

Machinery Directive 2006/42/CE

The new Machinery Directive (2006/42/CE) effective starting Dec 29th 2009 for Machinery made available to the market in 27 Countries of the European Community, plus Switzerland and Turkey, is aimed to increase the effectiveness of the previous Directive (98/37/CE) and to clear possible interpretation doubts present in it without substantially changing specs. The new Directive includes the application of the risk analysis and states that all essential safety criteria shall be met.

Partly Completed Machinery

A relevant change is the introduction of this new category: Partly Completed Machinery; they need a whole new technical documentation. Among Compact Hydraulics (CH) products, are considered “Partly Completed Machinery” the Compact Power Modules; they don’t need to be CE marked, but they are subject to the following specifications:

- a) Declaration of incorporation
- b) Assembly instructions
- c) Risk Analysis
- d) Complete Technical Documentation

The documents (a) and (b) must be made available to each customer, so that he may incorporate them in the technical file of the machine or equipment where the Power Module will be installed.

The manufacturer of a Partly Completed Machinery must keep the original copy of the documentation for at least 10 years, in order to avoid tampering and to submit it when requested by an Authority.

Safety components

Safety Component means a component aimed to fulfil a safety function, independently placed on the market, the malfunction of which endangers the safety of persons and which is not essential for the machine to function. Generally, CH does not manufacture and distribute to the market products pre-defined “Safety Components” and CE marked accordingly as requested by the Directive; CH would develop a Safety Component only after a specific customer request, and following a complete documentation of all reasons and all working conditions to which the component shall comply. . In fact, in order to fulfil a safety function, the Machine Manufacturer can also employ a standard component non CE marked (as all the ones shown in the current CH Catalogue) if he judges that the component chosen complies with the needed performance capacities; the Machine Manufacturer has to approve the component employed and has to take responsibility for it..

EN ISO 13849

EN ISO 13849 (issued November 2006, applicable starting November 2009) is a new Standard (that Bosch Rexroth decided to implement in all of its Divisions) which provides criteria for evaluation of control systems the malfunction of which endangers the safety of persons; the standard considers also the individual components employed in such control system (SRP/CS = Safety Related Parts of Control Systems) and gives criteria to evaluate their safety level and performance, if the malfunction or failure of such component may cause a “dangerous” failure of the whole control system.

Whenever a Machine Manufacturer needs or chooses to comply with EN ISO 13849, and if CH products are used as components which, in case of malfunction, could cause safety related issues (SRP/CS), the Manufacturer can ask the ‘MTTFd’ value (Mean Time To Failure dangerous) of the components , and he will use it as a parameter for calculating the safety level, or “Category”, of the whole ‘control system’.

UNI EN 982

The Directive UNI EN 982 is still effective: it provides general specifications and safety criteria for all of the hydraulic components. It’s a regulation that needs to be followed for manufacturing hydraulic components which, in case of malfunction or if misused, could imply danger.