

Machinery Safety Services

Intertek

Valued Quality. Delivered.

Efficient compliance
solutions for machinery
in the workplace



How Intertek can help

Our commitment to meeting our clients' needs and expectations is expressed in our proposition:
Valued Quality. Delivered.

To us it is a shared ideal that inspires and drives us. To you it is our promise that the unparalleled quality of our skills and services will deliver real and relevant value to your processes, products and brands.

Our aim: to Exceed our clients expectations by providing them with unrivalled speed of service whilst ensuring machine compliance.

Intertek is the trusted quality partner of many of the world's leading brands and companies and their suppliers. We deliver quality solutions that increase the value of our customers' products, processes and assets. As the global quality experts, Intertek combines in-depth industry knowledge with local understanding and insight. Our Machinery division can provide the following services:

- Machinery Safety consultancy
- PUWER assessments
- CE Marking
- Risk Assessments
- Training
- EMC testing



Testing

Using internationally approved methods, standards, equipment and guidelines, we test products, commodities, food and raw materials to ensure that what you produce or offer for sale meets all external safety requirements and your own quality standards.

Drawing on a complete understanding of government regulations and the rules that apply to your industry, we can also help you to monitor and optimise your processing chain and address any potential weak points.



Inspection

Our inspection services cover every aspect of your manufacturing and distribution operations - including factory, custody transfer, pre- and in-production, random sampling, pre-shipment, and loading supervision - to ensure compliance with country and industry requirements and your own customer specifications.

Our audits can monitor the integrity of your supply chain and ensure that systems, management and operating procedures meet expected standards.



Certification

Intertek's independent third-party certification services play a vital role in global trade. We lead the way with fast and simple processes that accelerate time-to-market, helping you to access new geographies and product categories and broaden your revenue profile.

More than 40 countries participate in our CB Scheme, a harmonised testing programme that simplifies domestic certification. As well as certification marks that include ASTA, BEAB, CE, ETL, GS, S and WH, we offer our own internationally-recognised Quality & Performance Mark for products.



Auditing

Auditing adds operational value as well as providing you with assurance of your business performance and compliance with statutory obligations. We can conduct independent audits of your own organisation (third-party), or audit other businesses on your behalf (second-party).

Our client-focused services range from verifying individual processes, to third-party certification of management systems, to full supply chain inspection, development, safety and compliance checks. These are supplemented by training and business solutions that can be customised to your requirements.

Machinery Safety Services

PUWER

- Guidance on Provision And Use of Work Equipment Regulations 1998
- Machine guarding risk assessments
- Safety circuit evaluation and assessment
- Risk assessments
- Functional safety consultancy

CE Marking

- Machinery
- Personal Protective Equipment (Respiratory protection)
- General Product Safety

Buying machinery

- Pre-purchase machine Specification
- Provide pre-delivery CE Audits
- Post installation PUWER inspections

Existing Machinery

- PUWER 98 inspections
- Lifting Operations and Lifting Equipment Regulations 1998 (LOLER)

Training

- Regulations overview
- Legislation & responsibilities
- CE Marking overview
- Tailored to meet your requirements



Outsourcing

Outsourcing offers opportunities to focus your capital and human resources on core activities, allowing you to achieve your commercial and technical goals more quickly and at a lower cost. Other benefits include maximisation of talent in areas of greatest return, increased capacity for innovation, accelerated product development, efficiency gains and risk transfer. Intertek is a world leader in devising innovative outsourcing business models for functions ranging from corporate R&D to quality control.



Advisory

Our advisory services enable you to draw on our knowledge and understanding of global products, technology and markets to advance your business. Our insights on the consumer and market trends, technology and regulatory developments affecting your business can assist you with your research and development and help you achieve global compliance.

Our expertise can also help you to improve the effectiveness of your business strategy and the performance of your processes and business operations.



Training

Our training programmes offer you opportunities to acquire valuable knowledge and skills from renowned technical experts, scientists and certification specialists from around the world.

We offer a wide range of courses to help you address issues such as the quality and safety of your work environment, safe equipment handling, product safety and process training on technical topics. We can also develop programmes to address the specific training needs of your business.



Quality Assurance

We share your understanding that quality is as much about the perception of consumers as it is about controlling your manufacturing processes. Our testing, auditing, inspection and certification of your systems, processes, raw materials and products can help you to fulfil all expectations.

Quality assurance, safety and training programmes are tailored to your needs at every stage from concept through to distribution to help you meet industry standards and adopt global best practices for your business.



