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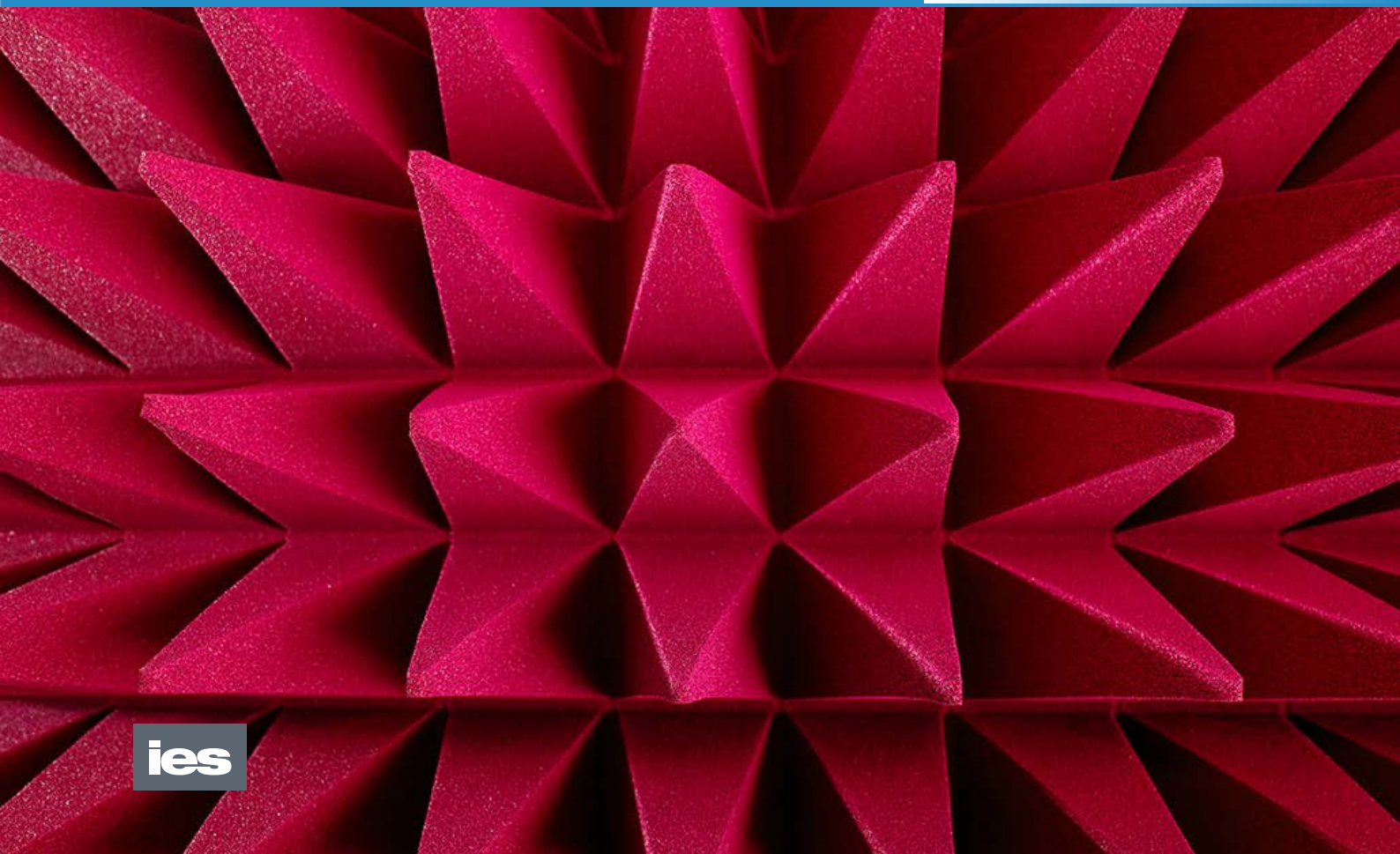
UKCA and CE Marking: A Manufacturer's Guide

A complete guide to UKCA and CE marking for manufacturers supplying equipment, products and machinery to GB or EEA markets

INTRODUCTION

Before you can sell or supply certain products in Great Britain or the European Economic Area, you must certify that they comply with UKCA or CE marking regulations.

Here's everything you need to know about the UKCA and CE marking regulations, how to comply with them and how IES can help.



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UKCA MARKING



UK Conformity Assessed (UKCA) is the required certification for products, equipment and machinery supplied to GB markets (England, Wales and Scotland).

The marking came into effect on January 1st 2021 to replace its predecessor, the European Union's CE marking. However, the UK Government has since announced that CE marking will continue to be recognised indefinitely to ease the strain on businesses.

Can you use UKCA marking for EU and NI markets?

UKCA marking applies to products, equipment and machinery supplied to GB markets only.

CE marking is the European Union's required certification for products supplied to the

European Economic Area (EEA). You will need to CE marking if you're supplying products to EEA markets.

If you're supplying products to both GB and EEA markets, you'll need to use both UKCA and CE marking.

If you're supplying products to the Northern Ireland (NI) market, you'll need to use either UKNI marking or CE marking, depending on your product and the specific regulations that apply to it.

What product areas does UKCA cover?

