

European Legislation on Design and Use of Personal Protective Equipment (PPE) against Falls from a Height

1. European Right Relating to Requirements for Personal Protective Equipment against Falls from a Height

According to the European Directive 89/686/EEC of December 21, 1989 on the approximation of the laws of the member states relating to personal protective equipment (PPE), this shall mean any device or appliance designed to be worn or held by an individual for protection against one or more health and safety hazards.

This directive was passed into legislation on July 1, 1992.

PPE devices are divided into three categories according to the degree of protection, there are three categories for PPE:

Category I (simple PPE)

This category covers PPE models where it can be assumed that the user can assess the effectiveness of PPE in comparison with the minimal risks concerned, and the effects, if gradual, can be safely identified in time by the user. This category includes, for example, PPE intended to protect the wearer against superficial, mechanically induced injuries, mildly-aggressive cleaning solvents, and direct sunlight. These PPE models may be placed on the market without EC type test.

Category II (normal PPE)

This category covers PPE models that cannot be assigned to categories I or III. PPE models of category II are intended to protect the wearers against threats to their safety and health at work. Protective footwear, hearing protection gear, and protective helmets for use in industry, for example, belong to this category. An EC type test is required for PPE models of category II for which the manufacturer can apply by submitting to an approved inspection body.

Category III (complex PPE)

This category covers PPE models intended to protect against mortal danger or against dangers that may cause serious and irreversible harm to one's health, and where it is assumed that the immediate effects cannot be identified by the user in sufficient time. This category includes, for example, PPE to protect against falls from a height and respiratory protection devices. For PPE models of this category, a check of the final PPE is required in addition to the EC type test. The manufacturer may choose between the EC quality control system for the final product (Art. 11A) and the EC quality assurance system through monitoring (Art. 11B)

Therefore, the category III PPE models relating to activities concerning special rescue from heights and depths are those most relevant for us.

In order to place a PPE on the market that is used to protect against falls from a height and for rescue, the EC type test from an approved inspection body is required. This applies also, if there is no harmonized standard for a specific product or if a manufacturer deviates from a harmonized standard or has found a better technical solution.

With an EC declaration of conformity, the manufacturer certifies that the PPE placed on the market is identical with the PPE which was subject of the EC type test certificate issued, and that it is subject to a quality assurance system according to Article 11A or 11B under supervision of the notifying body.

Every PPE receives a | mark with a 4-digit identification number of the notifying body that is involved in the quality control of the final PPE.

The manufacturer of the PPE must also include instructions for use for in the relevant official language of the country of destination. Such instructions for use must contain explicit and easily understood information pertaining, for example, to designated and correct use, storage, cleaning, maintenance, inspection checks, limits of use, and requirements for use of the PPE

to protect against falls from a height. If applicable, conformity with other PPE must also be stated.

Minimum requirements for the identification marks of all PPEs that protect against falls from a height:

| + 4-digit number of the quality monitoring body which gave notification,
Year of manufacture,
Name or logo of the manufacturer
Standard according to which the PPE EC type test was carried out and is manufactured
Serial and/or lot number
Normative designation of the PPE
Note of caution to follow instructions for use
The most important harmonized standards for Personal Protective Equipment for prevention against falls from heights and for rescues are listed as follows:

EN 341: Descender devices
EN 353 Part 1: Guided type fall arresters on a rigid anchorage line
EN 353 Part 2: Guided type fall arresters on a flexible anchorage line
EN 354: Lanyards
EN 355: Energy absorbers
EN 358: Work positioning belts and lanyards for work positioning belts
EN 360: Retractable type fall arresters
EN 361: Full body harnesses
EN 362: Connectors
EN 363: Fall arrest systems
EN 364: Test methods
EN 365: General requirements for instructions for use and marking
EN 795: Anchorage devices
EN 1496: Rescue lifting or lifting and lowering devices
EN 1497: Rescue harnesses
EN 1498: Rescue loops

Under consideration of the basic and especially threat-relevant additional requirements of the EC Directive on the prevention of falls from a height, all fall arrest systems must be used with a full body harness and the reduction of arrest impact set at a max. 6 KN.

2. **European legislation on requirements for the use of Personal Protective Equipment to protect against falls from a height**

According to Article 137 (formerly 118a) of the EEC contracts the European Community agreed on setting minimum requirements to encourage improvements of work environment and to increase employees' safety and health. Directive 98/391/EEC was developed on this basis. It stipulates the employers' and employees' obligations to promote safety and health at work. This directive is of general wording and is supplemented by subordinated special individual directives. One of these general provisions relates to the priority of collective hazard protection before the use of PPE.

