

EUCHNER SAFETY SERVICES

Services for machine manufacturers and operators



Your partner for machinery safety

EUCHNER

More than safety.



Your partner for machinery safety

Our expertise for your success

Industrial safety is becoming more important all the time. Machine manufacturers and operators must comply with European directives, as well as national and international standards. EUCHNER Safety Services can provide you with professional solutions for all aspects of machinery safety, anywhere in the world.

We help manufacturers and operators meet legal safety requirements at every stage of machine and installation life cycles. Our team of highly qualified machinery safety experts is at your disposal.

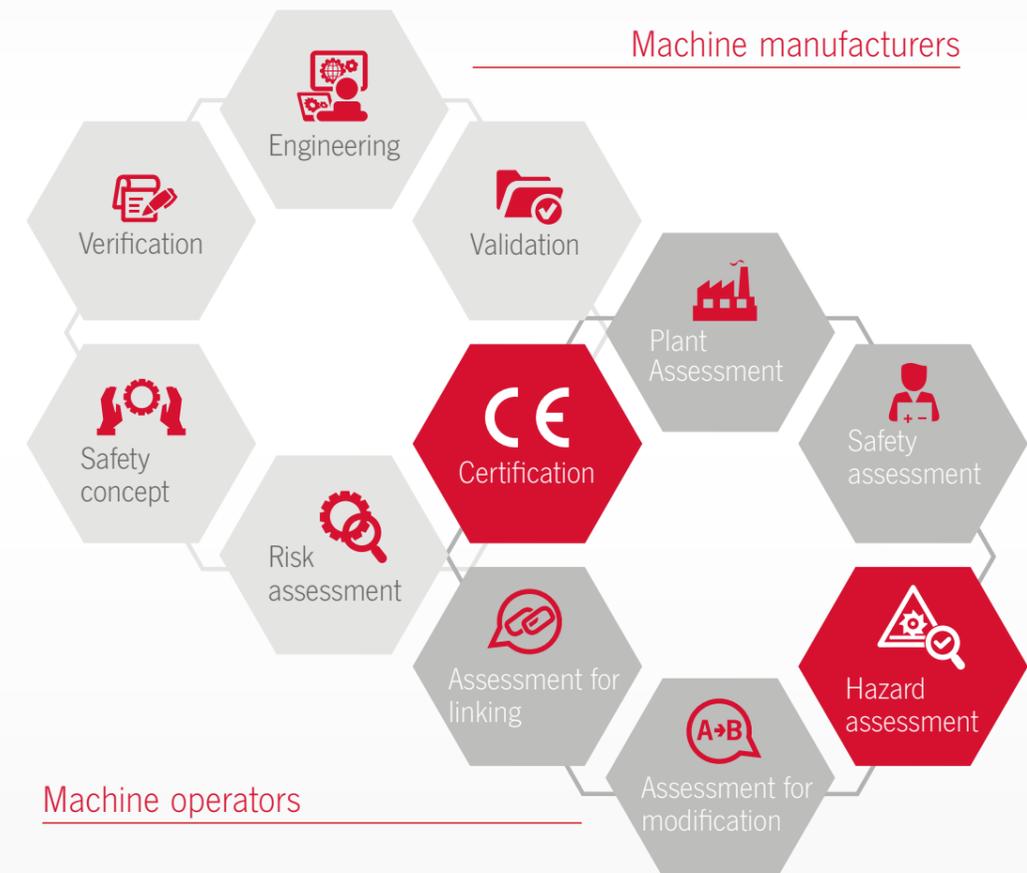
We'd be delighted to meet with you informally to discuss how our services can fulfill your specific requirements. Or why not schedule an in-house consultation day, tailored to suit your own safety engineering issues?

Knowledge you can trust

Our membership in national and international standards committees keeps us up to date on regulations, standards and future developments. As a machine manufacturer or operator, you can rely on us as a partner with a wealth of reliable advice and support for your safety engineering. We have the expertise needed to review, understand and analyze your specific requirements from a neutral, objective viewpoint.

Industry expertise in the service of safety

EUCHNER has dedicated itself to the safety of people, machinery and processes for over 60 years. This has given us valuable experience in all areas of safety engineering – and all sectors ranging from the construction of machine tools, printing presses, paper machines and packaging equipment to logistics, assembly technology, automotive engineering and renewable energy systems. We know the legal requirements, as well as the potential hazards and risks in your sector.



