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English ▼ Go

Home

What is CE Marking

Why call it "Passport"

Effect on export to EU

What countries

CE Marking Publications

What product needs CE

Which Standards

How obtain CEM

Enforcement

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EU Representative

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**Brief Introduction of**  
**Directive 73/23/EEC**  
**Low Voltage Electrical Equipment**

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產品進入歐盟的“特別通行證”

**COUNCIL DIRECTIVE 73/23/EEC of 19 February 1973** on the harmonization of the laws of Member States relating to Electrical Equipment designed for use within certain voltage limits.

This directive has been amended by the following Council Directives:

1. 92/59/eeec of 29 June 1992 (General Product Safety);
2. 93/68/eeec of 22 July 1993 (CE Marking directive).

Other Related CE Publications:

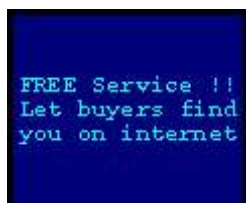
1. **Guidelines** to Low Voltage Directive (LVD) 73/23/eeec
2. 2000&2001 **Framework** of implementation of (LVD) Directive 73/23/eeec
3. 89/336/eeec: Directive of **Electromagnetic Compatibility** (EMC)
4. **Guidelines** to EMC Directive 89/336/eeec
5. **Technical-Aspects** relating EMC Directive 89/336/eeec
6. 2000 Framework of implementation of EMC Directive 89/336/EEC
7. **New List** of Harmonised (European) Standards
8. **New List** of Notified Bodies

## 1. Background

The Low Voltage Directive (LVD) was introduced at a time when directives contained detailed technical annexes which were intended to supersede national laws. The LVD set out the essential protection requirements, with the relevant technical details being defined by standards-making organizations. This subsequently paved the way for what were to be known as the New Approach Directives.

## 2. Scope

- 2.1 The "Electrical Equipment" means any equipment designed for use with a voltage rating of between **50 and 1000 V** for alternating current (A.C.) and between **75 and 1500 V** for direct current (D.C.). Therefore, this Directive is called often "Low Voltage Directive" which applies to the vast majority of electrical equipment in everyday use. The Electrical Equipment may be placed on the market only if it does not endanger the safety of persons, domestic animals or property. There are 11 principal elements of the safety objectives listed in [Annex I](#).
- 2.2 The Low Voltage Directive was the **first** directive to reference standards, and equipment which complies with harmonised safety standards drawn up by common agreement is deemed to comply. Where harmonised standards are **not** available, international standards which have been agreed to may be used.



- 2.3 The Low Voltage Directive has been in existence for over twenty years and, in conjunction with the [CE Marking Directive 93/68/EEC](#) which amended it as and from 1st January 1995, note should be taken of some of its main features.
- (a) The Low Voltage Directive is not designed to impose safety standards. Its primary purpose is to ensure free trade through the removal of technical barriers.
  - (b) Conformity with standards is not compulsory, but it can be used as one means to demonstrate compliance with the safety principles enshrined in the directive.
  - (c) The Low Voltage Directive covers other aspects of safety, including mechanical aspects.
  - (d) There are some items that are excluded from the Low Voltage Directives and those are listed in [Annex II](#) of the directive.

### 3. Demonstrating Conformity

- 3.1 From a manufacturer's perspective a key element of the directive is to be found in article 10, which relates to proof of conformity. The Low Voltage Directive defines **three means** whereby such conformity can be demonstrated; manufacturers declaration, certificates and notified body marks.
- 3.2 While the **manufacturer's declaration** is in itself sufficient to provide an "a priori" presumption of conformity of the equipment to the directive (the equipment is deemed to comply unless the importing country can prove otherwise), he must be entirely satisfied that he is correct in this regard.
- 3.3 Today, when manufacturers are faced with highly competitive markets, shortening product life cycles and continuing economic pressures, they are turning to independent certification agencies to provide the confidence and market advantage that is vital to their business needs. The certification agencies assist by issuing **certificates** in a recognized format, or by authorizing the use of a **notified certification mark**.

These mechanisms for certification do not exist in isolation, as reciprocal recognition arrangements are in place between National Certification Bodies at a number of levels.

- 3.4 The IECCE scheme for the mutual recognition of test reports, and the CENELEC Certification Agreement (CCA) are implemented by many certification agencies.
- 3.5 On the 1st January 1995, the Amending CE Marking Directive 93/68/EEC came into force. Its purpose, as far as the LVD is concerned, is to modify the conformity assessment and marking provisions so that the LVD can be fully integrated into the new approach/global approach philosophy. (See Articles 13-15 of 93/68/EEC).

