



Woodworking  
Machinery

## **The new Machinery Directive 2006/42/EC – how will the changes affect machinery users?**

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**The new Machinery Directive 2006/42/EC will go into effect on December 29th, 2009, and there will be no transition period. By this date, machinery manufacturers will have to ensure that their products comply with a number of changes to the current directive 98/37/EC. Customers and users of machinery which is supplied ready for use will not be affected by the new directive. However, users who intend to make (significant) modifications to existing machinery or build machinery for their own use and put the machinery into service should already be familiarizing themselves with the new directive [1] [2].**

Similar to the current directive (98/37/EC), the new Machinery Directive 2006/42/EC applies to machinery and partially completed machinery which is placed on the market, and it is primarily relevant to machinery manufacturers. Nearly all machinery with a drive system which is used in the woodworking industry falls within the scope of the directive including hand-held machinery, standard machinery, complex production systems that are linked together to function as an integral whole and partly completed machinery which is contained within these systems.

Under the new Machinery Directive, machinery manufacturers have an obligation when they design the machinery to systematically assess and sufficiently minimize all risks which can occur during activities which are performed throughout the life cycle of the machinery including setup, installation, maintenance, cleaning, etc. They must also take into account “any reasonably foreseeable misuse”. Even if, in compliance with the directive, the machinery design is state of the art, it is normally not possible to eliminate all risks, as the machinery must be capable of producing something. The manufacturer must affix warnings to the machinery and include the warnings in the instructions to inform the user of any residual risks.

The new directive will not directly affect customers and users, who will continue to receive machinery with the CE marking as well as instructions in the official language of the country where the machinery is to be used and an EC declaration of conformity in which the manufacturer confirms that the machinery conforms to all applicable EC directives.

## **Systems are also “machinery”**

Despite the fact that the Machinery Directive has been in force for more than 15 years, there is still a degree of uncertainty surrounding conformity assessment of production systems. Many users are not aware of the fact that a system, even if it contains machinery which bears the CE marking, must be assessed as an integral whole and that the user is normally responsible for overall conformity of the system with the exception of new systems which were supplied from a single source. The new Machinery Directive has not altered this basic principle. “Assemblies of machinery ... which, in order to achieve the same end, are arranged and controlled so that they function as an integral whole“ are included in the definition of machinery. Production systems which perform a sequence of operations in the woodworking industry such as panel sizing, edge banding and drilling are a typical example of “assemblies of machinery”. Within one of these “assemblies of machinery”, the CE marking can be applied to individual machines if these machines can be operated autonomously and they have the safety features which are required for autonomous operation (e.g. pressure beam saws and edge banding machines). Regardless of whether individual pieces of machinery (or all of the machinery) in the system bear the CE marking, CE marking is mandatory for the system as an integral whole.

The system manufacturer must carry out a risk assessment (“hazard analysis” in the previous directive) and generate a safety strategy for the entire system. The manufacturer must pay particular attention to the physical and control system interfaces, because the linkage of multiple machines and other equipment generally creates new risks at the interfaces which must be minimized. Measures must also be taken to ensure that (partially completed) machinery which is part of the system is integrated into a higher-level control system and that all affected machinery and subsystems can be started safely and brought to a safe stop condition in case an emergency stop becomes necessary. The system manufacturer also has an obligation to retain the technical documentation and generate instructions for the overall system which must include safety information relating to the individual subsystems (machinery) and the system interfaces. If, and only if, the total system complies with the Machinery Directive, the system manufacturer can and must confirm compliance of the entire system by issuing an EC declaration of conformity and affix the CE marking to the system. The manufacturer of a new integral system is generally the responsible general contractor [3] or his EU authorized representative.

## **The user as manufacturer**

It often happens during the service life of a system that individual machinery is significantly modified or replaced at the request of the user. When such major changes are made, the process for placing the machinery or system on the market must be repeated. Before the modified system may be put into service again, the safety of the system must be verified and documented. A new EU declaration of conformity, which is based on a new risk assessment and updated technical documentation, must be issued for the system.

Users who carry out significant modifications on their own assume responsibility for the “new” systems. They assume the role of the manufacturer including all of the associated obligations (risk assessment and minimization, documentation, instructions, EC declaration of conformity and CE marking). Integration of new machinery is more than just a technical challenge. The associated assessment, risk and hazard minimization and generation of documentation require mechanical engineering and in-depth safety engineering expertise. Some of the large producers in the woodworking industry have chosen this path and take full responsibility for their production systems. Most users however rely on the expertise of the machinery or production system manufacturer and ask the supplier to take responsibility for functional integration of the new machinery into the existing system including safety engineering tasks.

The effort and cost associated with the safety engineering aspects of integration obviously depends to a large extent on individual circumstances. As a result, many machinery and system manufacturers offer conformity assessment for updated systems as a service which is charged at actual cost.

## **Summary**

The new directive will require machinery and system manufacturers to take a closer look at the safety of their products than in the past. The situation will not change for customers and users of turnkey systems and machinery that is delivered ready for use.

An EC declaration of conformity will still be mandatory for the complete system, and it is usually issued by the general contractor. During modernization projects, the conformity of the system will have to be reassessed. The user or a company acting on the user's behalf will need to perform a risk assessment, ensure that the risks are minimized and issue a new EC declaration of conformity.

## **References**

- [1] Directive 2006/42/EC of the European Parliament and of the Council of 17 May 2006 on machinery, and amending Directive 95/16/EC (recast) at [http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l\\_157/l\\_15720060609en00240086.pdf](http://eur-lex.europa.eu/LexUriServ/site/en/oj/2006/l_157/l_15720060609en00240086.pdf)
- [2] Thomas Kindt, Thomas Kraus, Dirk von Locquenghien, Hans-J. Ostermann: Die neue EG-Maschinenrichtlinie 2006; ISBN 10: 3-410-16309-3, Beuth Verlag, Berlin
- [3] General contractors for the delivery of complete plants, <http://machines-for-wood.com/en/N8001.html>

## **The author**

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