All-around protection with EUCHNER Safety Services

You can rest assured that EUCHNER Safety Services will provide the best professional support over all machine and installation life cycle phases.

Even during the engineering phase, we help machine manufacturers implement the legal requirements set out in the Machinery Directive. Likewise, we assist machine operators over the longer term in fulfilling legal requirements from the Use of Work Equipment Directive.



EUCHNER Safety Services for machine manufacturers

Your road map to optimal machinery safety

Machines and production facilities must be safe in accordance with applicable law. Manufacturers cannot sell a machine in the European Economic Area until it has passed the conformity assessment process and received a CE marking.

From design to EC conformity

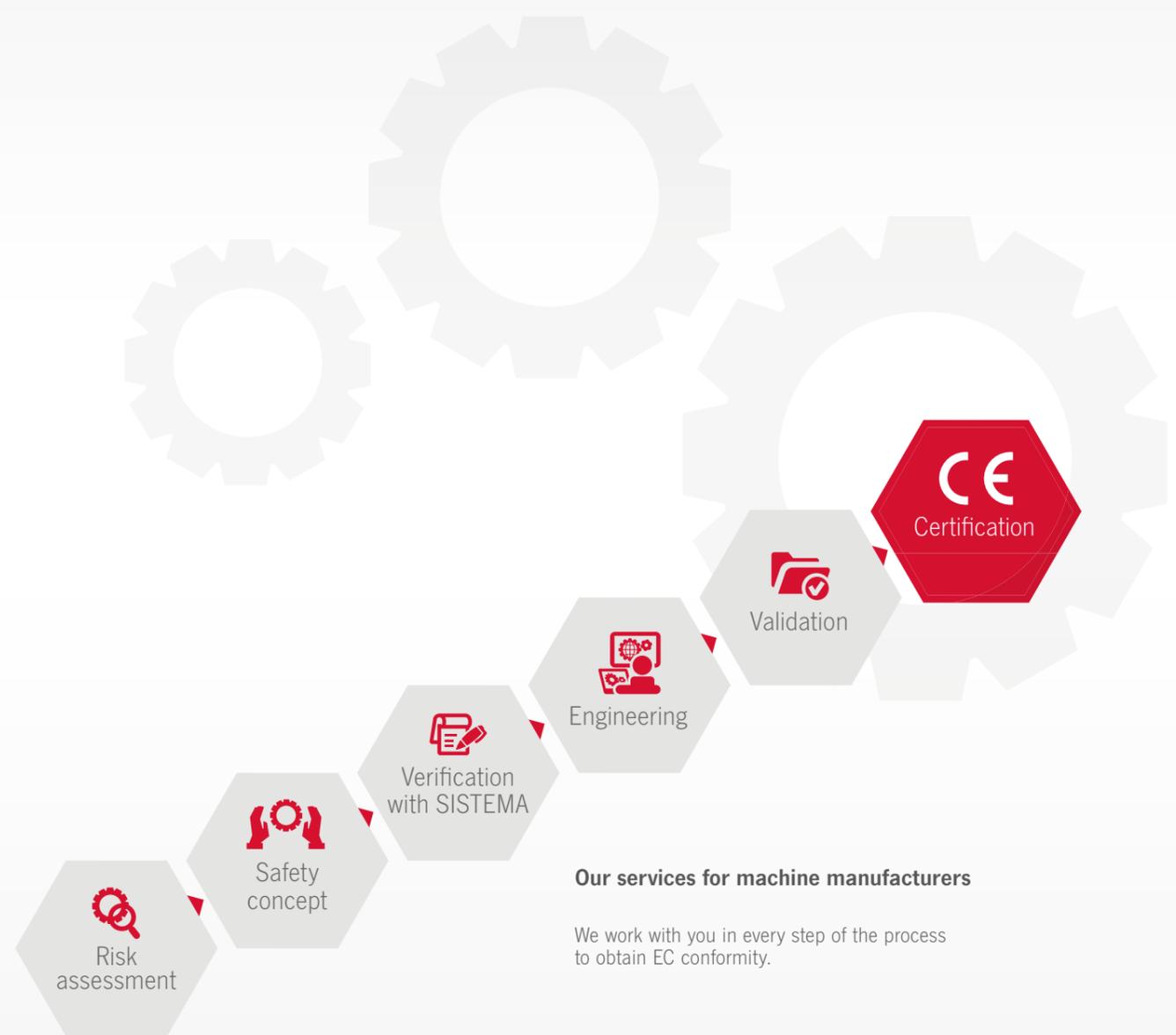
We can support you right from the engineering phase, accompanying you every step of the way to obtain the CE marking for your machine.

