Operating Forces

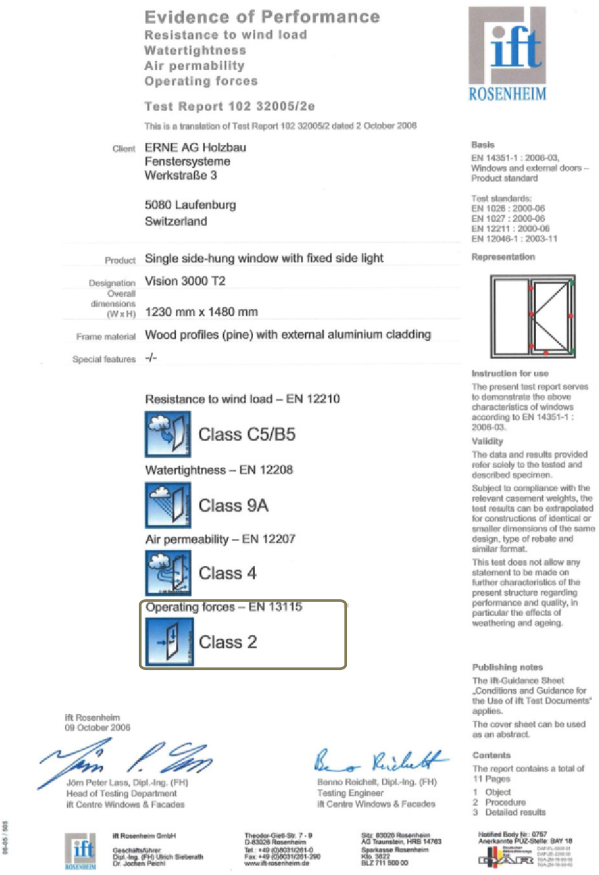
glas sustainable development

Glas Vision 3000 windows have been fully independently tested by ift Rosenheim in Germany (full test results are available upon request) for ease of movement of operating handles to disengage, open, close and re-engage.

The sample windows were tested to EN 12046 : 2003-11 and the results are classified in accordance with EN 13115 : 2001-07.

Where specified, the majority of UK buildings require the operating handles to need no more than 10Nm of torque (Class 1) to open the windows in general use. Where consideration for those less abled is to be made in the window design, then a maximum of 5Nm is generally considered appropriate (Class 2) and the Vision 3000 side hung casement can be used.

The performance levels achieved by the Vision 3000 product make the side hung open in casement appropriate for Class 2 applications and the tilt and turn appropriate for Class 1 applications.



Evidence of Performance
Resistance to wind load
Watertightness
Air permeability
Operating forces

Test Report 102 32005/2e

This is a translation of Test Report 102 32005/2 dated 2 October 2006

Client: ERNE AG Holzbau, Fenstersysteme, Werkstraße 3, 5080 Laufenburg, Switzerland

Product: Single side-hung window with fixed side light
Designation: Vision 3000 T2
Overall dimensions (W x H): 1230 mm x 1480 mm
Frame material: Wood profiles (pine) with external aluminium cladding
Special features: -/-

Resistance to wind load – EN 12210: Class C5/B5
Watertightness – EN 12208: Class 9A
Air permeability – EN 12207: Class 4
Operating forces – EN 13115: Class 2

ift Rosenheim
09 October 2006

Jörn Peter Lass, Dipl.-Ing. (FH), Head of Testing Department, ift Centre Windows & Facades
Benno Reichelt, Dipl.-Ing. (FH), Testing Engineer, ift Centre Windows & Facades

ift Rosenheim GmbH, Geschäftsführer Dipl.-Ing. (FH) Ulrich Sieberath, Dr. Jochen Peichl
Theodor-Gietl-Str. 7 - 9, D-83026 Rosenheim, Tel. +49 (0)8031/261-0, Fax +49 (0)8031/261-290, www.ift-rosenheim.de
Sitz: 83026 Rosenheim, AG Traunstein, HRB 14763, Sparkasse Rosenheim, Kto. 3822, BLZ 711 500 00

Basis: EN 14351-1 : 2006-03, Windows and external doors – Product standard

Test standards: EN 1026 : 2000-06, EN 1027 : 2000-06, EN 12211 : 2000-06, EN 12046-1 : 2003-11

