K-1
LAB MIXER

LANCASTER PRODUCTS

A NEW DIMENSION TO THE MIXING/GRANULATING PROCESS

The Lancaster Products high shear lab mixer is ideal for testing, experimentation and development of new processes and products. This rugged and versatile machine can also be used for small production work.
With various styles of rotors available, the Lancaster K-1 Lab is the mixer of choice for almost any type of batch mixing. The counter-current mixing action results in improved mix quality and the ability to mix-granulate in a single machine.



K-1 HIGH SHEAR LAB MIXER

EASY TRANSITION FROM PROOF-OF-CONCEPT TO FULL PRODUCTION

The K-1 Lab Mixer provides value throughout the product development and production process. Scaling up to production sized volumes is seamless as the Lancaster K-Series production mixers operate with the same counter-current high shear mixing action.

ADVANTAGES

Efficient transfer of process specifications requiring only minimal adjustments to the mix design

Optimize formulations and experiment in smaller batches

No disruption to production schedule for development work

Reduces the amount of material required when compared to production scale mixers.

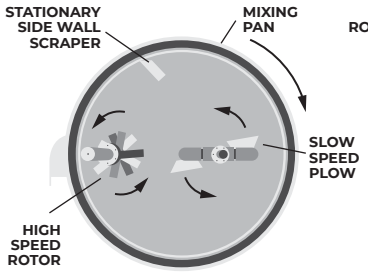
The Lancaster Products **counter-current mixing action** is the most effective mixing technology for rapid and consistent uniformity.

K-1 HIGH SHEAR LAB MIXER

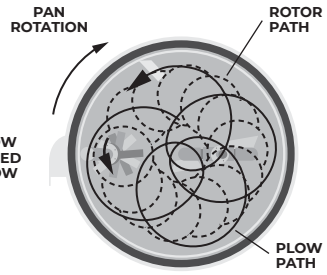
LANCASTER PRODUCTS

COUNTER-CURRENT MIXING ACTION

Counter-current action occurs when the pan rotates in a clockwise direction, while the mixing tools rotate counter-clockwise creating a shearing action within the mixing cavity. The powerful combination of multiple mixing tools including the rotating pan, high-speed mixing tool, and the counter-rotating plow effectively eliminate all dead zones in the mixer. Mixing tools are strategically placed to promote maximum material interface.



MULTI-TOOL MIXING CONFIGURATION



EXPANDED TOOL ACTION AS PAN ROTATES

DESIGN FEATURES

NEW UPGRADES

- Removable **316 stainless steel** mixing pan with 8L working capacity
- **NEW low friction PTFE seal** for improved cleaning and dust containment
- **316 SS Pan & Wetted Parts Standard** for improved corrosion resistance and a hygienic/sanitary surface
  - **Mixing pan dust cover**
  - **Mixing pan**
  - **Primary mixing rotor & spindle shaft**
  - **Side wall scraper**
- **Re-designed side wall scraper** from solid 316 block SS for reduced build-up of materials in the mixer
- **Fully accessible base** by forklift and pallet jack from all 4 sides
- Large viewing port on the pan cover for adding process materials, observing the mix, and taking samples during the mixing process.
- Thermocouple mix temperature reading
- Dual hand safety buttons for operating mixing head

OPTIONAL FEATURES:

- pan heating
- various rotor styles

CONTROLS FEATURES

- Electronic individually controlled speeds of pan and rotor, switchable from ft/sec to m/sec.
- Timer that starts/stops with the machine.
- Pre-programmable mix design times
- Resettable elapsed mixing timer that provides for total mix process cycle times
- Input or adjust pan and rotor speeds before or during operation
- Data record of operating functions can be exported to a USB or other device



SPECIFICATIONS

	METRIC
Pan Volume	20 Liters
Working volume	8 Liters
Pan motor	0.75 kW
Pan speed	0.13 - 1.1 m/s
Rotor motor	2.2 kW
Rotor speed	2.6 - 31.4 m/s
Weight	500 Kg
Length	1000 mm
Width	750 mm
Height	1350 mm

LANCASTER PRODUCTS
920 Mechanic St, Lebanon, PA 17046
800.445.7351, 717-273-2111
info@lancasterproducts.com