The earlier you involve us in your processes, the more you will benefit from this. Starting to consider safety engineering aspects during the development phase can greatly reduce your workload down the line, and help you develop the safest possible machine design from the outset.

We analyze and assess potential hazards, and suggest measures you can take to reduce risks. We develop custom safety concepts for you, and provide any assistance you may need to put the required measures into practice.

Your added value

With our support, you can rest assured that your machine will meet the latest legal requirements. We help you implement all relevant specifications. You save valuable time, and can focus on your core business.



Our services for machine manufacturers

We work with you in every step of the process to obtain EC conformity.

Benefits for you

- + Support in all engineering phases
- + Risk assessment according to current legal status and harmonized standards
- + Support in implementing risk reduction measures
- + Assessment of risk reduction measures
- + Comprehensive, clear documentation
- + Compliance with requirements of the conformity assessment process



Support through to CE certification

Machines in Europe must comply with the safety requirements of the Machinery Directive 2006/42/EC before they can be sold in the European Economic Area. The Directive governs a uniform protection level for avoiding accidents on machines.

The CE certification process comprises many individual steps. Each of them requires the well-founded understanding of applicable regulations and the extensive experience in dealing with machines and installations that we can offer as safety experts.

Our service: CE certification as a complete package

We support you in each individual step and guide you throughout the entire declaration of conformity process, until you obtain a CE marking for your machines.

Benefits for you

- ⊕ Independent, experienced experts help you navigate through complex rules and regulations.
- ⊕ You work with a partner that understands your specific requirements and can support you only where needed or throughout the CE process.
- ⊕ You will receive all services related to the CE certification from one source, saving you time and money.
- ⊕ We assume the responsibility for issuing the conformity declaration on your behalf.

Our services

We support you in all phases through to CE certification

The individual steps of the conformity assessment process:

- ▶ **Risk assessment**
We first determine the harmonized standards and legal foundation applicable to the machine concerned. We define the machine functions and identify and assess potential danger zones in the risk analysis and risk assessment. The risk assessment fully documents the risks and the required Performance Level.
- ▶ **Safety concept**
The next step after the risk assessment is designing the machine to be safe. We develop a detailed machinery safety concept for you by suggesting risk reduction measures.
- ▶ **Verification with SISTEMA**
With the safety concept as a basis, we specify and test the machine's individual safety functions and verify its safety integrity. EUCHNER uses the SISTEMA software for verification.

- ▶ **Engineering**
We support you as needed in implementing the measures from the safety concept.
- ▶ **Validation**
Validating the safety concept involves checking the effectiveness of the implemented measures. This includes the inspection of the machines' safety functions and preparing the required documentation of results and verification.
- ▶ **Preparation for issuing the conformity declaration**
Once the process is complete, we give you a written recommendation for issuing the conformity declaration. Alternatively, you can authorize us to issue the conformity declaration on your behalf.

Result: CE certification for your machine

Machines may be provided with the CE marking and sold within the EU once the conformity declaration process is complete. With the CE certification, you as the machine manufacturer declare conformity with the Machinery Directive and accept the responsibility for your product meeting the legal requirements.



Risk assessment

All manufacturers must perform and document a risk assessment for their machines. This risk assessment is a complete, systematic assessment of all machine hazards. It makes economic sense to perform the risk assessment as early as the engineering phase. Our safety experts assess the risks in close cooperation with you.

Systematic process according to EN ISO 12100

Risk assessment involves several steps to determine and assess all hazards posed by a machine. EN ISO 12100 determines the exact sequence and the assessment criteria.

The first step is to describe the machine in detail – including its use and its limits. In the process, we also determine the applicable harmonized standards and legal foundation. We identify a machine's hazards in the risk analysis and risk assessment. All danger zones are then listed and assessed using a standardized process.

Benefits for you

- ⊕ You receive an assessment of all safety-engineering aspects in compliance with the latest laws and standards, plus an assurance of neutrality on the part of our safety experts.
- ⊕ Standardized procedures and documents ensure uniform quality of development.
- ⊕ Our risk assessment lays the foundation for your machinery safety.

Our services

We analyze risks in the individual machine life cycles in accordance with legal requirements. This comprises:

- ▶ Assessment of the machine by a machinery safety expert.
- ▶ List of applicable directives and standards.
- ▶ Description of the machine, its use and limits.
- ▶ Risk assessment of the individual danger zones.



