Thermal Management
Fluid Handling Solutions
for Tempering & Cooling
Parker LPCE
Provider of Low Pressure Fluid Handling Solutions for Thermal Management

Our DNA
Inventor of push-to-connect technology, we constantly strive to design, manufacture and customize safe and reliable quick connections solutions, distributed anywhere across the globe
Liquid Cooling Applications

Thermal management is critical in virtually all industries. The overheating effects of any process can be disastrous and irreversible for the manufactured products as well as for the machine itself.

While liquid cooling systems are the preferred option for small spaces, dusty environments, quiet zones and high power rating applications, water circuit design requires particular care.

Through our brands Transair, Legris and Rectus, we continually endeavor to develop fluidic solutions to help our customers overcome the difficulties of water management.

Secure the process
Preserve water quality
Protect the environment
Ensure efficient flow rate
Ensure machine durability
Avoid any damage due to corrosion
Enable  fast & easy maintenance
Parker LPCE Fluid Handling Solutions

Fluid handling solutions from chillers to every stage of your cooling process.

Industrial & Processing

- Piping
- Brackets
- Valves

Power Generation

- Laser Processing
- Plastic Moulding
- Robotic Welding
- Printing

Frequency Converters

Energy Storage

L-ion Batteries
Parker LPCE Fluid Handling Solutions

Fluid handling solutions from chillers to every stage of your cooling process.

- **Generation**
- **Electronics**
- **Data Centers**
- **Computing Systems**
- **Semi-Conductor Machinery**
- **Frequency Converters**
- **Energy Storage**
- **Batteries**
- **Frequency Converters**
- **Power Generation**
- **Coupling**
- **Fittings**
- **Tubing**
Product Offer

Complete

Extensive range of piping, coupling, fitting, tubing and valves suitable for liquid handling from the cooling unit to the end lines
Numerous material choices

Fast & Easy

Connection without tools.
No need to weld, glue or crimp
Automatical tightness
Lightweight for easy handling

Compact & Flexible

Numerous configurations offering highly flexible installation solutions.
Space saving cartridge systems

Safe & Resistant

Push-In fittings 100% leak-tested and individually dated in production.
Materials chemically compatible with deionized water, glycol, corrosion inhibitors and bactericides
Double shut-off system
Flat sealing design

Robust & Efficient

Technology tried and tested for various industrial applications
Unrestricted design for optimal flow
Support & Services

Sizing
Support and tools to select the right diameter
Pressure drop simulation and measuring

Design
3D CAD drawings available on www.parker.com
MOLDFLOW rheology, FEA ANSYS numerical simulations
DFSS, 3D modulation & ECO design optimization methodologies

Test
Ageing under temperature cycles.
Mechanical tests (vibrations, shock or endurance...)
Leakage rate measure with Helium mass spectrometer
Strong partnership with accredited labs for fluid mechanics expertise

Chemical Compatibility
Right materials recommendation

Fast Prototyping
Quick molding technologies

Certificates
Certificates of conformity available on www.parker.com
2.1, 2.2 and 3.1 EN 10204 certificates on demand

Supply Chain
Long term commitments
Production agreement on forecast
Main Lines Solution

Transair® is the ideal solution for industrial fluid networks, by combining adaptability, quick installation, high performance and durability.

<table>
<thead>
<tr>
<th>Diameters</th>
<th>Ø16.5mm to Ø40mm</th>
<th>Ø42mm to Ø63mm</th>
<th>Ø76mm to Ø168mm</th>
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<tr>
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<td>Brass, Polymer, Stainless steel</td>
<td>Polymer Aluminium</td>
<td>Treated Steel Stainless steel</td>
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<td>Technology</td>
<td>Gripping Ring Instant Connection</td>
<td>SnapRing Quick-fit Connection</td>
<td>Lug &amp; Clamp Quick-fit Connection</td>
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<td>Materials</td>
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<tr>
<td>Working Conditions</td>
<td>Working pressure and temperature depend on the model.</td>
<td>All performances are available in our interactive catalogue on <a href="http://www.parker.com">www.parker.com</a></td>
<td></td>
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</table>
Quick Coupling Solution

Our systems stand out for their high level of compatibility with the broadest range of liquids (for example water or heat exchange oils) and the application environment. Likewise, their resistance to mechanical influences is vital. One of the most important requirements in the cooling of electronic systems is the avoidance of leaks, as this is the only way to guarantee fault-free function of the installation.

### Dry-Break Solution

**Dry-Break System**

- Dry-break coupling system with single-hand operation

**Cartridge Couplings**

- Dry-break cartridge couplings without locking mechanism

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<td>3-4-6-9-12-19</td>
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<tr>
<td>Materials</td>
<td>Nickel-Plated Brass</td>
<td>Stainless Steel</td>
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</table>

Dry break – extremely low dead volume remaining. Absolutely no air pockets when coupling and only a barely noticeable film of the medium being channeled on the valve bodies when uncoupling.

