



ON THE LEADING EDGE OF INNOVATION



Parker Filtration Innovation Center





RYAN PASTRANA

Director, Parker Filtration Innovation Center

“Here at the Innovation Center, we are dedicated to constantly innovating filtration technologies that not only improve the lifespan of our customers’ equipment, but also aim to make a real difference in the communities that we live in.”

WHO WE ARE

The Parker Filtration Innovation Center houses the research and development for all Parker Hannifin Filtration products. Parker has dedicated 82,000 square feet of space solely to the development of new filtration technologies and proprietary manufacturing processes — this is the largest in the nation.

Our dedicated team of engineers, PhD scientists, U.S. military veterans, and industry experts have helped Parker secure over 500 U.S. patents and 1,200 global patents in the filtration focus.

The inspiration for our constant innovation comes directly from our customers. Through our “New Product Blueprinting” program we interview our customers using an open, structured approach to discover and create solutions for their filtration needs. We work to develop new filter media and filter elements that design engineers can then blueprint their new products and equipment around.



WHAT WE DO

FILTER DESIGN

Embossed Deep Pleats

One of the newest filter designs to come from Parker, deep pleat construction uses embossed features and welded seams to maximize surface area and improve service life.



Modeling and Simulation

Our staff has extensive experience in computer modeling and simulation of fluid flow, heat transfer, and mechanical stresses. This allows us to predict design performance before we ever build our first prototype.

Real World Testing

We have invested heavily in capabilities to simulate real-world conditions in our labs to prove that our filters can survive in the harshest environments.

An example is our Gas Turbine Air Inlet test rig. It simulates sand, salt, and moisture ingestion at actual air speeds seen in a power plant.

MEDIA INNOVATION

PEACH® Technology

Originally developed for the Oil & Gas industry, this proprietary construction method controls 3-dimensional flow within the filtration media layers, increasing residence time and maximizing efficiency.



Surface Modification

Parker Filtration practices several forms of advanced Surface Modification technology to change the interaction of our filtration media with water and/or oils.

We can make our filters more...

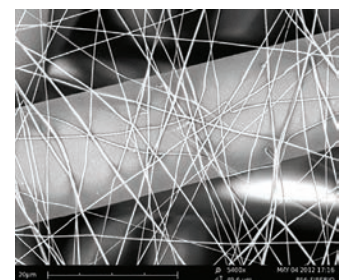
- waterproof (“Hydrophobic”)
- oil resistant (“Oleophobic”)
- water absorbent (“Hydrophilic”)

...through chemical coatings or even via treatments using energy from plasma.

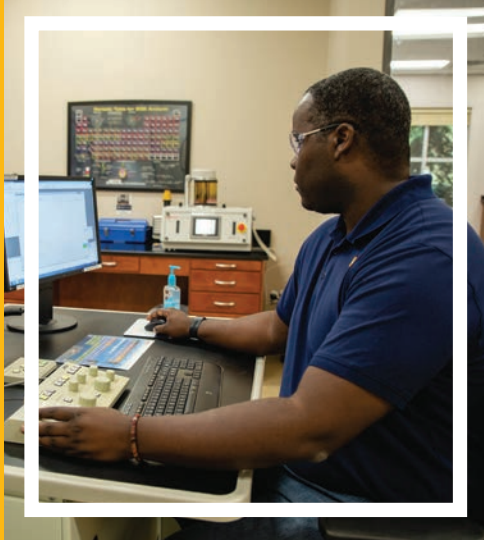
NANOFIBER TECHNOLOGY

The world’s leading Nanofiber lab is housed within the Innovation Center where our dedicated engineers are constantly innovating new filter media. Parker’s Nanofiber technology is cutting edge in regard to filtration efficiency.

Parker owns a proprietary technology called ForceSpinning™ that can accommodate the widest range of polymers in the industry so that our filters can survive many harsh filtration environments.



HOW WE DO IT



MEDIA CATALOGING

Filter media is really the heart of our technology. Here at Parker, we have the broadest portfolio of filtration solutions in the entire industry. Our talent and expertise at the Innovation Center is at a world-class level and the quality of instrumentation that we have is unmatched.

We have characterized every grade of filtration media – both used by Parker and the rest of the industry. We use that information to generate a database that can accelerate new product development.

By sharing that information with other divisions here at Parker, we can further promote ourselves as leaders in the industry.

MANUFACTURING INNOVATION

Robotics and Automation

To improve the safety, quality, delivery of product, and cost, we use advanced manufacturing solutions in the methods of automation, simulation, and robotics. The use of robotics and automation for advanced manufacturing has been a solution for creating new filtration methods like Protura™ and ForceSpinning™.

