Rheometer

Manufacturer: AntonPaar

Model: MCR 92

Technical specifications

Specifications	Units	MCR 92
Bearing	-	Air
EC motor (brushless DC) with high resolution optical encoder	-	✓
Rotation Mode	-	✓
Oscillation Mode	-	✓
Direct Strain Controller	-	✓
Direct Stress Controller	-	✓
Maximum torque	mNm	125
Minimum torque, rotation	µNm	1
Minimum torque, oscillation	µNm	1

Torque resolution	nNm	100
Angular deflection, set value	μrad	1 to ∞
Angular deflection, resolution	nrad	614
Step rate, time constant	ms	100
Step strain, time constant	ms	100
Minimum angular velocity	rad/s	10^{-4}
Maximum angular velocity	rad/s	157
Minimum angular frequency	rad/s	10^{-4}
Maximum angular frequency	rad/s	628
Minimum speed (CSS/CSR)	rpm	10^{-3}
Maximum speed	rpm	1500
Maximum temperature range	°C	-50 to +400
SafeGap, Normal force Limiter during Gapsetting	-	✓
TruRay, Dimmable illumination of sample area	-	✓
Connections		
Dimensions	mm	380 x 660 x 530
Weight	kg	33
QuickConnect for measuring systems, screwless	-	✓
Toolmaster^{TM}, measuring system	-	✓
Toolmaster^{TM}, measuring cell	-	✓
CoolPeltier^{TM}, Peltier-controlled Plate System with built in cooling option that requires no additional accessories for counter-cooling	°C	
Actively Peltier-controlled hood that requires no additional accessories for counter-cooling	°C	

CoolPeltier^{TM}, Peltier-controlled Cylinder System with built in cooling option that requires no additional accessories for counter-cooling	°C	
Virtually gradient-free (horizontal, vertical) temperature control	-	✓
Rheometer Software:		
Test Designer	-	✓
Report Designer	-	✓
User Management	-	✓
Electronic trim lock for the measuring system	-	✓
Automatic gap control/setting, AGC/AGS	-	✓

Standards

ASTM- D2556, D3236, D4440, D7271
DIN- 51810 Part 1, 51810 Part 2, 53019-1, 53019-2, 53019-3, 53019-4, 54458
DIN EN- 14770
EN- 14770
ICA- (chocolate)
IOCCC- 2000 (chocolate)
ISO- 3219, 3219-1 draft, 3219-2 draft
Pharmacopoeia Europe (Ph. Eur.)- 2.2.8 - Viscosity, 2.2.10 - Rotating viscometer method 0132
U.S. Pharmacopoeia (USP)- 912 - Rotational Rheometer Methods