

LIST Lab Kneader

Industrial success factor downscaled to lab

The LIST Lab Kneader LLK 1.0 brings LIST's scalable industrial high viscosity processing technology to laboratory scale.

Step in the lab

The LLK 1.0 is designed to fit in your fume hood for your first experiments without the usual viscosity limitations.

Mission

The LLK 1.0 shall ensure that no process idea misses industrial application due to viscosity limitations at lab scale.

Pushing the processing limits of R&D

The LLK 1.0 is your tool to develop products in the laboratory with a technology which is scalable to modern, efficient, sustainable, and continuous industrial processes.

Reduce risk and save time

The LLK 1.0 avoids a processing technology switch at a later point. This reduces development risk and saves time to market.

Prepared for continuous processing

The LLK 1.0's kneading shaft design follows industrial concepts for scale-up consistency.

LIST high viscosity processing technology

High viscosity processing technology leader

LIST is the leading high viscosity processing technology provider based on kneader reactors for industrial scale, mostly continuous processes at very high capacities and low fluctuations for high viscosity and crust forming products.

Industrial success factor

For more than 55 years, LIST kneader reactors have been in use worldwide as key enabler for competitive chemical production solutions.

Global support

Sales and service offices all over the world support LIST customers globally.

Support from lab to industrial

LIST Process Engineers develop with you and for you processing solutions customized to your needs up to industrial start-up.

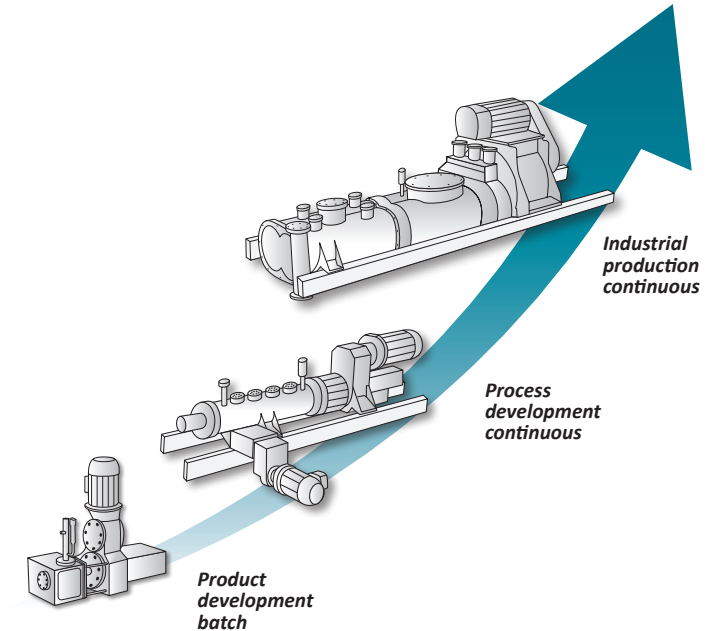
Test Center services

Our Test & Pilot Center Teams in Switzerland and South Korea conduct trials from small batch tests to extended complex multi-stage continuous processing solutions at pilot scale.



LIST Lab Kneader

The High Viscosity R&D-Platform



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Benefits

- Unlock lab scale viscosity limitations
- Prepared for conti processing
- Product and processing differentiation
- Save development time
- Reduce development risk

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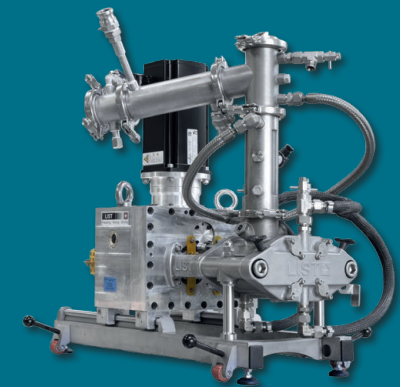
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www.list-technology.com

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LIST Lab Kneader

The High Viscosity R&D-Platform

High viscosity mixing & kneading
All-phase processing
Suitable for lab bench and fume hood
Prepared for continuous processes
Compact reaction chamber
Dosing of solid, liquid, or gaseous products
Multiple product discharges
Large pressure range
Close visual product observation
Control unit



High torque drive & gear
Self-cleaning shaft design
Industrial type shaft design
Jacketed casing, dome, front & end plate
Heatable shafts
Reliable 3-stage sealing system
Flexible condensation
Dome – a gas space extender
Easy installation & handling
Rapid dismantling – rapid cleaning



Details on our product-website
www.list-labkneader.com

Model:	LLK 1.0 with control unit
Agitated Volume:	1 Liter
Usable Product:	500 – 750 ml
Temperature rating:	up to 200°C (Standard), up to 280°C (with a sealing kit)
Heating / Cooling:	heated shaft, jacketed casing, front plate, end plate, dome
Shaft:	10 – 100 rpm / 80 Nm / heatable
Shear Viscosity:	up to ~20'000 Pas
Design Pressure:	up to 10 barg
Vacuum:	down to 5 mbara
Options:	heating unit, vacuum unit, condenser unit, different sealing kits
Types:	CKR (fully self-cleaned) CRP (excellent mixing)

LIST  
Kneading - Mixing - Drying