



# REPORT

Issued by an Accredited Testing Laboratory

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## Determination of resistance to wind load and safe opening

(2 appendices)

*This revision of the report is in response to a change of address.*

### Test object

The test object was a sectional overhead door of type TLB 40 with cassettes.  
The door was equipped with Torsion spring system.

The size of the door was 3000 mm daylight width and 2500 mm daylight height.

The door was supplied and fitted by the client in the opening of an airtight chamber, with its exterior facing inwards towards the chamber, see picture in appendix 1.

### Test procedure

#### Resistance to wind load

The door was tested in accordance with EN 12444 in an air pressure chamber. Before the test measures were taken to minimize air leakage in the door and its supporting construction. The air pressure in the test chamber was increased in steps in accordance with the different classes given in EN 12424.

After each step the bending of the door leaf was measured. The air pressure was then increased until the test was interrupted.

#### Safe openings

The door was tested for the event of failure of a single component in their suspension or balancing system against dropping or uncontrolled out-of-balance movement.

The balanced door was opened about 1 m above the floor and the spring was released to simulate a rupture in the balancing system.

After that the distance the door leaf came down was measured at both sides of the door.

The test was done in accordance with EN 12605, 5.1.2 and 5.4.2.

### Test results

#### Resistance to wind load

The door was equipped with two locking devices, one at each side of the door leaf, see picture in appendix 3.

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The test was interrupted at an inner pressure of 1375 Pa.  
After the test there were slight deformations on the outside of the panels.

The relation between air pressure and bending of the door leaf is shown in appendix 1.

Classification according to EN 12424: Class 4

### Safe openings

The door was equipped with Torsion Spring system with anti drop safeguard type TorqueForce 25649, SBD resi and the weight of the door leaf was 103.4 kg.

**Test 1:** Releasing of the spring.

The movement downwards was measured to 495 mm at both sides and the door leaf was held in the same position without any further movement downwards.

**Test 2:** Releasing of the spring.

The movement downwards was measured to 135 mm at both sides and the door leaf was held in the same position without any further movement downwards.

Requirements according to EN 12604, 4.3.3 are that the main edge of the door leaf shall not move downwards more than 300 mm and after that the door leaf has been stopped by the anti drop safeguard, it shall be held safely in the same position.

### Conditions of test

The test results refer only to the tested object.

Date of test:	2005-09-21
Date of arrival:	2005-09-20
Condition at arrival:	No damage was noted
Equipment used:	Test chamber no 200417, measuring equipment No. 202733,
Estimated error margin:	Air pressure difference $\pm 2\%$
Ambient climate:	Air temperature 21 °C, humidity 39 % and atmospheric pressure 1001 hPa

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### Appendices

- 1 Pressure-deformation curves
- 2 Photo of the test object