



INSTITUT IGH, d.d.
Laboratorij za građevinsku fiziku
Building Physics Laboratory
Janka Rakuše 1, 10000 ZAGREB, CROATIA
Tel: +385 1/6125 111, Fax: +385 1/6125 100
www.igh.hr



RN 62570888
ODS3 016/2023

Zagreb, 2023-05-24

IZVJEŠTAJ O ISPITIVANJU I OCJENI SVOJSTAVA NA TEMELJU ISPITIVANJA BR. 72570/043/23-081/23

(utemeljeno na uzorkovanju koje je proveo proizvođač)

Naručitelj: FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

Ponuda broj: 72570-0-0132/23 od 2023-01-27 i 72570-0-0197/23 od 2023-02-08

Građevni proizvod: COMPLANARE 78 jednokrlni prozor 1230 x 1480 mm VH D proizveden od drvenih jela/smreka profila s aluminijskom oblogom Complanare, ostakljen trostrukim IZO staklom debljine 44 mm

Proizvođač: FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

Datum zaprimanja uzorka: 2023-04-28

Mjesto ispitivanja: INSTITUT IGH, d.d., Zavod za materijale i konstrukcije, Laboratorij IGH, Laboratorij za građevinsku fiziku, Janka Rakuše 1, HR-10000 Zagreb

Laboratorijska oznaka uzorka: LGF 083/23

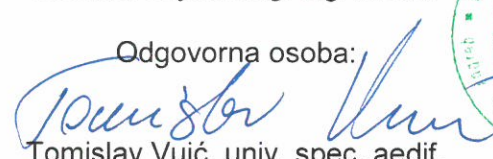
Norma proizvoda: HRN EN 14351-1:2016 - Prozori i vrata -- Norma za proizvod, izvedbene značajke -- 1.dio: Prozori i vanjska pješačka vrata (EN 14351-1:2006+A2:2016)

Ispitana svojstva: A dio: propusnost zraka
B dio: vodonepropusnost
C dio: otpornost na opterećenje vjetrom
D dio: ocjena svojstava građevnog proizvoda

Voditelj ispitivanja:


Antonio Šojat, mag. ing. mech.

Voditelj Laboratorija za građevinsku fiziku:


Tomislav Vuić, univ. spec. aedif.


dr. sc. Mladen Bezjak, dipl. ing. stroj.

Institut IGH d.d. je prijavljeno tijelo (notified body) pri Europskoj komisiji za radnje ispitivanja prozora i vrata s brojem NB 2477 u NANDO bazi.

Rezultati ispitivanja odnose se samo na ispitane uzorke. Djelomično umnožavanje ovog izvještaja nije dopušteno bez pisanog odobrenja Voditelja laboratorija. Ukupan broj stranica 14 uključujući 0 dodatka. Test results refer only to the tested specimens. Partial copying of this report is not permitted without a written authorization of the Head of the Laboratory. No. of text pages: 14, included annexes: 0.



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Izveštaj broj: 72570/043/23-081/23

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C4. REZULTATI ISPITIVANJA ZRAKOPROPUSNOSTI NAKON ISPITIVANJA OTPORNOSTI NA OPTEREĆENJE VJETROM

Ponovljeno ispitivanje zrakopropusnosti nakon ispitivanja otpornosti na opterećenje vjetrom uzorka LGF 083/23, COMPLANARE 78 jednokrilni prozor 1230 x 1480 mm VH D proizveden od drvenih jela/smreka profila s aluminijskom oblogom Complanare, ostakljen trostrukim IZO staklom debljine 44 mm, (Tablica 3 - A dio izvještaja), pokazuje da nije došlo do povećanja vrijednosti zrakopropusnosti većeg od 20 % u odnosu na granične vrijednosti dobivenog razreda nakon prvog ispitivanja zrakopropusnosti.

D DIO: OCJENA SVOJSTAVA GRAĐEVNOG PROIZVODA

S obzirom na rezultate ispitivanja propusnosti zraka (A dio ovog izvještaja), vodonepropusnosti (B dio ovog izvještaja) i otpornosti na opterećenje vjetrom (C dio ovog izvještaja), ispitani proizvod:

Građevni proizvod:	COMPLANARE 78 jednokrilni prozor 1230 x 1480 mm VH D proizveden od drvenih jela/smreka profila s aluminijskom oblogom Complanare, ostakljen trostrukim IZO staklom debljine 44 mm (4 mm Low-e / 16 mm Ar / Float 4 mm / 16 mm Ar / 4 mm Low-e) - ukupne izmjere, širina/visina: 1,23 m x 1,48 m
Proizvođač:	FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

ima razredbu prema navedenim normama

HRN EN 12207:2017 Prozori i vrata -- Propusnost zraka -- Razredba (EN 12207:2017)	4
HRN EN 12208:2001 Prozori i vrata -- Vodonepropusnost -- Razredba (EN 12208:2001)	9A
HRN EN 12210:2016 Prozori i vrata -- Otpornost na opterećenje vjetrom -- Razredba (EN 12210:2016)	C5

