



TEST REPORT Nr. 005 SŠF/08 OS en

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29 of January 2008

1 (5)

Air permeability measurement

(designation of the test)

Test performed: In accordance to LST EN 1026
(number of normative document)

Product: HS sliding doors. Wooden doors. Door height -2090 mm, length 1990mm. Karm profile - 40×133mm, sash profile - 66×90 mm. Product fittings - Siegenia HS - 200 Portal, consists of rail, rollers and lock. Silikon sealings - Sipla AS (Sweden); glueable sealing - Trelleborg (Germany). Glasing : 4/18/4 selective.
(name, description and identification details of a specimen)

Client: “Panorama Nordic“ Ltd, Jugintu vill. Babtu gen. Kaunas reg.
(the name and address)

Producer: “Panorama Nordic“ Ltd, Jugintu vill. Babtu gen. Kaunas reg.
(the name and address)

Results of test:

Name of the indicator and unit	Test method reference no.	Test result
Air permeability V_o , m^3/h	LST EN 1026	Annex 1
Air permeability V_A, V_L , m^3/hm^2 , m^3/hm ;	LST EN 1026	Annex 1
Air permeability class	LST EN 12207	4

Place of test: Laboratory of Building Thermal Physics, IAC KUT
(name of the test laboratory)

Product delivered: 2008-01-16 Date of test: 2008-01-22


Sample selected: by customer. Order description No 005/08, 2008 01 18

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

Annex: 1 – measurement results, 2 – schematical view of the test rig
(the numbers of the annexes should be pointed out)

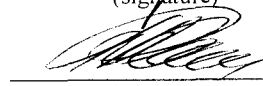
Technical manager:
(approving test results)

J. Ramanauskas
(n., surname)


(signature)

Test performed by:
(person responsible for a test)

R. Rauckis
(n., surname)


(signature)

S.P.

Validity – the named data and results refer exclusively to the tested and described specimens.
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Installation of the sample

Sample has been installed into test rig „KS 3025/45 ASD SPS Touch“ opening by workers of the laboratory. An opening of the test rig was adjusted that it size would meet the dimensions of the sample

Methods and equipment

Air permeability has been tested in accordance with requirements of [1], [2].

Test rig „KS 3025/45 ASD SPS Touch“ 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 – 3000 mm, height – 2500 mm,
2. Max developed test pressure: ± 3000 Pa,
3. Ranges of measurement: I – (0,5...50) m³/h II – (0,5...300) m³/h,
4. Range of displacement sensors ± 25 mm.
5. Electronic anemometer for air flow measurement VTS Nr. 00100173, Calibration certificate No EMA04271024139(date of calibration: 27-10-2004)

Sources [1] *LST EN 1026 Windows and doors- Air permeability – Test method*
[2] *LST EN 12207:2002 Windows and doors- Air permeability - Classification*

Distribution Client Original
Laboratory of Building Thermal Physics, IAC KUT Original

Contact person : Romas Rauckis, tel. +370 37 350779



Designation of the product tested: HS sliding doors. Wooden doors. Door height -2090 mm, length 1990mm. Karm profile - 40×133mm, sash profile - 66×90 mm. Product fittings - Siegenia HS -200 Portal, consists of rail, rollers and lock. Silikon sealings - Sipla AS (Sweden); glueable sealing - Trelleborg (Germany). Glazing : 4/18/4 selective.

Test date: 2008-01-22

Description of test conditions:

Size of the sample, $H_T = 2,085$ m, $B_T = 1,985$ m, $H_0 = 1,95$ m; $B_0 = 1,96$ m

Air temperature, 19,0 °C

Relative humidity of the air, 40 %

Atmospheric pressure, 100,0 kPa

Total area of the sample $A = H_T \times B_T = 4,14$ m²

Opening joints length $L = 2 H_0 + 2 B_0 = 5,82$ m

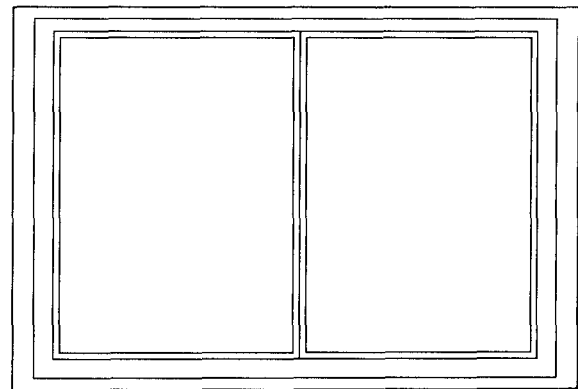


Fig 1. Picture of window or door

The results of measurements:

