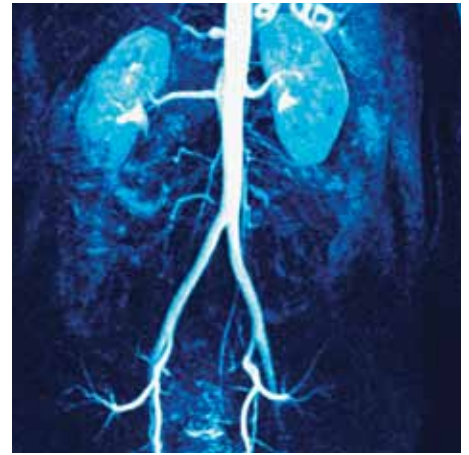


# ADVANCED FLUIDIC SOLUTIONS that ease dialysis for patients.



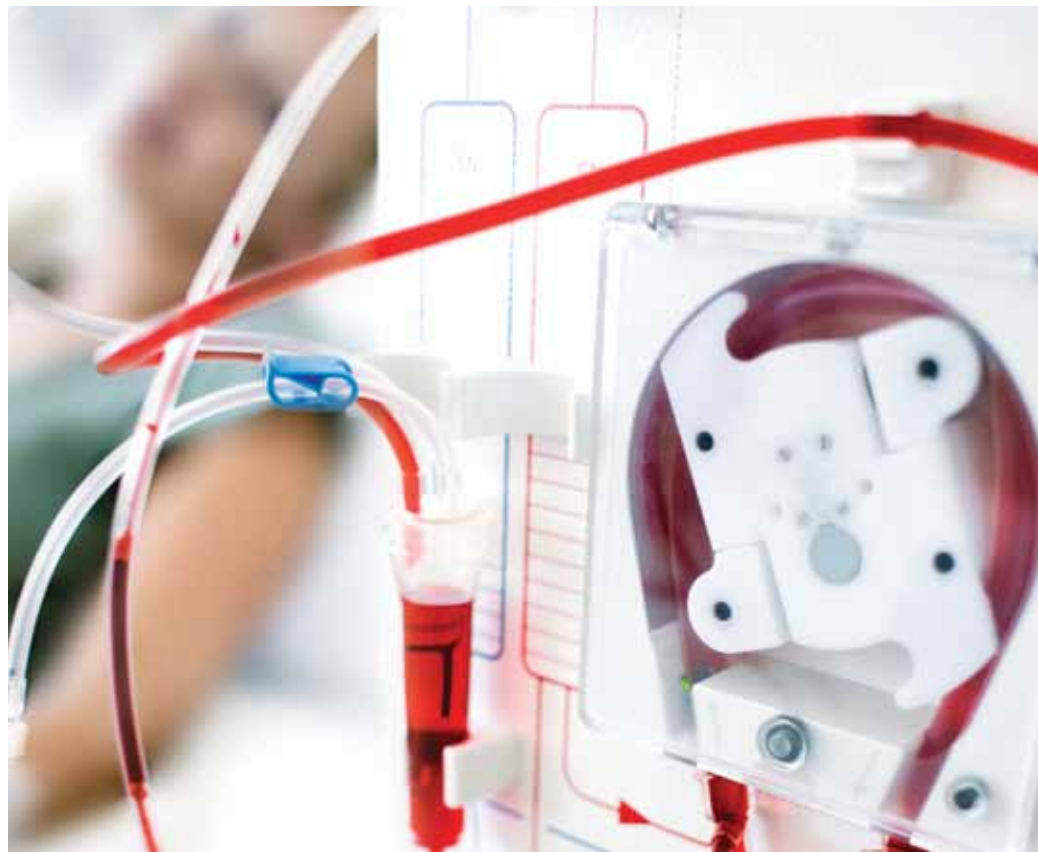
## One Partner. Multiple Options.

