

Anton Paar Rheometer Solutions

MCR Series



From Essential Rheology to Complete Material Insight

The MCR series supports applications ranging from routine rheology to advanced material characterization, with extended capabilities for oscillation, normal force, temperature control, and application-specific testing.



MCR 53

- Essential rheometer for routine QC**
- Rotational measurements and application-specific oscillation
 - Operation without pressurized air
 - Peltier and electrical temperature devices



MCR 73

- Sensitive rheometer for demanding QC**
- Rotational and oscillatory measurements
 - Accurate air-bearing motor (minimum torque 100 nNm)
 - Peltier and electrical temperature devices



MCR 93

- High-accuracy rheometer for comprehensive QC**
- Rotational and oscillatory measurements
 - Accurate air-bearing motor (minimum torque 20 nNm)
 - Normal force
 - Peltier and electrical temperature devices
 - Basic powder rheology and tribology
 - Accessories for high pressure and large particle rheology



MCR 303

- Premium rheometer for advanced characterization**
- Rotational and oscillatory measurements
 - Highly accurate air-bearing motor (minimum torque 5 / 1¹⁾ nNm)
 - Normal force
 - Peltier, electrical, and convection temperature devices
 - High-end powder rheology and tribology
 - Accessories for additional parameters such as humidity, pressure, and more
 - Torsional DMA measurements



MCR 503

- Top-selling rheometer supporting basic linear DMA**
- Rotational and oscillatory measurements
 - Highly-accurate air-bearing motor (minimum torque 0.15 nNm)
 - Normal force
 - Peltier, electrical, and convection temperature devices
 - High-end powder rheology and tribology
 - Accessories for additional parameters such as humidity, pressure, UV, and more
 - Sample-adaptive controller (TruStrain) included
 - Accessories for structural analysis and RheoOptics
 - TruChirp enables rapid broadband frequency sweeps
 - Transient Data enables advanced rheological analysis methods
 - Torsional and basic linear DMA measurements



MCR 703 MultiDrive

- Most advanced rheometer and DMA on the market**
- Rotational and oscillatory measurements
 - Highly-accurate air-bearing motor (minimum torque 0.15 nNm)
 - Normal force
 - Peltier, electrical, and convection temperature devices
 - High-end powder rheology and tribology
 - Accessories for additional parameters such as humidity, pressure, UV, and more
 - Sample adaptive controller (TruStrain) included
 - Accessories for structural analysis and RheoOptics
 - TruChirp enables rapid broadband frequency sweeps
 - Transient Data enables advanced rheological analysis methods
 - High-end DMA measurements
 - Full characterization platform



Find out more

1) 1 nNm with activated TruStrain option

	MCR 53	MCR 73	MCR 93	MCR 303	MCR 503	MCR 703 MultiDrive
Bearing design	Mechanical	Air, fine-pored carbon				
Motor design	Electronically commutated (EC) permanent magnet synchronous motor					
Normal force measurement design (US Pat. 6167752, 1996)	×		360° capacitive sensor, non-contacting, fully integrated in bearing			
Working modes	CMT					CMT, SMT, counter- movement
Min. torque (rotation)	200 µNm	100 nNm	20 nNm	5 nNm	1 nNm	
Min. torque (oscillation)	200 µNm	100 nNm	20 nNm	5 / 1 ¹⁾ nNm	0.15 nNm	
Max. torque	125 mNm	160 mNm	180 mNm	230 mNm	255 mNm	
Torque resolution	5 nNm			0.1 nNm	0.05 nNm	
Max. angular velocity	157 rad/s	261 rad/s		314 rad/s		628 rad/s
Max. speed	1,500 rpm	2,500 rpm		3,000 rpm		6,000 rpm
Min. angular frequency	10 ⁻⁷ Hz			2 x 10 ⁻⁸ Hz		
Max. frequency	100 Hz				250 Hz	300 Hz
Normal force range	×		0.001 N to 50 N			
Normal force resolution	×		0.4 mN	0.1 mN		
Ready for linear drive (DMA in tension, bending, and compression) US Pat. 9574983, 2015	×				✓	
TruStrain / TruChirp	×			○	✓	
Transient Data	×				✓	

Trademarks: RheoCompass (9177015), MultiDrive (16731581), TruStrain (9176918)

✓ Included ○ Optional × Not included

1) 1 nNm with activated TruStrain option.

Reliable. Compliant. Qualified.



**Our well-trained and certified technicians
are ready to keep your instrument running smoothly.**

Maximum uptime | Warranty program | Short response times | Global service network