Safety concept

The next step after determining a machine's danger zones in a risk assessment is to create an intelligent safety concept. The objective here is to define specific measures for each danger zone to reduce the risk to an acceptable minimum. The individual risk reduction measures are shown based on a machine overview.

We work closely with you to develop the technically and economically ideal safety concept. We are committed to neutrality in selecting the safeguards for this purpose.

Implementing the safety concept does more than just improve the installation's safety. A safe installation increases your machine availability while boosting your productivity.

Benefits for you

- ⊕ You get a technically optimized safety concept tailored to your requirements.
- ⊕ Professional integration of suitable safety measures saves you time and money.
- ⊕ Your safety concept always complies with the latest laws and standards.

Our services

We develop the safety concept for your machine. You receive an offer including the following services:

- ▶ Solutions for ensuring machinery safety over the long term.
- ▶ Development of suggestions for protecting the respective danger zone using state-of-the-art mechanical, electrical, pneumatic and hydraulic technologies.
- ▶ Specification of the safety function.



Verification

It must be verified whether the safety functions planned for the machine achieve the required safety level. EUCHER uses the manufacturer-independent SISTEMA software from the German employers' liability insurance association, the Institut für Arbeitsschutz (IFA) for this purpose. The SISTEMA calculation can quickly and reliably determine whether the planned safety measures comply with the requirements of the EN ISO 13849-1 standard. Our experts are well versed in using this software.

Simple machinery safety calculation

SISTEMA simulates the structure of machine safety components based on predefined architectures and then calculates the Performance Level achieved. The safety concept has been verified and corresponds to the specifications in the standards if the required Performance Level from the risk assessment has been met.

Benefits for you

- You receive a reliable evaluation of whether the planned safety measures comply with the requirements of the EN ISO 13849-1 standard.
- If you need a reliable partner with well-founded experience in using SISTEMA, look no further than EUCHNER Safety Services.

Our services

- ▶ Verification of the planned measures from the safety concept in accordance with EN ISO 13849-1.
- ▶ Verification using SISTEMA calculation, which includes feeding the safety functions from the risk assessment into the software structure.
- ▶ Reliable, clear documentation of results.



Validation

Validation is a decisive step in the conformity assessment process. It is used to check whether the fully equipped machine is safe and fulfills the specifications of the Machinery Directive 2006/42/EC. This final check ends with verification that your machine complies with all safety regulations. Our experts develop a suitable checking strategy for each safeguard.

The machine safety check is preceded by validation planning, during which we consider every danger zone from the risk assessment along with the safeguard implemented for it. Experienced experts develop a suitable checking strategy for each safeguard.

Benefits for you

- You receive an efficient and neutral machine assessment performed by experienced specialists.
- We work out details of the procedure with you in advance while keeping your economic considerations in mind.
- Standardized documentation, as well as state-of-the-art testing and measuring equipment, guarantees high productivity when processing the inspection order.

Our services

- ▶ Subsequent review and documentation of the danger zones from the risk assessment.
- ▶ Preparation of a detailed test plan based on the risk assessment and the installed safeguards („safety check“).
- ▶ Testing directly on the machine or installation.
- ▶ Standardized measurement and test report as verification.



EUCHNER Safety Services for machine operators

Working for your operational safety

Machine operators bear the heavy responsibility of adequately protecting employees against potential hazards. As a machine and installation operator, you are obliged to comply with all current machinery safety laws. This obligation begins as soon as you purchase a machine, and continues throughout its life cycle. Our safety experts are at your side in every phase.

Targeted and thorough

Operators must ensure occupational and machinery safety as soon as they purchase work equipment. This is required by the Use of Work Equipment Directive 2009/104/EC and by industrial safety regulations. New and existing machines must therefore undergo periodic hazard assessments.

