

# Introduction to European directives

- Overview of European directives

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# The European Economic Area (EEA) Europe today



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EEA consists of:

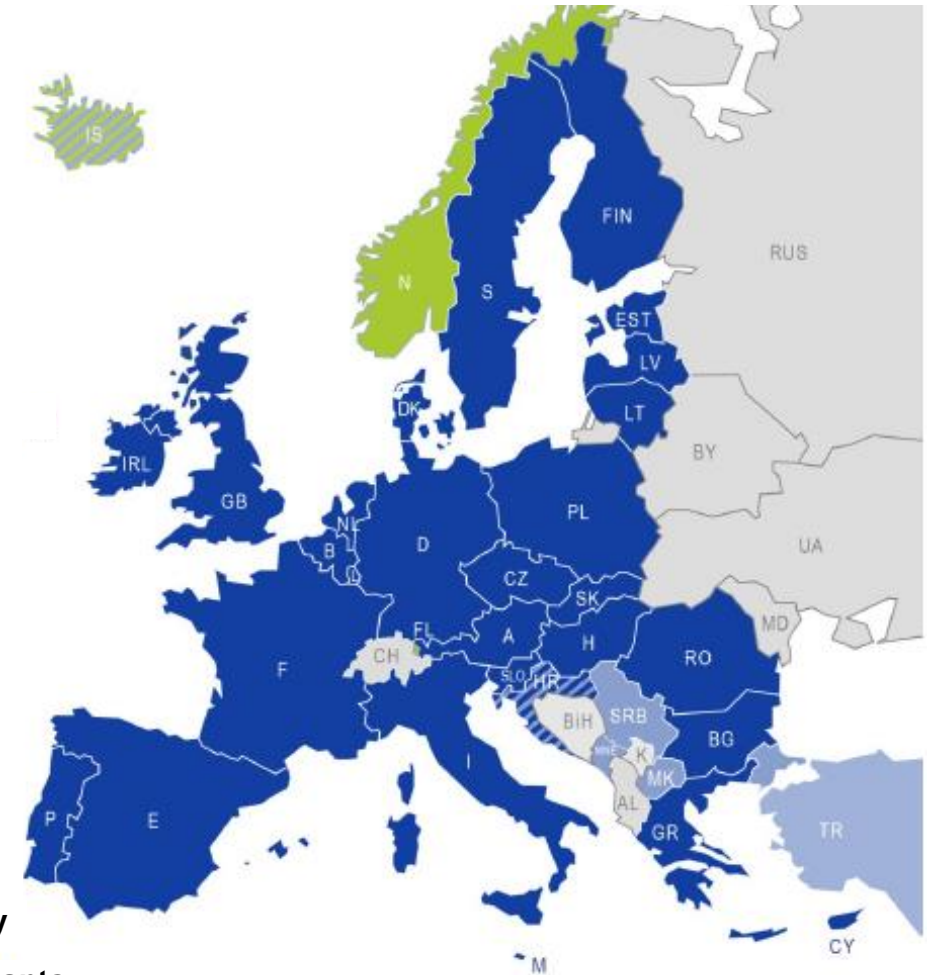
**EFTA member states (with the exception of Switzerland)**

 Island  Liechtenstein  Norwegen

**EU-participating member states**

 Belgien	 Italien	 Rumänien
 Bulgarien	 Lettland	 Schweden
 Dänemark	 Litauen	 Slowakei
 Deutschland	 Luxemburg	 Slowenien
 Estland	 Malta	 Spanien
 Finnland	 Niederlande	 Tschechien
 Frankreich	 Österreich	 Ungarn
 Griechenland	 Polen	 Vereinigtes Königreich
 Irland	 Portugal	 Zypern

 EU-28  
 EFTA  
 EU-accession country  
 EU-membership aspirants



## Switzerland:

"Agreement on mutual recognition of conformity assessments" of 6/21/1999

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# The European directives



Agreements are in place within the EU governing the free movement of goods and safety in the workplace.

Free movement of goods – **manufacturers**  
(Article 114 TFEU - Treaty of Lisbon)

Product Liability Directive 85/374/EEC  
General Product Safety Directive 2001/95/EC

Machinery Directive 2006/42/EC

Low Voltage Directive 2006/95/EC

EMC Directive 2004/108/EC

etc. (The manufacturer is obliged to comply with all relevant directives!)

