Parker
Your global partner to create growth and value in motion and control technologies
Your global partner to create growth and value.

Parker is the solutions development and innovation leader, manufacturing precision-engineered components and systems that can be found on and around everything that moves.

At Parker we continually partner with our customers to deliver new to the world or new to the market opportunities. These supply our customers with more value and provide long term benefits to all, helping us enable dreams and challenge possibilities. We do this by seeking new ways to innovate and combine technologies, collaborate in the development of new systems and technology solutions, and increase our customers' productivity and profitability.

Parker is solving the world’s greatest engineering challenges to meet human needs and improve the quality of life for people and communities everywhere, thanks to nine technologies:

- Aerospace
- Climate Control
- Electromechanical
- Filtration
- Fluid & Gas Handling
- Hydraulics
- Pneumatics
- Process Control
- Sealing & Shielding
Parker is both global and local. So wherever you are, you can access Parker’s worldwide network of distributors, experts and integrated solution development capabilities.

Here are some examples of markets the Parker network has extensive expertise and experience of supporting customers in:
- Aerospace
- Climate Control
- Construction
- Forestry & Mining
- Electronics Manufacturing
- Factory Automation
- Food & Beverage
- Industrial Manufacturing
- Industrial Processing & Refining
- Life Sciences & Healthcare
- Off-Road Transportation
- Oil & Gas
- On-Road, Rail & Marine Transportation
- Power Generation

Parker in EMEA
In all our market sectors, we are meeting customer needs with the design of precision engineered solutions across Compressed Air, Gas Treatment & Gas Generation, Electromechanical, Engine and Mobile Filtration, Fluid & Gas Handling, Hydraulic Filtration, Industrial Hydraulics, Instrumentation, Mobile Hydraulics, Pneumatics, Pneumatics Solenoid Valves, Process Filtration, Sealing, Shielding and Water Treatment and for customers that need instant access to spare parts and maintenance, a Parker-stocking distributor is never far away.
Saving Lives – through fluid handling systems that reduce the costs of diagnostics, medical treatment and new drug development.

Bioreactors are playing a growing and evermore important role in the biopharmaceutical arena. Their role within the research of pharmaceuticals and antibodies is contributing to new drug discovery and the development of improved production capabilities for new vaccines and therapeutics.

Reusable Bioreactors made of stainless steel and Single-Use Bioreactors (SUBs) are being used in a growing number of research and manufacturing applications. Their particular characteristics include low maintenance requirements, fast turnaround times and low energy consumption. These factors are making the use of Bioreactors particularly critical in research and manufacturing applications of mammalian and insect cell cultures.

When developing its new leading edge supply and control tower, a world leading manufacturer of bioreactors and fermentors for the biopharmaceutical industry required a fittings and tubing solution that would convey all the different gases, whilst being certified for the use with oxygen and that would be operationally efficient as well as cost-effective.

Working closely with experts from Parker Legris, the manufacturer’s design team was able to test and select a compatible solution for the supplying tower to feed the bioreactors with all the required gasses and oxygen (including air, O2, N2, CO2). According to Laurent Orcibal, CleanFit Product Manager at Parker, “the Parker supplied solution was based on its fully certificated range of CleanFit push-in fittings and tubings, and provides the complete circuit for fluid management.”

The only other connectors or tubes able to provide equivalent certification for oxygen use were stainless steel products, which are not only more expensive but also less flexible. The Parker CleanFit solution’s other advantages include easier assembly during the manufacturing process (which has significantly reduced assembly time and costs) and easier modifications and adjustment throughout the life of the bioreactor.

By helping to reduce the manufacturing costs, whilst improving the performance and reliability of this Bioreactor, Parker is contributing to the development of new drugs and treatments that will improve the health and wellbeing of people all around the world for years to come.

Thomas Mayer
Parker Life Sciences, Germany

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Generating a brighter future – by improving the quality of energy grid power and storage.

Westnetz is the distribution system operator of RWE, a major European utilities company, and the largest energy distribution system operator in Germany. It faced huge challenges in rural grids due to the increasing levels of solar photovoltaic (PV) generation on its network, particularly in the peak summer months. Traditionally, stabilisation efforts would require the operator to reinforce network infrastructure with new distribution lines and distribution transformers. However, by turning to Parker, Westnetz found another, more satisfactory solution.

Parker in the UK partnered with Westnetz to develop a new energy storage system. It allows peak solar energy generation, above the network limit, to be stored during daylight hours and released later as required.

The solution is based on a Parker 890PX series grid-tie inverter paired with lithium-ion batteries in a container-based energy storage system. It can be relocated to different areas of the power grid as required and offers a 250kW system with a capacity of 1MWh energy storage.

With increasing levels of solar PV generation being fed into Westnetz’s network grids, the system delivers reduced solar PV generation curtailment and improved grid power quality without the need for investment in distribution grid upgrades. It is making renewable energy delivery more consistent and viable, which promises a brighter future for all.