One of the subordinate individual directives is 89/656/EEC regulating the minimum requirements for the use by workers of personal protective equipment at the workplace. This EC user directive is the counterpart to the EC manufacturer directive (89/686/EEC).

Pursuant to this Directive, such PPE to protect falls from a height shall be provided free of charge to the employees by the employer that

- complies with 89/686/EEC
- provides sufficient protection, without bearing itself an even bigger risk
- is suitable for the workplace conditions.

Therefore, the employer is obligated, beside suitability of employee, for example,

- select the suitable PPE
- instruct the employees in the use of this PPE

- to repeat this instruction in regular intervals
- upon demand, however at least once a year, have the PPE checked by an competent person.

Since this requires a high level of professional knowledge, the employer should consider entrusting one or more qualified person(s) with this task. These persons should have all necessary knowledge about such matters as about constructional design, designated and proper use, recurring checks, period of use, and replacement state of wear of the PPE, and they should be able to convey this knowledge in theory and practice. Furthermore, basic knowledge about the legislation concerning the use of PPEs to protect falls from a height and for rescue is also necessary.

Special attention must be paid to adhering to information that is given by the manufacturer in the general regulations regarding limits for use, for example, in regard to use, recurring checks, and the period of use. These criteria fall under "Selecting a suitable PPE".

In general, the qualified person needs information of the respective manufacturer (e.g. instructions for use, supplementary check plan) that provides information on type and scope of the check to be carried out, check intervals, etc. Depending on their assessment of danger, the employer or the qualified person may only then deviate from the stipulations given by the manufacturer, if these deviations are set as even stricter requirements than defined by the manufacturer for type and scope of this check. The employer and his/her vicarious agent will be held liable in case of noncompliance with the manufacturer's information.

The documentation of the respective manufacturer also contain information on marking a recurring check that was carried out successfully. In addition to marking the product, the check must be recorded in the check log enclosed with the product. This check log in form of a book, an index card, or electronic data recording based on the paper version supplied by the manufacturer, contains data relating to description and normative basis of the PPE, name of the manufacturer, date of acquisition, date of first use, serial number, compatibility of this PPE with other PPEs, as well as space for comments (e.g. for recurring checks). Since the PPE should be specifically assigned to the individual user, the user's name is also recorded.

The employer must be organized in such a manner as to be able to identify and check the PPEs assigned to the individual users, to check them, and, if necessary, to remove them from further use in a controlled manner.

Irrespective of these obligations of the employers and their qualified staff, each user is obligated to check his/her PPE before each use. If, as a result of this check, there are doubts regarding the nature and perfect condition of the PPE, then the user is not allowed to use it. Moreover, the user must permanently remove it from further use and submit it to the employer of manufacturer for further examination and, if applicable, for repair. <}0{>

3. Repairs may only be carried out by the manufacturer.
4. **General exemplary notes on the use of the PPE to protect against falls from a height and organizing recurring checks, however, the manufacturer's information must be given priority. If there is no information from the manufacturer, then the manufacturer must be queried in writing to provide such information!**

As a matter of principle, textile components of PPEs to protect against falls from a height must be protected from aggressive materials such as, e.g., acids, lyes, and solvents. As a matter of principle, textile components of PPEs to protect against falls from a height must be protected from aggressive media such as, e.g., acids, lyes, solvents. PPEs should never be needlessly exposed to UV radiation. Particularly when fighting fires, the permissible temperature range (min.°C to max.°C) must be complied with. Soil and dirt are to be removed in compliance with the manufacturer's information given in the instructions for use.

Metallic components must never bear signs of corrosion, deformation, notches, or damages caused by blowtorches, etc.

Extraordinary use may require a recurring check by a qualified person, even though the set interval for a regular check may not yet be due.

Colored pens may not be used to mark the textile components of a PPE unless the manufacturer has expressly given written authorization.

The limits of use for the equipment must be demonstrated at regular intervals, especially under ever-changing conditions of use. PPEs to protect against falls, that are to be used

- horizontally or
- diagonally

and/or used in the event of being in danger of a fall over an "edge" must be proven to have passed special additional tests. Such use must be explicitly mentioned in the manufacturer's instructions for use as "proper and designated use".

If need for such arises, anchorage devices must have an additional feature for the use at an "edge". Such use must be explicitly mentioned in the manufacturer's instructions for use as "proper and designated use".

Anchorage devices, which bear a one-way stress load due to their arrangement capabilities in variable positions not only above the user, must meet the special requirements for such use. Such use must be explicitly mentioned in the manufacturer's instructions for use as "proper and designated use".