Product areas covered by UKCA include:

- ▶ Electromagnetic compatibility
- ▶ Machinery
- ▶ Low-voltage electrical equipment
- ▶ Toys
- ▶ Pyrotechnics
- ▶ Recreational craft and personal watercraft
- ▶ Simple pressure vessels
- ▶ Non-automatic weighing instruments
- ▶ Measuring instruments
- ▶ Measuring container bottles
- ▶ Lifts
- ▶ Equipment for potentially explosive atmospheres (UKEX)
- ▶ Radio equipment
- ▶ Pressure equipment

- ▶ Personal protective equipment (PPE)
- ▶ Gas appliances
- ▶ Equipment for use outdoors
- ▶ Ecodesign

However, some products are covered by UKCA but have special rules. These include:

- ▶ Medical devices
- ▶ Rail interoperability
- ▶ Construction products
- ▶ Civil explosives
- ▶ Marine equipment
- ▶ Cableways
- ▶ Energy using products
- ▶ Transportable pressure equipment
- ▶ Hazardous substances (RoHS)

We recommend consulting the [GOV.UK](https://www.gov.uk) website for sector-specific guidance.

5 steps to achieving UKCA compliance

UKCA compliance involves identifying the specific regulations that apply to your product, assessing your product against these regulations, compiling a detailed technical file and creating a Declaration of Conformity to prove compliance.

Our start-to-finish UKCA marking service covers every step of the compliance process, from assessing and testing high-technology equipment against electromagnetic compatibility, supply of machinery and electrical equipment regulations (all at your site) to compiling your technical file and drafting a Declaration of Conformity.

Let's examine each step in further detail.

01 Identify the relevant regulations

UKCA compliance covers a wide range of various product categories. And each has its own set of regulations.

So, step one is to identify the UK-specific regulations and standards that apply to your product category. We recommend checking the official safety regulations for your specific product [via the GOV.UK website here](#).

Next, categorise your product and determine which directives and regulations apply. It can be beneficial to consult with experts or regulatory professionals who specialise in your industry to ensure you've fully understood which regulations and directives you're expected to comply with.

How does IES help?

While there are a number of regulations that might apply to your product, IES specialises in testing and checking product, equipment and machinery conformity against three regulations:

1. UK Electromagnetic Compatibility Regulations
2. UK Supply of Machinery (Safety) Regulations
3. UK Electrical Equipment (Safety) Regulations

UK Electromagnetic Compatibility Regulations

The UK Electromagnetic Compatibility (EMC) Regulations apply to electrical and electronic equipment (including apparatus and fixed installations) that are prone to generate electromagnetic disturbance.

The regulations concern the compatibility of electrical and electronic equipment with electromagnetic fields, and set specified limits for electromagnetic emissions. Their two key objectives are to:

1. Prevent electrical and electronic equipment from disturbing telecommunication, radio and other mediums
2. Ensure immunity of electrical and electronic equipment to electromagnetic interference

Non-compliance with the Supply of Machinery (Safety) Regulations is an offence that can lead to a fine, imprisonment of up to three months, or both. Non-complying equipment and products may be recalled from the UK market immediately.

UK Supply of Machinery (Safety) Regulations

The Supply of Machinery (Safety) Regulations apply to new and modified machinery used in the workplace. Their purpose is to prevent machinery and equipment from causing harm or damage to users and their environments.

The regulations cover the safety-related elements of a machine, including:

- ▶ Various types of assemblies, as defined in the regulations, typically consisting of linked parts and a drive system that does not involve the application of human or animal effort
- ▶ Controls
- ▶ Safety components
- ▶ Lifting accessories
- ▶ Removable transmission devices
- ▶ Drive systems and other assemblies in partly completed machinery

Non-compliance with the Supply of Machinery (Safety) Regulations is an offence that can lead to a fine, imprisonment of up to two years, or both. The HSE could also demand that non-compliant equipment is withdrawn from the GB market immediately.

UK Electrical Equipment (Safety) Regulations

The Electrical Equipment (Safety) Regulations are a series of product safety requirements that apply to electrical equipment in the UK.

They apply to equipment used within certain voltage limits (50–1,000 V for alternating current and 75–1,500 V for direct current) and include health and safety measures to ensure that electrical equipment poses no risk to users or their surroundings.

To comply with UK Electrical Equipment (Safety) Regulations, manufacturers should certify that equipment:

- ▶ Is safe to use and poses minimal risk of causing harm to any person, animal or property
- ▶ Is constructed in accordance with good engineering safety practice
- ▶ Is designed to protect against electric shock through protective earthing
- ▶ Conforms with the principal elements of safety objectives in [Schedule 1](#) of the regulations

Non-compliance with the Electrical Equipment (Safety) Regulations is an offence that can lead to a fine, imprisonment, or both. The HSE could also demand that non-compliant equipment is withdrawn from the GB market immediately.



02 Determine the right route for assessment

Depending on your product, you'll either need to undergo a third-party conformity assessment by an approved body or self-declare compliance.

Self-declaration involves you as the manufacturer declaring on your own responsibility that your product complies with the applicable standards and requirements. You can see the full list of legislative areas where a self-declaration is permitted [via the GOV.UK website here](#).

Higher-risk products typically require a third-party conformity assessment. In this case, you'll need to identify an approved body. Not all approved bodies cover the same range of products, so ensure that the chosen body has expertise and is recognised in your industry and product category. You can use [the UK Market Conformity Assessment Body \(UKMCAB\) database here](#).

If you're able to self-declare your product, you won't need to identify an approved body.

03 Draft your technical file

To prove UKCA compliance, you'll need to draw up and continuously maintain a technical file or document that demonstrates your product, equipment or machinery complies with the relevant GB regulatory compliance requirements.

