



Rheometer Measuring Head

Customized rheometry with the performance of an MCR rheometer



DSR 502: Dynamic Shear Rheometer Measuring Head

Some applications require an accurate rheometer as part of a self-constructed setup or the integration of a rheological measurement into an automation process. The Dynamic Shear Rheometer (DSR) measuring head gives you the flexibility to mount the measuring unit far away from the electronics, allowing easy integration in fully automated workstations or custom-built setups without further modification.

The DSR 502 measuring head features the established motor and air-bearing technology as well as the software of the MCR rheometer series. It can be connected to the separate electronics with cable lengths of up to four meters. USB or Ethernet ports allow integration into a network and remote control of the system, if required.

All standard MCR measuring capabilities are available, e.g. for rotational, oscillatory and normal force measurements, with the exception of functions that require the lift motor.

- ¹⁾ Depending on measuring point duration and sampling time, practically any value is achieved
²⁾ Set frequencies below 10^{-4} rad/s are of no practical relevance due to the measuring point duration > 1 day
³⁾ Theoretical value (duration per cycle = 2 years)

Specifications

Bearing	Air
EC motor	✓
Maximum torque	230 mNm
Min. torque rotation	10 nNm
Min. torque oscillation	2 nNm
Torque resolution	0.1 nNm
Angular deflection (set value)	0.1 μ rad to ∞
Angular resolution	10 nrad
Min. angular velocity ¹⁾	10^{-9} rad/s
Max. angular velocity	314 rad/s
Min. angular frequency ²⁾	10^{-7} rad/s ³⁾
Max. angular frequency	628 rad/s
Normal force resolution	0.5 mN
Normal force range	0.005 to 50 N
Toolmaster™	✓
QuickConnect	✓
Direct strain controller	✓
Direct stress controller	✓
TruRate™	✓
TruStrain™	✓

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