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<b>PURPOSE</b>	<b>TESTS ACCORDING TO UNE-EN 1129 AND UNE-EN 747</b>
<b>TESTED SAMPLE</b>	<b>FOLDAWAY BUNK BED REF: LA LITERAL «L100»</b>
<b>REPORT No.</b>	<b>27019 (Translation)</b>

The results of the current report concern only and exclusively to the material tested and at the time and conditions in which the measurements were taken.

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## CHARACTERISTICS OF THE SAMPLE

On 13th January 2011, a foldaway bunk bed was received from the company SELLEX S.A, measuring:

- Height: 1970 mm
- Length: 2020 mm
- Depth: 380 mm (folded)



The bed is assembled by following the instructions provided by the customer. Subsequently, the bed structure is held in place by clamping it to a metal structure.

## REQUESTED TESTS

The tests requested have been the following:

1. Opening and closing test
2. Test of hinged elements
3. Durability of the folding part
4. Test for unexpected opening
5. Impact on the base of the bed

The first four tests correspond to standard UNE-EN 1129, referring to foldaway beds, whilst the fifth test corresponds to standard UNE-EN 747, referring to bunk beds.

## DEVIATION FROM THE STANDARD UNE-EN 1129-2:1995

According to standard UNE-EN 1129-2/95, the test mattress must be 100 mm thick, with a density of  $(30 \pm 2) \text{ kg/m}^3$ , and measure (800x800) mm.

In this case, the mattress used, supplied by the customer, is 150 mm thick, has a density of  $45 \text{ kg/m}^3$  and measures (1900x900) mm.

## TESTS CONDUCTED

The tests carried out have been the following:

### 1. - Opening and closing test, according to UNE-EN 1129-2/95, sect. 5.3

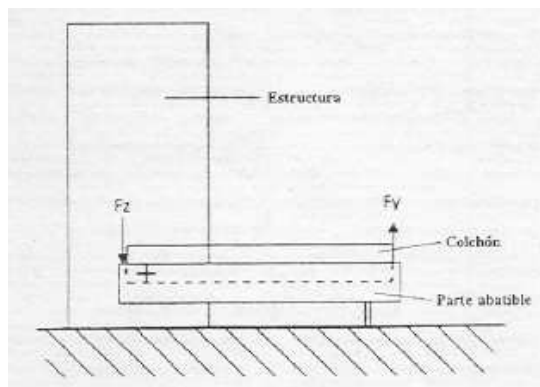
The test consists of measuring the opening and closing force of the bed at a slow rate with a constant motion. Furthermore, the opening and closing force should be measured in the middle of the opening arc of the bed.

The energy generated in the opening is calculated from the opening arc underneath the appropriate area of the resulting diagram.

### 2. - Test of hinged elements, according to UNE-EN 1129-2/95, sect. 5.4

The test consists of determining the force  $F_Y$  (see figure) resistance to opening and closing after 100 cycles and 10,000 cycles. Each cycle consists of fully opening and closing the bed, without generating additional forces, with a frequency of 3 cycles (opening/closing) per minute. After the test, it should be noted if there are any gaps or degradations in the fastenings for the hinge mechanisms, whether of the structure or the folding part.

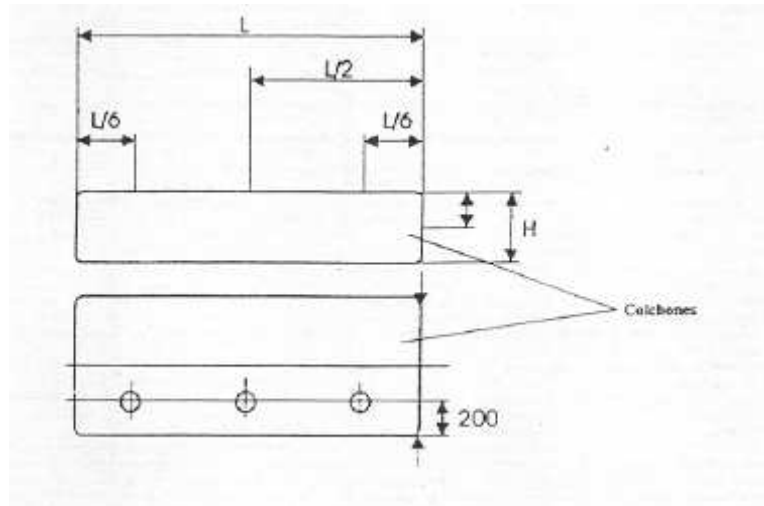
Furthermore, the opening energy measured at an opening angle of  $70^\circ$  must not exceed the value 10 Nm



