

Inline Continuous Dispenser Series



About Trilos Inline Continuous Disperser

High-Shear Inline Dispersion for Continuous Processing



TD80



TD40

The Trilos Inline Continuous Disperser series use a special stator-rotor structure. When the rotor rotates at high speed, the paste is subjected to intense shearing, squeezing, and impact forces in the narrow gap between the rotor and stator. Regarding to solid components added to low-viscosity paste, this high-intensity force effectively breaks up agglomerates between particles, dispersing them uniformly in the liquid medium. The result is improved dispersion uniformity, enhanced product stability, and consistent batch-to-batch reproducibility.

Application

TRILOS Inline Continuous Disperser Series supports diverse high-value industries:

New Energy :

1. Conductive paste, electronic paste
2. PEDOT
3. Barium Titanate (BaTiO_3) paste and Nickel paste
4. Ni/YSZ ceramic paste
5. CNT, graphene

Flexible Electronics :

1. Flexible displays
2. Flexible sensors
3. Smart skin

Cosmetics :

1. Liposomal cosmetics
2. Fragrance/soothing capsules
3. Hyaluronic acid gel

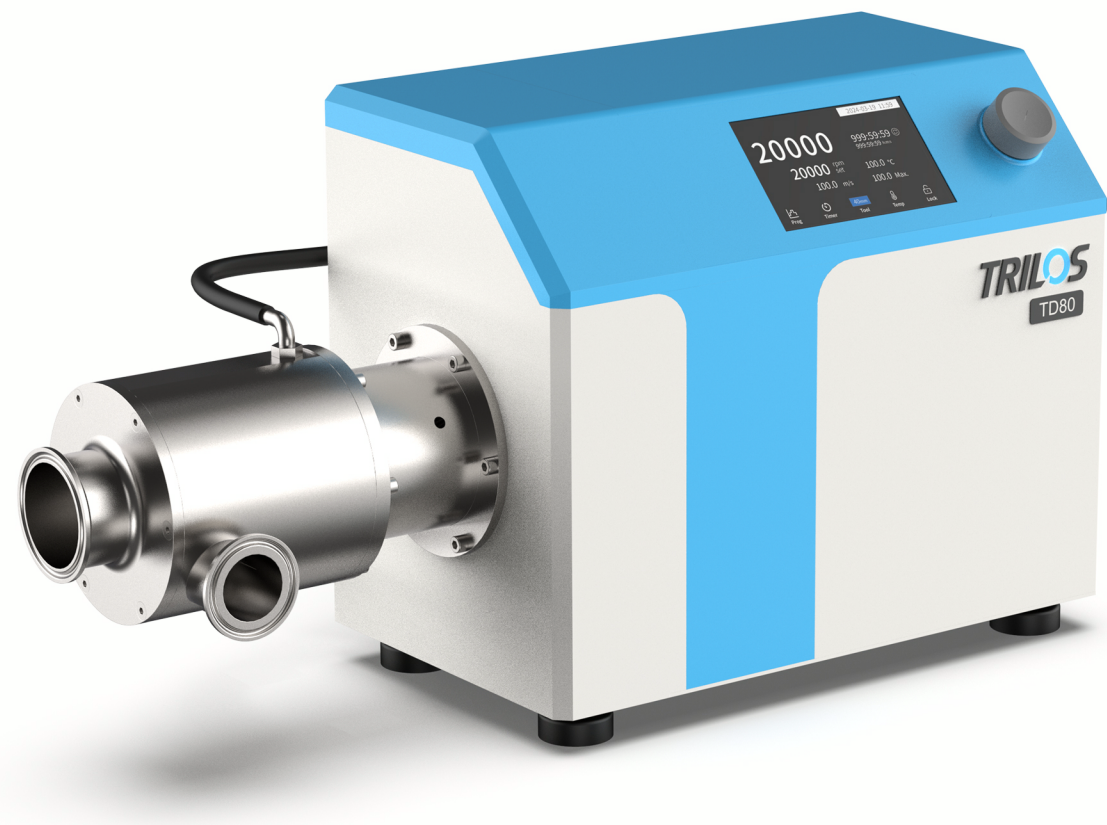
Biopharma :

1. Raw material preparation
2. Pharma mixing, drying and filling
3. Bioprocesses

Technical Principle

The disperser operates on a high-speed rotor-stator configuration:

- The rotor rotates at controlled high speed.
- Material passes through the narrow space between rotor and stator.
- Extreme velocity gradients create:
 - High shear force
 - Turbulent impact
 - Mechanical squeezing
 - Cavitation effects (under specific conditions)



Key Features

Compact Benchtop Design

- Minimal laboratory footprint
- Suitable for R&D and pilot environments
- Easy integration into existing process setups

High-Performance Brushless Motor

- Mature and stable drive technology
- Reduced mechanical wear
- Lower operating noise
- Extended service life

Modular Dispersion Chamber System

- Multiple chamber volumes and geometries available
- Interchangeable dispersing heads
- Optimized configuration for different viscosity ranges



Intelligent Digital Control

- Multiple chamber volumes and geometries available
- Interchangeable dispersing heads
- Optimized configuration for different viscosity ranges
 - Set speed
 - Actual speed
 - Linear speed
 - Sample temperature
 - Operating time

