hymatik

THERMAL MANAGEMENT

Fluid Handling Solutions for Tempering & Cooling

Parker

Tel: +45 63 12 83 00 | Email: ps@hymatik.com | www.hymatik.com | Hvidkaervej 27a, DK-5250 Odense SV, Denmark

Parker LPCE

Provider of Fluid Handling Solutions for Thermal Management

For more than 60 years, we strive to design, manufacture and customise safe and reliable quick connection solutions, distributed anywhere across the globe.

OUR BRANDS

legris transair RECTUS

OUR DIFFERENTIATORS

+ A GLOBAL PRESENCE
+ CUSTOMER ENGINEERING INTIMACY
+ IN-HOUSE ENGINEERING AND MANUFACTURING

OUR QUALITY MANAGEMENT

+ IATF 16949, ISO 9001 AND ISO 14001 CERTIFIED

KEY FIGURES

4500 shipments a day

70M finished goods / year

850 employees

7 locations in Europe

Parker LPCE headquarters

Parker

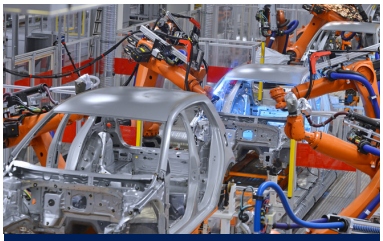
Liquid cooling applications at a glance

Thermal management is critical in 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.

