

ISTMA EUROPE position on EC Machinery Directive

Tools for Use on Machinery – Classification under Public Law

In day-to-day practice questions often arise regarding which legislation covers tools designed for use on machinery. These tools used on machinery, especially metal-cutting tools, forming dies and molds, are the subject of this position paper. What are referred to as "compressed-air tools", in particular those that are basically hand-held and hand-operated devices or even machines and are driven by compressed air, are not the focus of this review. However, since the tools specified above can be used on machinery, the impression could be created that such tools are generally covered by the scope of the Machinery Directive 2006/42/EC.

The Machinery Directive covers no range of applications that is identified by hazard specific characteristics. And the complexity of a product alone is not discussed as a decisive characteristic within the scope of the Machinery Directive. Hence, these aspects cannot lead to the conclusion that tools in general are covered by the Machinery Directive. Instead, the Machinery Directive covers specifically those products which meet all the characteristics of a definition compliant with Article 2. Hence, the following analysis is based on those definitions in the Machinery Directive that could be relevant for tools.

Are tools partly completed machinery?

In Article 2(g) the Machinery Directive defines what is meant by partly completed machinery in the context of the Machinery Directive. Article 2(g) contains the following definition:

“partly completed machinery’ means an assembly which is almost machinery but which cannot in itself perform a specific application. A drive system is partly completed machinery. Partly completed machinery is only intended to be incorporated into or assembled with other machinery or other partly completed machinery or equipment, thereby forming machinery to which this Directive applies;”

Note:

The present position paper only provides a point of reference, it is merely an overview of the classification of tools under public law and for using the Machinery Directive 2006/42/EC. It neither claims to be complete nor to be a conclusive interpretation of existing legal regulations. It may not be used as a substitute for an examination of the relevant directives, laws and ordinances. In addition, consideration must be given to the special features of individual products as well as their different potential uses. For this reason, it is imaginable that many more interpretations are possible.



The definition shows that only those products can be viewed as partly completed machinery that are designed to be “incorporated into or assembled with other machinery or other partly completed machinery or equipment, thereby forming machinery to which this Directive applies”.

If the tool that is intended for use on machinery were to be classified as partly completed machinery in the terms of Article 2(g), the operator of this machinery would have to repeat the procedures for assessing the conformity for the individual combination consisting of the machinery and the tool, since this combination (machinery, tool) would be machinery in the terms of the Directive. Moreover, this combination must include a CE marking after the required procedures have been conducted.

The declaration of incorporation for partly completed machinery contains the prohibition of putting it into service; this continues to exist until the complete product into which the partly completed machinery was incorporated has been submitted to procedures for assessing the conformity according to the Machinery Directive and the CE marking has been affixed to the product. In case of retooling, this new combination would also have to be submitted to these procedures. This bureaucratic effort was neither foreseen nor intended by the legislative authorities. That can be seen from the legislative authorities’ objective since the Machinery Directive regulates the initial providing of machinery and partly completed machinery and not of the making available of means to work by the employer.

The examination of the other characteristics of Article 2(g) also shows that a tool for use on machinery is not partly completed machinery in the terms of the Machinery Directive.

Are tools interchangeable equipment?

Interchangeable equipment is defined in Article 2(b) of the Machinery Directive as follows:

“‘interchangeable equipment’ means a device which, after the putting into service of machinery or of a tractor, is assembled with that machinery or tractor by the operator himself in order to change its function or attribute a new function, in so far as this equipment is not a tool;”

Only if the product which is supposed to be legally classified meets all the characteristics of this Article is it interchangeable equipment in the terms of the Machinery Directive. It is certainly true that tools intended for use on machinery are fitted by the operator after the machinery has been put into service. Generally, however, the tool does not change or enhance the function of

the machinery. Instead the tool contributes to the machinery being used in accordance with its intended purpose. The use in accordance with its intended purpose is defined by the manufacturer of the machinery within the framework of the procedures for assessing the conformity of the machinery and adapts the machinery's safety concept to the specified tools.

Each tool that corresponds to the technical specification of the manufacturer of machinery is covered by the machinery's protection concept. By affixing the CE marking and signing the EC declaration of conformity the manufacturer of the machinery declares that the tools specified can be used safely on the machine. Hence, the tools that neither enhance nor change the function of the machinery are not interchangeable equipment in the terms of the Machinery Directive.

