

PRÜFINSTITUT

für Bauelemente GmbH

Zweibrücker Str. 217 ■ D-66954 Pirmasens

Test Report

F 2008 / 49

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Annex 2

Client: Profine GmbH
Zweibrücker Straße 200
D-66954 Pirmasens

Specification: Windows – Methods of test
Australian Standard AS 4420

Item Tested: Sliding Door
System Premi Line

Test Date: 2008-10-29

Test Performance: Design Wind Pressure 1500 Pa (Housing/Residential)
1000 Pa (Commercial)
Operation force Passed
Air infiltration Passed
(non-airconditioned)
Water Penetration 300 Pa
Ultimate strength 2300 Pa

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1. General Information

Profine GmbH, Germany commissioned the PIB GmbH (Test institute for building elements) in Pirmasens, Germany on October 20th 2008 to perform a testing of a window according to the Australian Standard for windows testing AS 4420 in accordance to the requirements of AS 2047

The item tested is a sliding door. The element size is 2.400 x 2.150 [m]. Date of delivery of the test specimen October 20th 2008.

The client supplied the PIB with drawings, description of the test samples including profile references and a manual. These documents represent accurately the test sample in all respects.

2. Description of the sample

Sample type:	Sliding door		Manufacturer:	profine GmbH D-66954 Pirmasens	
System:	Premi Line		Profiles		
Material:	PVC-U		Profiles reference	Frame	6052
Element size:	2400 x 2150 (w x h)	[mm]		Sash	6041
Area:	5.160	[m ²]		Interlock	6061/9C61
Sash:	1189 x 2044	[mm]		Glazing bead	2429
Opening joint:	7.79	[m]		Reinforcement reference	Frame V 107
Glass:	Doubled glazed, 4-16-4, sealed unit	[mm]		Sash	none
Fittings:	Sigenia			Ziehgriff	9C58
Drainage:	<u>Frame:</u> 6 slots 5x25 mm from the rebate into the pre chamber and 4 slots 5x25 mm from the pre-chamber to outside <u>Sash:</u> 6 slots 6mm diameter inside/outside		Gaskets	Sash	9090
				Glazing	Inner: coex Outer: 9B58

3. Performance

The test rig is a model from K+S Schulten, Germany. On the rig elements up to 3.7 m wide and 2.5 m high can be tested. The centrifugal fan reaches 250m³/h and a maximum pressure difference of +/- 3000 Pa.

The test sequences are programmed and the test performance is operated by the computer. All data are electronically measured and saved on a data base.

The test elements were mounted in a metal subframe to fix on the test rig.

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4. Examination and Test

Date of Test:	29 th October 2008	Temperature °C:	20	Air pressure [hPa]	1012
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4.1 Deflection Test according to AS 4420.2

The test procedure follows AS 4420.2. The span (A-B) vertical was 2014 mm
Maximum deflection at l/150 -> 13.4 mm, at l/180 -> 11.2 mm and at l/250 -> 8.1 mm

Pressure [Pa]	Duration [min]	Displacement [mm]			Mid span deflection [mm]	Deflection ratio
		1 (A,top)	2 (C,mid)	3 (B,bottom)		
0	1	0,0	0,0	0,0	0,0	-
400	1	2,9	4,0	1,3	1,9	1:1060
800	1	4,6	7,7	2,6	4,1	1:491
1250	1	6,1	11,1	3,5	6,3	1:320
1500	1	7,6	14,4	4,6	8,4	1:240
0	2	0,7	1,3	1,0	0,4	-

Pressure [Pa]	Duration [min]	Displacement [mm]			Mid span deflection [mm]	Deflection ratio
		1 (A,top)	2 (C,mid)	3 (B,bottom)		
0	1	0	0	0	0	-
- 400	1	-3,8	-5,5	-2,2	-2,5	1:806
- 800	1	-5,7	-9,5	-3,5	-4,9	1:411
- 1250	1	-7,0	-12,9	-4,6	-7,1	1:284
- 1500	1	-8,0	-15,7	-5,5	-8,9	1:226
0	2	-0,2	-1,2	-0,8	-0,7	-

Result:

Building type	Max deflection ratio	Serviceability design wind pressure
Housing	1 :150	1 500 Pa
residential	1 :180	1 500 Pa
commercial	1 :250	1 000 Pa

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4.2 Operation force test according to AS 4420.3

The test procedure follows AS 4420.3

Force	Sliding door
Initiate maintain	150 N 100 N

4.3 Air Infiltration Test according to AS 4420.4

The test procedure follows AS 4420.4

Pressure [Pa]	Duration [sec]	Total [m ³ /h]	Total [L/s] *0.278	Air infiltration L/sm ² Area = 5.16 m ²
0	15	0	0	0
75	15	23.2	6.45	1.25
150	15	40.1	11.1	2.16
0	15	0	0	0
-75	15	32.7	9.1	1.76
-150	15	49.2	13.7	2.65

The maximum air infiltration according to AS 2047 should be less than 5 l/sm² at 75 Pa and less than 8 l/sm² at 150 Pa for non-airconditioned building types. The measured air infiltration fulfils this requirement.

Air infiltration test for non-airconditioned building type

passed

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4.4 Water penetration test according to AS 4420.5

The test procedure follows AS 4420.5 Spraying Method (unprotected mounting) with a jet line and an amount of 3l/(min·m²). Tilt of the axis 24° to horizontal line.

