Buying new machinery

A short guide to the law and your responsibilities when buying new machinery for use at work

Introduction

This leaflet explains the main aspects of health and safety law you need to know about when buying new machinery. Although the laws look complicated, they can be summed up as requiring that any new machinery you buy for use at work is safe.

The information in this leaflet is arranged in four sections:

- A summary of the law on new machinery
- What you have to do in practice
- More detailed information about machinery supply law
- Checklists to use when talking to suppliers and buying new machinery

A summary of the law on new machinery

What is the law on new machinery?

The Supply of Machinery (Safety) Regulations 2008 (as amended)[1] require that machinery:

- is safe when supplied;
- comes with a Declaration of Conformity and user instructions in English; and
- is CE marked.

(Note: where the word 'safe' is used here, it refers to risks to both safety and health.)

Manufacturers, or their authorised representatives in Europe, have to meet these requirements when machinery is first placed on the European market. The Regulations also apply to users when putting machinery into service for the first time if it has not previously been in use in Europe (for example machinery built for own use or imported directly from outside Europe with no CE marking).

Intermediate suppliers must supply safe machinery in accordance with the requirements of section 6 of the Health and Safety at Work etc Act 1974.

Users of machinery have responsibilities under the Provision and Use of Work Equipment Regulations 1998 (PUWER),[2] as amended by the Health and Safety (Miscellaneous Amendments) Regulations 2002, to:

- select and provide suitable work equipment, taking account of working conditions and the health and safety risks in the workplace;
- ensure that it is used correctly; and
- keep it maintained in a safe condition.

When buying new equipment (including machinery), users are also required by PUWER to check it complies with all relevant supply laws. This means checking it is:

- CE marked;
- supplied with a Declaration of Conformity and user instructions in English; and
- free from any obvious defect (such as missing or damaged guards).

Users also have other duties under PUWER, such as maintaining and inspecting the equipment to ensure it remains safe. These are covered by the leaflet *Using work equipment safely.*[3]

Why do we have these laws?

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

However, while these laws have replaced and updated older laws that had similar requirements, they have not really changed what you have to do.

What is meant by 'machinery'?

A machine is normally regarded as being a piece of equipment which has moving parts and, usually, some kind of drive unit. Examples include:

- fork-lift trucks;
- metal-working drills;
- paper-making machines;
- circular saws;
- combine harvesters;
- lifting equipment (including lifting tackle and lifting equipment that is not powered);
- escalators;
- meat-mincing machines; and
- baling machines.

Some types of machinery are not covered by the Supply of Machinery (Safety) Regulations 2008. These are listed in 'Exclusions' on page 7.

What you have to do in practice

You may already know that most new machinery should have CE marking when you buy it. However, CE marking is only a claim by the manufacturer that the machinery is safe and that they have met relevant supply law. You – as the user – also have to check it is actually safe for your use. To understand what this means in practice when buying new machinery, it will help to understand the manufacturer's responsibilities.

What does the manufacturer have to do?

Manufacturers must make sure that the machines they make are safe. They do this by:

- finding out about the health and safety hazards (trapping, crushing, electrical shock, dust, noise, vibration etc) likely to be present when the machine is used;
- assessing the likely risks as a result of the hazards;
- designing out those hazards that result in risks or, if that is not possible;

- providing safeguards (eg guarding dangerous parts of the machine, providing noise enclosures for noisy parts) or, if that is not possible;
- using warning signs on the machine to warn of hazards that cannot be designed out or safeguarded (eg 'noisy machine' signs);
- providing operating instructions with the machinery, giving information on any risks that cannot be fully controlled by the design and safeguards provided, and for where users need to have a safe system of work or undertake maintenance; and
- keeping information in a technical file, explaining what they have done and why.

Manufacturers must also:

- affix CE marking to the machine to show they have complied with all relevant supply laws;
- issue a Declaration of Conformity for the machine; and
- provide you, the buyer, with instructions in English that explain how to install, use and maintain the machinery safely.

Is CE marking a guarantee of safety?

By affixing the CE mark, the manufacturer is claiming that the machinery complies with the law. CE marking in itself does not guarantee safety. You still need to check the machine is safe for use on your site, before it is used.

What do I need to do when buying a new machine?

Before you buy it, think about:

- where and how it will be used;
- what it will be used for;
- who will use it (skilled employees, trainees etc);
- what risks to health and safety might result from its use; and
- how well health and safety risks are controlled by different manufacturers, comparing things such as noise or vibration levels produced.

This can help you decide which machine may be suitable, particularly when buying a standard machine 'off the shelf'.

