



ROCHESTER CABLES

ENGINEERED CABLE SOLUTIONS FOR HARSH ENVIRONMENTS



TE: Leadership in Connectivity

With a 75-plus year history of leadership, TE Connectivity (TE) is a global company that designs and manufactures products that connect and protect the flow of power and data inside the products that touch every aspect of people's lives.

Our nearly 80,000 employees, including 7,500 engineers, partner with customers in virtually every industry – from consumer electronics, energy and healthcare, to automotive, aerospace and communications networks – enabling smarter, faster, better technologies to connect products to possibilities. More information can be found at: **www.te.com**.



Marine, Oil and Gas (MOG)

TE's Marine Oil and Gas team offers wide-ranging interconnect solutions from leading brands including Rochester Cable and SEACON connectors for offshore exploration, production, commercial and military marine applications.

TE MOG has an excellent track record of providing rugged solutions to boost performance and increase reliability in some of the most extreme application environments on earth and beneath the oceans.

With manufacturing facilities in North America and Europe in addition to a global field service team, we are strategically positioned to work closely with both equipment designers, original equipment manufacturers (OEMs) and operators to create connectivity solutions to meet the specific demands of applications in defense, topside, subsea, and downhole environments.



Rochester Cable

TE's Rochester Cable brings advanced technology to the design and manufacture of cables for operation in severe environments. TE develops cables that are built for the most rigorous applications, helping you go deep into both the oceans and the earth.

Visit **www.te.com/rochester** for specific cable information.

Rochester Cable: Oil and Gas Applications

Rochester Cable: Taming Harsh Environments

Since its founding in 1794 as a manufacturer of ropes, TE Connectivity's (TE) Rochester Cable has evolved to become a recognized leader in the design and manufacture of electro-optical cables for a vast array of harsh environment applications. Our cables are highly engineered to meet specific application requirements in such demanding industries as oil and gas exploration and production, defense, oceanographic, and subsea applications.

Work Class Remotely Operated Vehicles



TE's Rochester Cable provides rugged, complex electro-optical products with time-tested quality and reliability for ROV systems operating in the harsh environment of the ocean depths.

Our experienced technical team have expert knowledge in designing bespoke cable solutions to meet customer requirements in all three areas of ROV cable components, main lift umbilicals, tethers and deck cables. We offer a variety of conductor insulation systems including specially developed subsea variants of the light weight, high temperature, TE Raychem SPEC 44 wire. We can also provide custom fiber optic solutions including our own STEEL-LIGHT and ELECTRO-LIGHT ranges of fiber components, available in both single mode and multi mode fibers.

When it comes to strength and protection we offer both in-house precision drawn metallic armors and a variety of synthetic armor packages.

Oil and Gas Exploration and Production



Deep water offshore drilling rigs have to manage huge pressures involved during drilling. Control of these pressures is done via a multiplexer which is connected to a Blow Out Preventer (BOP) attached to the top of the surface casing of a subsea well via a MUX cable. TE's Rochester Cable offers a variety of electro and electro-optical MUX cable solutions with a range of custom designed weight saving caged and spaced armor packages.

TE's Rochester Cable offers a range of Production Umbilical Component (PUC) cables for incorporation in the specialized manufacture of larger production umbilical cables. PUC component cables are offered as electro or electro-optical cables with a variety of steel, synthetic or armor free packages and can be manufactured with electrical screened or non-screened options.

Downhole Logging



TE's Rochester Cable has been manufacturing high performance wireline cables in its US based Culpeper, Virginia facility for over 60 years. Available in single element, multi element conductors through to more complex fiber end electro-optical cables. Our wirelines are designed for both exploration and production operations incorporating both steel and alloy armor packages.

TE's Rochester Cable 'Greaseless' cable technology offers a more Eco-friendly downhole cable solution over traditional wireline cables. Utilizing specially formulated flexible polymer outer jacket avoids exposed armor wires. This helps to ensure the cable will not "birdcage" or high strand, providing more efficient field operation.