From the 1st January 1995 until 31st December 1996 a transitional arrangement applies in that products may be placed on the market if they comply with the marking requirements in force before 1st January 1995. Alternatively, manufacturers may follow the provisions of the Amending Directive and apply the CE Marking, making sure that it is clearly stated that the Marking is evidence of compliance under the LVD. This will permit free circulation, avoiding difficulties with national administrations.

**From 1st January 1997**, application of the CE Marking will indicate that the equipment complies with the requirements of **all relevant directives**.

## **ANNEX I**

### **11 PRINCIPAL ELEMENTS OF THE SAFETY OBJECTIVES**

#### **1. General conditions**

- a) The essential characteristics, the recognition and observance of which will ensure that electrical equipment will be used safely and in applications for which it was made, shall be marked on the equipment, or, if this is not possible, on an accompanying notice.
- b) The manufacturers or brand name or trade mark should be clearly printed on the electrical equipment or, where that is not possible, on the packaging.
- c) The electrical equipment, together with its component parts should be made in such a way as to ensure that it can be safely and properly assembled and connected.
- d) The electrical equipment should be so designed and manufactured as to ensure that protection against the hazards set out in points 2 and 3 of this Annex is assured providing that the equipment is used in applications for which it was made and is adequately maintained.

#### **2. Protection against hazards arising from the electrical equipment**

Measures of a technical nature should be prescribed in accordance with point 1, in order to ensure:

- a) that persons and domestic animals are adequately protected against danger of physical injury or other harm which might be caused by electrical contact direct or indirect;
- b) that temperatures, arcs or radiation which would cause a danger, are not produced;
- c) that persons, domestic animals and property are adequately protected against non-electrical dangers caused by the electrical equipment which are revealed by experience;
- d) that the insulation must be suitable for foreseeable conditions.

#### **3. Protection against hazards which may be caused by external influences on the electrical equipment**

Technical measures are to be laid down in accordance with point 1, in order to ensure:

- a) that the electrical equipment meets the expected mechanical requirements in such a way that persons, domestic animals and property are not endangered;
- b) that the electrical equipment shall be resistant to non-mechanical influences in expected environmental conditions, in such a way that persons, domestic animals and property are not endangered;
- c) that the electrical equipment shall not endanger persons, domestic animals and property in foreseeable conditions of overload.

## **ANNEX II**

### **EQUIPMENT AND PHENOMENA OUTSIDE THE SCOPE OF THE DIRECTIVE**

- 1. Electrical equipment for use in an explosive atmosphere
- 2. Electrical equipment for radiology and medical purposes
- 3. Electrical parts for goods and passenger lifts
- 4. Electricity meters
- 5. Plugs and socket outlets for domestic use
- 6. Electric fence controllers
- 7. Radio-electrical interference
- 8. Specialized electrical equipment, for use on ships, aircraft or railways, which complies with the safety provisions drawn up by international bodies in which the Member States participate.



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[back to top of this page](#)

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5. Buy a Directive or Guideline on Directive in Chinese, English, French, Portuguese and/or Spanish.
6. Complete list of all CE Marking Directives and Guidelines to Directives
7. **New** Complete list of all (more than 1000) Notified Bodies for CE marking
8. **New** Complete list of all European and/or international standards related to CE marking
9. 85/374/eec: Directive of **Liability for Defective Products** (for all products)
10. 1999/34/ec: Directive of **Liability for Defective Products (amending)** (for all products)
11. 2000: (Proposal for a new) **General Products Safety** Directive (for all products)
12. 92/59/eec: Directive of **General Products Safety** (for all products)
13. 93/68/eec: **"CE Marking"** Directive (for all products)
14. 93/465/eec: **Conformity Assessment Procedures & CE Marking Rules, & Annex** (for all products)
15. **Guide** to Implementation of directives based on new approach & global approach (for all products)
16. 73/23/eec: Directive of **Low Voltage Electrical Equipment**
17. **Guideline** to Low Voltage Directive (LVD) 73/23/eec & Annex I, II
18. 2000&2001 **Framework** of implementation of (LVD) Directive 73/23/eec
19. 87/404/eec: Directive of Simple Pressure Vessels
20. 88/378/eec: Directive of **Toys** & Annex I, II, ... IV
21. 2001 **Framework** of implementation of 88/378/eec: Directive of **Toys**
22. 89/106/eec: Directive of Construction Products
23. 2001 **Guidance** to 89/106/eec Directive of Construction Products
24. 89/336/eec: Directive of **Electromagnetic Compatibility** (EMC)
25. **Guideline** to Directive of **Electromagnetic Compatibility** (EMC) 89/336/eec
26. **Technical-Aspects** relating Directive of **Electromagnetic Compatibility** (EMC) 89/336/eec
27. **Communication 2000** in framework of implementation of EMC Directive 89/336/EEC
28. 89/686/eec: Directive of Personal Protective Equipment (PPE)
29. **Useful Facts** relating to Directive (PPE) 89/686/eec
30. 2001 **Framework** of implementation of (PPE) Directive 89/686/eec
31. 90/384/eec: Directive of Non-automatic Weighing Instruments
32. 90/396/eec: Directive of Appliances Burning Gaseous Fuels (AppliGas)
33. 2001 **Commission Communication** in Framework of Impl (AppliGas) Directive 90/396/eec
34. 92/42/eec: Directive of Efficiency of (Liquid or Gaseous fueled) Hot Water Boilers

