



FITTINGS & VALVES FOR LIQUID COOLING APPLICATIONS

Thermoplastic & Brass Connectors



ENGINEERING YOUR SUCCESS.

PARKER FLUID SYSTEM CONNECTORS

Providing connectors for liquid cooling applications

Efficient thermal management of data centers is necessary for the safe and reliable operation of the Information Technology Equipment. At Parker, we will work with you to create a robust system that meets your customer's requirements for long-term, effective performance in server cooling.

ABOUT US

From design to delivery, the focus of Fluid System Connectors (FSC) Division is quality and service. From prototypes, new products, design improvements, and manufacturing efficiencies, our engineers are working to help you accomplish your goals. We offer a rich heritage of engineering and design excellence combined with technical services for our customers. The capabilities of our Custom Manufacturing department can quickly give you a solution to virtually any special design you may require.



YOUR CHALLENGES

OUR SOLUTIONS

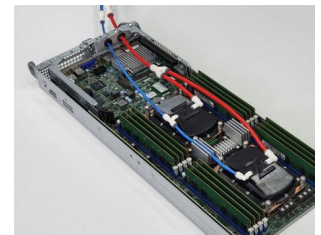
LEAK-FREE, COMPACT CONNECTORS

- Parker's LIQUIfit® fittings and ball valves provide a 25% reduction in envelope size compared to competitive product
- Parker's LIQUIfit® Cartridge allows for custom integration, providing your product or equipment with a clean profile while reducing labor costs and leak paths.



BEND RADIUS

- Parker LIQUIfit® fittings and one-piece cartridges feature a D-Seal that maintains a bubble-tight seal around the tubing to prevent liquid by-pass.
- D-seal technology handles side loaded tubing better than alternative sealing methods



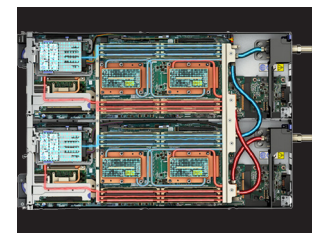
CHEMICAL COMPATABILITY

- Parker offers extensive chemical compatibility testing
- TrueSeal Kynar product range offers unique solutions for applications with high temperatures and the strongest chemical concentration
- Dielectric Fluid has been tested and validated for use with our LIQUIfit fittings, cartridges, and ball valves.



GLOBAL SUPPORT

- Parker has a global presence and an extensive distribution network
- Subject Matter Experts are able to provide end-to-end expertise in liquid cooling technology and components
- Parker has the ability to build full-functioning systems that include testing and validation



LEADERS IN LIQUID COOLING

Providing technical knowledge in leak prevention

There are many factors to consider when deploying a server rack liquid cooling system. Parker has years of experience in designing products that maximize flow and decrease pressure drop. As a leader in the space, find out how Parker can help you take thermal management to the next level.

FSC CAPABILITIES

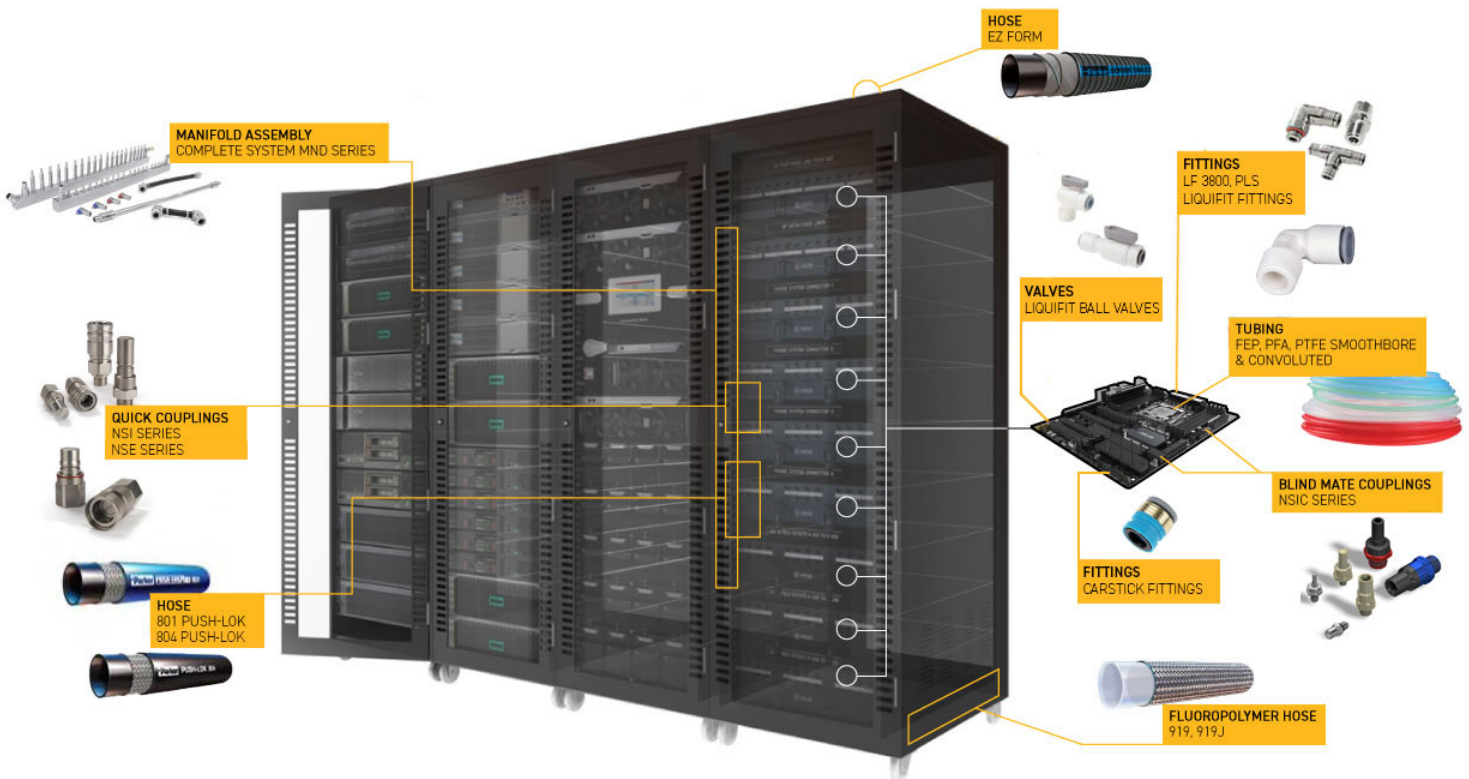
As Information Technology Equipment continues to progress, air cooling is no longer enough. Liquid is up to 4000 times better at storing and transferring heat than air. FSC has a wide portfolio of products that are built to address the challenges faced in liquid cooling applications. Our compact, leak-free fittings are ideal for CPU and on-blade cooling. We conduct material and product testing, and are able to validate solutions within our lab facilities.