### Working Conditions

<table>
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<th>Details</th>
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<td>Temperature</td>
<td>+200°C depending on the medium, different seal variants are available.</td>
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<tr>
<td>Temperature</td>
<td>-40°C</td>
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<tr>
<td>Pressure</td>
<td>Up to 15 bar</td>
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</table>

Maximum static working pressure with design factor 4 to 1.

The responsive flow charts will be in our catalogue on www.parker.com

### Flat Sealing Design

On the coupling and plug, our flat sealing coupling systems have valves that build up no dead-space volume. As such, when the connection is broken, no drops of the medium being channeled are able to escape. This variant is especially suitable for transporting aggressive media or in sensitive environments – e.g. in cleanrooms.

### Cartridge couplings:

The couplings are installed on floating bearings, which facilitates optimum balancing in the case of axial deviations.

Cartridge couplings with single-hand operation.
Parker Legris fluidic fittings and tubing have been engineered to outperform, working together with a system approach that offers reliable, leak-free connections, streamlines development and speeds manufacturing.

End Lines Solution

Parker Legris push-in fittings are 100% leak-tested and individually dated in production. They are designed to ensure full flow and to minimize pressure drop.

Working Conditions

-150°C

Working pressure and temperature depend on the tubing being used.

The tubing performances are available in our interactive catalogue on www.parker.com

Gripping Technology

Manual connection and disconnection

Manual connection Disconnection with tool

Robustness | Lightness | Space Saving
---|---|---
Range LF 3600/ LF 3800 | LIQUIfit® Cartridge |
Outer Diameter Ø4 to Ø22mm | Ø4 to Ø16mm | Ø4 to Ø16mm
Inner Diameter DN2 to DN18mm | DN2 to DN13mm | DN2 to DN13mm
Materials Nickel-Plated Brass Stainless Steel | Polyamide Brass Polyamide |
Gripping Technology Ring / Collet | Ring | Ring / Collet

The connection performances are closely linked to the fitting and tubing combination. The choice of the tubing material depends on the gripping technology. In some cases, a tube support can be recommended. Please contact us to define the right fitting and tubing combination (webcontact@parker.com).
Parker Legris tubings are calibrated on the external diameter complying with NF E49-100. Diameter, material, remaining length and batch number are marked on the full length of the roll.

A wide range of flexible tubings from Ø4 to Ø22 in multiple materials and colors.

In case of dynamic application (tubing movements, mechanical strains or vibrations), we strongly recommend using an additional tube support. Please contact us for any support (webcontact@parker.com).
Customer Support

Partners in your projects, we offer you support and guidance to surpass technological challenges to develop your fully adapted solutions.

Markets and applications expertise to provide guidance and support

Co-creation & validation loop with the user

Dedicated Application Engineer for each customer project
Our strong production capability in plastic injection, machining and automatic, ensures the most competitive products.

80 million finished good produced each year by LPCE Division

High cadence automated assembly processes

Lean flexibility and quick adaption (SMED) of production level

Clean room assembly ISO 7
ISO certified, quality management is at the very heart of our manufacturing processes in the entire value chain.

IATF 16949, ISO 9001 and ISO 14001 standards deployed in all plants and at suppliers locations.

Systematic vision-control to guarantee the production process robustness.

Individual component traceability.

Part number date code are systematically applied in production.

Push-in fittings are 100% air leak tested before packaging.
Premium Customer Service

As a global player, we provide you with premium customer service to any of your locations across the globe.

On-time delivery focus:
dedicated teams
for each order follow-up

Long term commitments
to our OEM customers

Strong aftermarket support
through our worldwide
distribution network
<table>
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<tr>
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<td>AE – United Arab Emirates</td>
<td>Dubai</td>
<td>+971 4 8127100</td>
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<tr>
<td></td>
<td>AT – Austria</td>
<td>Vienna</td>
<td>+43 (0) 2622 23501-0</td>
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<td></td>
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<td>Vienna</td>
<td>+43 (0) 2622 23501 900</td>
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<td>Baku</td>
<td>+994 50 2233 458</td>
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<td>BE/LU – Belgium</td>
<td>Brussels</td>
<td>+32 (0) 67 280 900</td>
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<tr>
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<td>Kladno</td>
<td>+420 284 083 111</td>
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<td>Dublin</td>
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<td>Oldenzaal</td>
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<td>Porto</td>
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<td>Bucharest</td>
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<td>Moscow</td>
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Low Pressure Connectors Division Europe
OEM Industrial & Processing Business Unit
Parc Alcyone - Bâtiment D
1, rue André et Yvonne Meynier
35069 Rennes Cedex - France
phone: +33 (0) 2 99 25 55 00
www.parker.com - www.parkerlegris.com
webcontact@parker.com