Technical specifications of Capillary Rheometer

Type of Barrel: Double Bore

Temperature Range: Ambient to 400°C

Temperature Control Accuracy: ± 0.1 °C or better throughout the barrel and die assembly

Temperature Cooling Rate: At least 15 K/min or lower

Maximum Force Range: 20kN or more

Piston Speed Range: Equal to or wider than 0.003 to 600 mm/min

Speed Uncertainty: Less than 0.1%

Pressure Transducers: Around 20 bar

Pressure Transducer Accuracy: Better than 0.5%

Two Die Sets: Each set should consist of suitable dies for performing both Mooney and Bagley corrections.

Die Set 1: This should include

(i) zero length die of 1 mm diameter,
(ii) two dies with diameter 1 mm but different lengths
(iii) one die which has the same L/D ratio as one of the dies in part (ii) above

Die Set 2: This should include

(i) zero length die of 2 mm diameter,
(ii) two dies with diameter 2 mm but different lengths
(iii) one die which has the same L/D ratio as one of the dies in part (ii) above
Die: Tungsten Carbide

Barrel Material: Nitride Steel

Corrections: Software and hardware required for calculating the following corrections must be included:

- Weißenberg-Rabinowitsch
- Bagley-Correction
- Mooney Correction
- Hagenbach-Correction

Accessories: Essential accessories, standard operating tools and accessories must be quoted along with the instrument.

Software:

- All essential software for enabling constant shear test, extensional viscosity measurement, flow/no-flow test should be included.
- Necessary tools for exporting data to Microsoft excel, etc. should be included.

Utilities: Computer with latest specifications and all software installed

Warranty: Three-year comprehensive warranty

Low Temperature accessory: the chiller & cooling coil required to reduce the temperature from room temperature to 5°C