

## Safe Opening test according to EN-13241-1

### Summary

**Table 1 Summary of test results according to EN 13241 – 1 Safe opening.**

Door	Fulfils req.
Lobas test door with Lobas hardware, Vippeport nr.1, 90 kg.	Yes

### 1 Introduction

SP has been commissioned by Lonevåg Beslagfabrikk A/S to perform tests according to 13241-1 Safe opening.

Place of testing: Lonevåg Beslagfabrikk A/S test site in Lonevåg, Norway.

Test period: 2011-12-05.

### 2 Test door

**Table 2 Test door**

Door	Hardware	Balancing system	Description	Size (B x H) [mm]	Mass [kg]
Lobas Test door	Lobas Vippeport Nr. 1	Six tension springs on each side	One piece over head door	2 260 x 2 100	90

### 3 Test performance safe opening test

The door was not equipped with any spring break device or cable break device. The balancing system consists of six visible tension springs on each side. Rupture in the balancing system was simulated by releasing one spring on one side. The door was balanced and measurements were performed, in order to determine the distance the door came down after rupture on the spring.

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## 4 Test results

The test results in this report are only valid for the tested objects.

The distance the door came down after released one spring was less than 300 mm.

The springs are clearly visible at all time and SP consider that if one spring would break it can be detect without problem.

## 5 Measurement uncertainty

The total calculated measurement uncertainty for the vertical movements  $< 2$  mm. Reported uncertainty corresponds to an approximate 95 % confidence interval around the measured value. The interval has been calculated in accordance with GUM (The ISO guide to the expression of uncertainty in measurements), which is normally accomplished by quadratic addition of the actual standard uncertainties and multiplication of the resulting combined standard uncertainty by the coverage factor  $k=2$ .

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