

## SCHEDULE 1

Regulation 2(1)

### (Annex I to the Lifts Directive) ESSENTIAL HEALTH AND SAFETY REQUIREMENTS RELATING TO THE DESIGN AND CONSTRUCTION OF LIFTS AND SAFETY COMPONENTS

#### *Preliminary Remarks*

1. Obligations under essential health and safety requirements apply only where the lift or safety component is subject to the hazard in question when used as intended by the installer of the lift or the manufacturer of the safety components.

2. The essential health and safety requirements contained in the Directive are imperatives. However, given the present state of the art, the objectives which they lay down may not be attainable. In such cases, and to the greatest extent possible, the lift or safety components must be designed and built in such a way as to approximate to those objectives.

3. The safety-component manufacturer and the installer of the lift are under an obligation to assess the hazards in order to identify all those which apply to their products; they must then design and construct them taking account of the assessment.

4. In accordance with Article 14, the essential requirements laid down in Directive [89/106/EEC](#)(1) not included in this Directive, apply to lifts.

#### **1 GENERAL**

(1.1) Application of Directive [89/392/EEC](#), as amended by Directives [91/368/EEC](#), [93/44/EEC](#) and [93/68/EEC](#).(2)

Where the relevant hazard exists and is not dealt with in this Annex, the essential health and safety requirements of Annex I to Directive [89/392/EEC](#) apply. The essential requirement of Section 1.1.2 of Annex 1 to Directive [89/392/EEC](#) must apply in any event.

##### (1.2) Car

The car must be designed and constructed to offer the space and strength corresponding to the maximum number of persons and the rated load of the lift set by the installer.

In the case of lifts intended for the transport of persons, and where its dimensions permit, the car must be designed and constructed in such a way that its structural features do not obstruct or impede access and use by disabled persons and so as to allow any appropriate adjustments intended to facilitate its use by them.

##### (1.3) Means of suspension and means of support

The means of suspension and/or support of the car, its attachments and any terminal parts thereof must be selected and designed so as to ensure an adequate level of overall safety and to minimise the risk of the car falling, taking into account the conditions of use, the materials used and the conditions of manufacture.

Where ropes or chains are used to suspend the car, there must be at least two independent cables or chains, each with its own anchorage system. Such ropes and chains must have no joins or splices except where necessary for fixing or forming a loop.

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- (1) Council Directive [89/106/EEC](#) on the approximation of the laws, regulations and administrative provisions of the Member States relating to construction products (OJNo. L40, 11.2.89, p.12) has been implemented in the United Kingdom by S.I. [1991/1620](#) and the Essential Requirements laid down in that Directive are set out in Schedule 2 to those Regulations.
- (2) The provisions of Council Directive [89/392/EEC](#) on the approximation of the laws of the Member States relating to machinery (OJ No. L183, 29.6.89, p.9), as amended, has been implemented in the United Kingdom by S.I. [1992/3073](#), as amended by S.I. [1994/2063](#), and the essential health and safety requirements of Annex 1 to that Directive are set out in Schedule 3 to those Regulations.

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- (1.4) Control of loading (including overspeed)
  - (1.4.1) Lifts must be so designed, constructed and installed as to prevent normal starting if the rated load is exceeded.
  - (1.4.2) Lifts must be equipped with an overspeed limitation device<sup>(3)</sup>.  
These requirements do not apply to lifts in which the design of the drive system prevents overspeed.
  - (1.4.3) Fast lifts must be equipped with a speed-monitoring and speed-limiting device.
  - (1.4.4) Lifts driven by friction pulleys must be designed so as to ensure stability of the traction cables on the pulley.
- (1.5) Machinery
  - (1.5.1) All passenger lifts must have their own individual lift machinery. This requirement does not apply to lifts in which the counterweights are replaced by a second car.
  - (1.5.2) The installer of the lift must ensure that the lift machinery and the associated devices of a lift are not accessible except for maintenance and in emergencies.
- (1.6) Controls
  - (1.6.1) The controls of lifts intended for use by unaccompanied disabled persons must be designed and located accordingly.
  - (1.6.2) The function of the controls must be clearly indicated.
  - (1.6.3) The call circuits of a group of lifts may be shared or interconnected.
  - (1.6.4) Electrical equipment must be so installed and connected that:
    - there can be no possible confusion with circuits which do not have any direct connection with the lift,
    - the power supply can be switched while on load,
    - movements of the lift are dependent on electrical safety devices in a separate electrical safety circuit,
    - a fault in the electrical installation does not give rise to a dangerous situation.

## **2 HAZARDS TO PERSONS OUTSIDE THE CAR**

(2.1) The lift must be designed and constructed to ensure that the space in which the car travels is inaccessible except for maintenance or in emergencies. Before a person enters that space, normal use of the lift must be made impossible.

(2.2) The lift must be designed and constructed to prevent the risk of crushing when the car is in one of its extreme positions.

The objective will be achieved by means of free space or refuge beyond the extreme positions.

