Specifications

Understanding the application under consideration, and the associated rheological test requirements, is a key factor in selecting the most appropriate rheometer system.

If you are unsure as to specifying an appropriate rheometer model for your application, Malvern recommend contacting us for further advice and/or a sample test and evaluation report.

General

Modes of operation:
Direct strain control. Shear rate control. Shear stress control.

Torque range:
10nNm to 200mNm. (Viscometry - Controlled Rate and Controlled Stress)

Torque range:
5.0nNm to 200mNm. (Oscillation - Controlled Strain and Controlled Stress)

Torque resolution:
0.1nNm.

Position resolution:
<10nrad.

Angular velocity range:
10nrads-1 to 325rads-1

Step change in strain:
<10ms.

Frequency range:
6.28μrads-1 to 628rads-1 (1μHz to 100Hz).

Motor inertia:
12μN.m.s2.

Normal Force range:
0.001N to 50N

Normal Force resolution:
0.5mN.

Normal Force response time:
<10ms.

Vertical lift speed:
0.1μms-1 to 35mms-1

Vertical lift range (measurable):
230mm.

Gap resolution (over full vertical lift range):
0.1μm

Fully configurable vertical profiles:

By speed and by Normal Force.

Raw instrument variables:

5kHz constant streaming data.

Complete sample history:

Data available from loading to unloading as standard.

Interface:

USB2 – plug and play.

Quick-connect geometries:

Auto-identification and auto-configuration – plug and play.

Interchangeable lower plates:

Varying pedestal diameters and surface finishes.

Cartridge environmental controllers:

Auto-identification and auto-configuration – plug and play.

Temperature range:

-40°C to 200°C (Peltier plate and active hood cartridges). -30°C to 200°C (Peltier cylinder cartridge), ambient to 350°C (High temperature cartridge).

Temperature resolution:

0.01°C.

Dimensions (W, D, H):

490mm (W) x 485mm x 680mm

Weight:

47kg.

Power:

110V or 220V.

Operating temperature (°C):

15°C – 40°C.

Humidity:

35% - 80% non-condensing.

Note:

Specifications have been obtained under conditions as stated in the Installation and Site Requirements for Kinexus rheometers