

OPTIMIZING LIQUID COOLING SOLUTIONS WITH PARKER'S MQD SERIES COUPLINGS

As a trusted provider of thermal management technologies, **Parker Quick Coupling Division (QCD)** continues to advance liquid cooling for the data center market. Backed by decades of engineering experience, Parker's **MQD Series** (Multi Quick Disconnect) is designed to support the evolving requirements of high-performance AI infrastructure, dense server racks, and supercomputing environments.

Parker's MQD Series

Parker's MQD Series (Multi Quick Disconnect) are compact, hand-mate quick disconnects designed for manual connection inside server trays or racks of liquid cooling systems. The flat-face design helps minimize leakage when connecting and disconnecting, protecting sensitive electronics.

These connectors deliver high flow performance in a space-efficient package for AI and data center liquid cooling. Both plugs and sockets comply with NVIDIA's MQD specification and are interoperable with products from other approved MQD manufacturers.

Built for technician-connected liquid cooling lines, Parker's MQD Series combines a non-spill, flat-face interface with robust mechanical locking to maintain secure connections under demanding flow conditions. Ideal for high-performance racks where reliability, serviceability, and interoperability are critical.

MQD Series Features

- Global manufacturing and service capabilities
- Flush-face valve design prevents any fluid loss and provides optimum protection of electrical components
- End of line helium leak testing for quality assurance
- Reduced pressure drop for superior energy efficiency and system performance
- Manufacturing and assembly processes that reduce contamination
- Red and Blue color coding options on both plugs and sockets



Part Number	Coupling Half	Connection Thread Size
MQD-121-4MO-RD	Socket	7/16-20 UNF
MQD-121-4MO-BU	Socket	7/16-20 UNF
MQD-181-4MB-RD	Socket	G 1/4-19 BSPP
MQD-181-4MB-BU	Socket	G 1/4-19 BSPP
MQD-251-6MB-RD	Socket	G 3/8-19 BSPP
MQD-251-6MB-BU	Socket	G 3/8-19 BSPP
MQD-122-4HB-RD	Plug	Hose Barb
MQD-122-4HB-BU	Plug	Hose Barb

Pressure Rating

Max Operating Pressure: 100 psi
Safety Factor: 3 to 1

Material

Coupling: Stainless Steel
Plug: Stainless Steel
Seals: EPDM

CV Values

MQD02 > 0.3
MQD03 > 0.6
MQD04 > 1.0

Part Number	Coupling Half	Connection Thread Size
MQD-182-4CMO-RD	Plug	7/16-20 UNF
MQD-182-4CMO-BU	Plug	7/16-20 UNF
MQD-182-4MO-RD	Plug	7/16-20 UNF
MQD-182-4MO-BU	Plug	7/16-20 UNF
MQD-252-4CMO-RD	Plug	7/16-20 UNF
MQD-252-4CMO-BU	Plug	7/16-20 UNF
MQD-252-4MO-RD	Plug	7/16-20 UNF
MQD-252-4MO-BU	Plug	7/16-20 UNF

Working Temperature

Rated Working Temperature: 17°C to 65°C
Storage / Shipping Temperature: -40°C to 65°C

Connect Force

MQD02 - 50.7N
MQD03 - 51.9N
MQD04 - 59.8N

Spillage/Air Inclusion

MQD02 - 0.0004 ml
MQD03 - 0.0006 ml
MQD04 - 0.0007 ml

MQD Series Markets & Applications

- Information Technology
- Electronics
- Data Centers
- Supercomputers
- Liquid cooling
- Servers
- Rackable Server Systems

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