

ASSA ABLOY

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TEST REPORT

No.TR 032-07

Test of: Door System

Issue Date: 16th May 2007

Test to: PAS 24-1:1999

Client Details: Folding sliding door company Contact: Richard Wharfe

Tests witnessed by: Richard Wharfe and Paul Searman.

Sample Details: Folding sliding doors

Samples Received: 21/03/07

Date Test Completed: 04/05/07

Job Number: 2007 057

Introduction

At the request of Folding Sliding Door Company assemblies detailed below were tested and assessed to the requirements of PAS 24-1:1999 Enhanced Security Performance Requirements For Door Assemblies – Part 1: Single leaf, external door assemblies to dwellings incorporating amendments No.1, No.2, and No.3. It is emphasised that assessments have not been made against the other clauses of the Specification.

Test Samples

Sample 1 – Folding Sliding door open out internally beaded door assembly

Sample 2 – Folding Sliding door open out internally beaded door assembly

Sample 3 – Folding Sliding door open out internally beaded door assembly

The samples were fabricated and supplied by the Folding Sliding Door Company and submitted for test mounted in 75mm x 100mm timber sub frames

Conclusions

Clause No.	Description	Compliance
A.4	Manipulation test	✓
A.5.1	Infill medium removal test – manual	✓
A.5.2	Infill medium removal test – mechanical	✓
A.6	Mechanical loading test	✓
A.7	Manual check test	✓
A.8	Additional mechanical loading test	N/A
A.9	Soft body impact test	✓
A.10	Hard body test	✓
A.11	Security Hardware and Cylinder test	✓

Note. The results are valid only for the conditions under which the test was carried out and for the specific range of door assemblies

Disposal

The doors have been returned to the Folding Sliding Door Company.

Sample Details

Test Engineer:

Ron Beech

Authorised by:

Ian Bridge (Laboratory Manager)

Revision No. 02

Document No. RS002

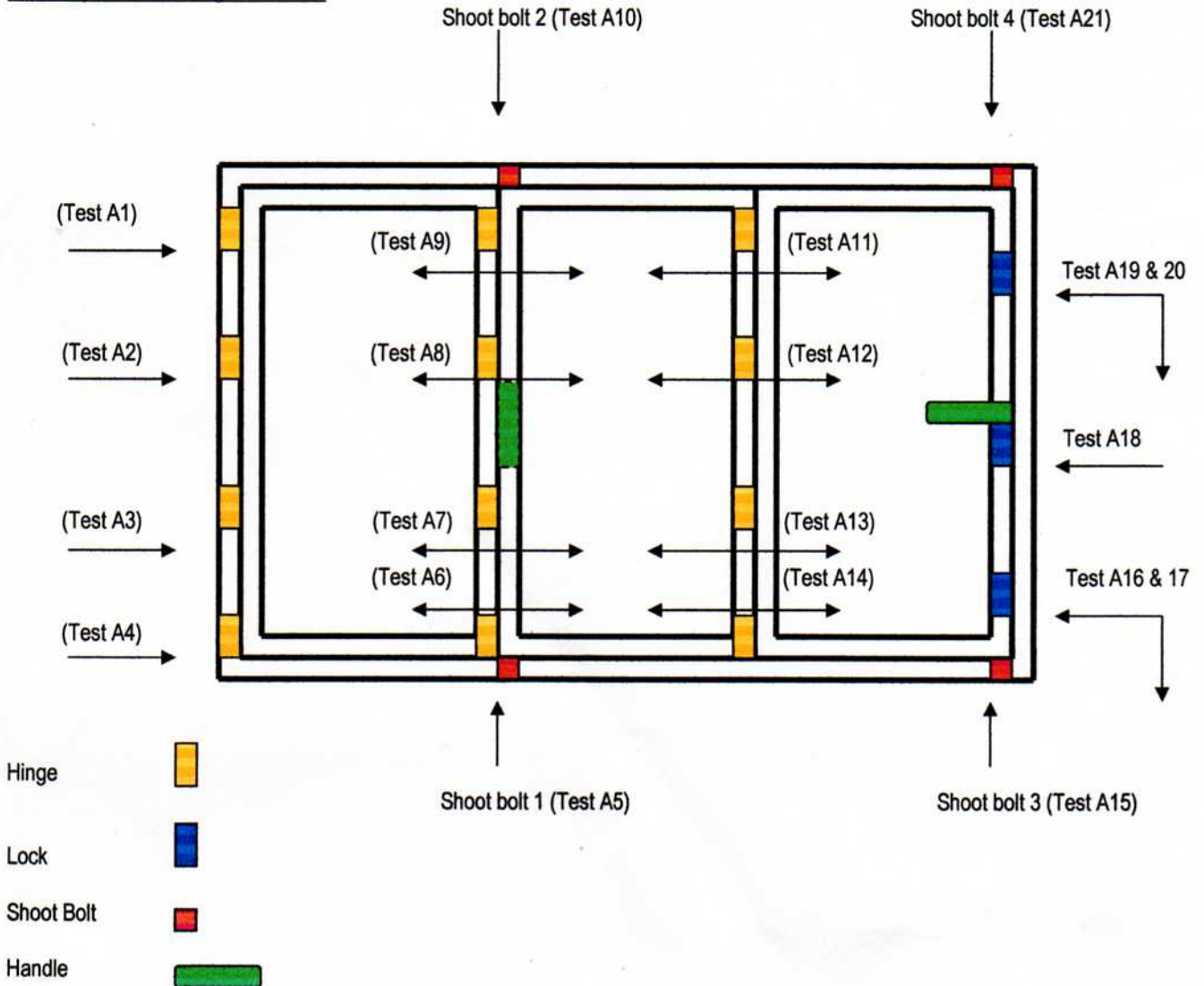
The Results obtained relate only to the items tested