35. 93/15/eec: Directive of Explosives for Civil Uses
36. 93/42/eec: Directive of **Medical Devices**
37. 2001 **Guidelines** for Classification of Medical Devices
38. **Guidelines** relating to the demarcation between Directives 90/385/eec, 93/42/eec and 65/65/eec.
39. 90/385/eec: Directive of Active Implantable Medical Devices
40. 98/79/ec: Directive of In Vitro Diagnostic Medical Devices
41. **Guidelines** to Medical Devices Vigilance System
42. **New List** of Harmonised (European) Standards for Medical Devices
43. **New List** of Notified Bodies for Medical Devices Directive
44. **New Guidelines** for Conformity Assessment of Breast Implants According to Directive 93/42/eec
45. **New Guidelines** on Assessment of Medical Devices Incorporating Materials of Animal Origin
46. **New Guidelines** on Medical Devices With Measuring Function
47. **New Guidelines** on Medical Devices: Subcontracting – Quality System Related
48. **New Guidelines** on Medical Devices: Treatment of Computers Used to Program Implantable Pulse Generators
49. **New Guidelines** on Medical Devices: Demarcation with other Directives- Directive 89/336/EEC EMC & Directive 89/686/EEC PPE
50. **New Guidelines** on Medical Devices: EMC Requirements
51. **New Guidelines** on Medical Devices Labelling: USE-BY DATE
52. **New Guidelines** on Medical Devices Labelling: Translation procedures
53. **New Guidelines** on Homogeneous Production Batches
54. 93/65/eec: Directive of Air Traffic Management Equipment & Systems
55. 97/15/eec: amending Directive of Air Traffic Management Equipment & Systems
56. 94/9/ec: Directive of Equipment used in Potentially Explosive Atmospheres (Atex)
57. **Guidelines** to directive 94/9/ec (Atex)
58. 2001 **Framework** of implementation of (Atex)Directive 94/9/ec
59. 94/25/ec: Directive of Recreational Craft
60. 2001 **Proposed New Version** for: directive 94/25/ec (RecCraft) 55p
61. 2001 **Guidelines&Framework**: directive 94/25/ec (RecCraft)
62. 95/16/ec: Directive of Lifts
63. 96/48/ec: Directive of Trans-European High-speed Rail System
64. 2001/16/ec: Directive of Interoperability of Trans-European Conventional Rail System
65. 96/57/ec: Directive of Energy Efficiency: Household Refrigerators & Freezers
66. 96/98/ec: Directive of Marine Equipment
67. 97/23/ec: Directive of Pressure Equipment
68. 2000&2001 **Framework**: directive 97/23/ec Pressure Equipment
69. 98/37/ec: Directive of **Machinery**
70. **2000: Comments** on Directive of Machinery 98/37/ec
71. **Useful Facts** relating to Machinery 98/37/ec
72. 2001 **Proposal** to amend Directive of Machinery 98/37/ec
73. 99/5/ec: Directive of Radio Equipment & Telecommunications Terminal Equipment (R&TTE)
74. 2001 **Framework** of implementation of Directive 99/5/EC R&TTE
75. 2001 **Guidance** on Directive 99/5/EC R&TTE
76. 2000/9/ec: Directive of Cableway Installations to Carry Persons
77. 2000/14/ec: Directive of Noise Emission in the environment by equipment for use outdoors
78. 1999 **Agreement on Mutual Recognition** of conformity assessment between European Union and United States of America
79. 2000 amendment to **Agreement on Mutual Recognition** of conformity assessment between European Union and United States of America
80. 1998 **Agreement on Mutual Recognition** of conformity assessment between European Union and Canada
81. 1998 **Agreement on Mutual Recognition** of conformity assessment between European Union and Australia
82. 1998 **Agreement on Mutual Recognition** of conformity assessment between European Union and New Zealand
83. 1999 **Agreement on Mutual Recognition** of conformity assessment between European Union and Israel

84. 2001 proposal **Agreement on Mutual Recognition** of conformity assessment between European Union and Japan



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[| home/first page](#) | [| back to where you were](#) | [| back one page](#) | [| top of this page](#) | [| next page](#) |

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