

Optimised power consumption, reduced noise and heat emissions, low space requirements, high level of flexibility, and ease of maintenance - these are all features of the new powerful ProCraneMC drive systems from Convertteam.



ProCraneMC – liquid cooled power electronics und modular design

ProCraneMC – Extreme Power Density in Every Application

ProCraneMC impresses with its extremely compact dimensions and modular design concept, which is suitable for both mobile and stationary crane installations. It is particularly in installations where several drives are harnessed together that ProCraneMC is able to demonstrate its true potential.

The power rating ranges from 70 kW to 2400 kW. The drive platform features an extreme power density, low operating costs, a high degree of adaptability, and an extremely high level of availability. By means of a common DC link, energy is exchanged between the active rectifier (mains pulse inverter) on the

supply side, the power modules (motor pulse inverters), the brake choppers, and the optional buck-boost converters. ProCraneMC achieves its high level of reliability and fault tolerance thanks to a new concept using water-cooled power stacks and powerful controllers that can be connected in parallel.

Modular Design – Reduced Dimensions

The ProCraneMC system solution is available for various performance ranges according to individual customer requirements.

It essentially consists of three key components: the power supply, the power stack and an open and closed-loop

control unit.

Mains pulse inverters, motor pulse inverters, brake choppers, and buck-boost converters are based on the same power electronics.

The power modules of the power stack differ with regard to their current load. Thanks to the integrated water-cooling it has been possible to further reduce their dimensions in favour of power density. Up to six complete power modules can now be easily installed in a 60 cm wide cabinet. The DC link can carry a maxi-

Technical Data

System:

- Grid supply voltage: 3 AC / 400 V - 690 V
- Power range: 70 kW - 2.400 kW
- Grid frequency: 50 / 60 Hz
- DC link voltage: 700 V - 1070 V
- DC link: 1.200 A max.

Power modules:

- Power range: 70 kW / 86 kVA - 244 kW / 298 kVA
- Rated module current: DC 70 A - 520 A

Features:

- Interfaces: Profibus, Can-Bus, Ethernet
- Cubicle protection: up to IP54
- Liquid cooled modules
- Ambient temperature: -25 °C to +55 °C

imum continuous current of 1200 A. Compared to conventional Converteam technology, it has been possible to decrease the design size of the Pro-CraneMC system solution by 30 percent and the weight of the power modules by 60 percent.

Modular Design – Individual Structure and Flexible Upgrades

The modular design supports easy expansion. Power ratings of up to 2400 kW can be achieved by adding a busbar and additional mains pulse inverter units. Our experts will be happy to advise you and adapt series-produced modules to your specific needs. Your optimum drive solution will be produced and tested by our production facility.

diesel unit's output. By using energy stores, diesel consumption and emissions can be further reduced. Naturally, the same active rectifiers can be used for energy-optimised mains operation of the crane. Alternatively, more cost-effective diode bridges are available. Brake choppers are available, which discharge the excess energy of the DC link.

Reliability Is No Coincidence

The well-designed concept of power and control parts that can be connected in parallel maximises availability and fault tolerance. Even in the event of a module fault, stable operation of the crane can continue with reduced power. Flexible communication concepts, powerful visualisation and intuitive operating software always provide an overview of the status of ProCraneMC.



ProCraneMC – powerful solutions for every requirement.

Active Energy Management

ProCraneMC can also be optimised for a wide range of requirements on the mains side. Mobile diesel cranes often require active rectifiers with active energy management. This enables energy-saving and low-emission control of the

Always Available – Expert Remote Service for Crane Installations

Teleservice provides you with rapid and effective support from our specialists. If required, our experts can respond to you at any location, no matter where you are. Consequently, optimum opera-

Highlights:

- Extremely compact dimensions
- Optional: Outdoor installation supported
- Highly flexibly design
- Low noise emission
- Simplified maintenance

Options:

- Fuel saving and emission reduction by featuring Li-Ionen batteries and diesel speed management
- Mains chokes, fuses, disconnectors, etc.
- Heat-exchange unit
- Integrated process control and HMI
- Diode bridge
- Brake chopper
- Energy store, e.g. with ultracaps

tion and a high level of availability can be achieved throughout the installation's life cycle. The manner in which support is provided will depend on the equipment level of the installation concerned as well as the intended scope of the support agreement.

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