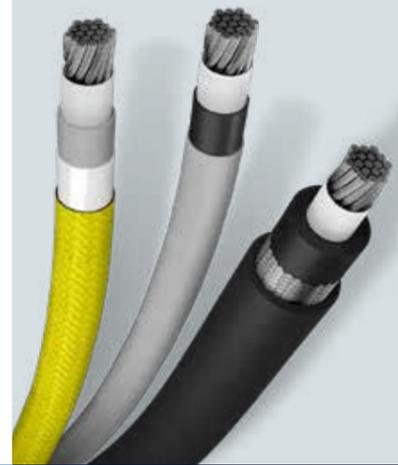
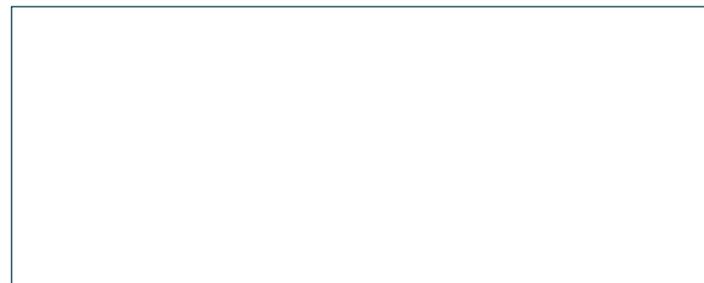


