

SIEMENS



A strong and rugged team

Completely liquid-cooled system: SIMOTICS FD motors and SINAMICS S120 Cabinet Modules

Added value through optimum coordination

Based on the unique concept of Integrated Drive Systems, water-cooled SIMOTICS FD motors and liquid-cooled SINAMICS S120 Cabinet Modules converters are optimally harmonized and coordinated with one another. They form a perfect combination with an extensive range of options, which allow flexible drive trains to be configured for demanding applications, for instance in the steel, automotive and process industries.

With Integrated Drive Systems, Siemens is providing the intelligent response when it comes to efficient drive solutions. The systematic approach and perfect coordination of all components of a drive train create a measurable added value: More power and performance, higher availability, lower operating and investment costs over the complete system life cycle.

Integrated drive systems – which always pay off:

- Lower operating costs through excellent energy efficiency
- Capital investment costs reduced by up to 15% by avoiding overdimensioning
- Up to 15 percent less non-scheduled downtimes by optimizing the motor for converter operation in conjunction with the drive train condition monitoring
- High degrees of protection – the perfect choice for harsh environments
- Especially quiet operation
- Low line harmonics when operated with Active Infeed



The liquid-cooled combination comprising SINAMICS S120 converter and SIMOTICS FD motor especially proves itself in all types of demanding environments



An IP55 degree of protection ensures safe and reliable operation even at high temperatures, dust, aggressive atmospheres, humidity, spray water and salt-laden sea air

Compact and energy-efficient and masters all requirements

A liquid-cooled SINAMICS S120 converter cabinet system and a water-cooled motor from the new SIMOTICS FD series are a perfectly harmonized and coordinated pair: The pulse patterns of the converters are precisely designed for the rated pulse frequency of the motors. The motor windings are adapted to the converter output currents and voltages.

The result is an optimized overall system with high power density – without overdimensioning the converter, for lower losses, outstanding voltage utilization and low noise emission. Further, high degrees of protection can be simply implemented. This means that the system is especially suited for use in harsh environmental conditions. The system is modular and can be flexibly combined to address various plant and system configurations.

Efficient cooling concept saves space and reduces costs

The liquid-cooled motor and converter result in lower space requirement when compared to air-cooled systems. An unbeatable advantage, for instance, for offshore applications or in shipbuilding. Further, for liquid-cooled systems, heat is dissipated far more efficiently and in a more specific way. Room climate control is significantly lower – and the heat dissipated to the cooling liquid can even be used as process heat. This increases the energy efficiency of the system, and, depending on the application, the possibility of energy recovery.

Get to know more about our products. You can find technical data and system information in the product documentation:

siemens.com/sinamics-s120-cabinet-modules
siemens.com/simotics-fd

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