Harmonized standards

Safety in the workplace – **operators**  
(Article 153 TFEU - Treaty of Lisbon)

Workplace Health and Safety Directive  
89/391/EEC

Use of Work Equipment 2009/104/EC

Other directives at national level

National standards

TFEU = Treaty on the Functioning of the European Union



TFEU

Treaty on the Functioning of the European Union

Manufacturer

User

Art. 114

Art. 153



Dismantling of trade barriers within the EU single market

Low-Voltage Directive 2006/95/EC

Machinery Directive 2006/42/EC

Product Safety Directive 2001/95/EC

EMC Directive 2004/108/EC

Cooperation between EU states in social matters



Workplace Health and Safety Directive 89/391/EEC

2001/45/EC to amend directive 2009/104/EC

Work Equipment Directive 2009/104/EC

RL95/63/EC to amend Directive 2009/104/EC



§ Equipment and Product Safety Act (GPSG)

§ EMC legislation



Mandate from the EU Commission Standards institution for creating safety standards at CEN/CENELEC

Implementing the EN standards without changes; harmonized, if in official journal of EU



Occupational Safety and Health Act, Ordinance on Industrial Safety and Health E.g., in Germany: regulations, provisions, rules, and information on industrial accident insurance §



When applying harmonized standards it can be assumed that the guidelines are being adhered to

Order based on applicable regulations

Machinery operators (assumption of responsibility)

Declaration of conformity CE marking

Safe machine/ control panel

Safe machine running

# The European directives Significance



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## Directives

Cover a large number of products (in terms of machines, devices, medicine) which share similar risks

## Contents

Few technical details

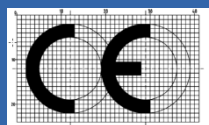
Basic requirements only

## Significance

A single benchmark (almost a "law") for judging whether or not a product may be marketed (brought into circulation)

## Verification

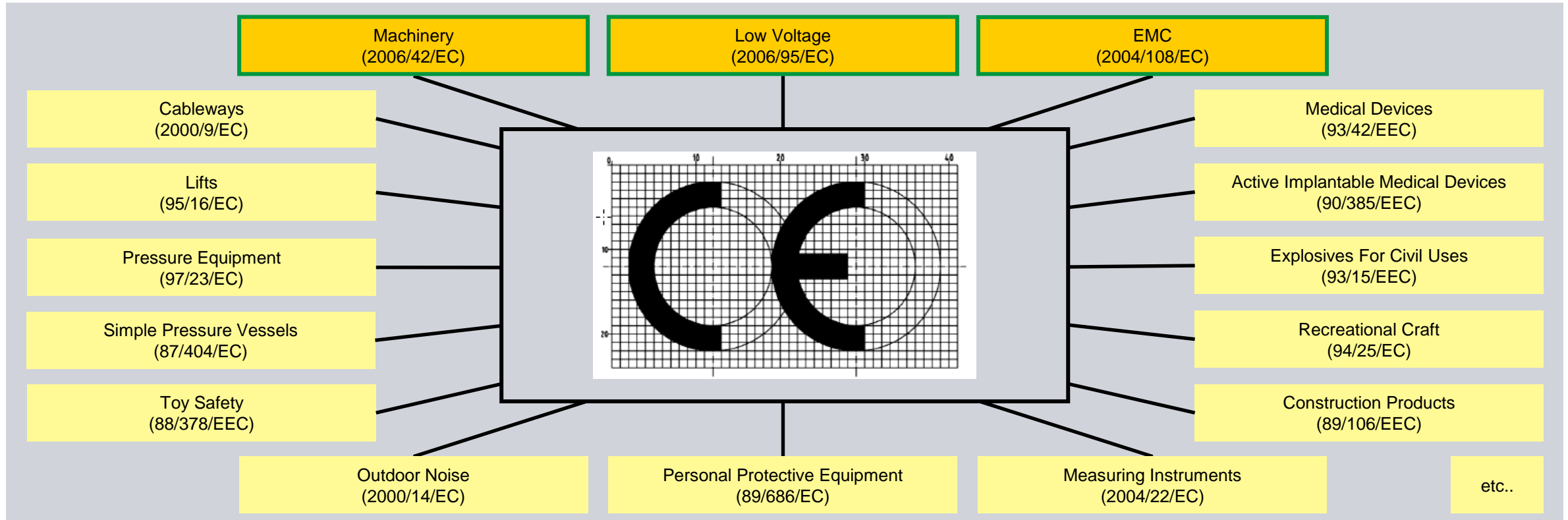
Compliance with the directive **must** be established and verified (conformity assessment / **Declaration of Conformity**).