SIWO-KUL® CUSTOMIZED CABLE SOLUTIONS FOR MOTORS, GENERATORS AND DRIVES



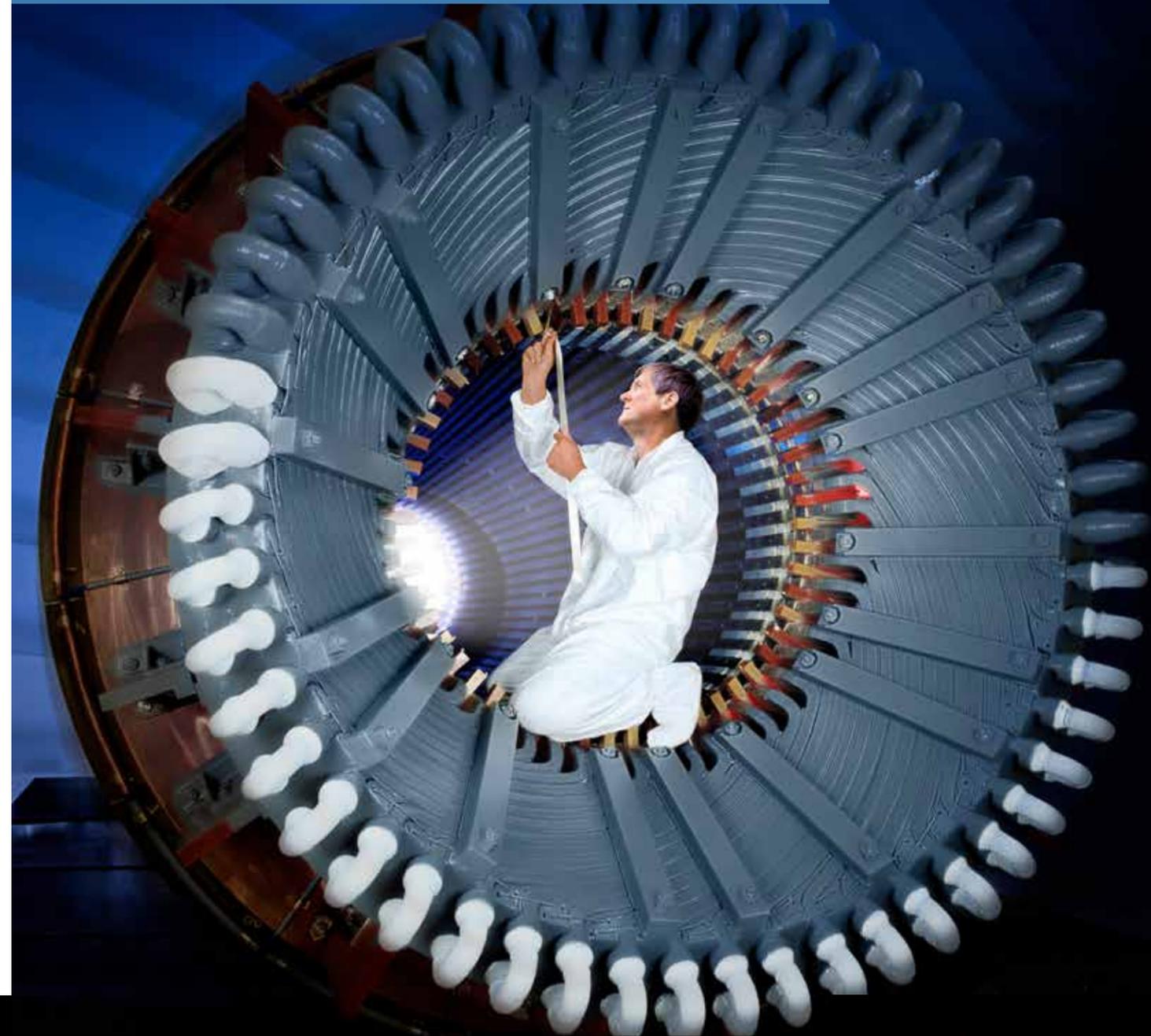
Nexans brings energy to life through an extensive range of best-in-class products and innovative services. For over 120 years, innovation has been the company's hallmark, enabling Nexans to drive a safer, smarter and more efficient future together with its customers. Today, the Nexans Group is committed to facilitating energy transition and supporting the exponential growth of data by empowering its customers in four main business areas: Building & Territories (including utilities, smart grids, e-mobility), High Voltage & Projects (covering offshore wind farms, submarine interconnections, land high voltage), Telecom & Data (covering data transmission, telecom networks, hyperscale data centers, LAN), and Industry & Solutions (including renewables, transportation, Oil & Gas, automation, and others). Corporate Social Responsibility is a guiding principle of Nexans' business activities and internal practices. In 2013 Nexans became the first cable provider to create a Foundation supporting sustainable initiatives bringing access to energy to disadvantaged communities worldwide. The Group's commitment to developing ethical, sustainable and highquality cables drives its active involvement within several leading industry associations, including Europacable, the National Electrical Manufacturers Association (NEMA), International Cablemakers Federation (ICF) or CIGRE to mention a few. Nexans employs more than 26,000 people with an industrial footprint in 34 countries and commercial activities worldwide. In 2017, the Group generated 6.4 billion euros in sales. Nexans is listed on Euronext Paris, compartment A. For more information, please visit: www.nexans.com



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Nexans
BRINGS ENERGY TO LIFE

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GENERATORS AND DRIVES REQUIRE **SIWO-KUL®**

Traditional and renewable energy generation, oil and gas, mining, the processing industry, shipbuilding and power plants are all dependent on medium-voltage motors, generators and drives. The latter enhance motor efficiency and optimize energy costs.

Annual average market growth until 2020 for motors and generators is predicted at around 8%, and for MV drives around 1.5%. Currently, the largest markets are the US, Brazil, Europe, China, India and the rest of Asia.

The challenges facing the industry depend greatly on optimizing flexible high-temperature cables to assure safe and reliable power connection and operation. There is a need for increased power density and faster start up (ignition) necessitating improved cable flexibility and lower partial discharges in insulations to extend the lifetime of the cable.

All of this requires advanced cable design, engineering, and extensive services that only a time-proven cable manufacturer can provide.