If you are buying a more complex or custom-built machine, you should discuss your requirements with potential suppliers, who can advise you on the options available.

When buying a custom-built machine, you can use this opportunity to work with the manufacturer to help them design out the causes of injury and ill health (some of the which are listed in 'Checklist A' on page 9). The time spent now, agreeing safeguards to control health and safety risks in your business, could save you time and money later. Remember, your workforce are likely to be able to help you identify the hazards and risks of using the machines in your business.

If you will be forming an assembly line by connecting several machines together yourself, you will need to comply with some of the requirements of supply law, including CE marking the line as a whole. More information on this is given under 'What about machinery which is going to be part of an assembly line?' on page 7.

When you place the order – especially from outside the EU – specify in writing that the machine must be safe, meet all relevant EU Supply Directives and be CE marked.

When you have bought it, check the machinery is CE marked and accompanied by:

- the Declaration of Conformity, which covers the relevant EU Directives (such as the Machinery Directive); and
- a set of instructions in English, stating how the machine should be used and maintained.

Most important of all, check the equipment is safe and do this every time before you bring new machinery into use.

How can I check the machine?

First make sure that the supplier (or installer) has given you information in English on how the machine works and its safety features. For smaller off-the-shelf machinery, this information should be included with the machine. Complex or custom-built machines may be backed up by a supplier demonstration but written instructions should still be supplied.

Then take a close look at it. Many things that affect safety are obvious; others can be detected using common sense and by taking the time to closely examine your new machine. Experienced members of your workforce can also help you do this. You can, of course, also compare it with your existing similar machines and check that it is at least as safe as they are.

Think about the following:

- Do any parts look dangerous, eg exposed gear wheels, cutters?
- Are there guards? If so, are they securely in place?
- Do the guards prevent access to the dangerous parts?
- Can the machine operate with the guards easily removed?
- Do you understand the controls?
- Can dust or fumes escape from the machine?
- Is it excessively noisy?
- Is there excessive vibration?
- Are any exposed parts likely to be extremely hot or cold?
- Are any live electrical parts exposed or easy to get at?
- Can you safely access all necessary parts for maintenance, especially those at height?
- Are there any special features, eg slow running speed, for use when setting?
- Are the manufacturer's instructions clear and comprehensive?

Further guidance is given in 'Checklist B' on page 9.

What should I do if I think the machinery I have bought is unsafe?

Don't use it. Contact the manufacturer or supplier for advice so you can arrange for the machine to be put right. If you allow unsafe machinery to be used then someone could be injured, for which you may have legal liabilities.

What else can I do?

If your company often buys machinery, you should consider producing guidelines on acceptance procedures and the checks to be made by those staff responsible for buying it.

How is doing all this going to help me and my business?

Allowing employees to use new machinery which is unsafe may cause an accident or incident. This will always cost you money and the costs can be higher than you realise. Also, if you were aware or should have been aware that a machine was unsafe, your business could be prosecuted.

More detailed information about machinery supply law

This section is for those who need to know more about the Supply of Machinery (Safety) Regulations 2008. (Note: these Regulations replaced in full the previous Supply of Machinery (Safety) Regulations 1992, as amended in 1994 and 2005.)

What is a Declaration of Conformity?

This is a printed document that comes with the machine. It is the manufacturer/ their authorised representative's declaration that the machine complies with the Machinery Directive (2006/42/EC), and any other Directives which are relevant to that particular machine (eg the Electromagnetic Compatibility Directive).

The Declaration of Conformity must state:

- the name and address of the manufacturer or their authorised representative in Europe;
- the make, type and serial number (if used) of the machine;
- the European Union laws (Directives) which the machine complies with;
- information on which standards have been used in the design and manufacture (if any);
- name and address of the notified body (this is only required for certain machinery, see the list in the Appendix); and
- the signature of an authorised person and the date of the Declaration.

What is a Declaration of Incorporation?

This is a printed document which must be supplied with partly completed machinery. Partly completed machinery is machinery which is either a drive system or an assembly – part of a machine but something that cannot in itself perform a specific application, and is only intended to be incorporated or assembled with other machinery/equipment to form a working machine.

The manufacturer should make this equipment as safe as possible, providing instructions for its safe assembly/incorporation and a Declaration of Incorporation. However, a partly completed machine should not be CE marked. The person who later combines this with other equipment to form a complete machine has the duty to comply with the relevant supply legislation, including CE marking.

Do importers and suppliers have to follow all these requirements, even if the machinery is made outside Europe?