+ OUR DIFFERENTIATORS

- A global presence
- In-house engineering and manufacturing
- In-house testing and validation
- In-house Technical support and customer service team

SYSTEM SOLUTIONS

We understand what's needed to implement a successful server rack cooling system. In addition to fittings for on-blade cooling, Parker is able to provide full system solutions that include non-spill couplings, tubing and hoses. Find out more at www.parker.com/thermal-management-connectors.



CUSTOM FITTINGS & VALVES

Machined Brass & Molded Composite Parts

Fluid System Connectors Division has the capability to create custom brass and composite components for your liquid cooling applications.

THE PROCESS

Data center thermal management technologies continue to evolve to serve new demands of both large and small data centers. Due to the ever-changing and increasingly unique needs of OEMs, standard brass and composite fittings often times may not fulfill the requirements of liquid cooling applications. Every server cooling kit, CPU cooling system, rack cooling units are all unique and built to some level of customer specification. For this reason, OEMs may find themselves needing custom configurations to

achieve their desired routing. In situations where standard fittings aren't suitable, Parker can create custom machined brass or molded composite parts. Our team of highly skilled, US-based engineers can design a part based on your requirements, develop a prototype, and complete testing based on designated criteria or specific specifications.

Custom-made composite parts can make sense for OEMs requiring

lightweight, compact fittings. This option requires some amount of lead time and up-front tooling costs because of the need for custom injection molds, but can lead to a wide variety of shapes in multiple dimensions.

For applications requiring special shapes or fittings with a specific thread patterns, Parker can design and manufacture custom brass configurations. This option involves no up-front tooling costs and can be completed in just a few weeks.

1

CUSTOMER INPUT & OBJECTIVES

Parker's team of engineers will work with you to understand the requirements for your application, including specifications for size, temperature, application, media, and pressure.

2

DEFINE PART ATTRIBUTES

Based on your objectives and the specifications, our engineers then define the part attributes including type of end connections and material selection.

3

DESIGN NEW FITTING OR MODIFY EXISTING FITTING

Our team of engineers will either modify a standard fitting or create an entirely new design. Prints and CAD models will be provided for your review.

4

CREATE PROTOTYPE

After the design has been agreed upon, a prototype is created. This may involve the creation of a new forging for shaped brass bodies or a new mold for composite bodies.

5

APPROVAL & TESTING

Upon your approval, we will complete any necessary testing. Testing will always depend on the specific fitting designed; this may be as part of a specification or due to your own internal requirements.

Parker Fluid Connectors Group

North American Divisions & Distribution Service Centers

Your complete source for quality tube fittings, hose & hose fittings, brass & composite fittings, quick-disconnect couplings, valves and assembly tools, locally available from a worldwide network of authorized distributors.

Fittings:

Available in inch and metric sizes covering SAE, BSP, DIN, GAZ, JIS and ISO thread configurations, manufactured from steel, stainless steel, brass, aluminum, nylon and thermoplastic.

Hose, Tubing and Bundles:

Available in a wide variety of sizes and materials including rubber, wire-reinforced, thermoplastic, hybrid and custom compounds.

Worldwide Availability:

Parker operates Fluid Connectors manufacturing locations and sales offices throughout North America, South America, Europe and Asia-Pacific.

For information, call toll free...

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