Table 1. Air permeability at the positive test pressure (+P1)

+P, Pa	V_{0s} , m ³ /h	V_A , m ³ /(h·m ²)	V_L , m ³ /(h·m)
50	1,2	0,29	0,21
100	2,1	0,51	0,36
150	2,4	0,58	0,41
200	2,5	0,60	0,43
250	3,4	0,82	0,58
300	4,4	1,06	0,76
450	5,5	1,35	0,96
600	6,4	1,57	1,12

V_{0s} – air permeability at the normal conditions $t = 20$ °C, $P_{atm} = 101,3$ kPa;

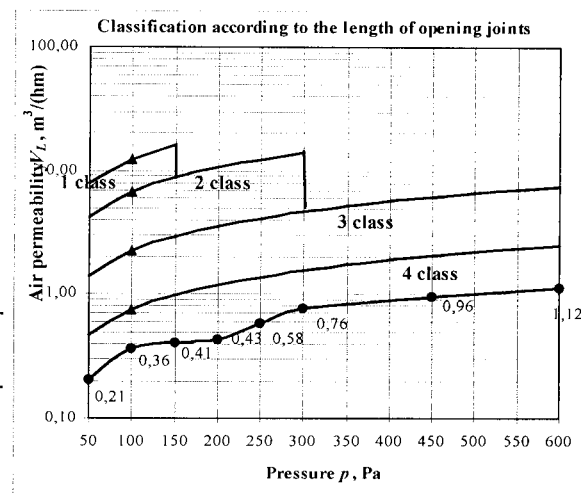
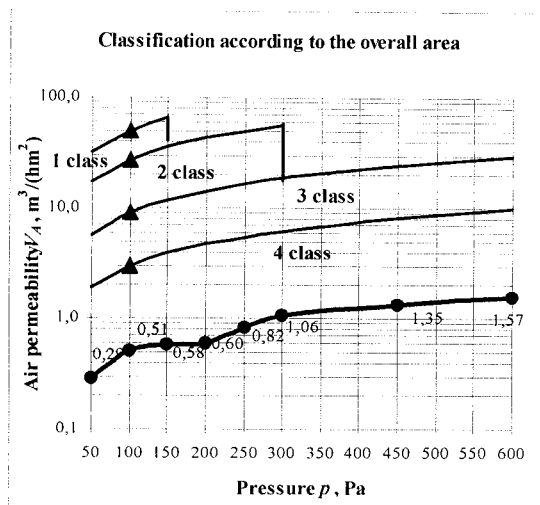
V_A – air permeability to the overall area;

V_L – air permeability to the length of opening joints.

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Air permeability at the positive test pressure (+P1)



The tested specimen, after comparison of V_A and V_L result values with the adequate values in table 3 and also in accordance with classification rules in LST EN 12207, is classified to:

- the overall area – **4 class**;
- the length of opening joints – **4 class**;
- the final classification of the specimen – **4 class**.

Evaluated in accordance with test results.

Table 3. Reference air permeability values V_A and V_L , $m^3/h \cdot m^2$, according to the test pressure range of air permeability classes

Test pressure, Pa	50	100	150	200	250	300	450	600
Class	$m^3/h \cdot m^2$							
1	31.50	50	65.52					
2	17.01	27	35.38	42.86	49.73	56.16		
3	5.67	9	11.79	14.29	16.58	18.72	24.53	29.72
4	1.89	3	3.93	4.76	5.53	6.24	8.18	9.91
Class	$m^3/h \cdot m$							
1	7.87	12.5	16.38					
2	4.25	6.75	8.85	10.71	12.43	14.04		
3	1.42	2.25	2.95	3.57	4.14	4.68	6.13	7.43
4	0.47	0.75	0.98	1.19	1.38	1.56	2.04	2.48