What you expect from a cable manufacturer:

As an OEM, energy system integrator, or specialized distributor you want a global cable partner who can provide you with high-end products and expertise to improve the performance and durability of your systems and equipment, including:

- A full range of flexible, high-temperature MV single core cables
- The right choice of conductors, platings and premium-quality silicone insulation
- Compactness and resistance to chemicals and oils
- Low smoke, minimal corrosive/toxic gases and fire-resistance
- Ongoing innovation to keep up with technical evolution
- International certifications and test approvals
- Technology to help optimize and reduce expensive copper
- Services: short lead times, prompt delivery, engineering, design input, electrical and thermal simulation, kits, supply chain and e-business tools



SIWO-KUL® CUSTOMIZED CABLES WITH A PORTFOLIO OF SERVICES

Nexans has been manufacturing a full range of high-performance low and medium voltage **SIWO-KUL®** single core cables for over half a century for applications that require high flexibility in prolonged high-temperature conditions.

We also offer a competitive high-temperature cable range for LV industrial motors.

SIWO-KUL® cables are mainly used in medium-voltage motors and generators for connecting stator coils to the terminal box. They are also vital elements for wind converters, transformers, solar power inverters and other MV/LV cabinets. In drives, silicone decreases copper cross-section and gives flexibility for compactness.

Nexans not only manufactures a customized product to fit your extra-tough specifications, we also provide expertise and an extensive service package to add value to your products and give you a competitive edge in the marketplace.

CABLE SOLUTIONS FOR FLEXIBILITY, EFFICIENCY AND DURABILITY

A typical low and medium voltage **SIWO-KUL®** cable consists of a flexible, class 5 tinned-copper conductor, a separation tape, silicone rubber insulation, a protective tape and varnished synthetic yarn braiding.

Other versions include bare copper, silver-plated copper, nickel-plated copper and aluminum (class 5 or 2). Nexans also masters complete pre-connected cables which are 100% electrically tested.

- **SIWO-KUL® B**
Protective braid with PUR or silicone varnish
- **SIWO-KUL® D**
Dual silicone insulation
- **SIWO-KUL® S**
Screened version

Apart from **SIWO-KUL®** cables, Nexans can also supply VFD power cables engineered to provide 100% containment of EMI emissions.

Outstanding features: adaptability, durability and performance

Silicone can tolerate high temperatures arising from ignition and harmonics. Thanks to their premium quality silicone insulation, **SIWO-KUL®** cables are chemical-resistant and extremely flexible, with excellent stretch properties and an elongation at break value greater than 300%. During a fire, the halogen-free insulation forms a ceramic shield that keeps them operational for at least 90 minutes. The cables are corona-resistant, electrically stable and have low partial discharge, thus prolonging cable life. Appropriate terminations/connectors make them easy to install, and all-in-one kits are available. All cables are UL and CSA certified, and approved by Lloyds' Register and Veritas.

SIWO-KUL® B



SIWO-KUL® D



SIWO-KUL® S



NEXANS SIWO-KUL® INTEGRATED SERVICES

- **Customization** to find the right conductor, insulation and design for your specific application (with the Nexans Research Center)
- **Thermal and electrical field simulation** to pre-test solutions in confined environments and optimize maintenance, installation, and energy efficiency
- **On-site engineering and technical consulting** to give support and expert advice on appropriate cables, installation and connectivity
- **Life Cycle Analysis (LCA) and PEP ecopassport®** to guarantee that all cables conform to your long-term environmental objectives
- **Short lead-time, emergency delivery on site** to make sure you get exactly what you need when and where you need it
- **Cut-to-length cables and customized packaging** to facilitate installation and identification of reels, barrels, boxes and coils, and reduce waste
- **E-ordering and e-invoicing** to streamline the supply chain and simplify ordering and billing
- **Cabling kits and harnesses** to reduce production costs and facilitate installation

With a long experience in materials science, silicone and metallurgy, and with proven expertise in designing cables for automation, wind turbines, and shipbuilding, Nexans can provide you with the expert knowledge and support you need to serve the demanding motor, generator and drive market worldwide.