### 3. - Resistance and durability of the folding part, according to UNE-EN 1129-2/95, sect. 5.5.1

A vertical and downwards force of 1,000 N is applied 10,000 times to each one of the three points shown in the figure, with a maximum frequency of 14 cycles/minute.

$l=900$  mm

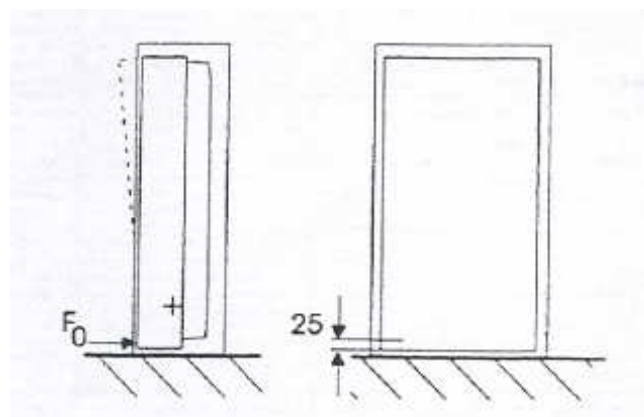


After the test, the folding and fastening mechanisms are inspected, noting any damage that has occurred.

### 4. - Unexpected opening, according to UNE-EN 1129-2/95, sect. 5.5.4

The test is carried out 10 minutes after having closed the folding part.

A horizontal force is gradually applied to the centre of the longitudinal axis at a distance of 25 mm from the lower edge until 250 N (see figure) is reached.

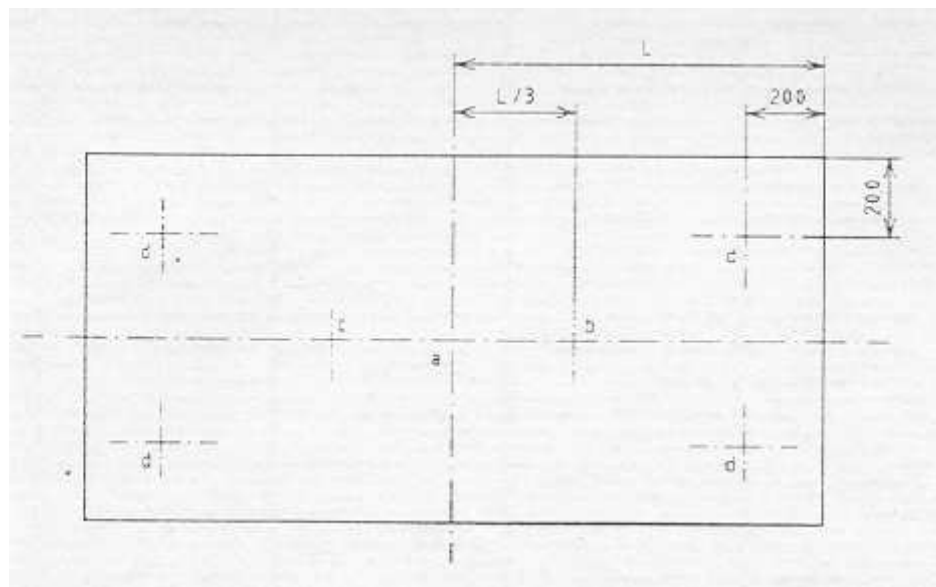


Record the force applied, checking whether or not the bed opens.

## 5. - Impact on the base of the bed, according to UNE-EN 747-2/93, sect. 5.4.4

The impact is carried out on the following points (see figure):

1. To the centre of the base of the bed
2. To the area located  $1/3$  of the longitudinal axis from the middle
3. To the point opposite the previous one
4. To each one of the points located at 200 mm from each adjacent edge
5. At 200 mm from the edge and to the centre.