Cleanroom-Compatible Sealing

- Mechanical sealing structure
- Leakage prevention
- Optional configuration for controlled environments



Process Flexibility

- Capable of handling varying viscosities
- Suitable for poor-fluidity samples
- 6-step programmable gradient operation
- Timer setting for unattended operation

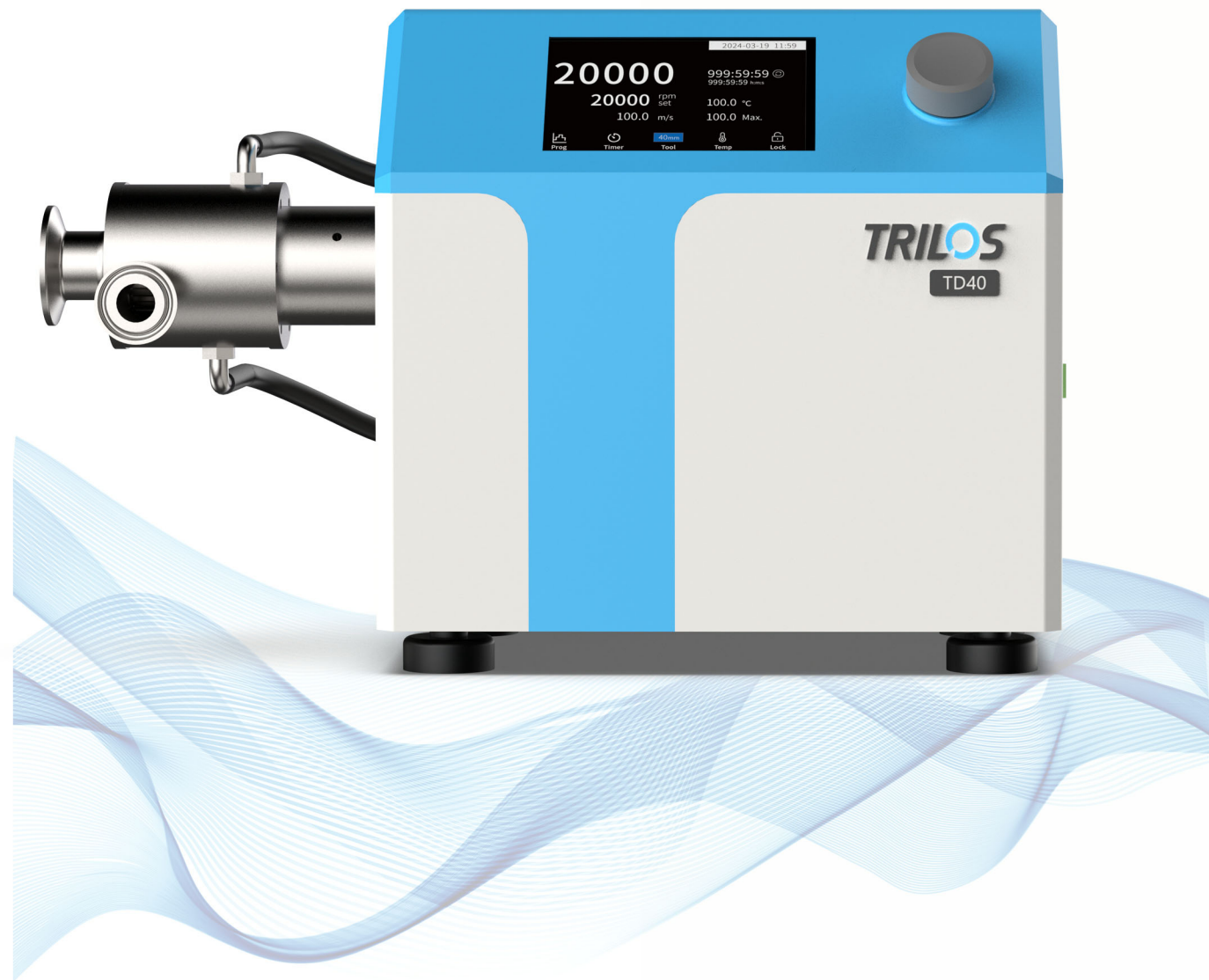
Process Flexibility

- Over-temperature protection
- Overload protection
- Over-current protection
- Lock-screen function to prevent unintended operation



TRILOS TD40

Laboratory Benchtop Model



Overview of The TRILOS Inline Continuous Dispenser Series

Specifications

Parameter	TD40	
Chamber Volume	50 ml	1.69 fl oz
Speed Range	3000–25000 rpm	
Maximum Flow	25 L/min	6.60 gal/min
Voltage	220 V	
Power	2.2 kW	2.95 HP
Dimensions (L×W×H)	550X280X300 mm	21.65X11.02X11.81 in



TRILOS TD80

Pilot-scale Benchtop Model



Overview of The TRILOS Inline Continuous Disperser Series

Specifications

Parameter	TD80	
Chamber Volume	220 ml	7.44 fl oz
Speed Range	1500–9000 rpm	
Maximum Flow	60 L/min	15.85 gal/min
Voltage	380 V	
Power	4.2 kW	5.63 HP
Dimensions (L×W×H)	670X300X340 mm	26.38X11.81X13.39 in