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Test report shall not be reproduced except in full, without written approval of the Test Laboratory

Type:	B1-Three door folding sliding unit
Fabricator:	The Folding Sliding Door Company
Profile:	FD72 System
Material:	Aluminium
Finish:	White
Lock:	GU Ferco multi lock and slam lock Avocet hook bolt keeps DHK2 Avocet dead bolt keeps CLK L2 and R2
Hinges:	In house design – PS01
Cylinder:	Mila
Handle:	"Mule" security handle (swing door lock). In house design (B1-fold lock)
Fixings:	Lock keeps and multipoint lock 3.9mm x 32mm self tapping Winzer Würth 20703932
Weather sealing:	Flipper gasket FSD/G/04
Glass:	4mm tough K
Glazing System:	28mm unit
Sample Dimensions:	2280mm x 2390mm

Door Layout & Loading Directions



Laboratory Temperature: 16°C

All hardware was checked for correct operation prior to the commencement of testing

Results

A.4 - Manipulation Test

This test was carried out on sample 2

Attempts were made to disengage the hook bolts, using the flat bladed screwdriver between the door and frame. After 1 minute attention was directed to the hinges where the plastic end caps were removed using the flat bladed screwdriver. A cross headed screwdriver was then used in an attempt to remove the hinge dowels. One set of dowels were removed but there was insufficient time to remove the other three and the technique was terminated after 3 minutes. No other potential weakness were identified and further testing was terminated.

Pass

A.5 – Infill Removal Test

A.5.1 – Infill Removal Test – Manual Test

This test was carried out on sample 3

Attempts were made to remove the gaskets from around the glazing system on the primary door using a flat bladed screwdriver and 6mm wood chisels. The gasket was extremely well secured and little progress was made. The technique was terminated after 3 minutes.

Pass

A.5.2 – Infill Medium Removal Test – Mechanical test

This test was carried out on sample 2

Each corner of the infill on each door panel successfully withstood a load of 204Kg (2kN) sustained for period of 8 – 12 seconds. On completion of test the infill showed no sign of damage or displacement.

Pass

A.5.4. – Infill Medium Removal Test – Manual Cutting

A 25mm and 6mm wood chisel were used in an attempt to remove the gasket from around the glass panel.

Access was not gained after 3 minutes

Pass

A .6 – Mechanical Load Test

This test was carried out on sample 3

Test A1– Top Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	460Kg	Pass

Test A2 – Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	460Kg	Pass

Test A3– Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	461Kg	Pass

Test A4 – Bottom Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	467Kg	Pass

Test A5 – Bottom Shoot bolt

Load Positions	Requirement	Actual	Assessment
Parallel to plane along the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	461Kg	Pass

Test A6 – Bottom Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	462Kg	Pass

Test A7 – Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	462Kg	Pass

Test A8 – Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	466Kg	Pass

Test A9 – Top Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	462Kg	Pass

Test A10 – Top Shoot Bolt

Load Positions	Requirement	Actual	Assessment
Parallel to plane along the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	463Kg	Pass

Test A11 – Top Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	464Kg	Pass

Test A12 – Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	464Kg	Pass

A13 – Middle Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	462Kg	Pass

Test A14– Bottom Hinge

Load Positions	Requirement	Actual	Assessment
Parallel to plane at right angles to the edge x 2	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	464Kg	Pass

Test A15– Bottom Shoot Bolt

Load Positions	Requirement	Actual	Assessment
Parallel to plane along the edge	1.5kN (153Kg)	153Kg	----
Perpendicular to plane	4.5kN (459Kg)	464Kg	Pass