Your technical file will typically include information such as how your product is designed and manufactured, how it's been shown to conform to relevant requirements, safety inspection reports and test certificates.

When compiling your file, you'll need to run various tests on your product to assess compliance with the relevant UKCA regulations. These tests include:

- ▶ Reviewing your product's design and specifications against the identified regulatory requirements and ensuring that it meets the outlined health and safety criteria
- ▶ Checking that all materials used in your product comply with relevant regulations
- ▶ Conduct functional testing to ensure that your product performs as intended and meets the safety standards—this might involve testing the product under various conditions to simulate actual usage
- ▶ Performing risk assessments to identify and mitigate potential hazards associated with your product
- ▶ Reviewing documents related to design specifications and manufacturing processes and ensuring they comply with regulations

If you identify any non-conformities during the testing phase, you'll need to take corrective actions to address these issues. This might involve modifying the product design, adjusting manufacturing processes or improving documentation.

Depending on the specific legislations applicable to your product, you generally

must keep your file for 10 years after you place your product on the market. During that time, market surveillance or enforcement authorities can request to see your file at any time to check that your product complies with the relevant regulations.

How does IES help?

IES can support your self-declaration, where a notified body is not required. We support the entire process, from testing your products against directives to compiling your technical file and supporting you in taking the right corrective actions in the event of non-conformity.

How IES carries out tests against UK Electromagnetic Compatibility Regulations

Assessing equipment for EMC involves testing both emissions and immunity.

To carry out the required checks, we provide an expert UKCA consultant either at your site or our testing facility.

Before starting, you will need to have fully connected your equipment to its required facilities, so that it can be operated in a normal production mode, with handling or transport functioning.

You'll also need to have energised any process-related direct current or radio frequency power supplied, as requested by the test engineer during the course of the EMC measurement procedure.

There are five classes of emissions and immunity assessments that we need to carry out to check conformity with EMC regulations:

1. Radiated emissions: Checking that the equipment doesn't emit unwanted radio signals
2. Conducted emissions: Checking that the equipment doesn't emit unwanted signals along connections
3. Radiated susceptibility: Checking that the equipment can operate normally under an electromagnetic field
4. Conducted susceptibility: Checking the equipment can operate normally when unwanted signals are applied to power leads and other connections
5. Electrostatic discharge: Checking that the product is resistant to a reasonable amount of electrostatic discharge

Once tests are complete, we supply all test data, technical documentation and recommendations on remedial actions, with the ability to partner with your team to implement remedial solutions where required.

If your equipment is non-compliant, we'll also work alongside you to find the most suitable solution.

How IES carries out tests against UK Supply of Machinery (Safety) Regulations

Compliance testing for the Supply of Machinery (Safety) Regulations involves a comprehensive analysis of all identifiable risks.

To carry out the required checks, we provide an expert UKCA consultant either at your site or our testing facility.

Our engineer selects the appropriate harmonised standards for the machine functions. These are then used as a basis for the audit and cover many disciplines, from ergonomic principles to light curtains.

As part of the testing process, our engineer will complete a checklist based on the requirements of each standard. This will form the basis of the technical report and any recommendations for conformity. We'll also carry out a comprehensive risk analysis for all identifiable risks.

We complete a risk assessment for every hazard we identify. As part of this, we describe the hazard and provide a risk grade according to the criteria described. Finally, we'll carry out an analysis of the measures taken to reduce or eliminate that risk.

We'll then create a technical report based on the result of the checklist and these individual risk assessments. This will include any recommendations to help non-conforming equipment comply with the Supply of Machinery (Safety) Regulations).

Finally, we can help companies and individuals meet their responsibilities in relation to PUWER (Provision and Use of Work Equipment Regulations 1998) guidelines, which require work equipment to be safe for their intended use and are applicable in the UK.

Complying with PUWER involves conducting a workplace assessment to ensure equipment is installed correctly, kept in a safe-to-use condition, only used by trained personnel, accompanied by health and safety measures, and more.

How IES carries out tests against UK Electrical Equipment (Safety) Regulations

To carry out the required checks, we provide an expert UKCA consultant either at your site or our testing facility.

Before starting, we require you to set up the equipment for full operational mode, as well as energise any high-power, direct current or radio frequency power supplies present in the equipment at various points in the testing process.

If we're working on-site, we also require you to have already commissioned complex equipment and that it's ready for normal operation. Simple systems such as benchtop metrology tools should be installed in a position and have power and any other required services connected to the tool ready for power up and operation of the tool.

We'll also need an engineer from your facility who's familiar with how to operate the equipment to be present for all tests, and will liaise with them when the equipment under test needs to be operated.

We complete our inspection using a checklist which reflects the requirements of the UK Electrical Equipment (Safety) Regulations.

We also provide full reporting, including test data, technical documentation, any non-compliance issues and expert guidance on the most appropriate remedial actions.

04 Draft your Declaration of Conformity

It's your responsibility as the manufacturer to draw up your UK Declaration of Conformity (DoC).

