



Engineered Solutions

for the Energy Industry

aerospace
climate control
electromechanical
filtration
fluid & gas handling
hydraulics
pneumatics
process control
sealing & shielding



ENGINEERING YOUR SUCCESS.

Parker - Global Solutions For Energy Recovery

Innovative products-marine hoses, power cables, mooring, high-pressure hose and custom umbilicals – produced by a customer-focused engineering & service organization: Parker Energy Products Division is your reliable systems provider. Welcome!



The Energy Products Division is part of the Parker Hannifin Corporation. With annual sales exceeding \$12 billion, Parker Hannifin is the world's leading diversified manufacturer of motion and control technologies and systems, providing

precision-engineered solutions for a wide variety of commercial, mobile, industrial and aerospace markets. The company employs more than 61,000 people in 48 countries around the world. Parker has increased its annual dividends paid to shareholders

for 52 consecutive years, among the top five longest-running dividend-increase records in the S&P 500 index. For more information, visit the company's web site at www.parker.com or its investor information site at www.phstock.com.

Everything You Need

Parker provides the highest quality materials, technology and workmanship.

Marine Hoses & Ancillaries

Parker ITR, Marine Hose business unit, was founded 40 years ago by Pirelli and acquired by Parker in 2002 and now located in Ortona, Italy, which is a state of the art facility where hundreds of hose assemblies are manufactured annually.

The product range:

- **Floating/submarine hoses including LPG applications at -50°C**
- **Single/double carcass hoses**
- **General application hose designs with a nominal bore size up to 600 mm**
- **Centenary hoses**

- **Hose for Hose Reel applications**
- **Multi-function extra strength hoses designed for the Arctic Circle in thick ice packs**
- **Dual system leak detectors**
- **Maintenance & inspection services**

The performance of our hoses is continuously tested under our **Safe Working Life Extension (SWLE) program**. The SWLE provides actual hose performance data of hose assemblies that have been in service for extended time periods. These program tests have confirmed that even after 10 years service, engineered materials have not suffered from degradation as a result of fatigue.

Subsea Hydraulic and Electro-hydraulic Umbilicals & Power Cables

With state of the art production equipment and highly qualified staff, Parker will provide the product and services required for all your subsea umbilical and cable needs: from power cables to multi-function control umbilicals combining power, signal, hydraulics and fiber optics in almost any length and configuration. Applications

Parker has the most comprehensive family of products available from any single manufacturer of marine hoses and related ancillaries.

include drilling, subsea power and controls, flying leads, chemical injection, and many others. Parker Energy Products Division has the most extensive global experience in the production of wind farm array power cables. With locations in Freeport, Texas (Gulf of Mexico), Ravenna, Ohio, and Tønsberg, Norway, Parker is a flexible supplier ready to deliver your next project.

Freeport:

- **High-capacity horizontal planetary machine (cabler) up to 6 inch/152 mm OD**
- **Three 1,000 metric ton Carousels for smooth product flow**
- **Heavy-lift capability or direct load-out to deepwater quay**
- **Experienced installation and service support**

Tønsberg:

- **New state-of-the-art, high-capacity horizontal planetary lay-up machine with 16 insets/pass and up to 10 inch/250 mm OD**
- **Five large volume Carousels, rated up to 2,200 metric tons enabling production of very long lengths without joints**
- **Direct access to deepwater quay for transpooling or loading of reels with onsite 250T crane**
- **In-house design and engineering department offers system integrity from concept to installation**



Deepwater Mooring Systems (fiber and steel)

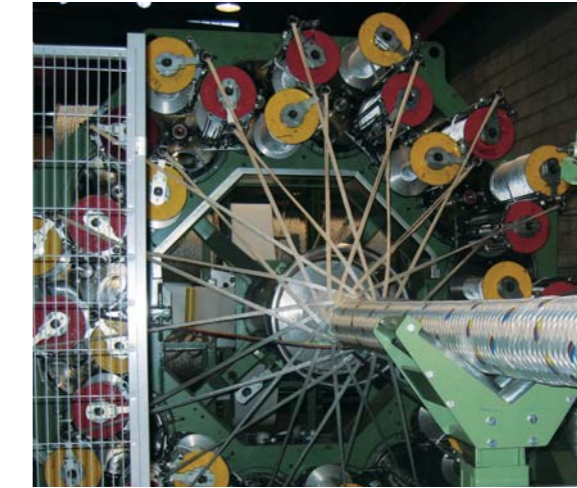
Parker has the largest manufacturing capacity in the world to produce custom mooring systems of spiral strands and 6-strand wire ropes and high-strength fiber (in Tønsberg, Norway). Dedicated equipment produces the MoorLine™ torque neutral and TorqueMatch™ product lines. Parker can produce the longest lengths of polyester lines in one continuous length in the world.

A sophisticated in-line tensioning system ensures accurate length measurement at 1% of minimum breaking load during production, and a 5 ton tensioning capability. Parker Scanrope produces extremely long lengths of both polyester and steel mooring lines; this is made possible by the factory's unique deepwater quay facility and 250 ton dock-side crane in Tønsberg - which allows for reduced segments per mooring leg for the customer.