All suppliers have to make sure that any machinery they supply within the European Economic Area (EEA) is safe, no matter where it has been made. The EEA includes the 27 European Union member countries and also Iceland, Norway and Liechtenstein. The EEA excludes Switzerland, although that country has now implemented the European Machinery Directive and so these requirements are also placed on machinery supplied in that country.

Importers and suppliers also need to check that:

- the manufacturer has carried out all the steps involved in making sure the machine is safe;
- there is a Declaration of Conformity or Incorporation for the machine;
- there are full instructions in English for installing, using and maintaining the machine; and
- if complete, the machine has CE marking.

Warning: If you import or construct the machine yourself, you take on the responsibilities of the manufacturer if the machine is not compliant with the Machinery Directive and CE marked with a Declaration of Conformity.

Does new machinery have to be made to any particular standards?

The machine must comply with the essential health and safety requirements (EHSRs) of EU supply law. In all cases, the manufacturer or the manufacturer's authorised representative must compile information in a technical file confirming how the machine complies with these requirements. The technical file must be kept for ten years after the product is last supplied.

However, when a machine has been made to the specification of any harmonised European standard listed in the *Official Journal* of the EU, it is presumed to conform to the EHSRs of that standard. (A harmonised standard is identified by an EN before the number, eg BS EN…, or BS EN ISO… .) In these cases the technical file has to show how the machine complies with those standards that give presumption of conformity. The use of these standards is voluntary but, if not followed, a similar level of risk reduction must be met as a minimum. European standards are already available for many types of machinery.

Manufacturers can design and manufacture their machinery to other product standards (eg British or American standards) as long as they are certain the machine will comply with the relevant EHSRs and is safe. However – unlike the harmonised European standards – the use of other such standards during manufacture does not give a presumption of conformity with the relevant EHSRs. Manufacturers must therefore demonstrate they have met all relevant EHSRs in the technical file.

In some circumstances, where certain machinery is not made in accordance with a harmonised standard – such as some woodworking machinery and power presses (see the complete list in the Appendix) – it must be type examined by an independent third party, known as a notified body. In these cases, the details of the notified body which has completed the examination will be on the Declaration of Conformity.

What about buying second-hand machinery?

It has to be safe for use. In some cases, it will not have CE marking but the supplier still has to make sure it is safe and accompanied by instructions for safe use.

As user, you have a duty to make sure that second-hand machinery is:

- safe when put into use;
- suitable for the selected work; and
- maintained in a safe condition.

If a second-hand machine has been totally refurbished (for example, adding CNC control, together with other work), it may have (or require) new CE marking. This is

because the way it operates is very different to before and, as a result, it has been treated as a new machine.

Importers of second-hand machinery which is 'new' to Europe – that is, second-hand machinery which has not been placed on the market or put into service there before – will have to meet the requirements of the Supply of Machinery (Safety) Regulations 2008. This means the product must be safe and CE marked. If you, as user, are also the importer in these circumstances, you will have to meet these requirements.

What about machinery which is going to be part of an assembly line?

Assembly lines may comprise a collection of CE-marked machinery, or a mix of complete CE-marked machinery, partly completed machinery and other equipment. Whoever fits the machine into the assembly line must pay particular attention to any hazards which may be introduced as a result (for instance, additional guarding or other controls may be required).

Once the machine has been fitted and the whole line is safe, the person incorporating the machine into the line must complete the technical file. This should contain all information on the design and how the machine was incorporated, together with the Declarations of Conformity (for whole pieces of machinery) and Incorporation (partly completed machinery) for all individual machines in the line. The whole line should have CE marking. This may be undertaken by you, as user – particularly if you operate a small company – or by a project manager (eg the installer, assembler or manufacturer).

Do I have to buy the manufacturer's safeguards?

If the item is a machine where the Machinery Directive applies, the manufacturer must supply it complete with all safeguards. They cannot supply it with any safeguards missing and expect you to provide them. However, in some special circumstances – for example where particular tools etc are going to be incorporated, or an existing noise enclosure is going to be reused – there can be a specific written agreement relating to the provision of these particular safeguards. This would be between you (the buyer) and the supplier, provided it is fully taken into account by the suppler in their technical file and the CE mark covers them.

However, this is not often done and manufacturers must generally supply all safeguards. Please note, you can only sign to accept the responsibility of fitting your own safeguards – and in effect, become involved in the final part of the manufacturing process – for equipment that does not come under supply legislation (see 'Exclusions' below).