Rješenje broj: KLASA: UP/I-360-01/21-08/15, URBROJ: 531-04-2-1-2-21-6 od 2021-07-15

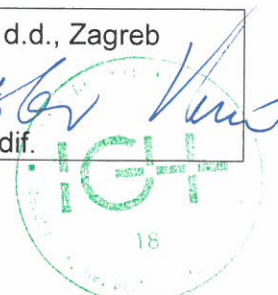
Broj izvještaja: 72570/043/23-081/23

Ispitni laboratorij: Institut IGH d.d., Zagreb

Datum izvještaja: 2023-05-24

Odgovorna osoba:

Tomislav Vuić, univ. spec. aedif.





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Zagreb, 2023-05-24

TEST REPORT AND ASSESSMENT OF PERFORMANCE BASED ON TEST NO. EN-72570/043/23-081/23

(based on sampling carried out by the manufacturer)

Client: FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

Offer number: 72570-0-0132/23 dated 2023-01-27 and 72570-0-0197/23 dated on 2023-02-08

Building product: COMPLANARE 78 single casement window 1230 x 1480 mm VH D made of wooden fir/spruce profiles with aluminium cover, glazed with a triple IZO glass pane, thickness 44 mm

Manufacturer: FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

Sample delivery date: 2023-04-28

Place of testing: INSTITUT IGH, d.d., Materials and Structures Department, IGH Laboratory, Building Physics Laboratory, Janka Rakuše 1, HR-10000 Zagreb, Croatia

Laboratory sample identification code: LGF 083/23

Product standard: HRN EN 14351-1:2016 – Windows and doors – Product standard, performance characteristics – Part 1: Windows and external pedestrian doorsets (EN 14351-1:2006+A2:2016)

Tested properties: Part A: Air permeability
Part B: Watertightness
Part C: Resistance to wind load
Part D: Assessment of performance of building product

Test overseer:


Antonio Šojat, mag. ing. mech.


Head of the Building Physics Laboratory:

Responsible person:


Tomislav Vuić, univ. spec. aedif.

dr. sc. Mladen Bezjak, dipl. ing. stroj.

Institut IGH d.d. is a notified body to the European Commission for activities of testing the properties of doors and windows used in civil engineering, under the number NB 2477 in NANDO database.

Test results refer only to the tested specimens. Partial copying of this report is not permitted without a written authorization of the Head of the Laboratory. No. of text pages: 14, included annexes: 0.



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Report No.: EN-72570/043/23-081/23

ODS3 016/2023

C4. AIR PERMEABILITY TEST RESULTS AFTER RESISTANCE TO WIND LOAD TESTING

Repeated air permeability test after the resistance to wind load test was carried out on the test sample LGF 083/23, COMPLANARE 78 single casement window 1230 x 1480 mm VH D made of wooden fir/spruce profiles with aluminium cover, glazed with a triple IZO glass pane, thickness 44 mm, (Table 3 – Part A of the report), showing that the increase in the value of air permeability rate was below 20 % in respect to the limit value for the class obtained after the first air permeability test.

PART D: ASSESSMENT OF PERFORMANCE OF BUILDING PRODUCT

With regard to the results of air permeability (Part A of this report), watertightness (Part B of this report) and resistance to wind load (Part C of this report), the tested product:

Building product:	COMPLANARE 78 single casement window 1230 x 1480 mm VH D made of wooden fir/spruce profiles with aluminium cover, glazed with a triple IZO glass pane, thickness 44 mm (4 mm Low-e / 16 mm Ar / Float 4 mm / 16 mm Ar / 4 mm Low-e) - total measurements, width/height: 1,23 m x 1,48 m
Manufacturer:	FAGUS HAUS d.o.o., Cara Dušana bb, BA-78220 Kotor Varoš

Has the following classification in accordance with the given standard:

HRN EN 12207:2017 Windows and Doors – Air permeability -- Classification (EN 12207:2017)	4
HRN EN 12208:2001 Windows and Doors – Watertightness – Classification (EN 12208:2001)	9A
HRN EN 12210:2016 Windows and Doors – Resistance to wind load -- Classification (EN 12210:2016)	C5

Decision No.: KLASA: UP/I-360-01/21-08/15, URBROJ: 531-04-2-1-2-21-6 dated 2021-07-15

Report number: EN-72570/043/23-081/23	Testing laboratory: Institut IGH d.d., Zagreb
Date of report: 2023-05-24	Responsible person: <i>Tomislav Vuić</i> Tomislav Vuić, univ. spec. aedif.