Connected Factories

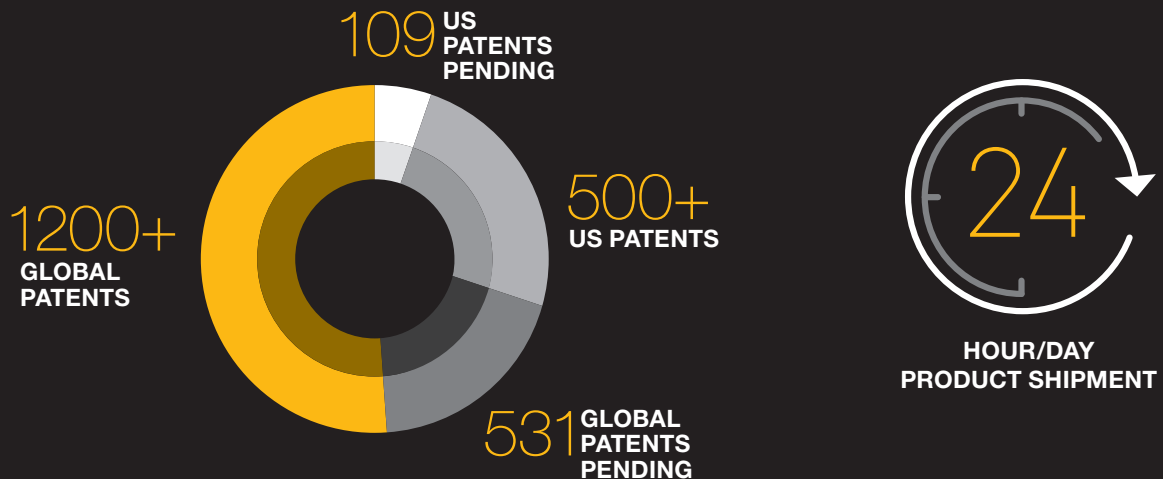
By leveraging the Internet of Things (IoT), we add sensors and connect our manufacturing lines to our network to analyze the data to improve productivity and up-time.



**ENABLING ENGINEERING BREAKTHROUGHS
THAT LEAD TO A BETTER TOMORROW**



ENGINEERING INNOVATION



64
MANUFACTURING
FACILITIES GLOBALLY



38
TECHNOLOGY
CENTERS

82,000
SQ FT OF SPACE
DEDICATED TO
FILTRATION R&D



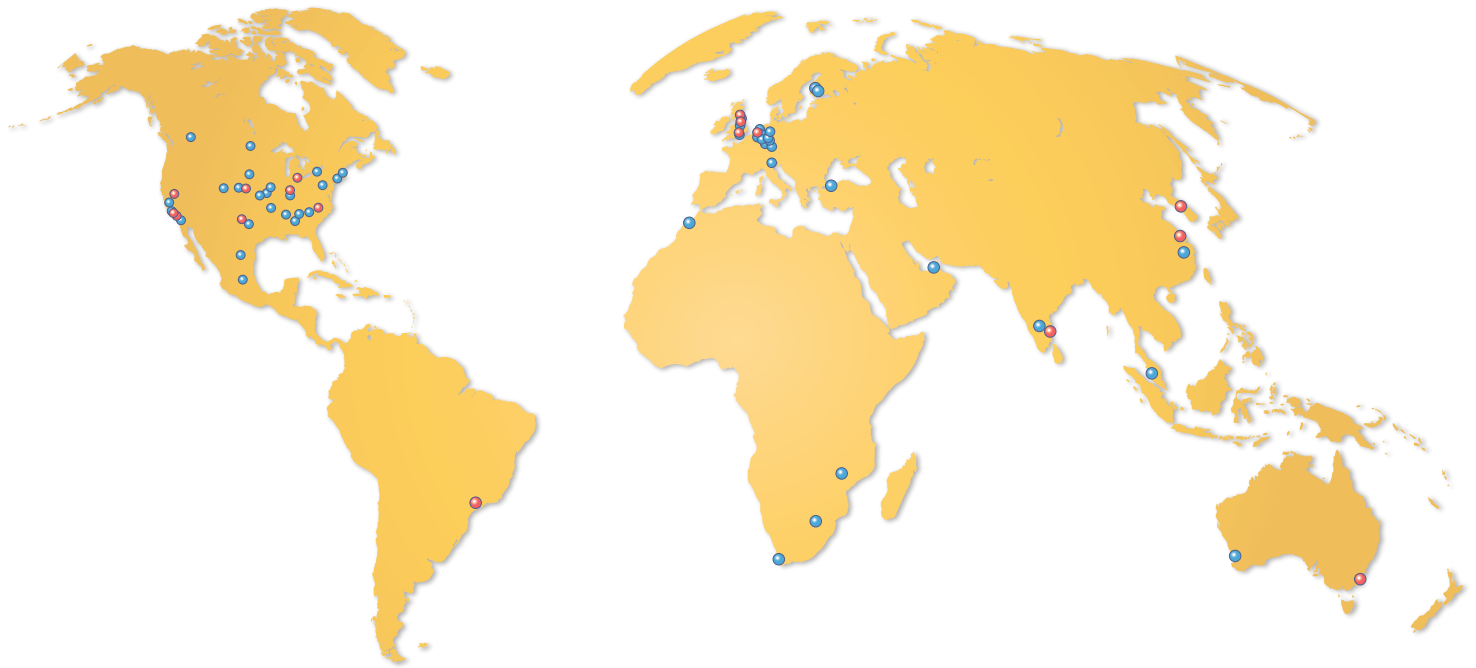
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PHD SCIENTISTS
ON STAFF



TO **PROTECT** AND TO **PURIFY** FOR OUR
CUSTOMERS' TOUGHEST APPLICATIONS
WITH DIVERSE **SOLUTIONS.**



ENGINEERING YOUR SUCCESS



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Engine Mobile Aftermarket Division
Kearney, Nebraska
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Engine Mobile Original Equipment Division
Modesto, California
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