Your DoC serves as a formal declaration that you've met all requirements and safety directives applicable and should generally include:

- ▶ Your product, type, batch or serial number
- ▶ Your name and address
- ▶ A statement that you accept full responsibility
- ▶ Means of identifying the product
- ▶ A statement that the product conforms with the relevant legislation
- ▶ References to any designated standards, where applicable
- ▶ Reference to the approved body that carried out any conformity assessment activity, where applicable
- ▶ Your name and signature
- ▶ Supplementary information, if applicable

05 Affix the UKCA mark to your product

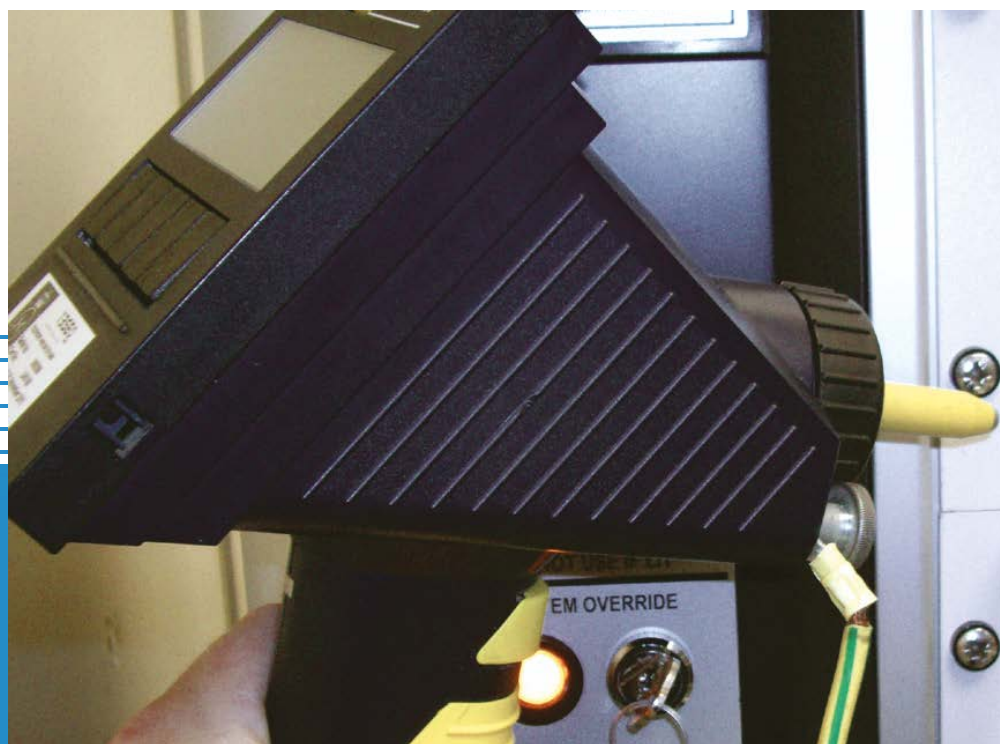
Once either your approved body has completed your conformity assessment or you have made your self-declaration, it's time to affix your UKCA mark to your product.

It's your responsibility, as the manufacturer, to place this mark. You may affix it directly to the product itself, its packaging and any supporting literature, depending on the specific regulations that apply to your product.

When using the UKCA image for your UKCA mark, the following rules apply:

- ▶ If you enlarge or shrink the size of the mark, each must still be in proportion to the official version below
- ▶ The UKCA mark must be at least 5mm high, unless otherwise specified in relevant legislation
- ▶ The mark can take different forms but must always remain visible and readable

Once you have affixed your UKCA mark, you can place your equipment, products and machinery on the GB market.



A close-up photograph of a person's hands holding a yellow and black digital multimeter. The person is using the device to test a solar panel, with red and black probes connected to the panel's grid lines. The background shows a large array of solar panels under a bright sky.

CE MARKING



CE marking is the European Union's required certification for products, equipment and machinery supplied to European Economic Area (EEA) markets, and is recognised by the UK Government for products sold in GB markets.

It confirms that products, equipment and machinery have been fully assessed and meet EU safety, health and environmental protection requirements.

Our start-to-finish CE marking service covers every step of the compliance process, from assessing and testing high-technology equipment against specific directives to providing a Declaration of Conformity to aid self-declaration.

Can you use CE marking for GB and NI markets?

Although the UKCA mark was introduced on January 1st 2021 to replace the CE mark as the required certification for products supplied to GB markets, the UK Government

has announced that it will continue to recognise the CE mark indefinitely for most products.

This applies only to [the 18 regulations that fall under the Department for Business and Trade \(DBT\)](#). We advise checking the sector-specific set of regulations that apply to your product.

You can use the CE mark for most products you supply to the Northern Ireland (NI) market. You'll have to use UKNI marking if your products have undergone a mandatory third-party conformity assessment by a UK-based notified body.

What product areas does CE marking cover?

Product areas covered by CE include:

- ▶ Electromagnetic compatibility
- ▶ Machinery
- ▶ Low-voltage electrical equipment
- ▶ Active implantable medical devices
- ▶ Appliances burning gaseous fuels
- ▶ Cableway installations designed to carry persons
- ▶ Eco-design of energy-related products
- ▶ Equipment and protective systems intended for use in potentially explosive atmospheres
- ▶ Explosives for civil uses
- ▶ Hot-water boilers
- ▶ Household refrigerators and freezers
- ▶ In vitro diagnostic medical devices
- ▶ Lifts
- ▶ Measuring instruments
- ▶ Medical devices
- ▶ Noise emission in the environment
- ▶ Non-automatic weighing instruments
- ▶ Personal protective equipment
- ▶ Pressure equipment
- ▶ Pyrotechnics
- ▶ Radio and telecommunications terminal equipment
- ▶ Recreational craft
- ▶ Safety of toys
- ▶ Simple pressure vessels

The CE marking is not required for:

- ▶ Chemicals
- ▶ Pharmaceuticals
- ▶ Cosmetics and foodstuffs

We recommend consulting the [GOV.UK](https://www.gov.uk) website for sector-specific guidance.