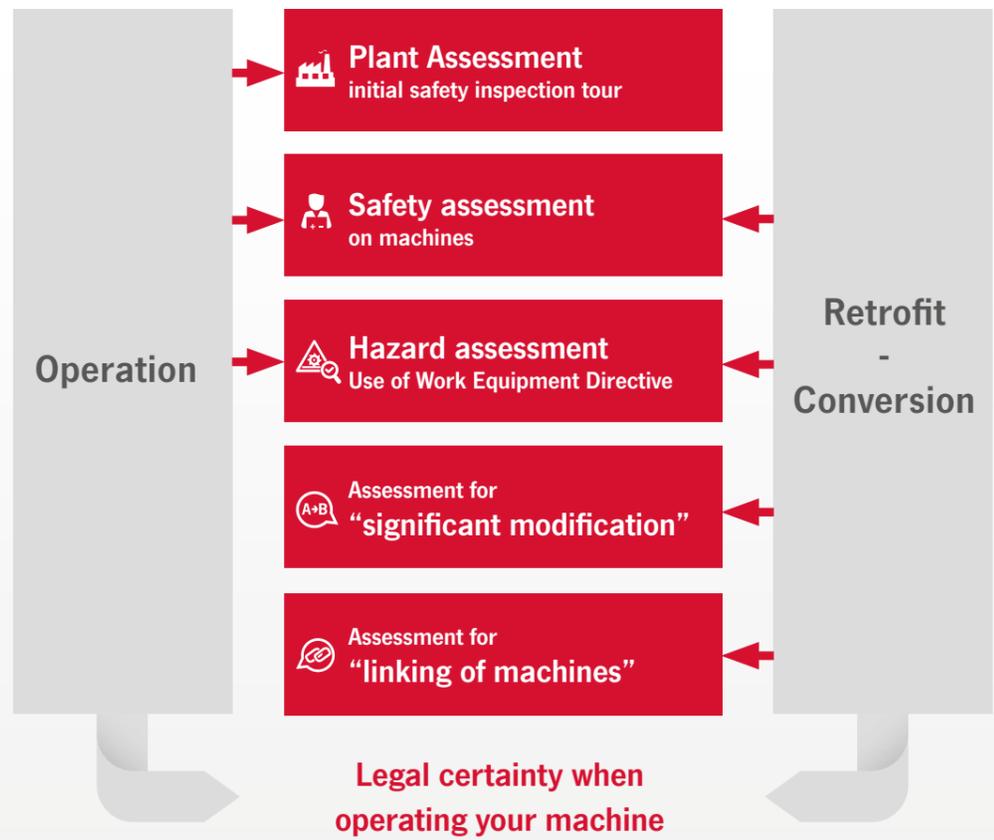
The operator must analyze and assess the effects of any modifications when converting, retrofitting or linking a machine. This is the only way to ensure that legal safety requirements are fulfilled.

We support you through the whole life cycle: we check and document the safety status of your machines, assess hazards, support you in conversions and accompany you all the way to CE certification for your machine if necessary.

Your added value

EUCHNER Safety Services will keep you in compliance with the Use of Work Equipment Directive at all times. Existing and potential hazards are ruled out so that you can rest assured you are always working and manufacturing in compliance with the law.

Our services for machine operators



Benefits for you:

- + Systematic hazard assessments
- + Greatest possible safety for employees, machines and processes
- + Minimized accident risks and machine downtimes
- + Solution-oriented, state-of-the-art approaches taking economic aspects into account at all times
- + Comprehensive, clear documentation
- + Support in implementing the measures



Plant assessment – safety inspection tour of production facilities

Operators must ensure safety in all machine and installation life cycle phases. An inspection tour of your production facilities and machines as part of our plant assessment provides a quick and easy evaluation of your actual safety status.

Our independent safety specialists inspect your production machines and facilities. You then receive the result in the form of an overview detailing the current safety level. We also suggest how you can upgrade your machines to the latest state of the art.

Our many years of experience allows us to quickly identify the key areas requiring action in the respective machine or installation, as well as the problems to prioritize. Using this assessment, we help you to prioritize the key safety tasks in the production facility so that they can be corrected promptly.

Benefits for you

- ⊕ You receive a quick overview of what must be done in terms of machinery safety.
- ⊕ You receive a manufacturer-independent assessment of your safety status.

Our services

- ▶ Preparation of a comprehensive list of all machines and the danger zones identified on them.
- ▶ We prioritize measures to correct safety defects promptly.



Safety assessment

Operators are often faced with the question of whether individual machines or machine components still meet the current safety requirements. As independent service providers, we can conduct a targeted safety assessment to determine whether your machines are in a condition to provide maximum protection for your employees, and thereby comply with applicable laws, or whether they require corrective measures.

We identify the key danger zones on the machine or plant section and define appropriate risk reduction measures. Existing safeguards are checked for compliance with standards.