Industrial

Laser Processing

Plastic Moulding

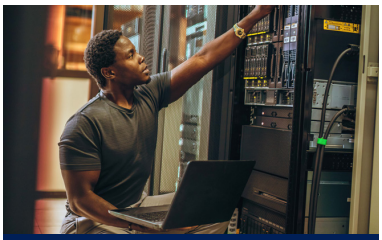


Robotic Welding

Printing

Power Generation

Power Conversion



Li-on Batteries

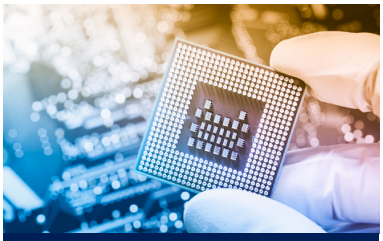
Energy Storage

Frequency Converters

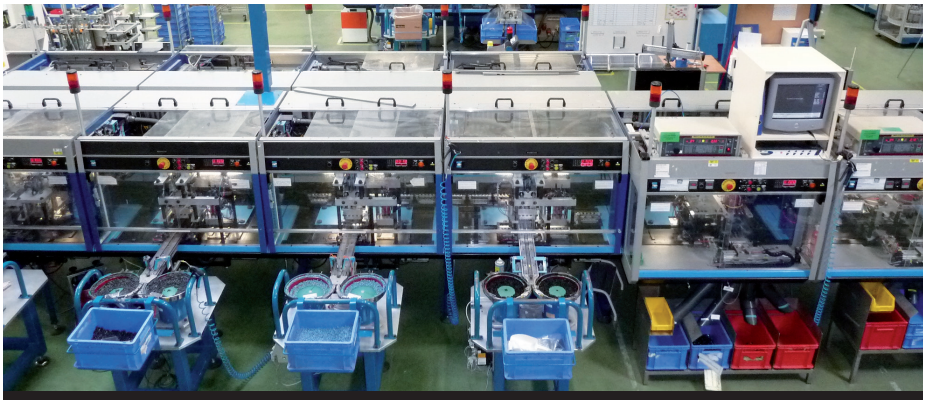
Electronics

Data Centers

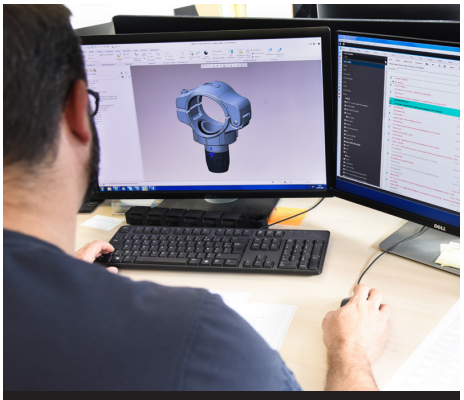
Computing Systems



Semiconductor Machinery



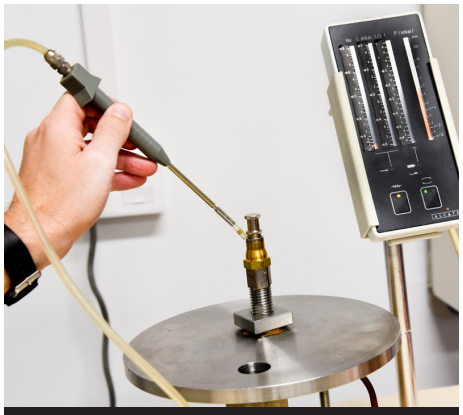
Plant assembly lines



CAD and numerical simulations

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

YOUR CHALLENGES	OUR SOLUTIONS
REACH THE BEST THERMAL EFFICIENCY	• Support and tools to select the right diameter • Flow diagrams including pressure drop and flow rate • Strong partnership with accredited labs for fluid mechanics expertise
OPTIMIZE THE DESIGN OF YOUR CIRCUIT	• FEA ANSYS numerical simulations • MOLDFLOW rheology • Fast prototyping thanks to quick molding technologies
ENSURE THE DURABILITY OF YOUR MACHINE	• Right materials recommendation to preserve water quality and to avoid any damage due to corrosion
IMPROVE YOUR PRODUCTIVITY	• In-house plastic injection molding • High cadence automated assembly process • On-time delivery focus: dedicated teams for each order follow-up
SIMPLIFY THE MAINTENANCE OF YOUR MACHINE	• Quick connections solutions for recurrent disassembly



Helium mass spectrometer for leakage rate measures

Test bench for flow rate measures

Thermal enclosure for ageing test

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Parker LPCE Fluid Handling Solutions

Fluid handling solutions from chillers to every stages of your cooling process

GLOBAL RANGE TO OFFER THE BEST SOLUTION FOR YOU

Extensive range of piping, coupling, fitting, tubing and valves suitable for liquid handling **from the cooling unit to the cold plates.**

FAST & EASY

+ Connection without tools.
+ No need to weld, glue or crimp
+ Automatical sealing and gripping
+ Easy handling

COMPACT & FLEXIBLE

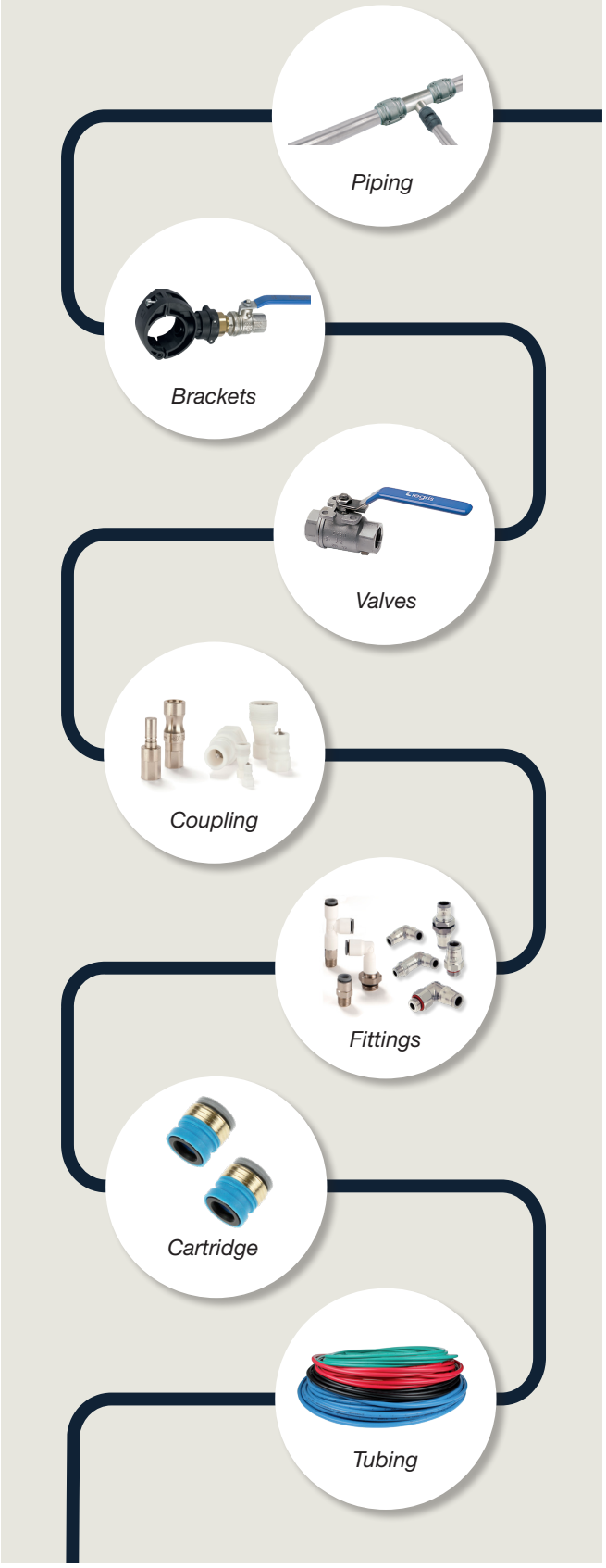
+ Numerous configurations offering highly flexible installation solutions
+ Space saving with cartridge systems

