

KRK High Shear Viscosimeter

Model No. 2204

Along with the progress in coating technology, especially with diversification of coating types, high speed processing and upgrading of quality, coating material needs to meet severe requirements in flowability, leveling and stability to various outer factors. Consequently, flowability tests for coating materials in the range of high speeds are indispensable to monitor problems at the high-speed blade coater and roll coater. With the KRK high shearing viscosimeter, it is possible to faithfully reproduce the operation of a practical machine in the laboratory, and to grasp behaviors at speeds of 1×10^5 /second, encompassing a wide range of elemental research, such as solving troubles and development of new coating materials. This machine is designed to test not only the materials in the category of high speed and high shearing, as well as those of low speed and high viscosity, with a special function (optional) of low revolutions, 1/10 speed of the standard high speed (a range of 0 to 220rpm) which enables to test various kinds of materials in speed and shearing. The measurement ranges up to 4,000mPa-s liquids. This machine features an electronically controlled stepless speed change, allowing linear deceleration and acceleration up to the maximum speed of 8,800rpm. The machine body is installed on a stable base, with almost no vibrations. This is a viscosimeter having an inner rotating cylinder, with a bob and a cup of high precision. Viscosity torque is detected by a strain gauge, and graphically displayed by the PO via an amplifier. The system with a computer can calculate viscosity coefficient and shearing speed that are continually changing to display plastic and leveling index.

Specifications

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| Specimen: | Newtonian liquid, Non-Newtonian liquid (plasticity, pseudo plasticity, thixotropy, dilatancy) |
| Maximum Shearing Speed: | 1.8×10^5 /second-1 |
| Maximum Viscosity: | 2,000mPa-s (cps) (4,000 option) |
| Rotation Speeds: | |
| 1st Stage: | low speed 0 to 220rpm, high speed 0 to 2,200rpm |
| 2nd Stage: | low speed 0 to 440rpm, high speed 0 to 4,400rpm |
| 3rd Stage: | low speed 0 to 660rpm, high speed 0 to 6,600rpm |
| 4th Stage: | low speed 0 to 880rpm, high speed 0 to 8,800rpm |
| Cup: | inner diameter 40mm, effective depth 80.5mm, Material: stainless steel (SUS304) |
| Torque Range: | shifting in four stages 5, 10, 20, 50 x 104 Dyn-cm/cm 10, 20, 40, 100 x 104 (optional) |
| Strain Gauge Protector: | overload prevention with a rotation angle limiter. |
| Torque Detecting Procedure: | full scaling with a check box and calibration weight |
| Heating and Cooling: | with jacket (optional) |
| Power Source: | single-phase 200/220VAC 50/60Hz 10 A |
| Outer Dimensions: | Viscosimeter 500 x 500 x 860mm Control panel 600 x 610 x 920mm |
| Instrument Weight: | Viscosimeter 120kg Control panel 85kg |



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