Benefits for you

- ⊕ Professional integration of suitable safety measures saves you valuable time and money.
- ⊕ Our independent, experienced employees always base their safety assessments on the highest quality standards and the latest state of the art.
- ⊕ You benefit from a partner that works closely with you while keeping the productivity of your processes in mind during all assessment phases.

Our services

- ▶ Agreement on the type and scope of the safety assessment.
- ▶ Analysis of the machine or installation by a machinery safety expert.
- ▶ Analysis and assessment of the identified machine hazards.
- ▶ Suggestions for eliminating possible causes of risk.



Assessment for a significant modification to a machine

Machines and installations undergo changes in the form of conversions, retrofitting or expansions over the course of their service life. This generally has direct effects on the machine's safety requirements as well.

It is decisive whether the modification is classified as "significant." An interpretation document from the German Federal Ministry of Labour and Social Affairs (BMAS) details the criteria for classifying a modification as significant. This document also specifies a generally recognized procedure to check this.

If the modification to the machine and its protective measures is of a significant nature, legislation requires that the conformity assessment process must be repeated for the modified overall system.

A significant modification is assessed using graphs with four decision levels. Decisions of an interpretative nature must be made at each level. Our experience helps you make those decisions.

Benefits for you

- ⊕ Experienced machinery safety experts help you assess modifications and conversion measures.
- ⊕ You benefit from assessment in compliance with all legal requirements and legal certainty regarding whether the modification in your facility is a "significant modification."

Our services

- ▶ Analysis of the existing machine and the planned conversion regarding the effects on safety.
- ▶ Support in deciding the degree of conversion and modifications.
- ▶ Preparation of a report on the decision concerning a significant modification.
- ▶ Assistance in performing the conformity assessment process.

Assessment for linking of machines

If individual machines or installations interact in the production process, it must be checked whether the combination constitutes a "linking of machines" as defined in the Machinery Directive. If this is determined to be the case, the assembly of machines must undergo a new conformity assessment process. If the combination does not constitute a "linking of machines," the operator must fulfill the requirements resulting from operation of the linked individual machines.

We guide you through the maze of options based on our long-standing experience, helping you make the right decisions in compliance with standards and the law. At the end of the consultation process, you receive a document recording the decision-making process and its result.

Benefits for you

- ⊕ Experienced machinery safety experts assist you in reliably assessing the linking of machines.
- ⊕ You benefit from assessment in compliance with all legal requirements and legal certainty regarding whether the linking falls under the "assemblies of machinery" definition according to the requirements of the Machinery Directive.

Our services

- ▶ Examination of interacting machines for linking (assemblies of machinery) as defined in the Machinery Directive.
- ▶ Report on the assessment for assemblies of machinery.
- ▶ Assistance in performing the conformity assessment process.



Machine operators



Machine operators

Machine manufacturers

Hazard assessment according to the Use of Work Equipment Directive 2009/104/EC

The Use of Work Equipment Directive 2009/104/EC governs the provision of work equipment by the employer and its use by employees.

Employers must regularly identify and check all workplace hazards that could impair their employees' health and safety.

By law, companies must perform a hazard assessment for each item of work equipment. Standardized assessment schemes are used for the hazard assessment for reasons of comparability, completeness and efficiency.

Benefits for you

- ⊕ Your work equipment is efficiently and fully assessed according to the Use of Work Equipment Directive 2009/104/EC.
- ⊕ You benefit from our structured approach that always takes the productivity of your production processes into account.

Our services

- ▶ Agreement about the type and scope of hazard assessments.
- ▶ Performance of the hazard assessments on an agreed schedule.
- ▶ Preparation of an action plan for eliminating possible causes of risk.
- ▶ Final documentation.

Consultation day

Our experts advise you on site about relevant machinery safety topics, including:

- ▶ Procedure for a CE process, as well as the requirements of Machinery Directive 2006/42/EC.
- ▶ Review of machine documents relevant to CE.
- ▶ Preparations for a risk assessment.
- ▶ Verification of safety functions according to EN ISO 13849-1 and SISTEMA calculation of achieved Performance Levels.
- ▶ Explanation of the risk estimation according to EN ISO 13849-1.
- ▶ Consultation on conversion and significant modification to machines.
- ▶ Consultation on linking of machines and machine installations.

Benefits for you

- ⊕ We clarify all safety-specific aspects with you and address your specific questions.
- ⊕ Since we advise you on site, you save valuable time and can concentrate on your core business.

Our services

- ▶ Our consultation is tailored to your requirements.

EUCHNER SAFETY SERVICES

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