**This project is a great example of Parker working in partnership to develop a solution that will not only test the system in critical grid situations, but also be a pilot for further development for a wide range of renewable energy applications – including solar, wind and tidal – all over the world.**

Dr. David Blood
Parker Hannifin Energy Grid Tie Division EMEA

**PRODUCT USED:**
Grid-Tie Inverters paired with lithium-ion batteries

**MARKET**
POWER GENERATION & RENEWABLE ENERGY

**TECHNOLOGY**
ELECTROMECHANICAL

**HUMAN NEED**
ENERGY

**SUCCESS STORY**
WESTNETZ / RWE MOBILE ENERGY STORAGE SYSTEM

**250KW SYSTEM**
With a capacity of 1MWh energy storage in a single 40ft shipping container
Keeping the oceans clean – managing the treatment of overboard water to ensure sustainable gas production.

Oil and gas operators are constantly struggling with the on-site treatment of the waste and/or produced water created in their normal offshore production environments.

Parker has developed an innovative solution called “TwinZapp” to treat this overboard water on location. In a simple and robust process, the overboard water is transformed into clean water, which is in full compliance with the overboard water regulations.

The unit uses limited consumables, creates room to increase production and simplifies logistics.

The process in TwinZapp breaks down chemical stabilised emulsions created by the use of methanol, corrosion inhibitors, etc. This environmentally innovative solution also removes or destroys most pathogens at the same time. The system requires no chemical additions and, when installed, hardly requires any operator actions.

TwinZapp technology has been developed by Parker in the Netherlands and successfully tested at ENGIE (formerly GdF Suez). The system is supplied as a fully automated and compact combination of two offshore certified skids. The first skid breaks down the emulsions, where the second skid will remove the solid particles. The second skid can be a Media Filter (single vessel) with a backwash function, fully controlled by the first skid, or a Dual Cartridge Filter Unit. The system can easily be hooked up with existing separation systems.

The TwinZapp system was installed on a platform from ENGIE on the Dutch continental shelf to treat 5m³/hr of effluent water in an uninterrupted and unattended production. The TwinZapp unit improved the overboard water quality from >100ppm down to <10ppm and made it compliant with all regulations for overboard discharge water. These results enabled ENGIE to re-open other wells which had been shut down due to the volume of poor quality overboard water, and could not be treated on site. Re-opening these wells increased their gas production by over 50%, adding millions of euros of extra revenue in just a few weeks.

“TwinZapp easily treats types of water which could previously only be treated with lots of chemicals and absorption media. We are achieving overboard water regulations (values less than 10ppm OIW) when treating chemically emulsified water, and when dealing with chemical upsets such as spikes in corrosion inhibitor concentrations. With Parker, we have truly created an innovative sustainable solution.”

Ruud Meinen
Parker Hannifin Manufacturing Netherlands (Process Filtration) B.V.
Returned, recycled, reused. Sustainability sorted – servo-drive technology that enables efficient sorting and recycling of returned bottles.

The return of empty bottles at the end of the beverage supply chain is a major logistics challenge. Bottles are typically returned in chaotically mixed crates. With their different shapes, colours and sizes; identifying, sorting and replacing them into their correct crates can be a highly complex automation process.

Parker has helped Vision-tec in Germany to produce a fully automated, rapid and reliable solution that detects bottles in differently mixed crates, removes counterfeit bottles and then refills and completes crates with the correct unmixed bottles, ready for reuse.

Vision-tec’s scalable and expandable sorting robots use a vertical and oblique image capture capability to detect manufacturers’ logos, UV light to reliably detect various shapes of bottles and labels and highly sensitive ultrasound systems to check bottle height with or without caps.

The jointly developed system’s sorting stations are equipped with two grab arms which use Parker Hannifin’s HPLA and LCB toothed-belt axes, in conjunction with Parker’s intelligent Compax3 servo controllers (with an EtherCAT communication interface) to enable highly dynamic movements, with optimally adapted acceleration and travel speed – and exceptional levels of control.

Parker was selected to work with Vision-tec because of the high performance and reliability of its electromechanical servo-drive technology, and because of Parker’s ability to contribute innovation as part of its role as a bespoke technology development partner.

The result is an automated detection and sorting system that is making a significant difference to the cost effectiveness and viability of bottle recycling and reuse; delivering a truly sustainable solution for the beverage industry worldwide.
Reassuring safety – through more reliable steering and braking hydraulics.

When a global leader in mobile machinery was seeking to improve the safety and performance of its truck braking systems, Parker worked closely with the manufacturer to find a more reliable solution. Even though their requirement was time critical, Parker was able to provide the perfect solution.

The UK-based manufacturer sought a solution that would replace their existing diaphragm membrane accumulators and with a worldwide reputation for the low servicing costs and high reliability of its heavy mobile plant and machinery, they also wanted a solution that would require less servicing, and have increased safety.