5 steps to achieving CE compliance

Achieving CE compliance involves identifying the specific regulations that apply to your product, assessing your product against these regulations, compiling detailed technical documentation and creating a Declaration of Conformity to prove compliance.

Our start-to-finish CE marking service covers every step of the compliance process, from assessing and testing high-technology equipment against electromagnetic compatibility, machinery and low-voltage directives to compiling your technical file and drafting a Declaration of Conformity. Best of all, we can do all of this at your site.

Let's examine each step in further detail.

01 Identify the relevant directives

CE marking is often associated with directives such as the Electromagnetic compatibility Directive, Machinery Directive, Low Voltage Directive, and more. Each directive outlines the essential requirements your product must meet.

So, step one is to identify the EU-specific regulations and standards that apply to your product category. We recommend checking the official safety regulations for your specific product [via the GOV.UK website here](#).

Next, categorise your product and determine which directives and regulations apply. It can be beneficial to consult with experts or regulatory professionals who specialise in your industry to ensure you've fully understood which regulations and directives you're expected to comply with.

How does IES help?

While there are a number of regulations that might apply to your product, IES specialises in testing and checking product, equipment and machinery conformity against three directives:

1. Electromagnetic Compatibility (EMC) Directive
2. Machinery Directive
3. Low Voltage Directive (LVD)

Electromagnetic Compatibility Directive

The Electromagnetic Compatibility Directive 2014/30/EU, also known as the EMC Directive, applies to electrical and electronic equipment (including apparatus and fixed installations) that are prone to generate electromagnetic disturbance.

The directive concerns the compatibility of electrical and electronic equipment with electromagnetic fields, and sets specified limits for electromagnetic emissions. Its two key objectives are to:

1. Prevent electrical and electronic equipment from disturbing telecommunication, radio and other mediums
2. Ensure immunity of electrical and electronic equipment to electromagnetic interference

Non-compliance with the EMC Directive is an offence that can lead to a £5,000 fine, imprisonment of three months, or both. However, more commonly, non-complying equipment and products will be recalled from the EEA market immediately.

Machinery Directive

The Machinery Directive is a set of EU health and safety requirements that apply to new and modified machinery used in the workplace. Their purpose is to prevent machinery and equipment from causing harm or damage to users and their environments.

The regulations cover the safety-related elements of a machine, including:

- ▶ Interchangeable equipment
- ▶ Safety components
- ▶ Lifting accessories
- ▶ Chains, ropes and webbing
- ▶ Removable mechanical transmission devices
- ▶ Partly completed machinery

Non-compliance with the EMC Directive is an offence that can lead to a fine, imprisonment of up to two years, or both. In most cases, non-complying equipment and products will be recalled from the EEA market immediately.

Low Voltage Directive

The Low Voltage Directive 2014/35/EU, also known as the LVD, is a set of product safety requirements that apply to electrical equipment in the European Economic Area.

They apply to equipment used within certain voltage limits (50–1,000 V for alternating current and 75–1,500 V for direct current) and include health and safety measures to ensure that electrical equipment poses no risk to users or their surroundings.

The directive applies to most items of electrical equipment—including cable management systems, cables, fuses, laser equipment, plugs and plug outlets, pole voltage detectors, power supply units and switches.

According to the LVD, equipment should be:

- ▶ Safe and at minimum risk of causing death or personal injury to any person or domestic animal, or damage to property
- ▶ Constructed in accordance with good engineering practice in relation to safety matters
- ▶ Designed and constructed to ensure that it protects against electric shock through protective earthing, double insulation or equivalent
- ▶ Designed and constructed to conform with the principal elements of the safety objectives, which are in Schedule 3 of the regulations

Non-compliance with the LVD is an offence that can lead to a fine, imprisonment, or both. Non-complying equipment and products may be recalled from the EEA market immediately.

02 Determine the right route for assessment

Depending on your product and its relevant directives, you'll either need to undergo a third-party conformity assessment by a notified body or self-declare compliance.

Self-declaration involves you as the manufacturer declaring on your own responsibility that your product complies with the applicable standards and requirements. You can see the full list of legislative areas where a self-declaration is permitted [via the European Commission website here](#).

Directives for higher-risk products like medical devices, pressure equipment and appliances burning gaseous fuels typically require a third-party conformity assessment. In this case, you'll need to identify an EU-authorised notified body. To do this, you can use [the New Approach Notified and Designated Organisations \(NANDO\) database here](#).

If you're able to self-declare your product, you won't need to identify an approved body.

03 Draft your technical documentation

To prove CE compliance, you'll need to draw up and continuously maintain technical documentation that demonstrates your product, equipment or machinery complies with the relevant EU directives and standards.

Your technical documentation will typically include information such as how your product is designed and manufactured, how it's been shown to conform to relevant requirements, safety inspection reports and test certificates.