Rochester Cable: Defense and Commercial Applications

Ocean Research



TE's Rochester Cable provides a range of rugged coaxial, fiber and complex electro and electro-optical products for ocean research systems and applications. Our products are extensively used in applications such as underwater geological surveying, ocean mapping and surveying, marine wildlife conservation, search and recovery and even treasure hunting.

From oceanographic measuring systems to deep water tow applications, our experienced technical design team offers bespoke solutions to overcome the challenges of this harsh environment through extensive understanding of pressures, torque, drag effects and working loads undertaken by our cables.

Defense Applications



Naval organizations worldwide rely on TE's Rochester Cable range of coaxial, fiber, electro and electro-optical cables for use in surveillance and recovery operations at sea.

Our products are extensively used in applications such as anti-submarine warfare, surface ship torpedo defense systems, mine countermeasures, helicopter mounted dip sonar systems, bottom lay cable systems, optical and electro-optical sensor cables, and ROV salvage and recovery systems. We offer a wealth of technical knowledge in designing bespoke cable solutions to counter the challenges of the pressure, drag, tension and torque effects associated with active cable operations in the ocean.

Industrial Specialty



TE's Rochester Cable offers a range of dynamic application, industrial cable solutions for service in unforgiving environments. Our single-conductor, coaxial, optical, and multiconductor TV inspection cables are designed to provide extended service life in hostile environments such as TV sewer pipe inspection, fishing, and mining.

Galvanized steel armors, aramid yarns, and durable thermoplastic material helps provide the protection needed in pipe and sewer inspection applications. Our mining power and lighting cables have been approved by the Mine Safety and Health Administration (MSHA).

Renewable Energy



The world is evolving from historical fossil fuel based energy systems to more sustainable sources of renewable energy, and TE's Rochester Cable supports this evolution by applying its technical expertise in the field of bespoke dynamic / working cable solutions to this sector.

Many renewable energy systems have similar requirements of tension, torque and drag resistance to our existing applications particularly in the ocean environment where tidal energy is being used to convert to electrical power.

Rochester Cable: Custom Cable Designs

TE: Leadership in Connectivity

Even with one of the most in-depth profiles of industry-leading products offered to market, we recognize that there are times when a “standard” product won’t deliver the performance your system requires. TE’s Rochester Cable has the experience to design and manufacture custom cables that deliver a product that will perform in harsh environments to your specific application requirements.

Utilizing our bespoke design system that allows reliable predication of characteristics such as cable torque, rotation, and elongation, TE’s Rochester Cable is technologically equipped to meet your toughest challenges with custom solutions.

Each cable is designed, developed, and manufactured to rigid specifications tailored to a specific application.

An example of our technical differentiation is our ability to offer smaller and lighter designs than traditional cables to market by using TE’s light-weight materials science technology, delivering all the performance of thick walled insulated cable conductors. The following are some of the major custom cable areas where TE has provided solutions:

MECHANICAL PERFORMANCE

- Weight
- Length
- Hydrostatic Pressure
- Size
- Tensile Strength

ELECTRICAL REQUIREMENTS

- Data Rates
- Signal Integrity
- EMC Requirements

ARMOR PACKAGES

- Synthetic Armor
- Steel-Wire Armor
- Alloy-Wire Armor

IN-HOUSE TESTING CAPABILITIES

- Individual Armor Wire Break Testing
- Cable Break Load Testing
- Torque Rotation and Elongation Testing
- Cyclic Bend over Sheave Testing

ENVIRONMENTAL PERFORMANCE

- Weight
- Length
- Hydrostatic Pressure
- Size
- Tensile Strength

CABLE CONFIGURATION

- Power
- Signal
- Coaxial
- Fiber Optic
- Composite

FIBER PACKAGES

- Fiber-In-Steel Tube
- STEEL-LIGHT Fiber
- ELECTRO-LIGHT Fiber

CONDUCTOR STYLES

- Standard Wall Designs
- SPEC 44 Technology

Empower Engineers to Solve Problems, Moving the World Forward.

AMP | AGASTAT | CII | DEUTSCH | DRI | HARTMAN | KILOVAC
MICRODOT | NANONICS | POLAMCO | Raychem | Rochester | SEACON

CONNECT WITH US

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