CE marking



# Which directive relates to control panel assembly?



A directive needs to be applied to a given product if the product is formally covered by the scope of application (**Article 1**) of this directive **and** the product involves risks as described in the requirements under this directive.

**The manufacturer is always responsible for deciding which directive(s) they (must) apply to their product.**





## General Background

- Reduction of trade barriers
- Maintained or Improved safety level
- Guaranteed free goods traffic within the EU (technical topics)

### **Major directives for machines, products, ... but not limited to:**

- **Low-voltage directive 2006/95/EC, valid since January 16, 2007**
- **Machinery directive MD 2006/42/EC, valid since June 29, 2006;**
- **EMC directive 2004/108/EC, valid since July 20, 2007;**
- **ATEX directive 94/9/EC, valid since March 23, 1994**  
For machinery completely or partly in potential explosive atmospheres



## Area of Application

The [EU low-voltage directive](#) applies to the [placing on the market of electrical operating equipment](#). Placing on the market and free goods traffic within the EU must not be impeded by any EU member state as long as the requirements of the directive are met. If this is not the case, placing on the market may be prohibited. Also product recalls may be ordered by the responsible authorities.

The directive **affects operating equipment** within specific voltage ranges which lie between **50 V and 1000 V AC** and between **75 V and 1500 V DC**. The directive affects:

- Electrical operating equipment
- Turnkey devices
- Parts, e.g. incandescent lamps, switches, ...

→ **Therefore, also complete machines are subject to this directive.**

Note: The voltage limits refer to the max. input and output voltage, not to the voltage which may be generated within the devices/machines.





*Technical measures have to be taken* for the protection against risks originating from electrical operating equipment to ensure the following conditions, subject to the intended use and proper servicing of such equipment:

- Persons and livestock have to be adequately protected against the risks of direct injury or other damage which may be caused due to direct or indirect contact.
- Temperatures, arcs or radiations which may result in risks must not arise.
- Persons, livestock and objects have to be adequately protected against non-electric risks which are by experience caused by electrical operating equipment.
- Insulation has to be dimensioned in accordance with the intended loads.
- *EMC aspects are covered by the EMC directive.*



# Essential Steps for Compliance with “Conformity”

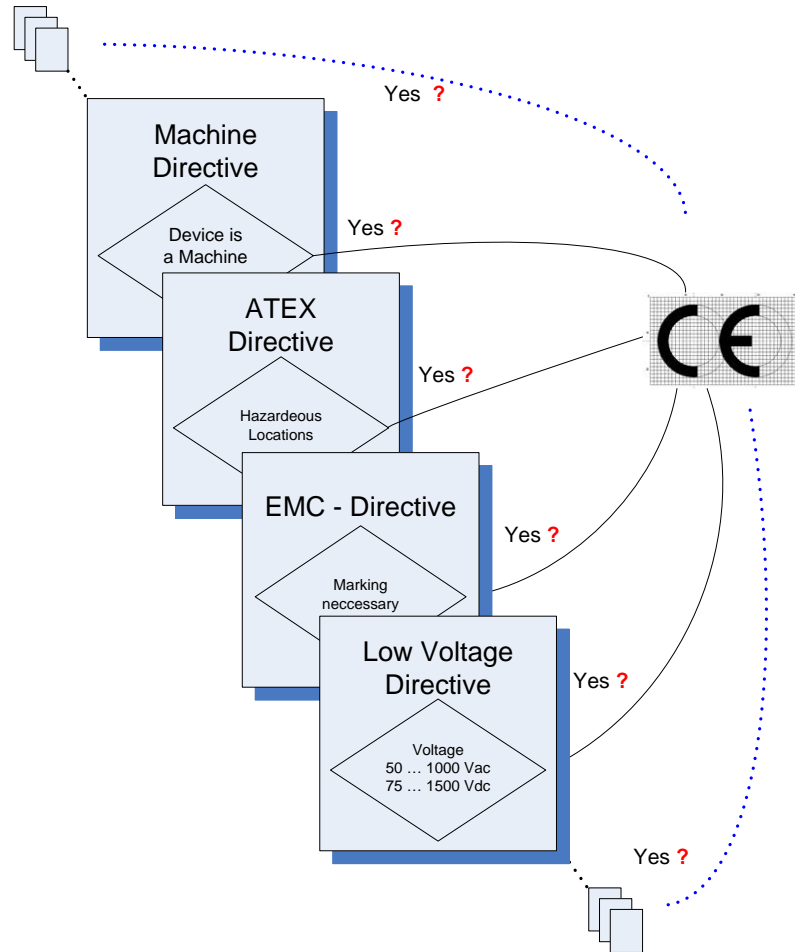
- **Application of the valid standards** for the product, the machine, ...
- **Assessment** of conformity
- **Compilation** of technical documents
- **Preparation of the declaration of conformity**
- **Attaching of the CE mark**
- **Archiving of documents**