When compiling your documentation, you'll need to run various tests on your product to assess compliance with the relevant CE directives and standards. These tests include:

- ▶ Reviewing your product's design and specifications against the identified regulatory requirements and ensuring that it meets the outlined health and safety criteria
- ▶ Checking that all materials used in your product comply with relevant regulations, especially if there are restrictions on certain substances or chemicals
- ▶ Conduct functional testing to ensure that your product performs as intended and meets the safety standards—this might involve testing the product under various conditions to simulate real-world usage

- ▶ Performing risk assessments to identify and mitigate potential hazards associated with your product
- ▶ Reviewing documents related to design specifications and manufacturing processes and ensuring they comply with regulations

If you identify any non-conformities during the testing phase, you'll need to take corrective actions to address these issues. This might involve modifying the product design, adjusting manufacturing processes or improving documentation.

Depending on the specific directives applicable to your product, you generally must keep your documentation for 10 years after you place your product on the market. During that time, market surveillance or enforcement authorities can request to see your file at any time to check that your product complies with the relevant regulations.

You can also usually choose which language you'd like to use for your technical documentation. However, you may be asked to translate it, depending on the EEA country where you've placed your product on the market.

See the following checklist for what your technical documentation should include.



Section Number	
	Table of contents
Section 1	Copy of a signed declaration of conformity
Section 2	Purpose & objective of the technical document
Section 3	Description of the device, its function, intended use and any variants or variants that are planned
Section 4	Copies of the marketing literature
Section 5	Essential requirements checklist – Machinery Directive
Section 6	Essential Requirements checklist – Low Voltage Directive
Section 7	Essential requirements checklist – EMC Directive
Section 8	Risk analysis data (using EN954 and EN1050)
Section 9	Design calculations – e.g. wire sizes for design current, material stress calculations for intended pressure applications, etc.
Section 10	Electrical safety inspection reports
Section 11	EMC Reports and certificates
Section 12	FMEA's, fault trees, etc. (Failure Mode Effect Analysis – if appropriate)
Section 13	User manuals, maintenance manuals, installation manuals – these can be included or referred to by part number and location.
Section 14	Design drawing, diagrams of components, sub-assemblies, circuits etc. Again these can be referred to by part number and location.

How does IES help?

IES can support your self-declaration, where an approved body is not required. We support the entire process, from testing your products against directives to compiling your technical documentation and supporting you in taking the right corrective actions in the event of non-conformity.

How IES carries out checks against the Electromagnetic Compatibility Directive

Assessing equipment for EMC involves testing both emissions and immunity.

We provide an expert CE consultant either at your site (for fixed installations) or at our fit-for-purpose testing facility to carry out the required checks.

Before starting, you will need to have fully connected your equipment to its required facilities, so that it can be operated in a normal production mode, with handling or transport functioning.

You'll also need to have energised any process-related direct current or radio frequency power supplied, as requested by the test engineer during the course of the EMC measurement procedure.

There are five classes of emissions and immunity assessments that we need to carry out to check conformity with EMC directives:

1. Radiated emissions: Checking that the equipment doesn't emit unwanted radio signals
2. Conducted emissions: Checking that the equipment doesn't emit unwanted signals along connections
3. Radiated susceptibility: Checking that the equipment can operate normally under an electromagnetic field
4. Conducted susceptibility: Checking the equipment can operate normally when unwanted signals are applied to power leads and other connections
5. Electrostatic discharge: Checking that the product is resistant to a reasonable amount of electrostatic discharge

Once tests are complete, we supply all test data, technical documentation and recommendations on remedial actions, with the ability to partner with your team to implement remedial solutions where required.

If your equipment is non-compliant, we'll also work alongside you to find the most suitable solution.



How IES carries out checks against the Machinery Directive

Compliance testing for the Machinery Directive involves a comprehensive analysis of all identifiable risks.

To carry out the required checks, we provide an expert CE consultant either at your site or our testing facility.

Our engineer selects the appropriate harmonised standards for the machine

functions. These are then used as a basis for the audit and cover many disciplines, from ergonomic principles to light curtains.

As part of the testing process, our engineer will complete a checklist based on the requirements of each standard. This will form the basis of the technical report and any recommendations for conformity. We'll also carry out a comprehensive risk analysis for all identifiable risks.

See a short sample below of the checklist we use:

1. Principles of Safety Interrogation	Yes	No	N/A	Support Documentation
Are mains cables terminated close to the point of entry to the machine?				
Does the isolator disconnect all power supplies?				Individual risk assessment sheets.
Following point of disconnection, are circuits supplied through protective devices?				
2. Controls	Yes	No	N/A	Support Documentation
Will the controls withstand the rigours of normal use?				
In the event of any errors of logic, will the machine stop safely?				

We complete a risk assessment for every hazard we identify. As part of this, we describe the hazard and provide a risk grade according to the criteria described. Finally, we'll carry out an analysis of the measures taken to reduce or eliminate that risk.

We'll then create a technical report based on the result of the checklist and these individual risk assessments. This will include any recommendations to help non-conforming equipment comply with the Machinery Directive.

Finally, we can help companies and individuals meet their responsibilities in relation to PUWER (Provision and Use of Work Equipment Regulations 1998) guidelines, which require work equipment to be safe for their intended use and are applicable in the UK.

Complying with PUWER involves conducting a workplace assessment to ensure equipment is installed correctly, kept in a safe-to-use condition, only used by trained personnel, accompanied by health and safety measures, and more.

How IES carries out checks against the Low Voltage Directive

We provide an expert CE consultant either at your site or our testing facility to carry out the required checks.

Before starting, we require you to set up the equipment for full operational mode, as well as energise any high-power, direct current or radio frequency power supplies present in the equipment at various points in the testing process.