SAFE & RESISTANT

+ Robust test protocols are applied: ageing, endurance and mechanical tests such as vibrations, shock or burst pressure
+ Push-In fittings 100% leak-tested and individually dated in production
+ Safety locking function

SMART & EFFICIENT

+ Unrestricted design for maximal flow
+ Double shut-off coupling system
+ Flat sealing coupling system
+ Self-alignment coupling system



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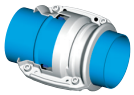
Rigid Piping Solution

For main lines connections

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

Because users need versatile but reliable and safe solutions, Transair® has developed **different technologies for the best compromise between safety, efficiency and adaptability.**

Diameters	Ø16.5mm to Ø40mm	Ø42mm to Ø63mm	Ø76mm to Ø168mm
Connector Materials	Brass, Polymer, Stainless steel	Polymer Aluminium	Treated Steel Stainless steel
Technology	**Gripping Ring Instant Connection**	**SnapRing Quick-fit Connection**	**Lug & Clamp Quick-fit Connection**



Transair® innovative technology takes into account the specific requirements of each diameter and provides the user with an optimum safety coefficient and easy connection.

Working Conditions

+90°C

-20°C

Our global piping, coupling and fitting solution is generally suitable for a temperature range of -20°C to +90°C.

Up to 10 bar

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

Quick Coupling Solution

For modular and rackable systems

Our rectus couplers 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 System	Cartridge Couplings
		
	Dry-break coupling system with single-hand operation	Dry-break cartridge couplings without locking mechanism
Series	200KL	200KLEK
DN (mm)	4-6-9-12-16-19-25	3-4-6-9-12-19
Materials	Nickel-Plated Brass Stainless Steel	Nickel-Plated Brass Stainless Steel

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

+90°C

-20°C

Our global piping, coupling and fitting solution is commonly designed for working from -20°C to +90°C. However, we can offer couplers which can work as low as -40°C or up to +200°C.

Up to 15 bar

Maximum static working pressure with design factor 4 to 1.

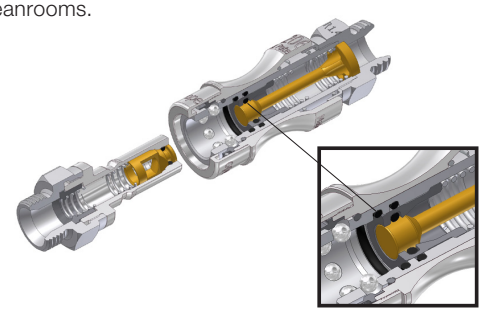
The responsive flow charts will be in our catalogue on www.parker.com

Interchangeability:

On demand, our couplings can be adapted to be compatible with competitors' profiles.

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.in cleanrooms.



Cartridge couplings:

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

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legris

Push-In fitting solution

For end lines connections

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.

	Robustness	Lightness	Space Saving
			
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

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

+90°C

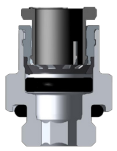
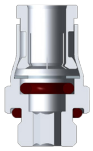
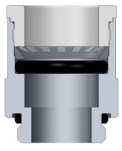
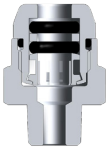
-20°C

Our global piping, coupling and fitting solution is commonly designed for working from -20°C to +90°C. However, we can offer fittings which can work as low as -40°C or up to +150°C.

Up to 30 bar

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

Gripping Technology

	Gripping Ring	Gripping Collet
Manual connection and disconnection		
Manual connection Disconnection with tool		

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.

Associated Products

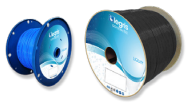
Polymer coupling series recommended for liquid cooling applications.

