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Determination of air permeability, resistance to water penetration and resistance to wind load

(3 appendices)

Test object

The test object was a sectional overhead door of type TLB 40 Ribbed. The door was equipped with extension 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 3.

Test procedure

Air permeability

A positive air pressure was established in the chamber and the air leakage was measured at 50 Pa.

The joint between the test chamber and the tracks of the door was sealed with airtight tape.

The test was done in accordance with EN 12427.

Resistance to water penetration

Water was applied through two horizontal rows of nozzles with eight nozzles in each.

The upper row supplied 2±0.2 l/min of water per nozzle. The lower row supplied 1±0.1 l/min of water per nozzle.

The test was done in accordance with EN 12489.

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.

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