



The universe of European standards for the safety of machinery

All these standards are subject to

Machinery Directive 2006/42/EC

Type A standard (basic safety standard)

Basic safety standards address fundamental questions of safety as well as principles that are applicable to all machines and only require to be laid down once. These include standards for basic concepts, instructions for use and terminology.

Example of type A standard

EN ISO 12100 Safety of machinery – General principles for design – Risk assessment and risk reduction

Type B standard (generic safety standards)

Generic safety standards are standards with safety statements that not only relate to a single machine but also similarly apply to a group of different machines or applications. They are subdivided in B1- and B2-standard.

B1 standards address general safety aspects, e. g. safety distances, ergonomic principles, the temperatures of hot surfaces, etc.

Examples of type B1 standards

- EN ISO 13857 Safety of machinery – Safety distances to prevent hazard zones being reached by upper and lower limbs
- EN ISO 13854 Safety of machinery – Minimum distances to avoid crushing of parts of human body
- EN ISO 13849** Safety of machinery – Safety related parts of control systems
- EN ISO 13855 Safety of machinery – Positioning of safeguards with respect to the approach speeds of parts of the human body
- EN ISO 14118 Safety of machinery – Prevention of unexpected start-up
- EN ISO 13732-1 Ergonomics of the thermal environment – Methods for the assessment of human responses to contact with surfaces – Part 1: Hot surfaces.
- EN 60204** Safety of machinery – Electrical equipment of machines

B2 standards address safety devices that can be used on different types of machines, e. g. emergency stop equipment, two-hand control devices, light barriers, etc.

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Examples of type B2 standards

- EN ISO 13850 Safety of machinery – Emergency stop equipment, functional aspects – Principles for design
- EN ISO 13851 Safety of machinery – Two-hand control device
- EN ISO 14120 Safety of machinery – Guards – General requirements for the design and construction of fixed and movable guards
- EN ISO 4413 Hydraulic fluid power – General rules and safety requirements for systems and their components
- EN ISO 4414 Pneumatic fluid power – General rules and safety requirements for systems and their components
- EN ISO 14119 Safety of machinery – Interlocking devices associated with guards – Principles for design and selection
- EN ISO 13856** Safety of machinery – Pressure-sensitive protective devices
- EN 61496** Safety of machinery – Electro-sensitive protective equipment

Type C standards (machine safety standards)

Machine safety standards address specific safety requirements for individual machines or groups of machines respectively. These include e.g. standards relating to machinery for the processing of foodstuffs, packaging machines, wood-working machines, etc.

Examples of type C standards

- EN 280 Mobile elevating work platforms
- EN 415** Packaging machines
- EN 474** Earth-moving machinery
- EN 528 Rail dependent storage and retrieval equipment
- EN ISO 16092** Presses
- EN 1493 Vehicle lifts
- EN ISO 10218** Robots and robotic devices
- EN 12331 Food processing machinery – Mincing machines
- EN ISO 23125 Turning machines

** This standard consists of several parts



Useful links

- European directives and regulations: www.ec.europa.eu/growth/sectors_en
- European standards: www.snv.ch, www.electrosuisse.ch

Do you have any questions about the testing or the certification of machines? Just give us a call and we will be pleased to assist.