Series 21	Series 70	Series 48
		
Coupling in POM or PVDF with the most popular profile in DN 5mm. Color coding to avoid coupler / plug mix-up.	Coupling in POM with profile compliant with ISO 7241-1 series B, especially suitable for liquid media from DN 4,3mm to 30mm.	Coupling in POM or PVDF in DN 7mm. Color coding to avoid coupler / plug mix-up.

Manual Ball Valves	Piloted Valves	Accessories
		

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.

	Total Versatility	High Resistance	High Flexibility
			
Material	Polyethylene	Fluoropolymer	Anti-Spark Polyurethane
Outer Diameter	Ø4 to Ø22mm	Ø4 to Ø22mm	Ø4 to Ø14mm
Inner Diameter	DN2 to DN18mm	DN2 to DN18mm	DN2,5 to DN9,5mm

In case of dynamic application (tubing movements, mechanical strains or vibrations), we strongly recommend using an additional tube support.

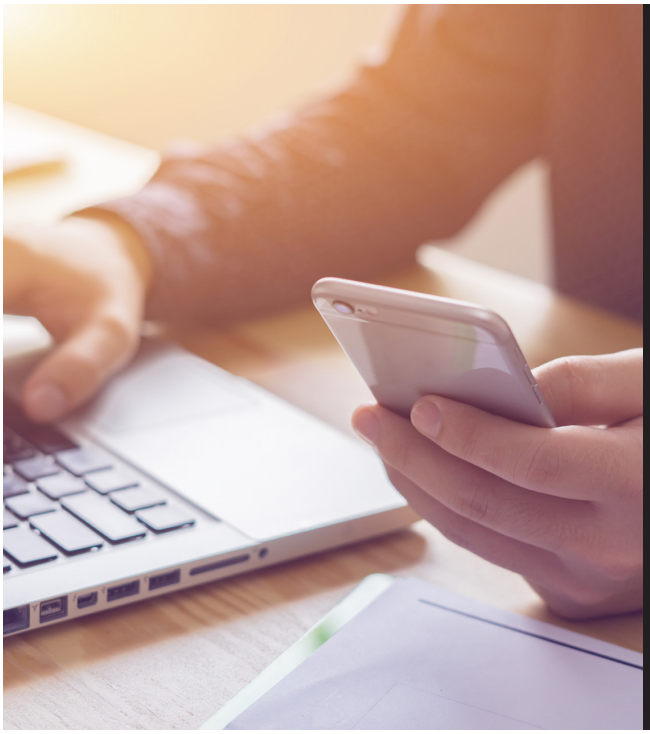
Your unique cooling partner

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

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

OUR CUSTOMER SUPPORT

+ Markets and applications expertise to provide guidance and support
+ Co-creation & validation loop with the user
+ Dedicated Application Engineer for each customer project



Contact us

Please contact us for any support
webcontact@parker.com

- Because your **application** is **unique** we can help you to define the right solution.
- Together, we can **design** your integrated **customized** liquid cooling circuit.
- We can bring more **value** if we are involved at the **early** stage of your project.

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Parker's Motion & Control Technologies

At Parker, we're guided by a relentless drive to help our customers become more productive and achieve higher levels of profitability by engineering the best systems for their requirements. It means looking at customer applications from many angles to find new ways to create value. Whatever the motion and control technology need, Parker has the experience, breadth of product and global reach to consistently deliver. No company knows more about motion and control technology than Parker. For further info call 00800 27 27 5374

Aerospace

Key Markets

Aftermarket services
Commercial transports
Engines
General & business aviation
Helicopters
Launch vehicles
Military aircraft
Missiles
Power generation
Regional transports
Unmanned aerial vehicles

Key Products

Control systems & actuation products
Engine systems & components
Fluid conveyance systems & components
Fluid metering, delivery & atomization devices
Fuel systems & components
Fuel tank inerting systems
Hydraulic systems & components
Thermal management
Wheels & brakes

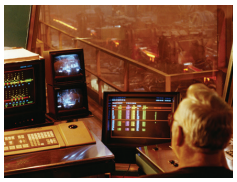
Climate Control

Key Markets

Agriculture
Air conditioning
Construction Machinery
Food & beverage
Industrial machinery
Life sciences
Oil & gas
Precision cooling
Process
Refrigeration
Transportation

