• Norm EN 81-71
Vandal resistant lifts
The Norm:

- Every elevator is used in one way or another, either without problem or mishandled.
- Elevators, ones built after EN 81-1 and 81-2 offer a standardized protection.
- The norm EN 81-71 entails special measures and security rules about the withstanding protection against vandalism in elevators. Built in, in the areas that are susceptible to vandalism.
- The Norm EN 81-71 includes either extra or a variation version for the security of the elevator user.

By the given categories the following relevant facts are noted:

- The level of usage of the lift
- The surrounding area of the lift
- The level of which someone is seen, in the neighboring surroundings
- Security in the building
- Surveillance camera in the elevator
- Opening times, to the building and its elevators
- The vulnerability to the elevator or its user
- The users purpose of the elevator

<table>
<thead>
<tr>
<th>Vandals Tools</th>
<th>Elevator category (Class) after EN 81-71</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>1</td>
</tr>
<tr>
<td>Pen</td>
<td>X</td>
</tr>
<tr>
<td>Rope/Thread/Wire</td>
<td>X</td>
</tr>
<tr>
<td>Key</td>
<td>X</td>
</tr>
<tr>
<td>Cane</td>
<td>X</td>
</tr>
<tr>
<td>Chewing Gum</td>
<td>X</td>
</tr>
<tr>
<td>Cigarettes</td>
<td>X</td>
</tr>
<tr>
<td>Human weight (75 kg)</td>
<td>X</td>
</tr>
<tr>
<td>Lighter X</td>
<td>X</td>
</tr>
<tr>
<td>Pocket knife (100 mm blade)</td>
<td>X</td>
</tr>
<tr>
<td>Medium sized screw driver (length 200 mm)</td>
<td>X</td>
</tr>
<tr>
<td>Bottle cap</td>
<td>X</td>
</tr>
<tr>
<td>Side cutter (medium sized without additional functions)</td>
<td>-</td>
</tr>
</tbody>
</table>
ELEVATOR CATEGORY

CLASS 0

- Condo-apartment buildings, small amount of units, that are personally owned
- Office and management buildings in good areas or with controlled entrances
- Normal hotels
- Shopping centers with glass elevators
<table>
<thead>
<tr>
<th>ELEVATOR CATEGORY</th>
</tr>
</thead>
<tbody>
<tr>
<td>CLASS 1</td>
</tr>
</tbody>
</table>

- Apartment buildings with many units, rentals that are in good areas
- Office and management buildings with a lot of public traffic and without surveillance of elevators
- Low-budget hotels in critical areas
- Glass elevators in train stations and at bus stations in nice areas
- Non-surveillance elevators in shopping malls in good areas
ELEVATOR CATEGORY
CLASS 2

- Apartment buildings, that are mostly all rentals and that are in social critical areas
- All public buildings in social critical areas, without surveillance
- Stadiums and public revenues where large crowds turn out

Concert halls

Large apartment complexes

Football stadiums
SHOCK TESTING

Method

- The test is done with a machine with a weight of 1 kg and a circumference of 10 mm.
- The press head is followed out three times from the height of 0.2 m in category 1 and from 1 m in category 2. The test model is placed in an improper point built in the holder frame and then dropped.
- After the test is carried out, the model has to be in safe and functional working condition.
The model is built in, just like in a normal situation that this component is used.

The gas lighter with a flame of 40 mm long is placed in the worst possible angle to examine the worst possible outcome. The test model in category 1 is held for 60 seconds through a flame, and 120 seconds in category 2.

After the test, the model has to be in safe and functional working order. The marking must also stay readable.
Laboratory test to prove resistance to spray or shower of water, Second index-3, tests for water proof “IPX3”

This IP-code is used for the protection of the function within the box against hurtful function through the area the water can penetrate. The model and the main test are exactly planned out.

- Test agent spray hose, with an angle from +/- 180° both sides direct sprays. The maximum distance is from 200 mm.
- Water-amount-energy 0,07 l/mm (+/- 5 %) for every opening in the spray head.
- Test time 10 minutes
- After the test the model must be in safe and functional working condition.
COMPONENTS
EN 81-71 CLASS 1 (IP X3)

- Front plate removable with the help of a special tool.
COMPONENTS

EN 81-71 CLASS 1 AND 2 (IP X3)

- Faceplate mounting invisible for the elevator user

Components:
- VB 42 M
- VB 42
- Label mat
- Label black
- PT 56
- PT 28
COMPONENTS

EN 81-71 CLASS 1 AND 2 (IP X3)

- Lense with security glass (ESG)
- For displays and luminous fields

- Flap cover stainless steel for key switch
- ES42 Vandal-proof behind the faceplate

- Desk-shaped fixture with XL push buttons