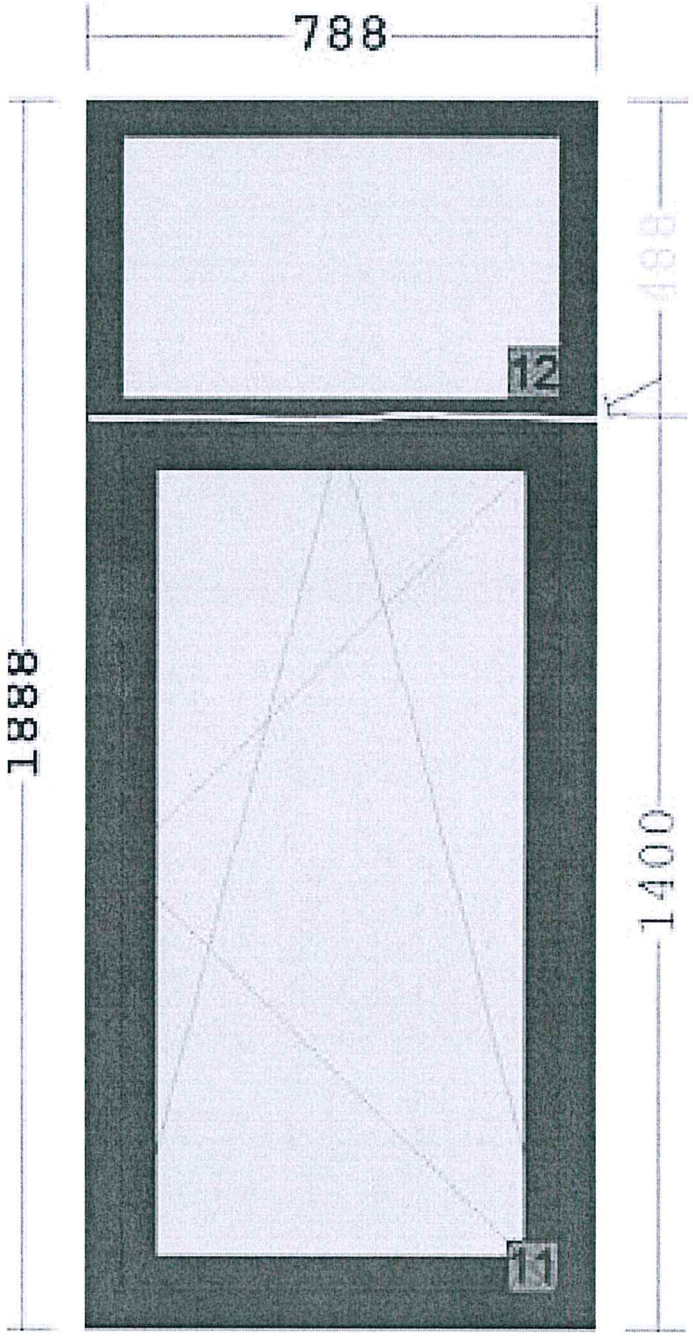

Fig.1 Drawing of the window (information submitted by the customer)

