

# TECHNO GR SAFETY SERVICE

Your partner for machine safety



» Tailor made solutions

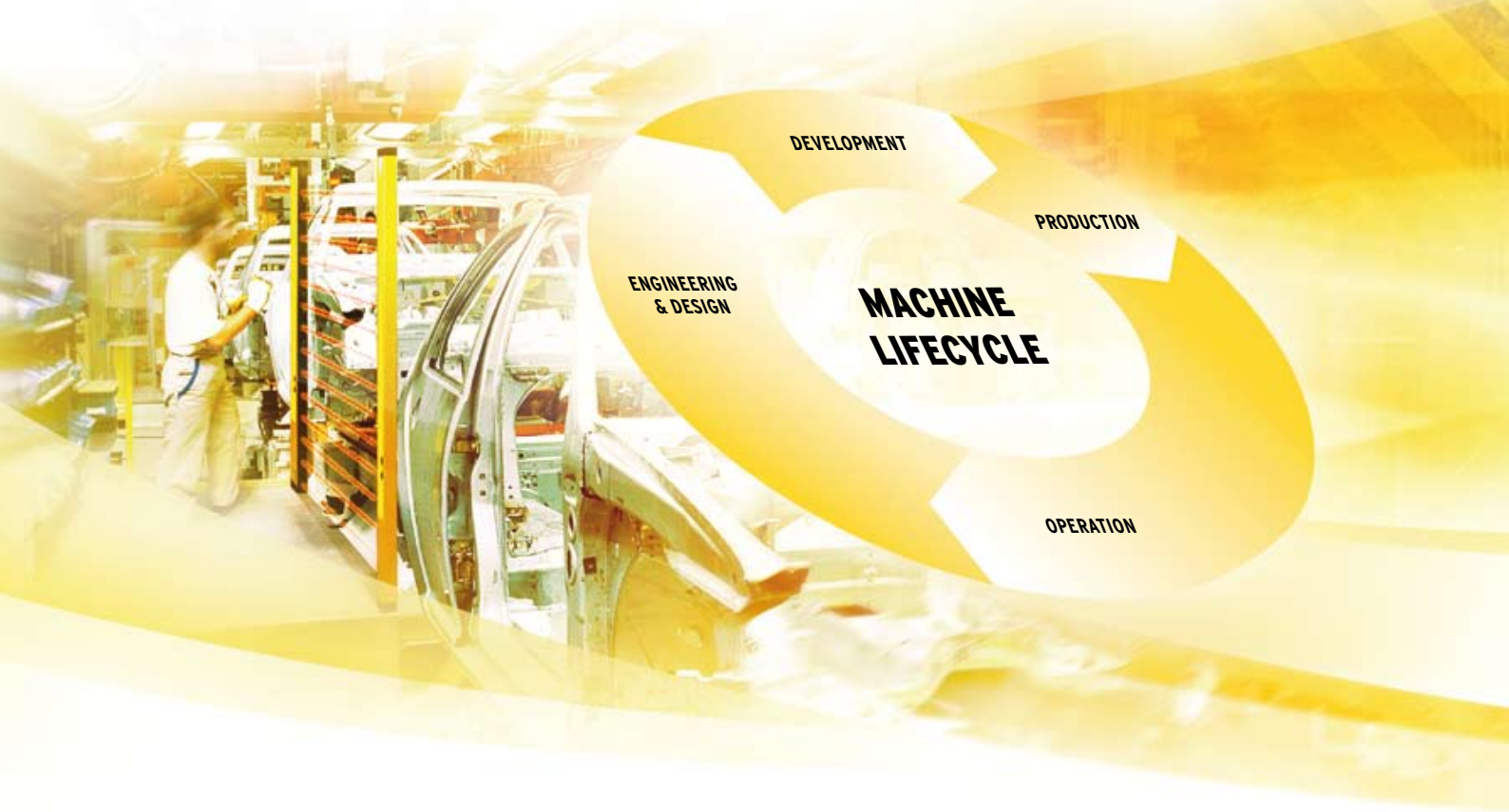
» Support throughout the machine lifecycle

» Seamless safety compliance



# We can help protect your business

Accidents in the workplace can cause major problems for your business, ranging from possible legal action through lost production to impacts on staff morale, corporate reputation and profitability. With TechnoGR Safety Services by your side, you have a head start in protecting your business.



## We know legislation

Our knowledge of safety regulation is wide. We know the whole range from European directives to local health and safety standards. We provide advice based on our in-depth knowledge of the issues: advice that is clear, practical and designed to ensure your total compliance at all times, and the risk for senior management is reduced to a minimum.