NOTICES FROM MEMBER STATES			
Commission communication in the framework of the implementation of Directive 2006/95/EC of the European Parliament and of the Council of 12 December 2006 on the harmonisation of the laws of Member States relating to electrical equipment designed for use within certain voltage limits (Text with EEA relevance) (Publication of titles and references of harmonised standards under the Directive) (2008/C 221/01)			
European Standardisation Organisation (!)	Reference and title of the standard (and reference document)	Reference of the superseded standard	Date of cessation of presumption of conformity of the superseded standard Note 1
Cenelec	EN 41003:1998 Particular safety requirements for equipment to be connected to telecommunication networks	EN 41003:1996 Note 2.1	Date expired (1.1.2002)
Cenelec	EN 50063:1989 Safety requirements for the construction and the installation of equipment for resistance welding and allied processes	None	—
Cenelec	EN 50065-4-2:2001		

Only standards which are published as “harmonized standards” in the Official Journal of the European Union can be used as “valid” (applicable) standards. If no standards in accordance with the directive are applied, the manufacturer has to describe the manner in which the safety requirements of the directive are complied with in the technical documents.



# Simultaneous Application of Various Directives



The **Low Voltage Directive** is one amongst other directives which have to be considered.

A product, device, machine, ... , may only be placed to market, if it **complies fully** with **all relevant directives**.

Do different necessary directives have different rules for the same topic a **Risk analysis** (acc. EN ISO 14121-1 (EN 1050)) has to be performed.

In general:

**The directive which provides the higher protection must be used in this specific topic only.**



## New Low-voltage Directive 2014/35/EC

- The **current LVD 2006/95/EC** was revised
- The **new LVD 2014/35/EC** is already effective
- **Transition time** till April 20<sup>th</sup> 2016

### Article 25

#### Transitional provisions

Member States shall not impede the making available on the market of electrical equipment covered by **Directive 2006/95/EC** which is in conformity with that Directive and which was placed on the market **before April 20<sup>th</sup> 2016**.

29.3.2014 EN Official Journal of the European Union L 96/357

**DIRECTIVE 2014/35/EU** OF THE EUROPEAN PARLIAMENT AND OF THE COUNCIL  
**of 26 February 2014**  
**on the harmonisation of the laws of the Member States relating to the making available on the market of electrical equipment designed for use within certain voltage limits**  
(recast)  
(Text with EEA relevance)

THE EUROPEAN PARLIAMENT AND THE COUNCIL OF THE EUROPEAN UNION,

Having regard to the Treaty on the Functioning of the European Union, and in particular Article 114 thereof,

framework for the marketing of products <sup>(5)</sup> lays down common principles and reference provisions intended to apply across sectoral legislation in order to provide a coherent basis for revision or recasts of that legislation. Directive 2006/95/EC should therefore be adapted to that Decision.

**Any questions?**