1 Annex. Test photos

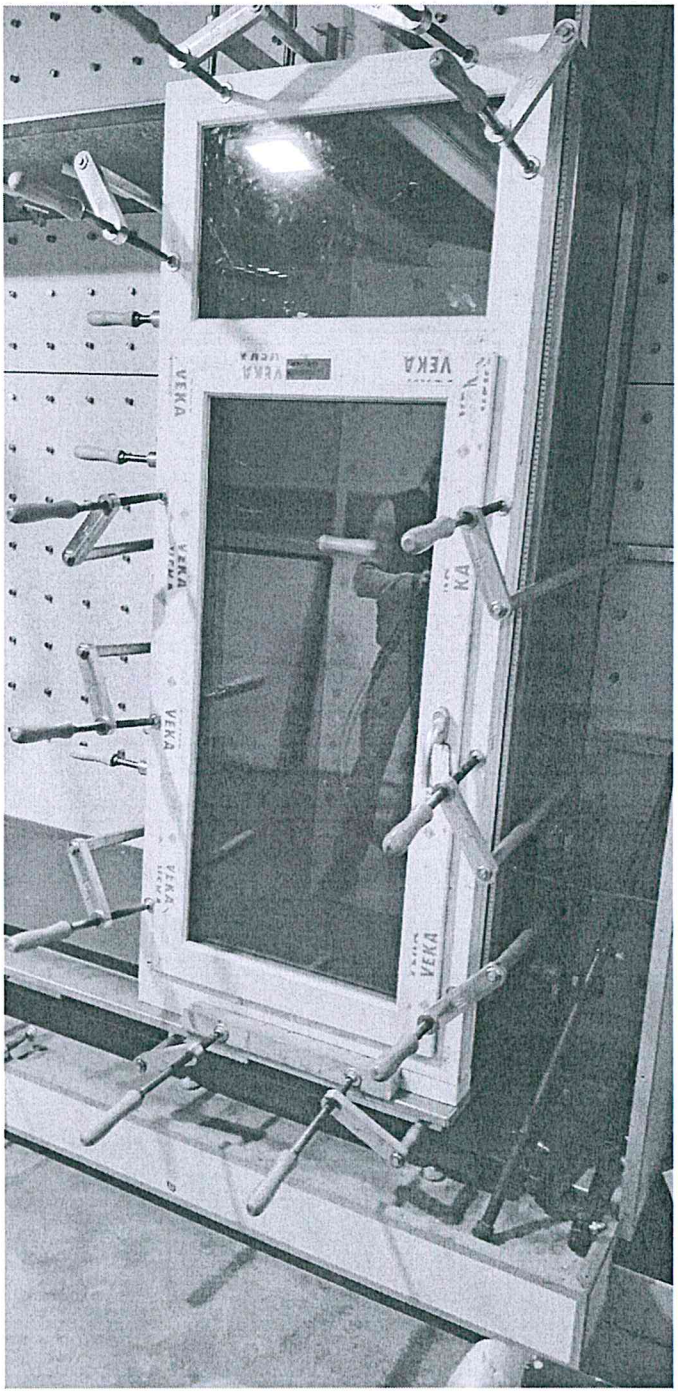

Fig 2. Photo of the window (when was testing)