If we're working on-site, we also require you to have already commissioned complex equipment and that it's ready for normal operation. Simple systems such as benchtop metrology tools should be installed in a position and have power and any other

required services connected to the tool ready for power up and operation of the tool.

We'll also need an engineer from your facility who's familiar with how to operate the equipment to be present for all tests, and will liaise with them when the equipment under test needs to be operated.

We complete our inspection using a checklist which reflects the requirements of the LVD regulations. We also provide full reporting, including test data, technical documentation, any non-compliance issues and expert guidance on the most appropriate remedial actions.

See a short sample below of the checklist we use:

Incoming Supply EN60204		Yes	No
01	Are mains cables terminated close to the point of entry to the machine?		
02	Does the isolator disconnect all power supplies?		
03	Following point of disconnection, are circuits supplied through protective devices?		
Earthing EN60204		Yes	No
01	Is the main earth terminated near the main isolation point and marked PE?		
02	Where the earth conductor is terminated to equipment frame, is all paint removed?		
03	Is earth bonding connected to the panel and back plate of the power terminal enclosure?		
04	Where there is electrical equipment mounted on a metal access door, is the door earth bonded?		

04 Draft your Declaration of Conformity

It's your responsibility as the manufacturer to draw up your EEA Declaration of Conformity (DoC).

Your DoC serves as a formal declaration that you've met all requirements and safety directives applicable and should generally include:

- ▶ Your product, type, batch or serial number
- ▶ Your name and address
- ▶ A statement that you accept full responsibility

- ▶ Means of identifying the product
- ▶ A statement that the product conforms with the relevant legislation
- ▶ References to any designated standards, where applicable
- ▶ Reference to the approved body that carried out any conformity assessment activity, where applicable
- ▶ Your name and signature
- ▶ Supplementary information, if applicable

See below for an example of what your declaration of conformity might look like.

EC Declaration of Conformity

Name of manufacturer:

Address:

Declares, in sole responsibility, that the following assembly

Model:

Identification tag:

Conforms to the Essential Requirements of the following Directives:

- ▶ EC Low Voltage Directive 2014/35/EU
- ▶ EMC Directive 2014/30/EU

by comparison against the Essential Requirements of the above Directives and the Harmonised Standards listed below:

- ▶ BSEN 12100 2010 (Safety of machinery - Principles for risk assessment)
- ▶ EN 60204 2013 "Safety of machinery – Electrical equipment of machines, part 1: Specification for general requirements"
- ▶ EN 60335-2:2016 "Household and similar electrical appliances – Safety – General Requirements"
- ▶ EN 61000 series for Electromagnetic Compatibility

The manufacturer named above will keep the Technical Files required by EC Directives for review by authorised persons. This Declaration becomes invalid if modifications are introduced without the manufacturer's specific approval.

Authorised signature:

Name:

Position:

Date of issue:

05 Affix the CE mark to your product

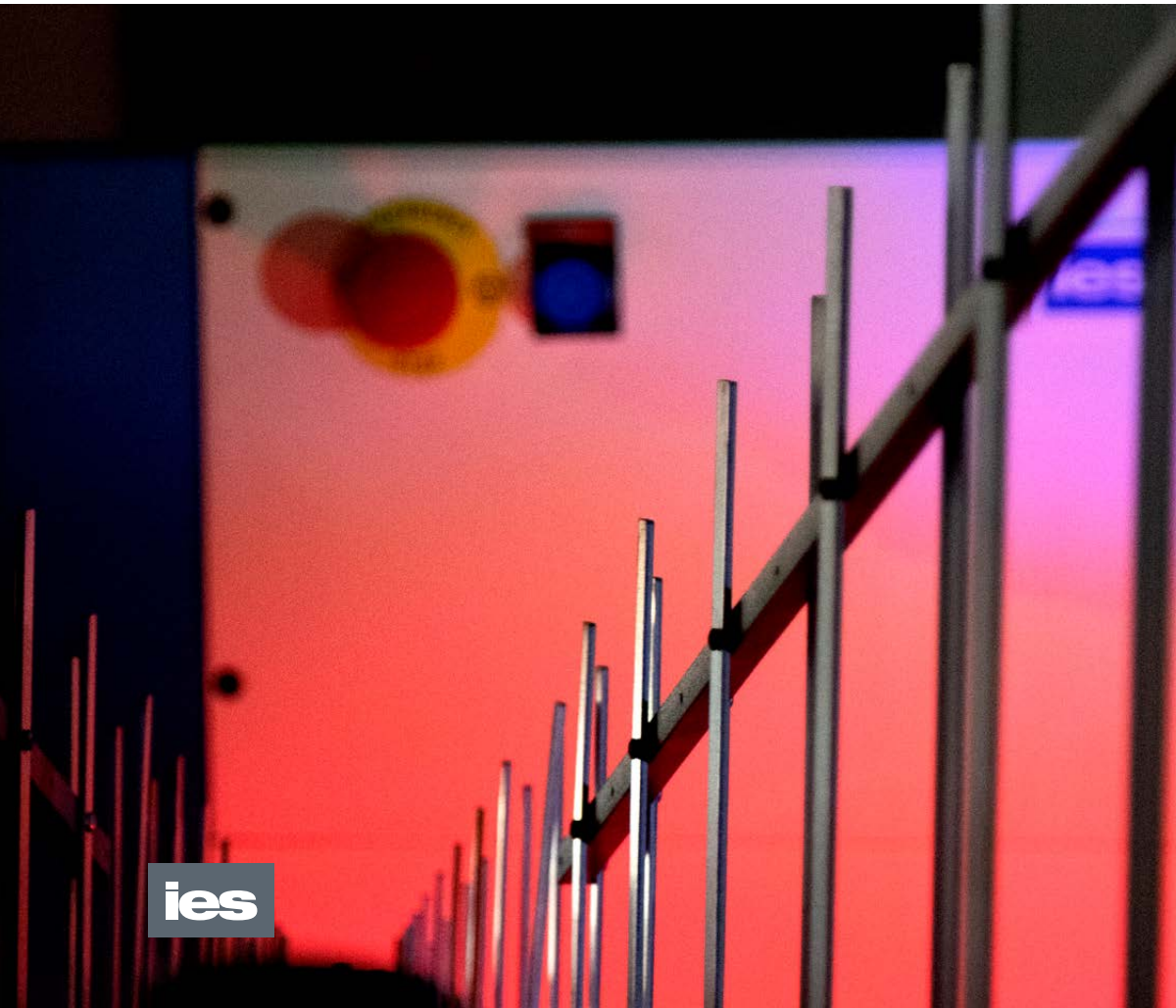
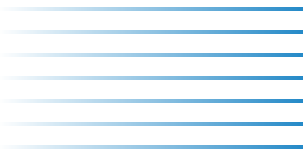
Once either your notified body has completed your conformity assessment or you have made your self-declaration, it's time to affix your CE mark to your product.