Representation

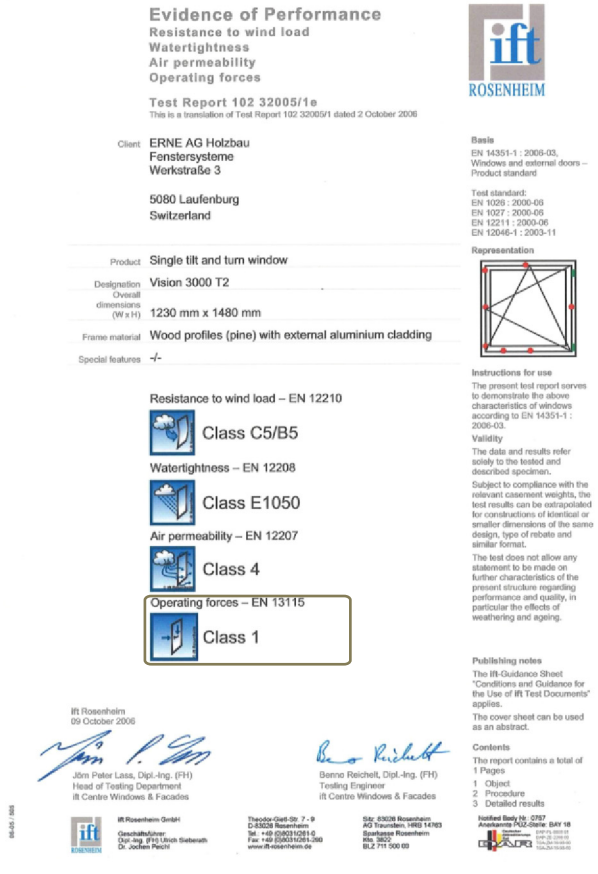
Instruction for use: The present test report serves to demonstrate the above characteristics of windows according to EN 14351-1 : 2006-03.

Validity: The data and results provided refer solely to the tested and described specimen. Subject to compliance with the relevant casement weights, the test results can be extrapolated for constructions of identical or smaller dimensions of the same design, type of rebate and similar format. This test does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing.

Publishing notes: The ift-Guidance Sheet „Conditions and Guidance for the Use of ift Test Documents" applies. The cover sheet can be used as an abstract.

Contents: The report contains a total of 11 Pages
1 Object
2 Procedure
3 Detailed results

Notified Body Nr.: 0757
Anerkannte PÜZ-Stelle: BAY 18



Evidence of Performance
Resistance to wind load
Watertightness
Air permeability
Operating forces

Test Report 102 32005/1e

This is a translation of Test Report 102 32005/1 dated 2 October 2006

Client: ERNE AG Holzbau, Fenstersysteme, Werkstraße 3, 5080 Laufenburg, Switzerland

Product: Single tilt and turn window
Designation: Vision 3000 T2
Overall dimensions (W x H): 1230 mm x 1480 mm
Frame material: Wood profiles (pine) with external aluminium cladding
Special features: -/-

Resistance to wind load – EN 12210: Class C5/B5
Watertightness – EN 12208: Class E1050
Air permeability – EN 12207: Class 4
Operating forces – EN 13115: Class 1

ift Rosenheim
09 October 2006

Jörn Peter Lass, Dipl.-Ing. (FH), Head of Testing Department, ift Centre Windows & Facades
Benno Reichelt, Dipl.-Ing. (FH), Testing Engineer, ift Centre Windows & Facades

ift Rosenheim GmbH, Geschäftsführer Dipl.-Ing. (FH) Ulrich Sieberath, Dr. Jochen Peichl
Theodor-Gietl-Str. 7 - 9, D-83026 Rosenheim, Tel. +49 (0)8031/261-0, Fax +49 (0)8031/261-290, www.ift-rosenheim.de
Sitz: 83026 Rosenheim, AG Traunstein, HRB 14763, Sparkasse Rosenheim, Kto. 3822, BLZ 711 500 00

Basis: EN 14351-1 : 2006-03, Windows and external doors – Product standard

Test standard: EN 1026 : 2000-06, EN 1027 : 2000-06, EN 12211 : 2000-06, EN 12046-1 : 2003-11

Representation

Instructions for use: The present test report serves to demonstrate the above characteristics of windows according to EN 14351-1 : 2006-03.

Validity: The data and results refer solely to the tested and described specimen. Subject to compliance with the relevant casement weights, the test results can be extrapolated for constructions of identical or smaller dimensions of the same design, type of rebate and similar format. The test does not allow any statement to be made on further characteristics of the present structure regarding performance and quality, in particular the effects of weathering and ageing.

Publishing notes: The ift-Guidance Sheet "Conditions and Guidance for the Use of ift Test Documents" applies. The cover sheet can be used as an abstract.

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Performance

Side Hung Casements

Attained a Class 2 rating (according to EN 13115 : 2001-07) requiring no more than 5Nm (3.4Nm was the actual average result) of torque to disengage, open, close and re-engage the window handle.

Tilt and Turn Casements

Attained a Class 1 rating (according to EN 13115 : 2001-07) requiring no more than 10Nm (6.4Nm was the actual average result) of torque to disengage, open, close and re-engage the window handle.

- Tests carried out to EN 12211 : 2000-06 and are classified as EN 12210 : 1999-11.
- Individual test results refer to individual window types and sizes.
- Refer to full test reports and Glas Technical for full details.