

## Technical Data - MCR Tribometer

<b>Temperature Control Technology</b>	Peltier			Electrical
<b>Measuring Cell</b>	T-PTD 200	T-PID/44	T-BTP	
<b>Environmental conditions:</b>				
<b>Temperature Range</b>	-40 °C to 200 °C	-30 °C to 190 °C	-20 °C to 180 °C	-160 °C to 600 °C
<b>Relative Humidity Level</b>	-	-	5 % to 95 %	-
<b>Contact conditions:</b>				
<b>Normal Force Range</b>	1 N to 50 N	0.7 N to 50 N	0.1 N to 70 N	
<b>Normal Force Resolution</b>	0.005 N			
<b>Contact Type</b>	Point, Bearing	Point, Flat	Point	
<b>Motion conditions</b>				
<b>Continuous rotation:</b>				
<b>Speed Range</b>	10 <sup>-6</sup> rpm to 3000 rpm	10 <sup>-6</sup> rpm to 1000 rpm	10 <sup>-6</sup> rpm to 3000 rpm	
<b>Sliding Speed Range</b>	10 <sup>-8</sup> m/s to 3.3 m/s	10 <sup>-8</sup> m/s to 2.3 m/s	10 <sup>-8</sup> m/s to 1.4 m/s	
<b>Torque Range</b>	1 nNm to 300 mNm			
<b>Torque Resolution</b>	0.1 nNm			
<b>Friction Force Range</b>	250 nN to 120 N			
<b>Friction Force Resolution</b>	25 nNm			
<b>Oscillatory rotation:</b>				
<b>Frequency</b>	10 <sup>-7</sup> Hz to 100 Hz			
<b>Angular Amplitude</b>	1 μrad to ∞ μrad			
<b>Angular Resolution</b>	10 nrad			
<b>Additional parameters:</b>				
<b>Min. Online Wear Depth</b>	0.65 μm			