Comprehensive
machinery
inspections ensuring
site efficiency and
compliance

Efficiency
from
innovation

PUWER 98

The Provision and Use of Work Equipment Regulations 1998 (PUWER)

replaces PUWER 1992. It carries forward the older requirements with some changes and additions such as the inspection of work equipment and new requirements for mobile work equipment. Many aspects of PUWER should therefore already be familiar to you.

The Regulations require risks to people's health and safety, from equipment that they use at work, to be prevented or controlled. In addition to the requirements of PUWER, lifting equipment is also subject to the requirements of the Lifting Operations and Lifting Equipment Regulations 1998.2 (LOLER)

How PUWER relates to Health and Safety legislations

Under section 2 of the Health and Safety at Work Act etc 1974 it requires that all employers ensure, so far as is reasonably practicable, the health, safety and welfare of all their employees.

This is similarly to Management of Health and Safety at Work Regulations 1999 which contains important duties relating to undertaking a risk assessment to identify measures that you can take to eliminate, or reduce, the risks presented by the particular hazards in your workplace.

PUWER 98 provides a set of guidelines to help employers comply with health and safety obligations.

Where does PUWER 98 apply

This regulation applies to all workplaces and work situations where the HSAW (Health and Safety at Work Act etc 1974) applies and extends outside Great Britain to certain offshore activities in British territorial waters and on the UK Continental Shelf.

If you are an employer or self-employed person, and you provide work equipment for use at work, or you have the control of the use of equipment then these regulations will apply to you, e.g. factories, offices, hospitals, shops, offshore installations etc. This regulation also applies to temporary places of work, such as construction sites.

Domestic work in private households or equipment used by the public is not subject to PUWER regulations.

This regulation requires that equipment provided for use at work is:

- Maintained in a safe condition and, in certain circumstances, inspected to ensure this remains the case
- Inspected and ensure the equipment
- Equipment is used by only the people who received suitable training, adequate information and instructions
- Ensure suitable safety measures are in use, e.g. protective devices, markings, warnings and personal protective equipment (PPE)



What equipment is covered by PUWER 98

Generally, any equipment to be used in the workplace is covered by PUWER 1998, including CNC lathes, drilling machines, grinding machines, power press, circular saws, forklift trucks, pallets trucks etc.

Also if employees bring in their own equipment to use at work, this too must comply with the regulation.

How to comply with PUWER 98

The primary objective of PUWER is to ensure that work equipment is safe to use. These regulations provide guidance and requirements for the provision and safety of use of work equipment.

Regulations 1 to 3 - interpretation of the regulation and definition of terms. Identifies where the regulation applies and where respective duties lie.

Regulations 4 to 10 - mentions the Management duties of PUWER 1998 covering the selection of suitable equipment, inspection, maintenance, risk assessment, instructions and training.

Regulations 11 to 24 - deal with the physical aspects of this regulation. E.g. guarding of dangerous moving parts of work equipment, provision of appropriate stop and emergency stop controls, stability, suitable and sufficient lighting and suitable warning markings or devices.

Reducing
risk,
improving
efficiency

Speed
from
expertise

Regulations 25 to 30 - deal with the risks arising from mobile working equipment.

Regulations 31 to 35 - deal with management requirements for the safe use of power presses.

Regulations 36 to 39 - cover transitional provisions, repeal of Acts and revocation of instruments.

Importance of carrying out a risk assessment

The Management of Health and Safety at Work Regulations 1999 emphasises the importance of the risk assessment which must be carried out on any work equipment. Therefore, risk assessment is a key part of the PUWER assessment to the work equipment.

The primary objective of a risk assessment is to identify the risks that may arise during operation, maintenance and other activities. Risk assessments should be carried out regularly and should consider the mechanical and electrical hazards to which people may be exposed, as well as environmental conditions such as lighting and the weather.

Risk assessments should also identify the actions needed to eliminate or control the risks involved in operating or maintaining equipment.

Machinery Directive 2006/42/EC

The Machinery Directive 98/37/EC came into force in 1995. It was later replaced with a revised Machinery Directive 2006/42/EC.

The Directive mandates a set of Essential Health and Safety Requirements (EHSRs).

