

ELONGATIONAL **RHEOMETER**

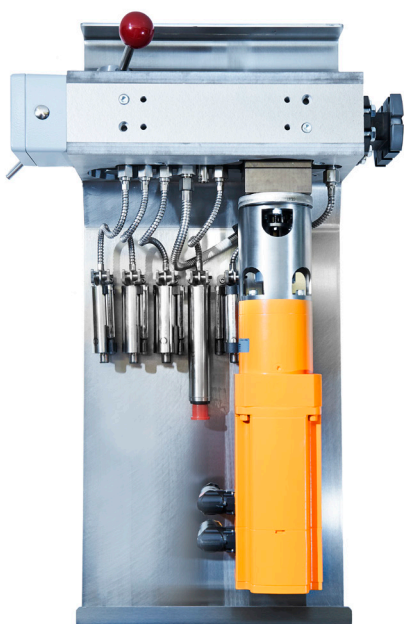
Data sheet



Leistritz Elongational Rheometer		
Type	motor-gear-combination (AC synchronous servo motor)	
Power unit	Cooling method	fully closed machine, surface-cooled
	Rated output	1.1 kW
	Protection class	IP54
	max. permissible drive torque	50 Nm
	max. permissible output speed	50 min ⁻¹
Type	gear metering pump	
Product to be fed	various polymers like PP, PE, PET, PA, ABS	
Melt pump	Operating temperature	up to 300°C
	Permissible cleaning temperature	550°C (without seal)
	Feed rate	1.321 cm ³ /rpm or 2.624 cm ³ /rpm
	Pre-pressure	10 to max. 50 bar
	Counter-pressure	max. 500 bar
	Differential pressure	max. 450 bar
	Melt pressure sensors (5x)	mercury-free / 0 - 500 bar
Melt temperature sensors (1x)	Type J (Fe-Cu/Ni)	
System volume	43 cm ³	

No responsibility is taken for the correctness of the specifications provided.

The rheometer facilitates online measuring of the shear viscosity with shear rates in the range of 10 to 10,000 s⁻¹ and the elongational viscosity with elongation rates in the range of 5 – 75 s⁻¹. It has a newly developed, patented die geometry with a hyperbolic narrowing that generates a constant elongational flow. This has not been possible with current online measurement devices. During a continuous measuring process, the operator can query two measured values of shear viscosity and one measured value of extensional viscosity in the according, precisely defined shear and expansion ranges at the same time.



Operating principle

During the extrusion process, a small amount of the melt flow is channeled off via a bypass system and pushed through the rheometer's slot die. After the measurement the material is transferred back into the process without losing any material.

The melt flow can manually be diverted outwards, e.g. for determining the melt density. However, if sensitive material is being processed, the melt flow can also permanently be diverted outwards.