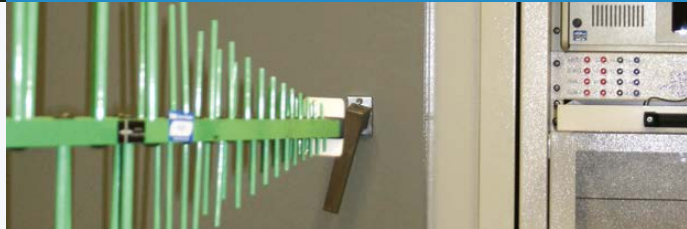
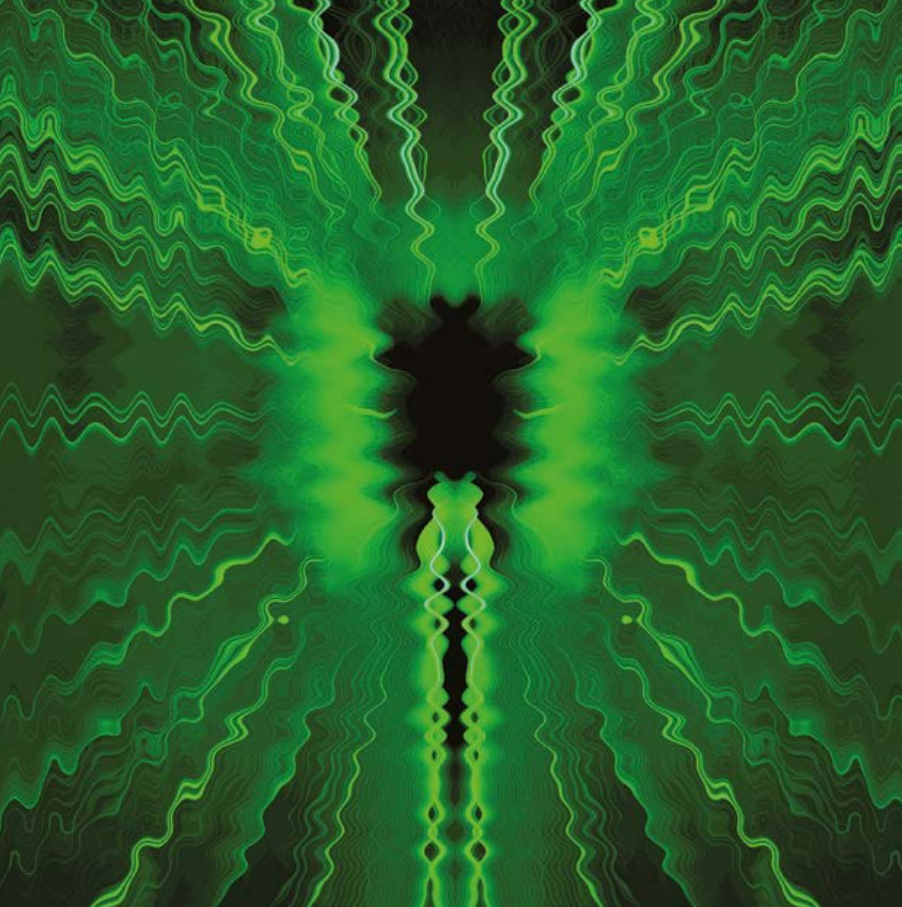
It's your responsibility, as the manufacturer, to place this mark. You should affix it directly to the product itself, but you can also place it on its packaging, manuals and any supporting literature, depending on the specific directives that apply to your product.

When using the CE image for your CE mark, the following rules apply:

- ▶ If you enlarge or shrink the size of the mark, each must still be in proportion to the official version below
- ▶ The CE mark must be at least 5mm high, unless otherwise specified in relevant directives
- ▶ The mark can take different forms but must always remain visible and readable

Once you have affixed your CE mark, you can place your equipment, products and machinery on the GB market.





ABOUT IES

At IES, we've been helping end-users and OEMs in high-technology industries such as semiconductor, pharma and aerospace to move and relocate business-critical equipment since 1991.

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