

TRILOS
More than Equipment

Three Roll Mill Series



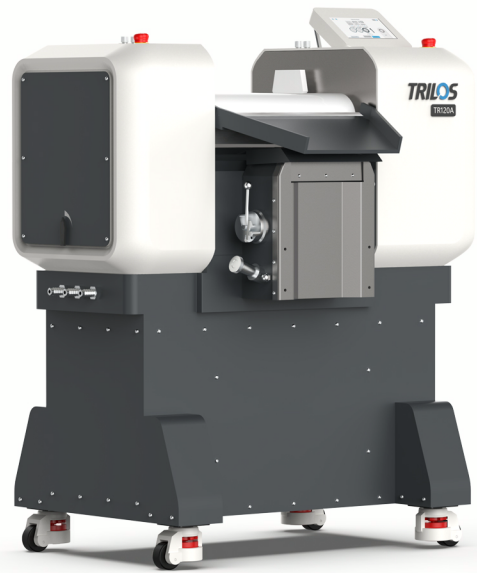
TRILOS

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Due to the continuous improvement of products, such as the technical parameters in this manual are modified without prior notice.

About TRILOS Three Roll Mill

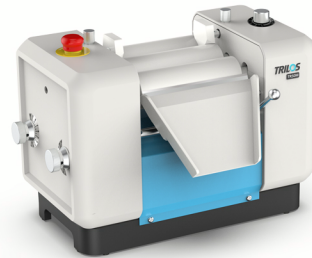
Precision Grinding, Intelligent Control



TR120A



TR80A



TR50M

TRILOS Three Roll Mill is engineered for high-precision grinding and dispersing of medium to high-viscosity materials.

With the precision ground ceramic rolls and stepper motor, it delivers significant particle size reduction, high particle stability and batch-to-batch consistency.

Technical Principle

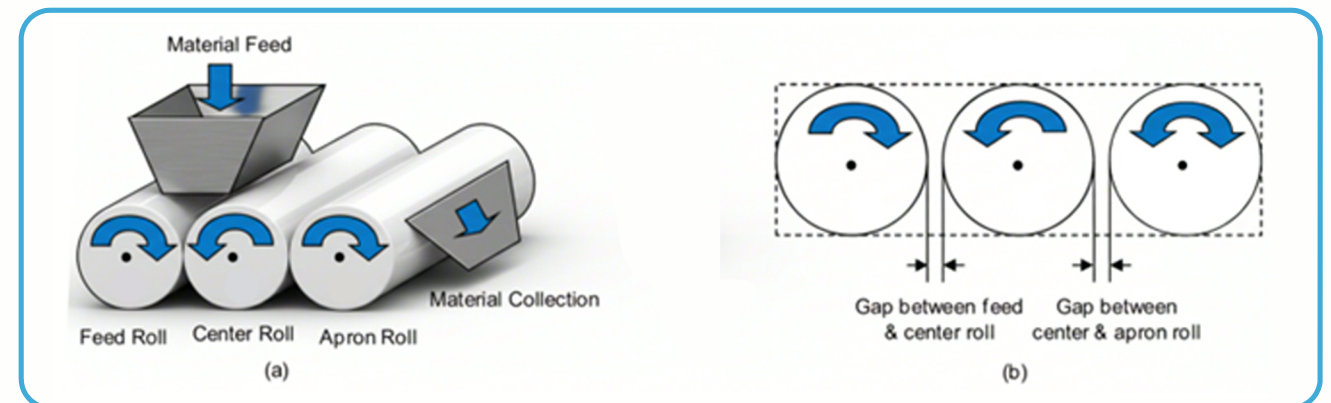
The three horizontally positioned rolls rotate in opposite directions and different speeds, it creates strong shear force, resulting in

- Reduction in particle size
- Improvement of material uniformity and stability
- Enhancement of material smoothness