Parker proposed a new and superior technology solution based on its 350 Bar, 3.5 litre, CE approved, A-Type Piston Accumulator which provides additional reliability for safety critical applications such as braking or steering systems. Parker Piston Accumulators also provide extended service intervals and improved longevity, due to reduced permeation gas loss and the ability to withstand shock and vibration, without causing friction to the sealing system. Most importantly, unlike Diaphragm Accumulators, they are unlikely to experience sudden failure.

The solution from Parker was an innovative application of this existing Piston Accumulator technology. It was developed and delivered for the manufacturer to the required specifications, in the required volumes, within a very short timescale. It has immediately provided key safety improvements and cost saving benefits in terms of reliability, and reduced down time and service costs for the manufacturer’s mobile plant customers.

Given the highly demanding nature of this application for active braking & emergency brake supply, it was an advantage to change the traditional Diaphragm Accumulator to the more advanced Piston Accumulator design with benefits of longer service life and safe emergency operation.

Dave Wheat
Product Manager, Parker Hannifin Accumulator and Cooler Division Europe, UK.

Product Used:
Piston Accumulators
Keeping the world on track – through advances in rail hose technology and safety.

As a leading rail track machine manufacturer, Plasser & Theurer needed to find a partner who could reliably meet their requirements in the supply of a wide range of certified rail hoses.

In 2013 a new European Rail Standard (EN45545) was introduced requiring the use of certified hoses for rolling-stock vehicles, but also for rail track machines.

Parker was the first hose manufacturer in Europe to develop a new rubber compound to the required standards of EN45545 in terms of fire retardancy, smoke behaviour and toxicity. The Parker certified rail hose range is now well established across the world and includes the No-Skive Compact Spiral Hose; delivering advantages such as better bend radius, hose dimensions and assembly cost savings.

Plasser & Theurer – based in Linz, Austria – installed and tested their first Parker rail hose samples in 2014. Since then the partnership has developed, with regular day-to-day contact including sales, marketing and engineering support provided by Parker’s rail hose specialists. Parker now supplies its full range of certified rail hoses to Plasser & Theurer, including many which have been specially developed to meet the customer’s specific requirements.

It is important for us to have partners like Parker on our side together with their excellent support, which include a day by day availability to find the best solutions for our upcoming new market requirements or any technical challenge.

Purchasing Department, Plasser & Theurer, Austria

It is a partnership that is setting new standards in railway maintenance and keeping the global rail network on track, in line with the latest and safest regulatory requirements.

PARKER

SUCCESS STORY
PLASSER & THEURER RAIL TRACK MACHINE

TECHNOLOGY
HYDRAULICS, PNEUMATICS

MARKET
TRANSPORTATION

HUMAN NEED
INFRASTRUCTURE

PRODUCT USED:
Certified rail hoses
Keeping cool under pressure – developing refrigeration dryers that improve energy and plant efficiency while reducing costs.

The Duisburg Base of thyssenkrupp Steel Europe is truly vast. It covers nine square kilometres, has 440km of road networks and a working population of 28,000 people and it incorporates a smelting works with four furnaces for flat steel production. Every year it processes up to 12 million tons of iron ore into high-grade steel for a wide range of applications including automotive, civil engineering and household appliances.

New regulations meant that three large refrigeration dryers for the plants compressed air network had to be replaced (each with a flow rate of 28,000 Nm³/h) by Parker.

Six new specially developed refrigeration dryers with an airflow quantity of 14,000 Nm³/h per unit were built and installed. Doubling the number of units not only safeguards plant operations in the event of a fault, but also enables repair work to be performed on the cooling circuit by thyssenkrupp Steel Europe’s own staff without downtime.

Dryers of this type and size are rare and the units supplied by Parker Hiross Zander, included numerous new and unique efficiency-enhancing measures that are serving as a model for the power optimisation and maintenance efficiency of compressed air dryers.

The control systems for the dryers have been jointly designed by Parker and thyssenkrupp Steel Europe, and all dryer performance data is continually monitored and recorded. A switch cabinet with a touch panel is installed next to each individual dryer to monitor and read relevant operation data and conditions, and a central touch panel shows the data of all the dryers. Error messages and performance diagrams illustrate the continuous state of operations. In the event of a fault, an affected dryer automatically switches itself off and another goes on to the grid so that maximum plant availability is guaranteed.

Because thyssenkrupp Steel Europe places great importance on energy efficiency and conserving resources, Parker included a pump for the cool-water circulation to keep condensation temperatures constant all year round, while saving water and preventing oil loss in the winter.

This installation represents a pioneering standard in terms of energy efficiency, maintenance engineering and optimised performance for the large dryer sector.

This was a special project for both thyssenkrupp Steel Europe and Parker Hiross Zander, not only because the dryers’ exceptional efficiency broke new technological ground, but also because of the extensive know-how and clear goal-setting of the project managers who made this an exemplary team project.

Frank Mehler,
Senior Engineer District Cooling
thyssenkrupp Steel Europe, Germany

Product Used:
Large-Capacity Refrigeration Dryers