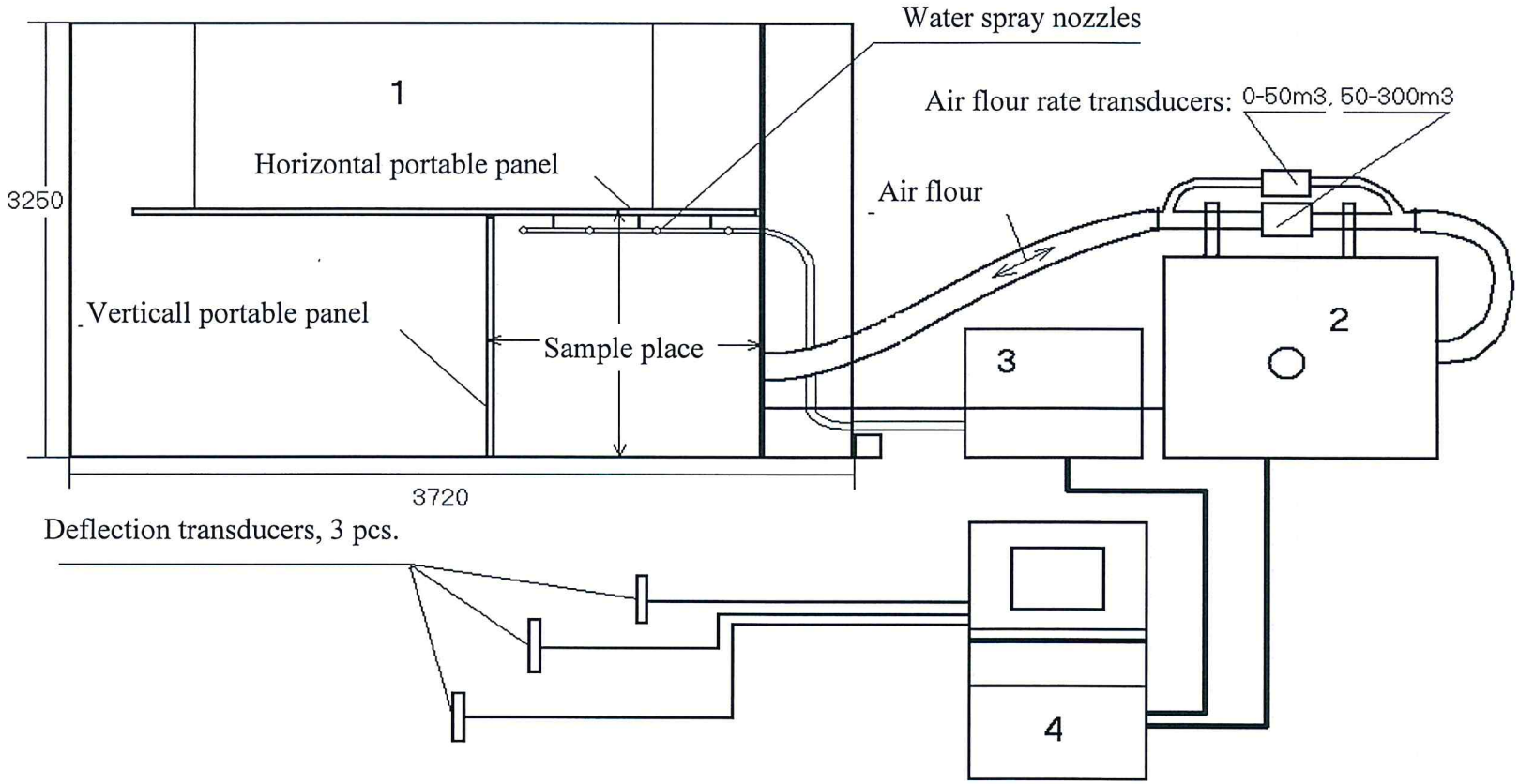

Fig 1. Equipment for window, door, roof window, industrial door and screen wall air permeability, rain water resistance and resistance to wind load measurements scheme: 1 – test measurement wall, 2 – air flow control and regulation block, 3 – water spray device, 4 – indicator and control equipment

Test protocol

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Statybines fizikos laboratorija
Tunelio g. 60, Kaunas
Lietuva

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Client : Order 219 042/21
Test number: 042/21 Date: 13.04.2021
Examiner : R.Rauckis

Carried out tests:
1.) Watertightness: EN 12208

Bandinio charakteristikos
Bandinio tipas : Langas
Varstymo tipas : atidaromas i vidu
Measurument of the element (W x H) : 0.788 x 1.888 m Area : 1.487 m2
Measurements of the sash (W x H) : 0.648 x 1.296 m Area : 0.839 m2
Seal length : 3.888 m

Profilio duomenys

Remas	:	Stikl. paketo skirtukas	:
Varcia	:	Skersinis remas	:
Remo elementai	:	Stiklajuostes	:
Sandarinimas	:	Drenazinis kanalas	:
Tech. iranga	:	Kita	:
Medziagiskumas	:	Uzraktas	:
Apdaila	:	Vyriai	:

Istiklinimas

Tipas	:	Uzpildas	:
Uzpildas	:	Stiklo plotas	:
Stiklo matmenys	:	Kitas	:

Classification

Air permeability EN 12207	Target Class 0	Actual Class 0
Water tightness EN 12208	Target Class AE1500	Actual Class AE1500
Wind resistance EN 12210	Target Class 0-	Actual Class 0-

Temperature: 18 Celsius Humidity: 43 Air pressure: 1011.3 HPa

Remark:

Place:..... Date:13.04.2021 Tester:.....

Test protocol

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Watertightness: EN 12208 -

Spaying method A Number of nozzles: 2 Vol. Water: 240.0 litre/hour
Spaying angle:24 Degree : 4.0 litre/minute
Add. spraying pipe Number of nozzles: 0 Vol. Water: 0.0 litre/hour
(0.0 litre/nozzle) : 0.0 litre/minute

1. Watertightness pressure

Pressure Pa		Time	Remark
Nominal	Real		
0	0	00:15:00	OK
50	50	00:05:00	OK
100	100	00:05:00	OK
150	150	00:05:00	OK
200	200	00:05:00	OK
250	251	00:05:00	OK
300	301	00:05:00	OK
450	450	00:05:00	OK
600	600	00:05:00	OK
750	755	00:05:00	OK
900	904	00:05:00	OK
1050	1052	00:05:00	OK
1200	1204	00:05:00	OK
1350	1349	00:05:00	OK
1500	1507	00:05:00	OK

Watertightness Class: AE1500

Point of water ingress :

Probable cause of leakage :

Test protocol

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Window sketch:

Dimensions (W x H) : 0.788 m x 1.888 m
Joints length: 3.888 m
Window surface: 1.487 m2
Sash surface: 0.839 m²