Exclusions

The Supply of Machinery (Safety) Regulations 2008 do not apply to the following:

- machinery intended for use outside the EEA;
- second-hand machinery (when not substantially refurbished), except when 'new' to the EEA;
- manually powered machinery, except machinery used for lifting or lowering loads;
- machinery for medical use;
- specialised fairground or amusement park equipment;
- steam boilers, tanks and pressure vessels;
- nuclear equipment, which will emit radioactivity if it fails;
- radioactive sources forming part of a machine;

- weapons, including firearms;
- storage tanks and pipelines for petrol, diesel, flammable liquids and dangerous substances;
- passenger transport vehicles and their trailers (air, road, rail or water);
- seagoing vessels and mobile offshore units, and their equipment;
- cableways, including funicular railways used to carry passengers;
- most aspects of agricultural and forestry tractors;
- military and police equipment;
- conventional passenger lifts;
- mine winding gear;
- machinery intended to move performers during artistic performances;
- electric motors;
- household appliances intended for domestic use;
- audio, video and information technology equipment;
- ordinary office machinery;
- electrical switchgear and transformers;
- safety components supplied as identical spare parts by the original equipment manufacturer;
- rail-mounted means of transport using rack and pinion; and
- motor vehicles exclusively intended for competition.

What other supply law is there?

The Electrical Equipment (Safety) Regulations 1994 (as amended) apply to electrical equipment with mainly electrical risks – such as, household appliances intended for domestic use, audio, video and information technology equipment, ordinary office machinery, low-voltage switch and control gear, and electric motors.

- The Electromagnetic Compatibility Regulations 1992 apply to equipment likely to cause electromagnetic disturbance, or whose performance is likely to be affected by electromagnetic disturbance.
- The Pressure Equipment Regulations 1999 and the Simple Pressure Vessels (Safety) Regulations 1991 (as amended) apply to most pressure systems.
- The Equipment and Protective Systems Intended for Use in Potentially Explosive Atmospheres Regulations 1996 (as amended) apply to equipment for use in flammable atmospheres.
- The Lifts Regulations 1997 apply to conventional passenger lifts.
- The Medical Devices Regulations 1994 (as amended) apply to most equipment used for medical purposes, including medical devices which are machinery.
- The Gas Appliances (Safety) Regulations 1995 apply to domestic gas appliances.
- The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001.
- The Personal Protective Equipment (EC Directive) Regulations 1992.

Checklists to use when talking to suppliers and buying new machinery

Checklist A

What should I talk to a supplier (or manufacturer) about?

Tell the supplier where the machine will be used, what you want to use it for and who will be using it – particularly if it is a complex or custom-built machine.

Ask the supplier the following questions:

- What health and safety risks might there be when using the machine?
- Are there any dangerous parts and what guards will be provided?
- Will it need emergency stop controls and how will it be isolated?
- How do the controls and control systems work?
- Will dust or fumes etc be produced by the machine? If these are likely to be in significant quantities, can you adapt an existing extraction system to cope with the new machine or will you have to buy a new system?
- Has the machinery been designed to minimise the noise and vibration levels produced and what levels are expected?
- Are there any extremely hot or cold parts of the machine, and can they be insulated or protected?
- Are there any lasers or thickness gauges, and can any exposure to radiation be eliminated? If not, what precautions are there to stop any exposure to radiation?
- What has been done to eliminate the risk of electric shock, particularly during maintenance work when covers or control panel doors may be open?
- Are there possible risks from other sources of energy, such as unsupported raised parts, or hydraulic and pneumatic power sources?
- What precautions exist for safe access, especially at height?
- Is there clear information about installation, maintenance and breakdown procedures?
- Will you be informed if problems arise with similar machines bought by other users?

In addition, it is good practice for the supplier or manufacturer to have a service backup or helpline so you can get further information as you need it. You could check what is in place before buying.

Checklist B

What do I have to do when I have bought new machinery?

- Check it has CE marking (unless it is partly completed machinery) and a copy of the EC Declaration of Conformity (or Declaration of Incorporation, if partly completed machinery). If not then you should ask the supplier to provide this.
- Check that the supplier has explained what the machinery is designed to be used for and what it cannot be used for (unless this is off-the-shelf machinery).
- Make sure a manual has been supplied which includes instructions for safe use, assembly, installation, commissioning, safe handling, adjustment and maintenance.
- Make sure the instruction manual is written in English. (However, the maintenance instructions may be written in another language, if specialised staff from the manufacturer or supplier will be carrying out the maintenance.)

- Make sure information has been provided about any remaining risks from the machine, and the precautions you need to take to deal with them. These may include electrical, hydraulic, pneumatic, stored energy, thermal, radiation or health hazards.
- Check that data about noise and vibration levels has been provided, where necessary.
- Ensure that any warning signs are visible, in English and easy to understand.
- For a complex or custom-built machine, arrange for a trial run so you can be shown the safety features and how they work.
- Check for yourself to see if the machine is safe.
- Make sure any early concerns about the safety of the machine are reported to the supplier.

