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New EU Regulations for Electric Motors Start Date Drawing Near

Windmüller & Hölscher well positioned with “Greenovation” strategy

The EU is serious: energy waste will not be tolerated. Following the ban of conventional light bulbs, energy-inefficient motors will also be banned from the market beginning in summer 2011. The new requirements will have no effect on customers of machinery manufacturer Windmüller & Hölscher, as today's motor systems not only possess the highest efficiency standards, but already meet the standards of tomorrow. As a part of its “Greenovation” strategy, W&H has already made necessary updates to meet these stricter requirements.

Extrusion, Printing and Converting: without electric drives, today's package production would be impossible. Electric motors provide motion, whether driving the extruder screw, guiding web through a press or transporting hands of paper sacks by automatic conveying systems. They maintain the resin, ink and glue supplies, pressurize operating media and play a central role in the technological processes, e.g. the supply and exhaust of cooling and drying air. As a component of a complex automated solution, motors position tools or assembly units during changeovers.



These examples represent just a small segment of applications in which electric motors are used.

However, there is a flip side to their wide-spread use. Today, electric motors represent the largest share – roughly 70% – of energy consumption at industrial companies. Given this fact, the EU took regulatory actions, including the Eco-design Directive¹ and Electric Motor Regulations², in order to ban energy-inefficient electric motors, achieve the goals of creating environmental sustainability, and reduce CO₂ emissions.

Compared to other forms of energy converting machines, electric motors are generally highly efficient. Nonetheless, the class of motors listed in the EU-regulation possesses the potential to further improve efficiency by 20 – 30% by applying state-of-the art motor design.

This regulation targets three-phase asynchronous motors with 2 – 6 poles that are connected to the grid for continuous operation and have a rated capacity between 0.75 and 375 kW. Beginning on June 16th, 2011, only motors meeting the minimum efficiency requirements are permitted to be sold. Such motors will have the abbreviation IE2 on the name plate. In both January 2015 and 2017, requirements will be tightened and extended to motors of other specifications (IE3).

¹ Directive 2005/32/EC of the European Parliament and of the Council of 6 July 2005 establishing a framework for the setting of ecodesign requirements for energy-using products

² Commission Regulation (EC) No 640/2009 of 22 July 2009 implementing Directive 2005/32/EC of the European parliament and of the Council with regard to ecodesign requirements for electric motors (Text with EEA relevance)



It should be noted that motors aren't always the culprit of energy inefficiency. Sometimes the problem lies in the installation situation. For instance, it is not particularly efficient to use a damper to regulate air flow through a duct while running a fan at a constant speed. A better solution is to run the fan motor in speed control mode drawing only the energy needed from the grid.

Such quality solutions are characteristic of W&H machinery, which are mobilized almost exclusively by regulated, thus energy-efficient drives. Thanks to the closed-loop control, the machinery is not only always running at optimum energy efficiency but also capable of feeding energy back into the grid in braking mode. Saving energy was also the driving force for changing motor technology, e.g. replacing continuously energized stepper motor positioning drives with servo motors for color deck adjustment. There are a few subordinated areas – such as pumps and fan drives – where asynchronous motors are used. Well ahead of the new regulations, W&H has replaced these for more efficient versions.

It is important to note, that machines delivered prior to June 16, 2011 do not need to be retrofitted. This is also the case for replacement motors purchased before the effective date that are currently in storage as well as for the repair of existing motors. All motors delivered after June 16, 2011, must follow the new and more stringent requirements. In the event that replacement motors are mechanically or electrically incompatible with the originals W&H will provide the necessary modifications.

If you have questions regarding the Electric Motor Regulations and your W&H equipment, W&H personnel in product management, customer service and the Information and Diagnostics Center can help. You can be



certain, that W&H machinery is and will continue to be among the most efficient in the industry and meet the highest environmental standards.

Windmüller & Hölscher is an international leader in the design, manufacture and distribution of machinery for the flexible packaging industry and is based in Lengerich, Germany. The product range includes flexographic and gravure printing presses, blown and cast film extrusion systems, multiwall equipment, plastic sack and bag making machines as well as form-fill-seal machinery.

This release can be found in .doc and .pdf format at:

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PR 1302

State-of-the-art electronic controllers permit energy-saving operation of motors
