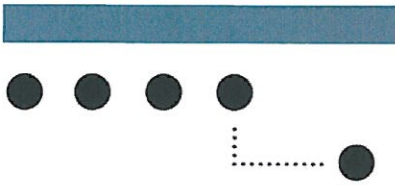
Test Certificate

Bern University of Applied Science
Architecture, Wood and Civil Engineering
Burgdorf, Biel



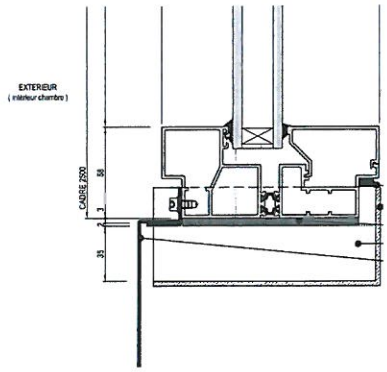
Test object	**Fixed light**
Product code	**TH$^+$ FIXE**
Certificate No	7804-PZ-04
Test report No	7804-PB-03
Order No	7804.DPE
Customer	VITROCSA Orchidées Constructions SA Mr Joray Route Cantonale CH – 1425 Onnens
Construction	Fixed light, adapted for horizontal sliding window TH$^+$ Dimension of frame: width x height: 1500 mm x 2543 mm
Relevant standards	EN 1026 (06/2000) – Air permeability EN 1027 (06/2000) – Water tightness EN 12211 (06/2000) – Resistance to wind load,
Classification	**Class 4** - EN 12207 (11/1999) – Air permeability **Class E1050** - EN 12208 (11/1999) – Water tightness **Class C4** - EN 12210 (11/1999) – Resistance to wind load
Date of issue	05-Aug-2011
Validity	This certificate will expire if the construction or the material of the test procuct or one of its components changes or if the content or validity of the underlying standard changes.
Address of test laboratory	Bern University of Applied Sciences R&D Department, Facades, Finishing and Furniture Solothurnstrasse 102, CH-2504 Biel
Person in charge	Christoph Rossmanith
Head R&D Facades, Finishing and Furniture	Urs Uehlinger

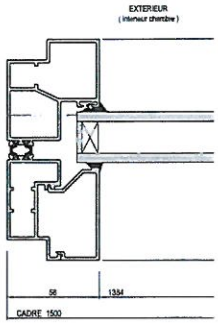
SUMMARY OF RESULTS

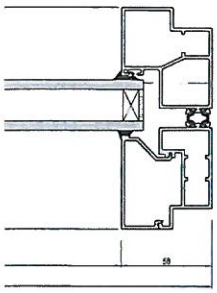
Test object
Fixed light, system: „TH+ FIXE“,
manufactured by VITROCSA Orchidées Constructions SA

Frame: thermally separated aluminium profile;
Corner joint: mitre joint with corner plate, bolted and bonded;
Profile depth: 140 mm; profile width: 58 mm;
Gaskets, impregnated, pre-compressed sealing tape, round cord, sealant;
Drilled holes for drainage of frame into the sub drainage profile.
Thickness of glass panel: 32 mm

Length of joint: L = 7.54 m
Test area: A = 3.75 m^2







Test results

Air permeability – EN 1026		
Pressure **P** in Pa	Air volume V_L in m^3/hm	Air volume V_A in m^3/hm^2
0		
50	0.0	0.0
100	0.1	0.3
150	0.2	0.4
200	0.3	0.5
250	0.3	0.6
300	0.4	0.7
450	0.5	0.9
600	0.6	1.1

Water tightness – EN 1027		
Class Test method A	Time **t** in min	Water penetration
1A	15	no
2A, 3A, 4A	each with 5	no
5A, 6A, 7A	each with 5	no
8A, 9A	each with 5	no
E750, E900	each with 5	no
E1050	each with 5	no

Resistance to wind load – EN 12211		
Class	Test	Pressure **P** in Pa
C4	Deflexion (P1)	—
	Dynamic wind load (P2)	± 1000
	Safety test (P3)	± 2400

The test was conducted on March 1st and 2nd 2010 at the BFH in Biel.