The test consists of letting the impactor fall freely 10 times, from a height of 180 mm measured from the base of the mattress, on each one of the selected points. Subsequently, all parts of the base of the bed should be checked for any breakages and the hinged elements for any loosening.

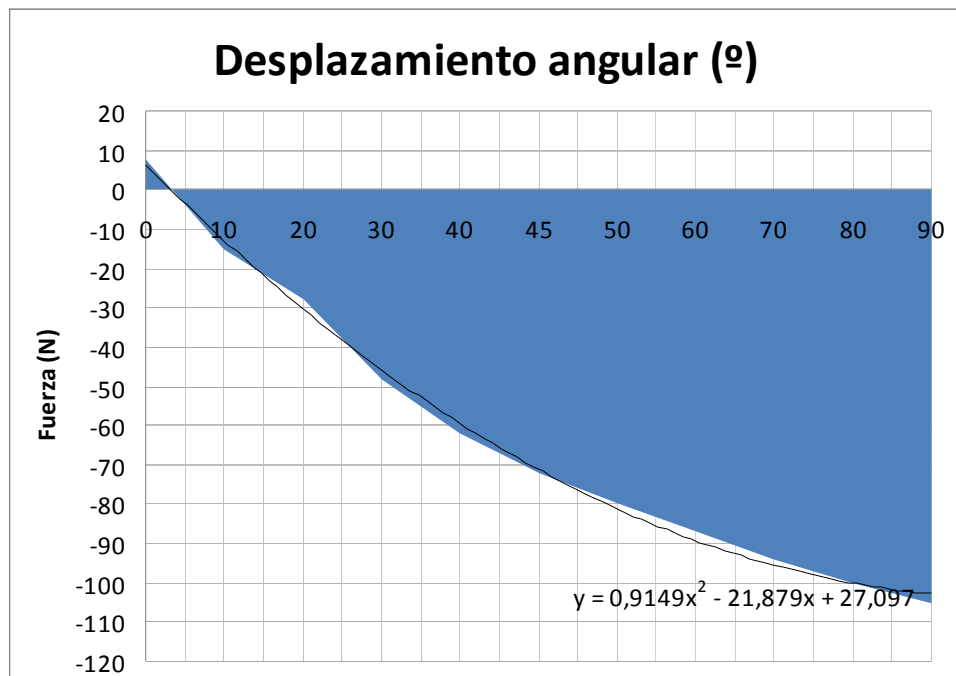
## RESULTS

The results obtained are as follows:

### 1. - Opening and closing test, according to UNE-EN 1129-2/95, sect. 5.3

The following parameters were measured during the test:

- Opening and closing force in the middle of the opening arc: **72 N**
- Speed of angular opening: **1.6 rad/s (const.)**
- Energy generated in the opening: **71 Nm**



## 2. - Test of hinged elements, according to UNE-EN 1129-2/95, sect. 5.4

- Opening and closing speed: **3 cycles/min**
- No. of cycles performed: **10,000**
- Resistant strength at the opening (100<sup>o</sup> cycle): **87 N**
- Resistant strength at the opening (10,000<sup>o</sup> cycle): **92 N**

No gaps or degradations observed following the test.

**RESULT: SATISFACTORY**

## 3. - Resistance and durability of the folding part, according to UNE-EN 1129-2/95, sect. 5.5.1

- Applied force: **1,000 N**
- No. of cycles performed: **10,000 at each point**
- Test rate: **14 cycles/min**

No gaps or degradations observed following the test.

**RESULT: SATISFACTORY**

## 4. - Unexpected opening, according to UNE-EN 1129-2/95, sect. 5.5.4

After applying a force of 250 N, the bed does not open.

**RESULT: SATISFACTORY**

## 5. - Impact on the base of the bed, according to UNE-EN 747-2/93, sect. 5.4.4

Impactor mass: **25 Kg**

After impacting 10 times at each one of the points, there are no breakages at the base of the bed or any loose joining elements.

**RESULT: SATISFACTORY**

DATE OF RECEIPT:	<b>13.01.2011</b>
START DATE OF TEST:	<b>17.01.2011</b>
END DATE OF TEST:	<b>07.02.2011</b>
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