EU Machinery Safety Legislation: Directive 2006/42/EC & Regulation (EU) 2023/1230

Essential Health and Safety Requirements (EHSR), CE Marking, and Legal Signatory Liability

CRITICAL GOVERNANCE PRINCIPLE (DIRECTIVE 2006/42/EC & REGULATION (EU) 2023/1230): Software controls are classified as programmable risk mitigation elements. Under international functional safety law, software cannot be certified in isolation from physical hardware interlocks. Independent verification (Level I1/I2/I3) and multidisciplinary sign-off are mandatory requirements prior to operational release.

1. Statutory Legal Obligations and Legal Signatory Authority

European machinery and industrial bench legislation establishes statutory criminal and civil liabilities for commercial equipment deployed in the European Union.

Annex I: Essential Health and Safety Requirements (EHSR 1.2.1)

Control systems must be designed such that a fault in the software logic or hardware circuit does not lead to a hazardous situation. Mandates the principle of Safety by Design and Fail-Safe Defaults.

- Harmonized Standards ISO 13849-1 / IEC 62061: Control parts must achieve verified Performance Levels (PL a through PL e) using Category 3/4 redundant architectures.
- Emergency Stop Devices (EHSR 1.2.4.3): Physical emergency stop buttons must directly cut actuator power, independently of programmable logic.

Annex II: EC Declaration of Conformity (Legal Signatory)

The Declaration of Conformity (DoC) and CE marking must be signed by the legal representative of the manufacturer (CEO, Managing Director, or authorized corporate signatory).

- Developer Immunity & Limitation: An individual software developer is not legally recognized as the manufacturer and has no legal authority to sign a DoC.
- Prohibition of Unilateral Waivers: Individual employee waivers of liability are legally null and void under EU product liability directives.