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Machinery Directive Risk Assessments

A risk assessment is a key part of the CE marking process

The Machinery Directive requires that the manufacturer assesses the hazards by performing a risk assessment for all products falling under its scope. Evidence that a risk assessment has been performed forms part of the technical file for the product.

The risk assessment process is a series of logical steps for examining the hazards associated with machinery. It is outlined in the European Norm standard, EN ISO 14121 1:2007, which is a type A harmonised standard for the Machinery Directive i.e. it covers basic concepts, principles for design and general aspects that can be applied to all machinery.

The standard provides guidance on the information required to enable a risk assessment to be performed. It has sections, which define processes for identifying hazards and estimating and evaluating risk, and describes in detail the type of documentation to be retained in a technical file in order to demonstrate that the risk assessment procedure has been followed.

The risk assessment procedure of EN ISO 14121 1:2007 includes the following stages.

1. **Risk analysis comprising**
 - a) Determination of the limits of the machinery
 - b) Hazard identification
 - c) Risk estimation

2. **Risk evaluation.**

Risk analysis provides information required for a risk evaluation to be made on the safety of machinery. If the risk evaluation leads to the conclusion that there are high risks associated with the machinery, it is normally followed by a process of risk reduction, which is outlined in EN ISO 12100 parts 1 and 2. EN ISO 12100 parts 1 and 2 are also Type A harmonised standards for the Machinery Directive.

TÜV Product Service provides Risk Assessment Services to support manufacturers in complying with the requirements of the Machinery Directive.

Note: The text is an extract from the directive and is intended to give guidance to the main requirements applicable in most circumstances. However the directive has many parts which are not reproduced here, which may impose additional requirements in certain circumstances.

TÜV Product Service Ltd • TÜV SÜD Group
Octagon House • Concorde Way • Segensworth North • Fareham •
Hampshire • PO15 5RL • United Kingdom
Tel: +44 (0)1489 558202 • Fax: +44 (0)1489 558101 • Email: rharris@tuvps.co.uk