Manufactured umbilicals can be stored on carousels, processed to reels, or transpoiled directly to lay vessels.

This translates into fewer end terminations and less connection hardware, reducing direct costs as well as ensuring faster and safer installation.

- **MoorLine polyester tethers, min. Break Load up to 3,000 metric ton, in-line tensioning and length measuring system, unit weights up to 120 ton**
- **Steel Spiral strand mooring lines with extruded protective jackets, up to 250 ton**
- **Six Strand Wire Ropes, anchor lines for Floating Production Units and Mobile Offshore Drilling Units. Anchor handling wires, Abrasion Resistant ropes, crane ropes, riser tensioning lines, drilling lines; up to 200 ton**



MoorLine™ production at Parker Scanrope.

- **Specialty products, including riser protection nets, non-rotating synthetic ropes and high performance mooring ropes for vessels.**

Tubing & Hose Bundles

Parker Multitube™ tubing bundles are designed to withstand harsh applications including hot fluids, gas and steam transfer,

process fluid temperature control and freeze protection, as well as process analyzer sample umbilicals. Custom designs can be produced and shipped in days to minimize your downtime. Parker Hose Bundles deliver reliable, fast-response hydraulics to your subsea drilling and work over operations up to 20,000 psi working pressure. Hose types include aramid fiber and high-strength steel or both.

Other applications include:

- **BOP Umbilicals**
- **Multiplex Drilling System Hot Line hose assemblies**
- **Grouting & Packer Inflation Bundles**
- **Insulated Tubing**
- **Electric Traced Tubing**
- **Process Analyzer Tubing**

Maritime Services

Parker offers a wide range of qualified services for the offshore industry.

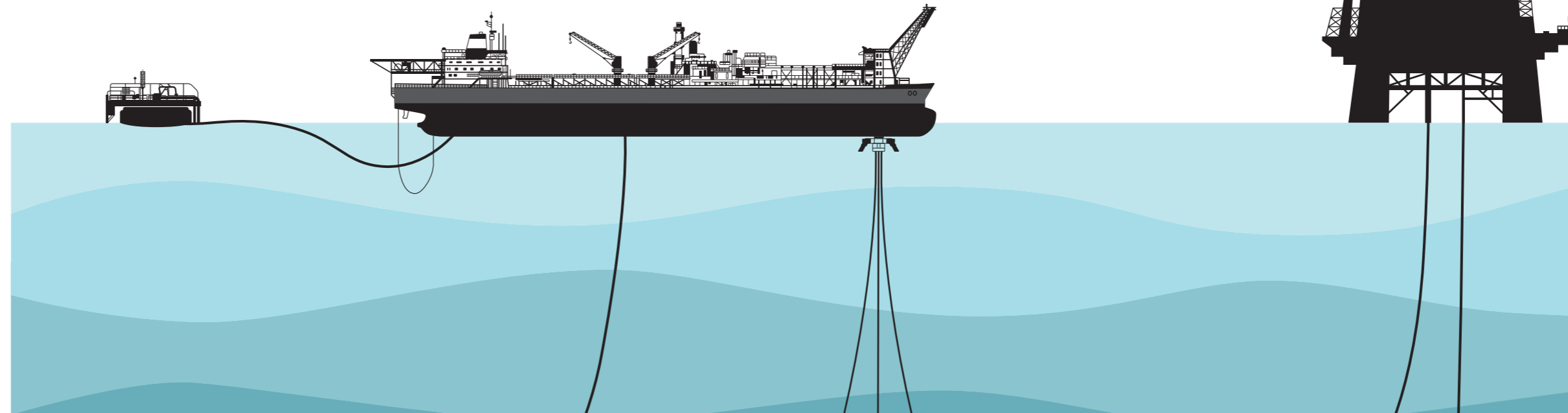
The services:

- **Dimensional control**
- **3D scanning and**

- **underwater photogrammetric**
- **Seabed survey**
- **Gyro calibration and DGPS control**
- **Position monitoring system (blom/PMS, blom/RPMS)**
- **Target equipment for total station**
- **Software**

Below left: custom bundled to your system's specifications.

Below right: high pressure thermoplastic hoses. Polyflex® products include flexible lances, delivery hoses and oil field well intervention hoses.



All you need at a glance

- All types of marine hoses and related ancillaries
- Subsea umbilicals and cables in the length and configuration needed
- The longest mooring ropes in the world
- A complete range of bundle tubing products
- Highly qualified services for the offshore industry

Parker Energy Products Division: An Advantageous Choice

Parker's commitment is to support every client with the best solutions to answer the challenges of the Energy Industry, and deliver on-time and on-budget to meet your project schedule.

Parker's advantages:

- Engineered systems solutions for your project
- Experienced project management teams
- Certified quality management programs
- On-time deliveries
- Products engineering for research and development along with project support

Energy Products Division locations are:

Parker ITR Oil&Gas

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Parker Scanrope

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