



# SIPAPER<sup>CIS</sup> Drives

Innovative drive solutions for the paper industry

Industrial Technologies

**SIEMENS**

# Perfect drive solutions for the paper industry

The intelligent, modular SIPAPER<sup>CIS</sup> Drives concept offers you outstanding solutions – from straightforward single drives to complex multimotor drive systems. Energy-saving and highly efficient, they're perfectly suited for every task – and give you a lasting competitive edge.



## The challenge

The requirements in paper production could not be more contradictory. While investment budgets are under constant cost pressure, the product quality demanded on the international paper markets is virtually impossible to achieve using outdated technology. Moreover, the possibilities for action are further limited by continuously rising energy and raw material prices. That's why it's important to specifically optimize those aspects that can significantly increase system performance – with improved control technology, for example, and more energy-efficient modern drives. That's the idea behind SIPAPER<sup>CIS</sup> Drives, the modular solution for electric drive systems in paper production.



## Our solution

SIPAPER<sup>CIS</sup> Drives gives you a lasting competitive edge with its combination of efficient drives and master automation system. The gearless drives attached directly to the machine feature outstanding energy efficiency and minimized maintenance costs. The control system ensures the functionality of the drives and allows convenient operator control and monitoring, including comprehensive fault diagnostics. Optimum control quality is thus possible at all times, and the number of paper web breaks can be substantially reduced.

The new SINAMICS frequency converters let you take advantage of the highly dynamic properties and control precision of modern three-phase motors such as the gearless direct drives from Siemens. The product assortment ranges from simple pump and ventilator fan applications in the process area to high-performance multimotor drives on the paper machine. The joint system platform covers all requirements from small to large power ratings and from low to medium voltage. This offering is rounded out by the leading automation system on the global market, SIMATIC S7, which perfectly integrates the functionality of the drives to create a powerful, reliable overall system with high availability. SIPAPER<sup>CIS</sup> Drives solutions enjoy very high acceptance, as proven by their many success stories in the paper industry around the world.



## SIPAPER<sup>CIS</sup> Drives: Your advantages

- Modular concept, compatible with other SIPAPER<sup>CIS</sup> products
- Ideal for modernization and revamping thanks to the high degree of scalability and expandability
- Motors attached directly to the machine which are suitable for use under drying hoods at ambient temperatures of up to 90 °C; optimal solution for the revamping of old machines with gears and gearboxes
- Compact, new generation of SINAMICS converters allow modernization of the switchgear even in confined spaces
- Globally applied SIPAPER<sup>CIS</sup> Drives software standard offers a wide range of control functions and global service support
- Powerful software platform which is also used for coating machines, rewinders, offline calenders and slitter winders
- Energy-efficient system design optimized for minimum system perturbation
- Standard control system for drives, power supply and process for maximum operating reliability and protection of investment
- Reduction of paper web breaks thanks to optimized master controls for increased output in the required quality
- Maintenance-friendly, low-noise and space-saving design
- Uniform, self-explanatory human-machine interface for more information and convenient control with low training costs

### Energy efficiency

All drive components feature a high level of efficiency, and the optimum operating point is also taken into account in the design of the components. Elimination of gears and other mechanical transmission elements in the drive train permanently improves the energy balance while increasing availability and control quality. Drives are also available with water cooling as well as air cooling. This makes the system more compact and also allows the recycling of dissipated power, for example for reuse as energy.

### Modernization

Thanks to its modular concept, SIPAPER<sup>CIS</sup> Drives components can also be easily implemented in existing systems. For this, digital converter technology is available for DC as well as for AC systems with a large number of standardized interfaces based on global industry standards. Their extremely compact design allows modernization even where there is only little space available in the switchroom.

### Standardization

SIPAPER<sup>CIS</sup> Drives systematically relies on the use of standard solutions. This brings obvious advantages: In addition to the cost advantages of scale, the main benefits include global availability of spare parts and increased reliability. A modernized multimotor configuration offers the same advantages as a greenfield installation, in some cases with considerably lower costs.



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