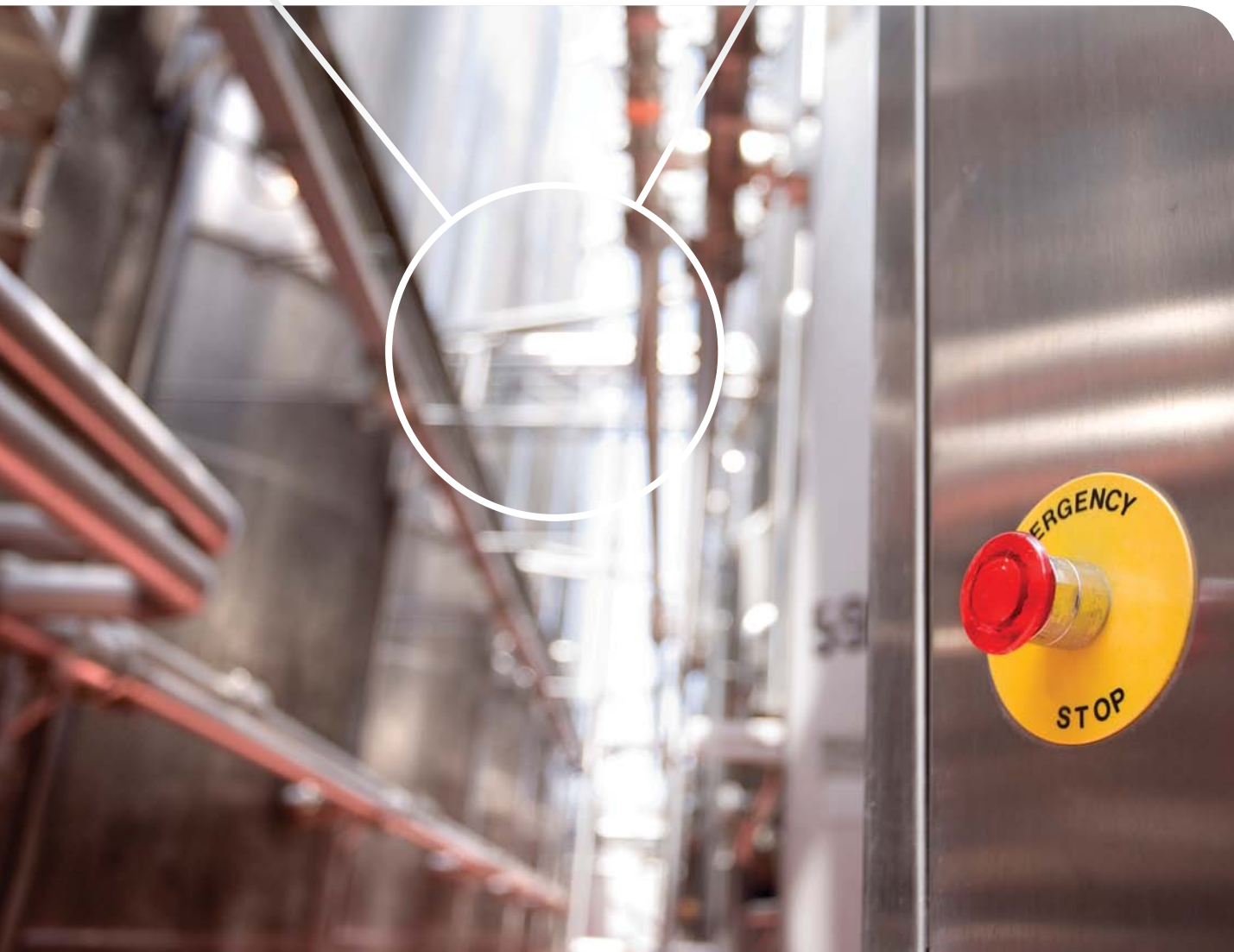
A machine is defined as follows:

- an assembly, fitted with or intended to be fitted with a drive system other than directly applied human or animal effort, consisting of linked parts or components, at least one of which moves, and which are joined together for a specific application,
- an assembly referred to in the first, missing only the components to connect it on site or to sources of energy and motion,
- an assembly referred to in the first and second indents, ready to be installed and able to function as it stands only if mounted on a means of transport, or installed in a building or a structure,

- assemblies of machinery or partly completed machinery which, in order to achieve the same end, are arranged and controlled so that they function as an integral whole,
- an assembly of linked parts or components, at least one of which moves and which are joined together, intended for lifting loads and whose only power source is directly applied human effort.



We aim to exceed our clients expectations by reducing risk with an unrivalled speed of service



Machinery Directive - CE Marking

CE Mark stands for “**Conformité Européenne**”, meaning European Conformity.