## Safety - because you care

In the 21<sup>st</sup> century, manufacturers must ensure the safety and security of everyone affected by their business activity. It's an ethical as well as a legal requirement in the industrial world. Our specialists in TechnoGR Safety Services offer a full safety service package. We support you and your machines during their whole lifecycle, to create a safer industrial world and give you peace of mind.



- Partner in implementation
- Tailored advise
- Proven expertise
- Latest legislation knowledge

### **Keep total cost of ownership under control, today and tomorrow**

We know that it is important that you get – and pay for – only those services that you need to comply fully with safety regulations. Our service is tailor-made for you – as wide as necessary and as uncomplicated as possible.

**A tailor-made portfolio of solutions, based on proven TechnoGR safety expertise**



### **Machinery risk assessment**

This basic procedure in machine safety is used to identify the hazards, estimate the risk for the users, and decide on the need for risk reduction. We offer risk assessment in accordance with:

- Machine Directive (2006/42/EC - Annex I)
- Worker Protection Directive (99/92/EC)
- Low Voltage Directive (2006/95/EC)
- EMC Directive (2004/108/EC)
- Pressure Equipment Directive (97/23/EC)
- Explosive Atmospheres Directive (95/9/EC)

Based on EN ISO 14121 or the relevant machine “C” safety standards.

Proposals for technical, organizational and procedural countermeasures for risk reduction are provided in a final technical report, together with a proposal for required components. This report is the basis for the evaluation of the required safety category, performance level (PLr) or safety integrity level (SILCL).

### **Verification and update service**

Many existing risk assessments and machine approvals are based on the EN 954-1 safety category system. Our update service helps you to conform to the performance level system of EN/ISO 13849-1 or the safety integrity level system of EN/IEC 62061. Our verification service covers a compliance check of your safety control system according to the latest standard EN/ISO13849-1. This service is based on the characteristic reliability data, supplied by the customer to suit your individual application

### **Electrical tests**

Based on EN/IEC 60204-1/2006 or the relevant machine “C” standard, we perform electrical tests on your machine

- Protective earth (PE) equipment
- Insulation resistance
- Rated voltage
- Residual voltage

Test results are shown in a technical report.

# Creating a safe industrial world

## ...with a strong partner



### Definition of products

Safety control systems require a system architecture that is based on the safety category or performance level found during the risk assessment process. A basic requirement is that the structure in use at least meets the required performance level or safety category.

Our specialists help to define and select the right products for your application, and confirm in a technical report that the architecture in use meets the required standards.

### Supply of safety components

TechnoGR is a well-known supplier of:

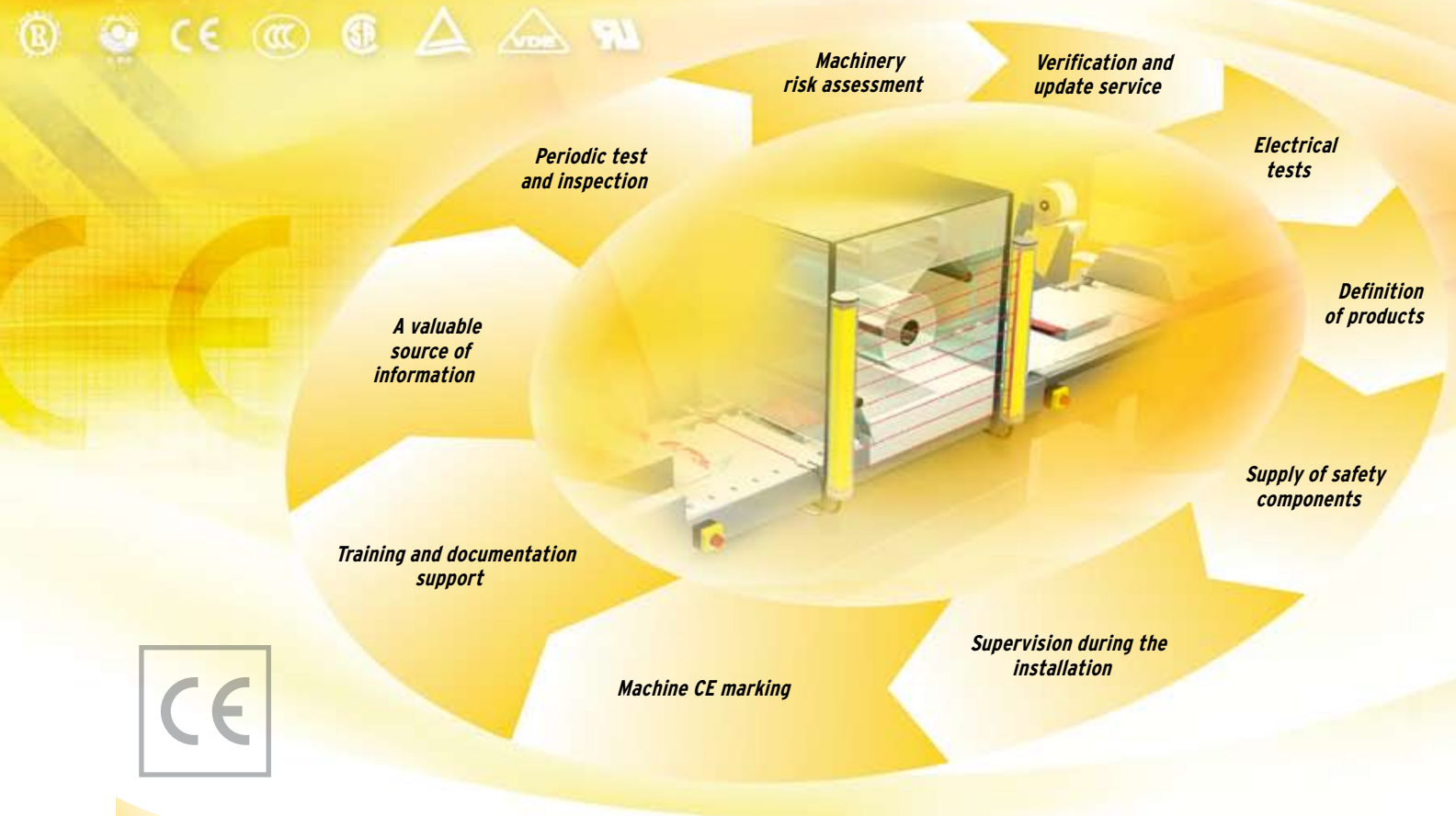
- Safety sensors in hand- and finger protection
- Safety sensors for perimeter guarding
- Safety relay units
- Two-hand control systems
- Guard interlocking systems

