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Telesteps AB  
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## Strength test of Adjustable Safety Feet

(2 appendices)

### 1 Introduction

On behalf of Telesteps AB, RISE has performed strength test on one type of adjustable safety feet for ladders.

Aim: To load the safety feet to load levels of 300, 500 and 575 kg.

Site of testing: RISE laboratory of Applied Mechanics, Structures and Components in Borås.

### 2 Test object

Designation: Adjustable Safety Feet

Description: Adjustable safety feet for ladder made of aluminium.

Sampling: The selection of the test object was carried out by Telesteps AB, without participation from RISE.

Arrival at RISE: 2021-04-20.

#### RISE Research Institutes of Sweden AB

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Figure 1 – Picture of tested object

### 3 Test method and scope of test

Test method: The testing has been carried out in accordance with a test procedure provided by Telesteps AB. The test procedure is also described in chapter 4 together with the results.

Scope: One loading test was performed.

Date of testing: 2021-03-24.

### 4 Test procedure and results

The test object was placed in a rig freely on the floor. Between the test object and hydraulic piston a 4 x 100 x 100 mm plate was used to distribute the load over the stile connected to the feet. The foot was extended so that L in the figure in Appendix 1 is equal to 50 mm out of a maximum 220 mm during loading.

The load was applied in 3 steps with unloading between each step.

**Table 1 Results**

Step	Load [kg]	Load [kN]	Result	Note
1	300	2.94	After reaching load no failure occurred .	No visible cracks or deformation.
2	500	4.90	After reaching load no failure occurred .	No visible cracks or deformation.
3	575	5.63	Reached load. After 10 seconds at this load failure occurred.	Maximum load before failure were measured to 5.68 kN / 582 kg

At the failure load the locking mechanism failed and the safety foot was compressed.

## 5 Additional information

The measurement uncertainty of the load and deformation is estimated to be less than 1.0%.

The uncertainty reported corresponds to an approximate 95% confidence interval around the measured value. The interval has been calculated in accordance with EA-4/16 (EA guidelines on the expression of uncertainty in quantitative testing) which is normally accomplished by quadratic addition of the actual standard uncertainties and multiplication of the resulting combined standard uncertainty by the coverage factor  $k=2$ .

The results only apply to the tested specimen.

### **RISE Research Institutes of Sweden AB**

#### **Department Applied Mechanics, RISE AB - Construction and Infrastructure**

Performed by

Examined by

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Jonatan Backlund

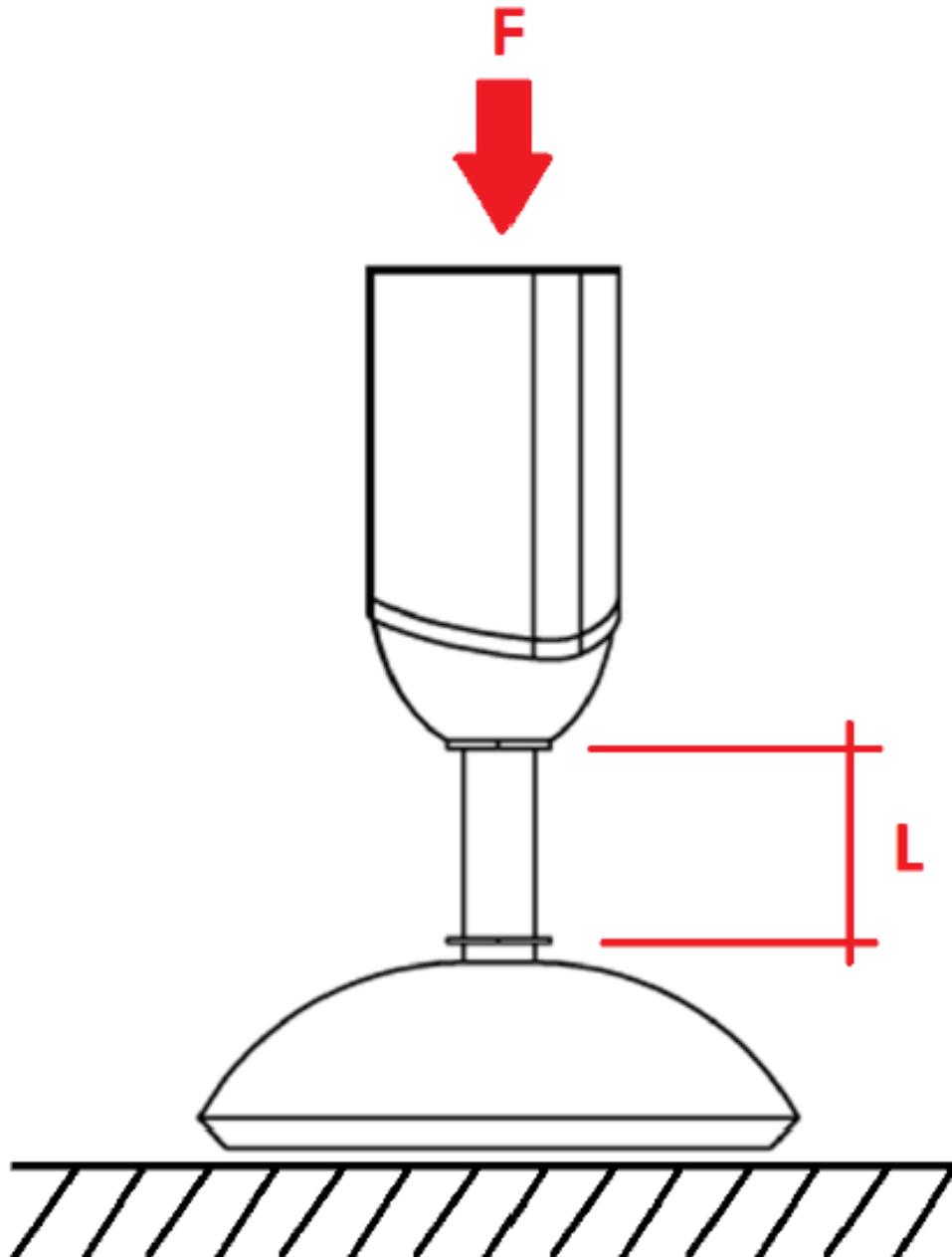
Daniel Vennetti

### **Appendix**

1 Drawing of test setup (1 page)

2 Drawing of the test object (1 page)

Appendix 1



### Appendix 2