There is a legal duty for the manufacturers or suppliers of the machinery to CE Mark their products before it is put placed on the market within European Union (EU). It also applies to any company who build their own machinery or equipment for their own use inside the EU.

Any equipment / machinery supplied from outside of the EU for use within the EU requires a CE Mark. This applies to whether you are dealing with an old machine or new machine.

Who should undertake CE Marking?

CE Marking is the responsibility of the person who places the product on the market or puts it into service for the first time. This duty rests with the responsible person, which in most cases is either the manufacturer or the manufacturers authorised representative, but can also include those who import a non CE Marked product into the EU, any user in the EU who makes a product for their own use, and those who modify existing products already in use to an extent they must be considered “new” products.

The Six Steps to CE Marking for the Machinery Directive

Step 1 - Product identification - The first step of the process is product identification, it is essential for the manufacturer to ensure that their products are covered by Article 1 in the Machinery Directive. Is the product under the scope of Machinery Directive?

Step 2 - Perform a risk assessment - Under the Machinery Directive 2006/42/EC, it emphasises the importance of risk assessment as stated in Annex 1 of the Directive. It is the starting point for the designer of machinery under Machinery Directive. The manufacturer needs to perform a risk assessment to identify all the hazards associated with their machinery. The risk assessment must be identified based on the intended use of the machinery and also needs to take account of all the life cycles once the machine is operated, e.g. operation, maintenance, services, cleaning, transportation and setting etc.

Step 3 - Meets Essential Health and Safety Requirements (EHSRs) - The Essential Health and Safety Requirements of the Directive are mandatory. It is the responsibility of the machine manufacturer to comply.

The requirements are wide-ranging and consider risks or potential risks to the operators and other persons who may be at risk. It may be difficult to meet all of the requirements of the Directive as it covers a diverse set of products; in this situation a manufacturer can validate the machine against an appropriate harmonised Standard.

Step 4 - Compile the technical file - Annex VII of Machinery Directive describes the procedures for compiling a technical file. The technical file must demonstrate that the machinery complies with the requirements of the Directive. It must cover the design, manufacture and operation of the machinery to the extent necessary for the assessment.

The file should contain the following:

- Details of applicable Directives
- A descriptive drawing of the machinery including information showing how relevant EHSR have been met (which may include reference to standards applied)
- Details of relevant research and test reports including the standards used to achieve this
- Wiring and circuit diagrams
- Parts List
- Copy of instructions (user, maintenance, installation)
- Test reports
- Description of control circuits and their safe operation.
- Declaration of Conformity

Step 5 - Issue the EC Declaration of Conformity

A Declaration of Conformity is a legally binding document, and is required before a manufacturer can place CE Marking on the machine. It declares that the manufacturer has considered all the applicable Directives and met the essential health and safety requirements of all the relevant Directives. The person signing the EC Declaration of Conformity must be authorised to represent their company.

The manufacturer of partly completed machinery should issue an EC Declaration of Incorporation along with the assembly instructions when this type of equipment is placed on the market.

The declaration and assembly instructions are part of the technical file as mentioned in previous step.

Step 6 - Affix the CE Mark - The CE Mark maybe affixed to a machine when the EC Declaration of Conformity issued only.

CE Marking should be affixed to the manufacturer's name plate alongside the name and address of the manufacturer.



Pre-Requisition Audits

Intertek can assist you when you or your company are looking to purchase a new or used machine. We already carry out such audits for our clients on a global basis and can carry out a full pre-purchase audit to ensure that the machine you are buying meets conformity requirements.

The supply of Machinery Regulations 2008 require that machinery:

- Is safe when supplied
- comes with a Declaration of Conformity and user instructions in English
- is CE Marked
- is free from any obvious defect, such as damaged or missing guards

We have these laws to ensure that manufacturers and suppliers provide safe work equipment. This means, that when the equipment is used correctly and safely, the risk of accidents occurring is reduced.

Manufacturer Responsibilities

Most new machinery should have CE Marking when you buy it, however CE Marking is only a claim by the manufacturer that the machine is safe and they have met relevant laws when supplying machines. The manufacturer has a responsibility to ensure the machine is safe for use. He does this by applying the following:

- Completing a risk assessment to highlighted the associated hazards
- Designing out hazards such as trapping, crushing, electrical shock, noise etc.
- Provide safeguards (guarding dangerous parts of the machine)
- Using warning signs on the machine to warn of hazards that cannot be designed out
- Provide operating instructions with the machine giving information on any risks that cannot be fully controlled by the design and guards provided
- Provide users with a safe system of work or undertake maintenance
- Provide full information of actions taken in the technical file





Users Responsibility

Before you buy the machine, you need to think about how and where it will be used, who will use it, and what risks might result from its use.