Mechanical guarding according EN 294:1993 can be supplied by a TechnoGR partner, including guard fences, housings, mounting brackets etc. Our partners supply the mechanical equipment to suit your application. Please contact your TechnoGR Safety Services partner for further information.

### Supervision during the installation and final test

Supervision during the installation and final test machine, and is not limited to components supplied by TechnoGR: mechanical guarding or other third-party components are covered as well. If requested we can work with your established suppliers and partners. We carry out this service by using local engineers, with TechnoGR supervision during the installation process. This local support and face-to-face contact ensures quick reaction times, with a minimum number of service providers.

# throughout the complete machine lifecycle



## Machine CE marking

CE marking of a machine is a complex process in which there are several steps to take and judgements to make. Clear guidance in this process is provided by TechnoGR Safety Services, looking at all the different directives and standards to follow. This makes a third-party test by a notified body more straightforward and ensures that the declaration of conformity is based on solid foundations, for your own safety and confidence.

**Our specialists will assist you during the process of CE marking in:**

- Selection of the relevant European and local directives and standards
- Technical advice for best fitting solution
- Drafting the user- and maintenance-manuals for your machine
- Risk assessment documentation according to ISO 14121 or other applicable harmonised standards

### Support in:

- User- and maintenance-manual production
- Drafting the declaration of conformity
- Drafting the datasheet including mechanical drawings
- Listing essential requirements in accordance with machine directive
- Listing all applicable standards
- Drafting documentation for partly assembled machines in accordance with machine directive (assembly and integration examples)



## Training and documentation support

A modular training concept covers the individual levels of information in your design, engineering and service department throughout the machine lifecycle. Our training modules:

### How to conform to

- Machine Directive
- EMC Directive
- Low voltage Directive

### Design of control circuits, using programmable electronic system according to EN 62061 of EN/ISO 13849-1

### Safety circuit and control functions

- Operating modes
- Stop category
- Emergency stop
- Reset, start-up and interlocking

### How to use optoelectronic protective devices

- Selection of correct length, resolution and safety category
- Installation requirements

### How to set up mechanical guarding

- Selection of correct interlocking method
- Correct installation

### Oil, hydraulic and pneumatic equipment in applications on a press In accordance with EN 982 and EN983

### Electrical safety

- Correct wiring of protective earth (PE)
- Current surges

### Support documentation conforming to European directives

- Technical datasheet
- Precautions
- User manual for installation, use and putting the machine into service

## Periodic test and inspection

A regular test of the machine safety system ensures the operability of the installed safety components over the machine lifetime. TechnoGR Safety Service support:

- Initial inspection before the machine is put into service
- Yearly inspection (in accordance with local test and maintenance regulations)
- Additional inspections after repair or maintenance of the machine or safety system

## A valuable source of information

The TechnoGR Safety Services homepage provides you an update service on the latest changes in information regarding:

- European directives
- European standards
- International standards
- Product and application news in cooperation with OMRON

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