Key Products

Accumulators
Advanced actuators
CO_2 controls
Electronic controllers
Filter driers
Hand shut-off valves
Heat exchangers
Hose & fittings
Pressure regulating valves
Refrigerant distributors
Safety relief valves
Smart pumps
Solenoid valves
Thermostatic expansion valves



Electromechanical

Key Markets

Aerospace
Factory automation
Life science & medical
Machine tools
Packaging machinery
Paper machinery
Plastics machinery & converting
Primary metals
Semiconductor & electronics
Textile
Wire & cable

Key Products

AC/DC drives & systems
Electric actuators, gantry robots & slides
Electrohydrostatic actuation systems
Electromechanical actuation systems
Human machine interface
Linear motors
Stepper motors, servo motors, drives & controls
Structural extrusions

Filtration

Key Markets

Aerospace
Food & beverage
Industrial plant & equipment
Life sciences
Marine
Mobile equipment
Oil & gas
Power generation & renewable energy
Process
Transportation
Water Purification

Key Products

Analytical gas generators
Compressed air filters & dryers
Engine air, coolant, fuel & oil filtration systems
Fluid condition monitoring systems
Hydraulic & lubrication filters
Hydrogen, nitrogen & zero air generators
Instrumentation filters
Membrane & fiber filters
Microfiltration
Sterile air filtration
Water desalination & purification filters & systems

Fluid & Gas Handling

Key Markets

Aerial lift
Agriculture
Bulk chemical handling
Construction machinery
Food & beverage
Fuel & gas delivery
Industrial machinery
Life sciences
Marine
Mining
Mobile
Oil & gas
Renewable energy
Transportation

Key Products

Check valves
Connectors for low pressure fluid conveyance
Deep sea umbilicals
Diagnostic equipment
Hose couplings
Industrial hose
Mooring systems & power cables
PTFE hose & tubing
Quick couplings
Rubber & thermoplastic hose
Tube fittings & adapters
Tubing & plastic fittings

Hydraulics

Key Markets

Aerial lift
Agriculture
Alternative energy
Construction machinery
Forestry
Industrial machinery
Machine tools
Marine
Material handling
Mining
Oil & gas
Power generation
Refuse vehicles
Renewable energy
Truck hydraulics
Turf equipment

Key Products

Accumulators
Cartridge valves
Electrohydraulic actuators
Human machine interfaces
Hybrid drives
Hydraulic cylinders
Hydraulic motors & pumps
Hydraulic systems
Hydraulic valves & controls
Hydrostatic steering
Integrated hydraulic circuits
Power take-offs
Power units
Rotary actuators
Sensors

Pneumatics

Key Markets

Aerospace
Conveyor & material handling
Factory automation
Life science & medical
Machine tools
Packaging machinery
Transportation & automotive

Key Products

Air preparation
Brass fittings & valves
Manifolds
Pneumatic accessories
Pneumatic actuators & grippers
Pneumatic valves & controls
Quick disconnects
Rotary actuators
Rubber & thermoplastic hose & couplings
Structural extrusions
Thermoplastic tubing & fittings
Vacuum generators, cups & sensors

Process Control

Key Markets

Alternative fuels
Biopharmaceuticals
Chemical & refining
Food & beverage
Marine & shipbuilding
Medical & dental
Microelectronics
Nuclear Power
Offshore oil exploration
Oil & gas
Pharmaceuticals
Power generation
Pulp & paper
Steel
Water/wastewater

Key Products

Analytical Instruments
Analytical sample conditioning products & systems
Chemical injection fittings & valves
Fluoropolymer chemical delivery fittings, valves & pumps
High purity gas delivery fittings, valves, regulators & digital flow controllers
Industrial mass flow meters/ controllers
Permanent no-weld tube fittings
Precision industrial regulators & flow controllers
Process control double block & bleeds
Process control fittings, valves, regulators & manifold valves

Sealing & Shielding

Key Markets

Aerospace
Chemical processing
Consumer
Fluid power
General industrial
Information technology
Life sciences
Microelectronics
Military
Oil & gas
Power generation
Renewable energy
Telecommunications
Transportation

Key Products

Dynamic seals
Elastomeric o-rings
Electro-medical instrument design & assembly
EMI shielding
Extruded & precision-cut, fabricated elastomeric seals
High temperature metal seals
Homogeneous & inserted elastomeric shapes
Medical device fabrication & assembly
Metal & plastic retained composite seals
Shielded optical windows
Silicone tubing & extrusions
Thermal management
Vibration dampening

ENGINEERING YOUR SUCCESS.

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