Looking to simplify your supply chain? Think Parker. Our complete solutions in fluidic control and management for renal dialysis systems are unmatched, reducing your need for multiple suppliers.

Ranging from tubing and connectors to pumps, pressure/flow controllers, USP Class VI materials, catheter assemblies, and filtration systems, our breadth of technology makes us a strong, reliable partner for dialysis system OEMs, delivering:

- Inventive system solutions utilizing our complete range of proven products
- Advances that are smaller, lighter, more energy efficient, and highly reliable
- Unique materials suited to life-sustaining applications and functional requirements

Early collaboration with Parker streamlines new product development. What's more, our selectable levels of integration – which include components, modules, and integrated systems – reduce technical risk, lower development cost, and speed time to market.



### Innovative Solutions for:

- Hemodialysis
- Home Hemodialysis
- Peritoneal dialysis
- Portable dialysis devices
- Emerging dialysis care

### Parker Capabilities:

- Rapid prototyping
- Finite Element Analysis (FEA)
- Computational fluid dynamics
- Material science expertise
- Custom components
- Integrated solutions
- Logistics management



ENGINEERING YOUR SUCCESS.

# Innovative Solutions for Renal Dialysis

A financially stable and globally connected collaborative partner, Parker has been working with medical and analytical device OEMs for more than 30 years.

## FLUID SYSTEMS COMPONENTS



- **Diaphragm pumps**  
Micro, miniature, and high capacity positive pressure and vacuum pumps.



- **Miniature solenoid valves**  
Pneumatic and liquid valves for fluid control.



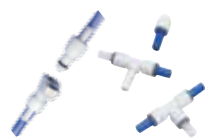
- **Pressure/vacuum controllers**



- **Proportional and directional valves**  
Proportional valves for variable flow control.



- **Water filtration**  
Fixed filtration modules as well as disposable in-line filtration.



- **Fittings and connectors**  
Push-to-connect fittings, quick couplings, and custom luer fittings and connectors.



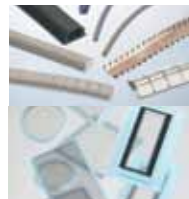
- **Silicone and polymeric tubing**  
Medical grade multi-lumen silicone tubing, polymer and fluoropolymer tubing, shrink tubing, and organic elastomer tubing.

- **Plastic components**  
Medium to high volume plastic injection and insert molding capabilities facilitate the manufacture of complex components in a wide range of engineered materials.



## ELECTRONIC SYSTEMS

- **EMI shielding**  
Optically enhanced display screens, EMI shielded housings and windows, EMI elastomeric and low-closure force materials, optical filters, shielding laminates, and conductive plastics.



- **Thermal management**  
Thermally conductive and thermal gap fill materials.



## ENGINEERED SYSTEMS

- **Integrated pneumatic valve assemblies**  
Fully integrated valve assembly with pressure sensors.
- **Custom fluidic manifold module**  
Integrated PD positive pneumatic assembly with elastomeric seal, pump, valves, and positive pressure and vacuum reservoirs.



- **Dialysis catheter assemblies**  
PD catheters and transfer sets; HD/HHD catheters and assemblies; and dialysate delivery tubing sets.



## MATERIAL SCIENCE & CUSTOM MOLDING CAPABILITIES

Whether for reusable or single-use devices, our material science specialists can lend real value to the development process, reducing time, lowering risk, and managing cost.

Here's how:

- Finite Element Analysis (FEA)
- Computational Fluid Dynamics (CFD) – predict fluid flow and simulate component performance
- Anti-bacterial and anti-thrombotic materials
- FDA and USP Class VI silicone
- High purity perfluoroelastomers
- Custom material formulations
- In-house mold design and mold building capabilities
- Rapid prototyping (silicone prototypes are created in an ISO 13485, FDA-registered facility with ISO Class 7 and ISO Class 8 clean rooms)
- Functional testing



Custom molded components and O-rings

## Contact Information:

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