Remember: Never assume that machinery is safe just because it has CE marking. Always check for obvious defects and damage.

Appendix

List of machinery subject to type examination by a notified body (the details of this body should be given on the Declaration of Conformity), if not manufactured fully in accordance with a relevant harmonised standard (from Annex IV, Machinery Directive 2006/42/EC).

1 Circular saws (single or multi-blade) – for working with wood and material with similar physical characteristics, or for working with meat and material with similar physical characteristics – of the following types:

a) sawing machinery with fixed blade(s) during cutting, having a fixed bed or support with manual feed of the workpiece or with a demountable power feed;
b) sawing machinery with fixed blade(s) during cutting, having a manually operated reciprocating saw-bench or carriage;
c) sawing machinery with fixed blade(s) during cutting, having a built-in mechanical feed device for the workpieces, with manual loading and/or unloading; and
d) sawing machinery with moveable blade(s) during cutting, having mechanical movement of the blade, with manual loading and/or unloading.

2 Hand-fed surface planing machinery for woodworking.

3 Thicknessers for one-side dressing having a built-in mechanical feed device, with manual loading and/or unloading for woodworking.

4 Band-saws with manual loading and/or unloading – for working with wood and material with similar physical characteristics, or for working with meat and material with similar physical characteristics – of the following types:

a) sawing machinery with fixed blade(s) during cutting, having a fixed or reciprocating-movement bed or support for the workpiece; and
b) sawing machinery with blade(s) assembled on a carriage with reciprocating motion.

5 Combined machinery of the types referred to in points 1 to 4, and in point 7, for working with wood and material with similar physical characteristics.

6 Hand-fed tenoning machinery with several tool holders for woodworking.

7 Hand-fed vertical spindle-moulding machinery for working with wood and material with similar physical characteristics.

8 Portable chainsaws for woodworking.

9 Presses, including press-brakes, for the cold working of metals, with manual loading and/or unloading, whose moveable working parts may have a travel exceeding 6 mm and a speed exceeding 30 mm/s.

10 Injection or compression plastics-moulding machinery with manual loading or unloading.

11 Injection or compression rubber-moulding machinery with manual loading or unloading.

12 Machinery for underground working of the following types:

a) locomotives and brake-vans; and
b) hydraulic-powered roof supports.

13 Manually loaded trucks for the collection of household refuse, incorporating a compression mechanism.

14 Removable mechanical transmission devices, including their guards.

15 Guards for removable mechanical transmission devices.

16 Vehicle servicing lifts.

17 Devices for the lifting of people, or of people and goods, involving a hazard of falling from a vertical height of more than 3 m.

18 Portable cartridge-operated fixing and other impact machinery.

19 Protective devices designed to detect the presence of people.

20 Power-operated interlocking moveable guards, designed to be used as safeguards in the machinery referred to in points 9, 10 and 11.

21 Logic units to ensure safety functions.

22 Roll-over protective structures (ROPS).

23 Falling-object protective structures (FOPS).

References

1 Supplying new machinery: A short guide to the law and your responsibilities when supplying machinery for use at work Leaflet INDG270 HSE Books 2011 www.hse.gov.uk/pubns/indg270.pdf

2 Safe use of work equipment. Provision and Use of Work Equipment Regulations 1998. Approved Code of Practice and guidance L22 (Third edition) HSE Books 2008 ISBN 978 0 7176 6295 1 www.hse.gov.uk/pubns/books/l22.htm

3 Using work equipment safely Leaflet INDG229(rev1) HSE Books 2002 (priced packs of 10 ISBN 978 0 7176 2389 1) www.hse.gov.uk/pubns/indg229.pdf

Further reading

Machinery: Guidance Notes on the UK Regulations is available from the Department for Business, Innovation and Skills (BIS). See: www.bis.gov.uk

For full details of *The Health and Safety at Work etc Act 1974* and *The Supply of Machinery (Safety) Regulations 2008 (as amended 2011),* visit: www.legislation.gov.uk

Further information

For information about health and safety, or to report inconsistencies or inaccuracies in this guidance, visit www.hse.gov.uk/. You can view HSE guidance online and order priced publications from the website. HSE priced publications are also available from bookshops.

This document contains notes on good practice which are not compulsory but which you may find helpful in considering what you need to do.

This document is available at: www.hse.gov.uk/pubns/indg271.pdf.

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