

The Rheology Solutions OnLine Rheometer (OLR) continuously measures full viscoelastic properties, G' , G'' , phase angle, and complex viscosity, directly in process pipes in real time, without sample extraction or laboratory analysis.

SPECIFICATIONS

Models	Series 1000 (process liquids), Series M2000 (mining slurries)
Measurement	G' , G'' , phase angle (δ), complex viscosity $ \eta^* $
Frequency range	1–100 Hz
Viscosity range	0.25–200,000 Pa·s
Force range	0–44.48 N
Temperature range	–10 to 110°C
Pressure (Series 1000)	0.05–10 bar (optional to 30 bar)
Pressure (Series M2000)	0.05–30 bar
PLC comms	MODBUS
Software	SOLR (real-time trending, alarms, diagnostics)
Installation	Inline, side-loop, or at-line

FEATURES

- ▶ Continuous in-pipe measurement of G' , G'' , phase angle (δ), and complex viscosity
- ▶ Proprietary squeeze-flow technology: cyclic deformation across 1–100 Hz
- ▶ No moving parts in the flow path
- ▶ Series 1000: general process liquids, food, pharma, coatings, polymers
- ▶ Series M2000: ruggedised for mining slurries, rated to 30 bar, application-specific flow cells
- ▶ Viscosity range: 0.25–200,000 Pa·s
- ▶ Temperature range: –10 to 110°C (Series 1000); RTD PT100 Class A sensor
- ▶ Installation modes: inline, side-loop, at-line
- ▶ SOLR software: real-time trending, alarms, diagnostics
- ▶ MODBUS communication to plant PLCs
- ▶ Made in Australia (Laverton North, Victoria)

APPLICATIONS

- ▶ Food and beverage manufacturing: real-time viscosity and texture monitoring
- ▶ Cosmetics and personal care: continuous in-process gel and emulsion characterisation
- ▶ Pharmaceutical production: process analytical technology (PAT) compliance
- ▶ Mining: slurry viscosity and yield stress for pumping and pipeline optimisation
- ▶ Minerals processing: underflow and paste backfill rheology
- ▶ Water and wastewater: sludge treatment monitoring
- ▶ Oil and gas: drilling mud and fracking fluid rheology
- ▶ Polymer processing: melt and solution flow monitoring