Moreover, Article 2(b) excludes pieces of equipment that are tools. The Machinery Directive does not define any tools and, hence, contains no definition of them. For the purpose of explanation, the Guide to Application of the Machinery Directive 2006/42/EC contains the following comment in §41, that also applies to the characteristic of functional change or enhancement:

“Interchangeable equipment is also distinguished from tools, such as, for example, blades, bits, simple earthmoving buckets, etc. which do not change or attribute a new function to the basic machinery. Tools as such are not subject to the Machinery Directive (although the machinery manufacturer must specify the essential characteristics of tools which may be fitted to the machinery – see §268: comments on section 1.7.4.2 (n) of Annex I.

Annex I of the Machinery Directive contains fundamental safety and health protection requirements that the manufacturer of machinery is required to observe. These requirements also include provisions for the compilation of operating instructions for machinery. These provisions also commit the manufacturer to the specification of those tools that may be used on the machinery, see section 1.7.4.2 (n) of Annex I:

“(n) the essential characteristics of tools which may fitted to the machinery;”

The Guide to Application of the Machinery Directive explains this provision in section 1.7.4.2 (n) of Annex I as follows:

§268 The essential characteristics of tools

Section 1.7.4.2 (n) deals with instructions relating to tools that are not permanently fixed to the machinery and that may be changed by the user. Such tools are not considered as part of the machinery – see §41: comments on Article 2 (b) – however the safe use of the machinery frequently depends on the fitting and use of appropriate tools. The instructions must therefore specify the characteristics of the tools on which safe use depends. This is particularly important for fast moving or fast rotating tools, in order to avoid risks due to the break-up and ejection of fragments of tools or due to the ejection of the tools themselves – see §207 and §208: comments on sections 1.3.2 and 1.3.3.

The essential characteristics to be specified may include, for example:

- the maximum or minimum dimensions and mass of tools;
- the constituent materials and assemblies of tools;
- the requisite shape or other essential design features of tools;
- the compatibility of the tools with the tool-holders on the machinery.

The consequence is that tools that are designed to be used on machinery and meet the specifications of the manufacturer of machinery are not interchangeable equipment in the terms of the Machinery Directive. Tools that enhance or change the machinery's function and, as a result, are either no longer covered at all or in part by the machinery's safety concept can be classified as interchangeable equipment if they also correspond to the other characteristics contained in Article 2(b) of the Machinery Directive.

Are tools outside the scope of law?

If tools that are used on machinery are not partly completed machinery or interchangeable equipment in the terms of the Machinery Directive, the impression might arise that tools such as these do not need to meet any safety or health requirements. However, this is not true. If products are not covered by the European harmonization legislation, the national legislation of member states must be applied. These regulations commit the manufacturer to place exclusively safe products on the market. For tools this means that, for example, during fitting, maintaining, transporting or storage this tool must not be a source of hazards. This applies especially if the tool has stored energy or if its surface temperature is extreme.



The tool manufacturer must always ensure that the protective measures taken meet the state of the art and, if necessary, that warnings are affixed to the tool or that, if all further technical measures available to minimize risk have been exhausted, an operating manual warns against any residual risks.

The disadvantage of national legislation on product safety is the absence of any provisions regarding procedures for assessing conformity. The Device and Product Safety Act contains no requirements relevant to prove the compliance of the product with safety-related requirements.

There are also no requirements for the performance of a risk assessment or the presentation of the connection between the risk assessment and the operating manual or directions for use.

What is the way out of this dilemma?

The solution to the problem in practice

The manufacturer of a tool that is covered by the above named national legislation can apply elements of the procedures for assessing the conformity in the terms of the Machinery Directive in its safety assessment even if the tool is not included in the scope of the Machinery Directive. The following elements of the procedures could be applied:

- Determining the relevant, fundamental safety and health requirements of Annex I of the Machinery Directive
- Risk assessment including the determination of the hazards compliant with the Annex of EN ISO 12100: 2010
- Compiling the operating instructions in accordance with the Machinery Directive, section 1.7.4 of Annex I

In a further step, the tool manufacturer may select and document the safety solutions to meet the determined fundamental safety and health protection requirements compliant with the state of the art and to sufficiently minimize, or even eliminate, all the risks identified. The national legislation on product safety commits the manufacturer to compile the operating instructions in the official language of the respective country. This also covers tools. For this reason, at this point, there is also no disadvantage to applying specific elements of the procedures for assessing the conformity in compliance with the Machinery Directive.

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