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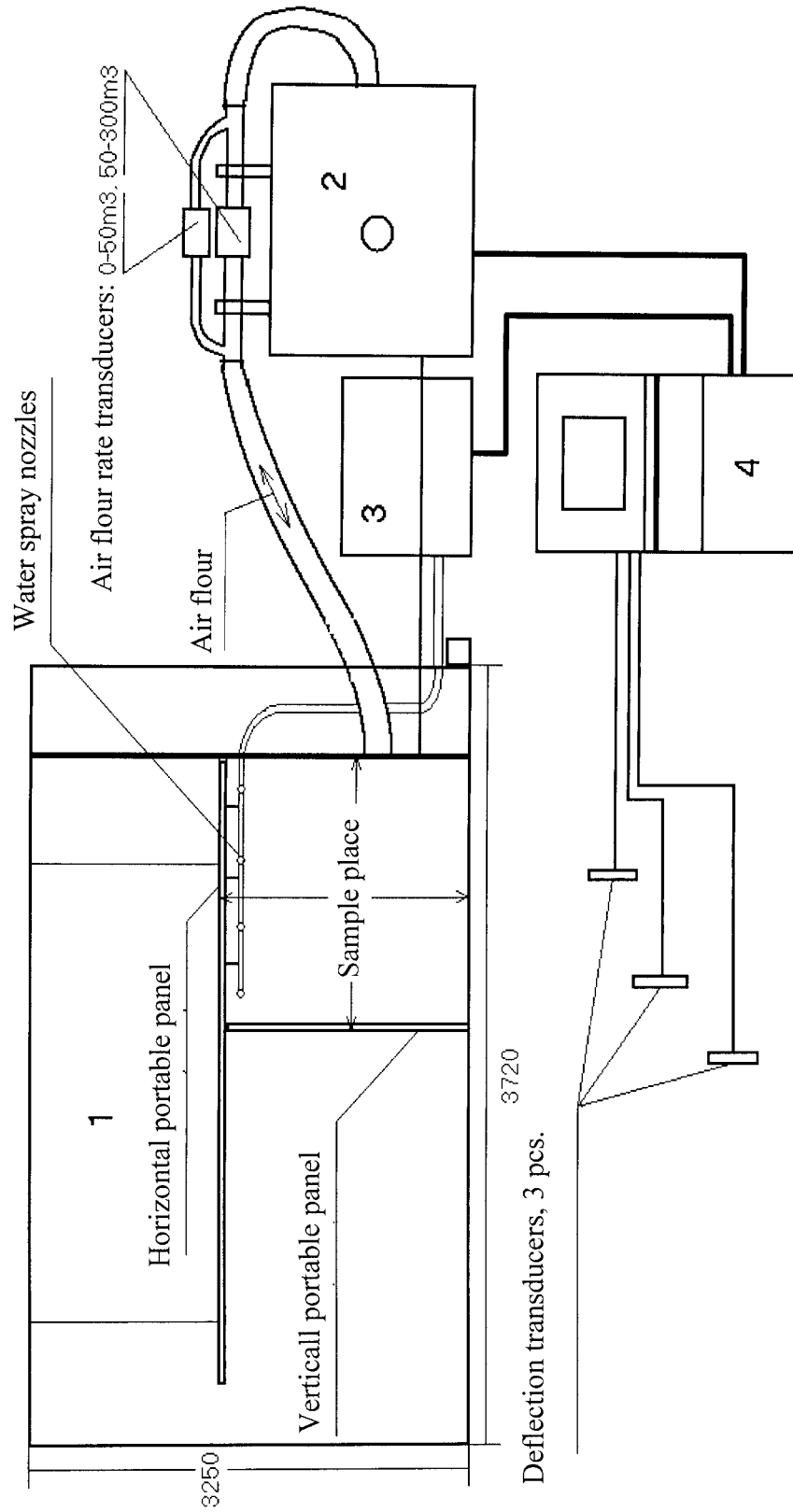


Fig 1. Equipment for window, door, roof window, industrial door and screen wall air permeability, rain water resistance and resistance to wind load measurements scheme: 1 – test measurement wall, 2 – air flow control and regulation block, 3 – indicator and control equipment