This can help you decide which machine may be suitable, particularly when buying "off the shelf". If you are buying a more complex, custom built machine, you should consult your supplier on what options are available.

The time spent now, agreeing safeguards to control health & safety risks in your business could save you time and money later.

If you will be forming an assembly line by connecting several machines including the one you are looking to purchase now, you need to comply with such requirements as CE Marking the line as a whole.

If you are buying the machine from outside the EU, specify in writing that the machine must be safe, meet all relevant EU supply directives and be CE Marked.

Checking the Machine

Many things that effect safety are obvious, as they can be detected using common sense, however utilise your operators to help you do this as they will be familiar with similar machines and can check if it is safe. You may want to think about checking the following:

- Do any parts look dangerous, e.g. exposed gears or cutters
- If guards are fitted, are they securely fitted
- Do the guards prevent access to dangerous parts
- Can the machine operate with the guards removed
- Understand the controls
- Is it noisy
- Is vibration an issue
- Hot or cold surfaces
- Are electrical parts exposed
- Safely access parts for maintenance
- Are the manufactures instructions clear

Second Hand Machinery

It has to be safe for use, it may not have a CE Mark, but the supplier still has to make sure it is safe and accompanied by instructions for safe use.

As a user, you have the duty to make sure that the machine is:

- Safe when put into use
- Suitable for selected work
- Maintained in a safe condition.

If a second-hand machine has been refurbished, adding new control, or new operation then it may have (or require) new CE Marking. This is because the way it operates is different to before and is treated as a new machine.

Intertek can assist you when purchasing new or second-hand machinery as we can carry out a full pre-purchase audit which will highlight any problem areas and can recommend corrective actions to ensure full compliance.



Making your work
environment safe and
efficient using innovative
assessment procedures

Training Seminars

We can offer you fully tailored training seminars that meet your personal requirements. Our flexibility allows us to facilitate these seminars either at your site or at our fully equipped training rooms at our facilities.

We believe that customer interaction is priority and with this in mind, we utilise technology by using the latest tablet PC's to ensure that you have full interaction with the course facilitator. This will allow a "hands on" approach to training encouraging you and your colleagues to carry out test assessments on machines to give you a better understanding of the process involved in carrying out a full risk assessment.

The topic of training can be adjusted to suit your needs as can the content and the duration. These are just some of the topics covered:

- POWER 98
- CE Marking
- Risk Assessment
- Pre-purchase Audits
- EN Standards - Mechanical & Electrical
- Machine Guarding
- Electrical safety of Machines

Each module will be delivered by experienced and qualified training professionals, who will also be on hand to answer any questions you may have.

These seminars are relevant to the following persons:

- Operations - managers, directors
- Maintenance managers
- Mechanical & Electrical engineers involved in design and modification of site machinery
- Procurement staff involved in buying new & second-hand machines
- Specification engineers

Please contact us for full details.

Intertek Academy

Intertek training programmes address a broad range of subjects, are customised, and can be delivered online, on-site, or at an Intertek office around the world.

Operating at the forefront of international and local regulatory developments, customer and legal compliance requirements, as well as good manufacturing and compliance practices, our experts have the experience to assure your key staff, management and suppliers will be up-to-date on key compliance issues, technical expertise, and more.

We share our expertise through an extensive array of training and implementation programmes, helping our clients and their supply chains understand regulatory requirements, improve their business processes, and meet customer demands.

In addition to our Machinery Safety training programme we offer a wide range of courses discussing the regulatory drivers for manufacturers of product in the following key areas:

- CompEx Training for Hazardous Locations
- Medical Devices
- IT / Telecoms
- Industrial products
- Household appliances
- Toys & Hardlines
- Electronics
- Environmental
- Lighting
- Batteries
- Electromagnetic Compatibility
- Management Systems



Providing the very latest knowledge using comprehensive and innovative training methods



Intertek

Valued Quality. Delivered.

At Intertek, our time-tested service, wealth of experience, and depth of knowledge allow us to offer solutions dedicated to helping you navigate the regulatory process. Intertek delivers the precision you need, with the speed to market you are looking for.



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