Result:

pressure difference [Pa]		duration [s]		water [l/m ²]	
<i>Nominal</i>	<i>actual</i>	<i>Nominal</i>	<i>actual</i>	<i>nominal</i>	<i>actual</i>
0	0	300	300	15.75	15.00
300	300	900	900	15.75	15.11

No occurrence of leakage at 300 Pa.

Rating: This window is classified for water penetration resistance in N 5

4.5 Ultimate Strength test according to AS 4420.6

The test procedure follows AS 4420.6.

Within 1min. the differential pressure has been increased to the determined test pressure of 2300 Pa maintained for 10 sec. No collapse of the element, described in AS 2047 had been observed.

Rating: This window is classified for ultimate strength in N 4

Pirmasens, January 29th 2009

Certified by



i.V. Dr. Claus Doernfeld
Head of Laboratory



tested by



i. A. Walter Kau
Test Engineer

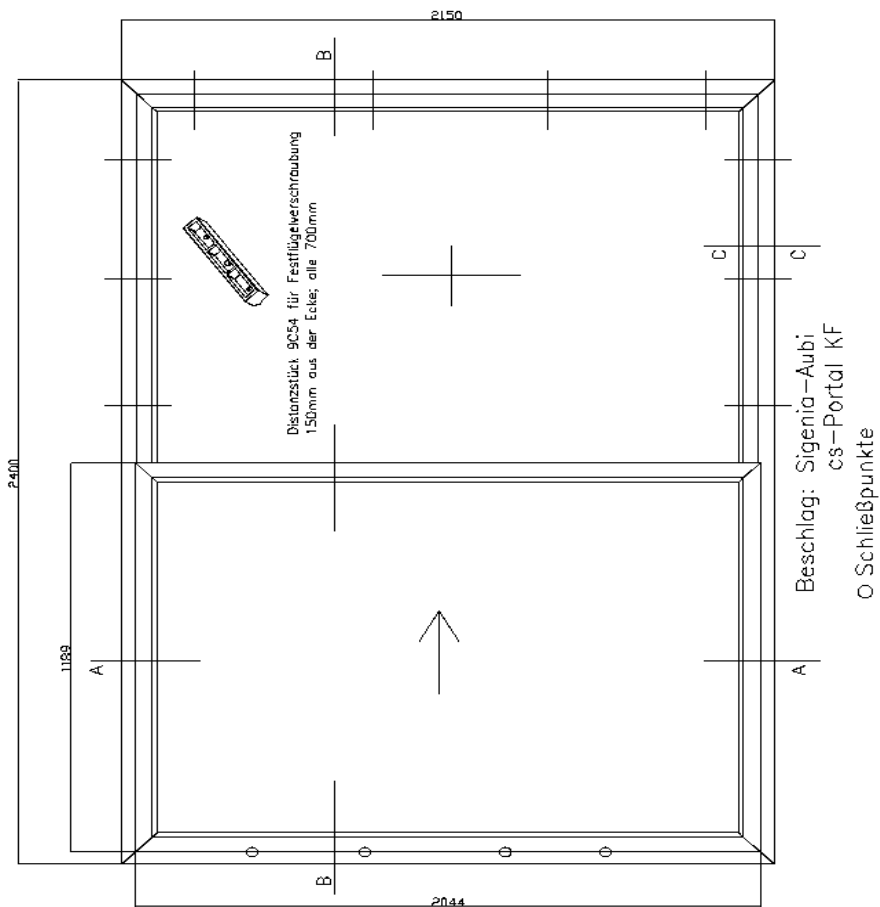
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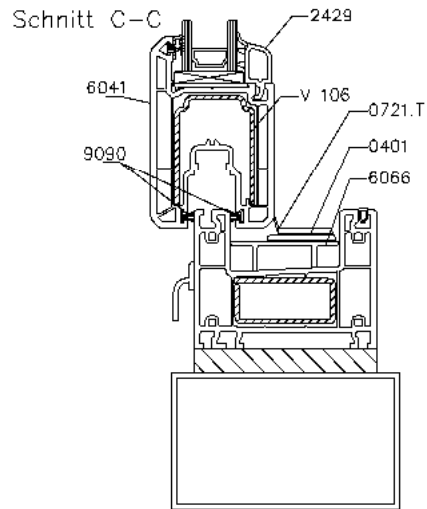
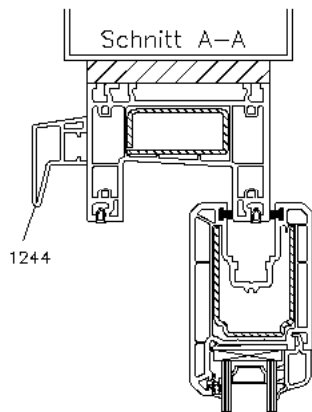
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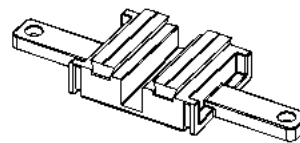
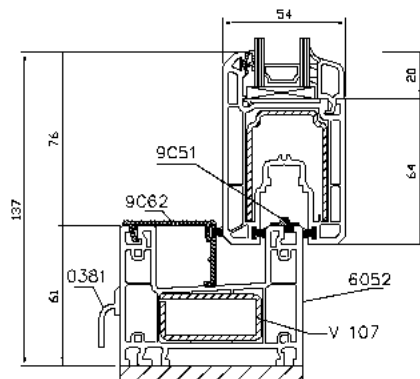
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ISO 24mm
4 / 16 SZR / 4



Labyrinthabschluß 9C63
im Mittelbereich

Im Eckbereich Drainageprofil abdichten
mit dauerelastischem Dichtstoff