However, in specific cases, in affording Member States the possibility of giving prior approval, particularly in existing buildings, where this solution is impossible to fulfil, other appropriate means may be provided to avoid this risk.

(2.3) The landings at the entrance and exit of the car must be equipped with landing doors of adequate mechanical resistance for the conditions of use envisaged.

An interlocking device must prevent during normal operation:

- starting movement of the car, whether or not deliberately activated, unless all landing doors are shut and locked,

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(3) There are some linguistic errors in the English text of the Lifts Directive. The text of the Directive uses the word “governor” instead of “limitation device”.

- the opening of a landing door when the car is still moving and outside a prescribed landing zone.

However, all landing movements with the doors open shall be allowed in specified zones on condition that the levelling speed is controlled.

### **3 HAZARDS TO PERSONS IN THE CAR**

(3.1) Lift cars must be completely enclosed by full-length walls, fitted floors and ceilings included, with the exception of ventilation apertures, and with full-length doors. These doors must be so designed and installed that the car cannot move, except for the landing movements referred to in the third sub-paragraph of Section 2.3, unless the doors are closed, and comes to a halt if the doors are opened.

The doors of the car must remain closed and interlocked if the lift stops between two levels where there is a risk of a fall between the car and the shaft or if there is no shaft.

(3.2) In the event of a power cut or failure of components the lift must have devices to prevent free fall or uncontrolled upward movements of the car.

The device preventing the free fall of the car must be independent of the means of suspension of the car.

This device must be able to stop the car at its rated load and at the maximum speed anticipated by the installer of the lift. Any stop occasioned by this device must not cause deceleration harmful to the occupants whatever the load conditions.

(3.3) Buffers must be installed between the bottom of the shaft and the floor of the car.

In this case, the free space referred to in Section 2.2 must be measured with the buffers totally compressed.

This requirement does not apply to lifts in which the car cannot enter the free space referred to in Section 2.2 by reason of the design of the drive system.

(3.4) Lifts must be so designed and constructed as to make it impossible for them to be set in motion if the device provided for in Section 3.2 is not in an operational position.

### **4 OTHER HAZARDS**

(4.1) The landing doors and car doors or the two doors together, where motorised, must be fitted with a device to prevent the risk of crushing when they are moving.

(4.2) Landing doors, where they have to contribute to the protection of the building against fire, including those with glass parts, must be suitably resistant to fire in terms of their integrity and their properties with regard to insulation (containment of flames) and the transmission of heat (thermal radiation).

(4.3) Counterweights must be so installed as to avoid any risk of colliding with or falling on to the car.

(4.4) Lifts must be equipped with means enabling people trapped in the car to be released and evacuated.

(4.5) Cars must be fitted with two-way means of communication allowing permanent contact with a rescue service.

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(4.6) Lifts must be so designed and constructed that, in the event of the temperature in the lift machine room exceeding the maximum set by the installer of the lift, they can complete movements in progress but refuse new commands<sup>(4)</sup>.

(4.7) Cars must be designed and constructed to ensure sufficient ventilation for passengers, even in the event of a prolonged stoppage.

(4.8) The car should be adequately lit whenever in use or whenever a door is opened; there must also be emergency lighting.

(4.9) The means of communication referred to in Section 4.5 and the emergency lighting referred to in Section 4.8 must be designed and constructed so as to function even without the normal power supply. Their period of operation should be long enough to allow normal operation of the rescue procedure.

(4.10) The control circuits of lifts which may be used in the event of fire must be designed and manufactured so that lifts may be prevented from stopping at certain levels and allow for priority control of the lift by rescue teams.

## 5 MARKING

(5.1) In addition to the minimum particulars required for any machine pursuant to Section 1.7.3 of Annex I to Directive 89/392/EEC, each car must bear an easily visible plate clearly showing the rated load in kilograms and the maximum number of passengers which may be carried.

(5.2) If the lift is designed to allow people trapped in the car to escape without outside help, the relevant instructions must be clear and visible in the car.

## 6 INSTRUCTIONS FOR USE

(6.1) The safety components referred to in Annex IV must be accompanied by an instruction manual drawn up in an official language of the Member State of the lift installer or another Community language acceptable to him, so that:

- assembly,
- connection,
- adjustment, and
- maintenance,

can be carried out effectively and without danger.

(6.2) Each lift must be accompanied by documentation drawn up in the official language(s) of the Community, which may be determined in accordance with the Treaty<sup>(5)</sup> by the Member State in which the lift is installed. The documentation shall contain at least:

- an instruction manual containing the plans and diagrams necessary for normal use and relating to maintenance, inspection, repair, periodic checks and the rescue operations referred to in Section 4.4.
- a logbook in which repairs and, where appropriate, periodic checks can be noted.

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(4) There are some linguistic errors in the English text of the Lifts Directive. The text of the Directive uses the words “lift machine” instead of “lift machine room”.

(5) This is a reference to the Treaty establishing the European Community.