Process

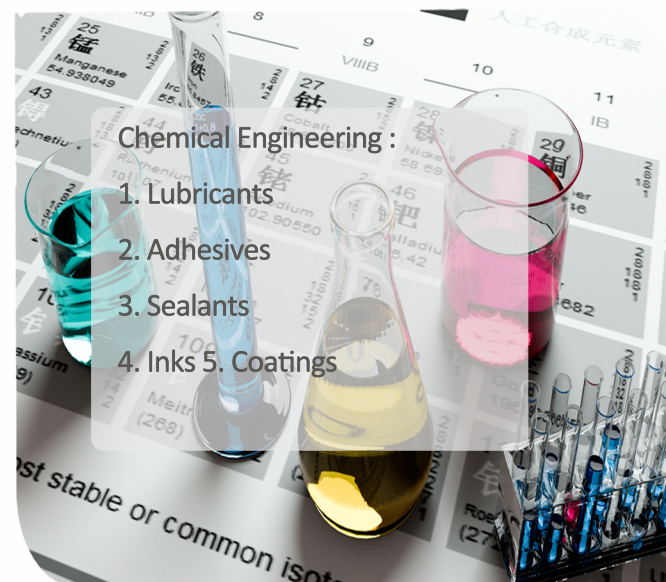
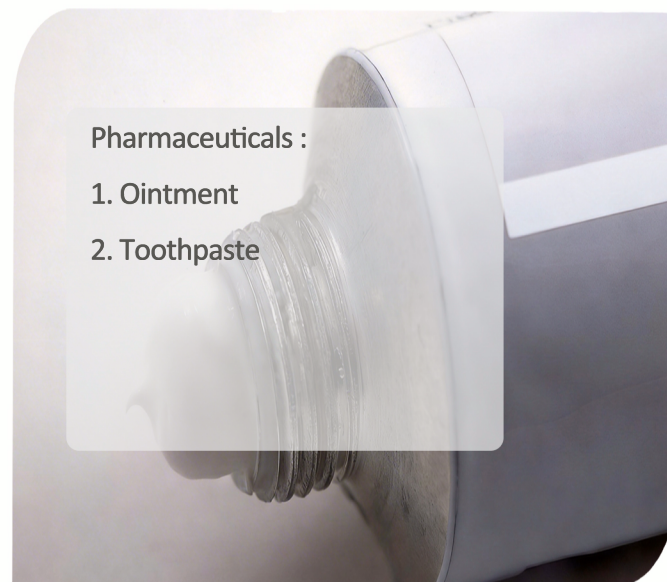
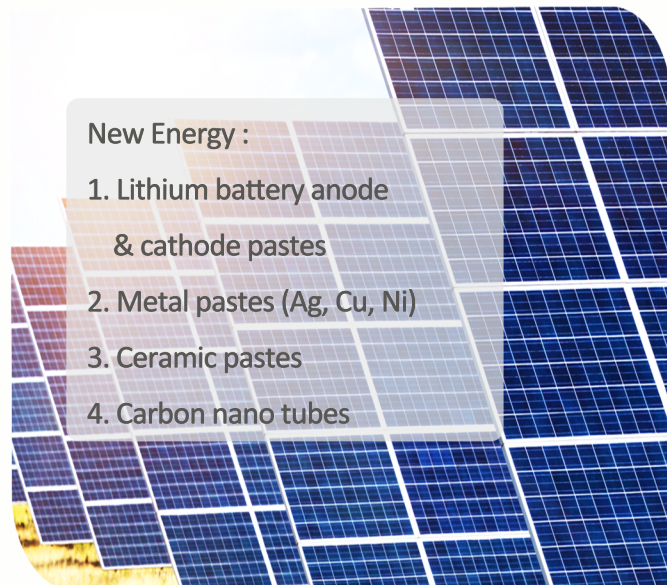
The raw materials are fed between feed roll and center roll. The finished materials are collected on the apron.

Feed roll → Center Roll → Apron Roll → Apron



Application

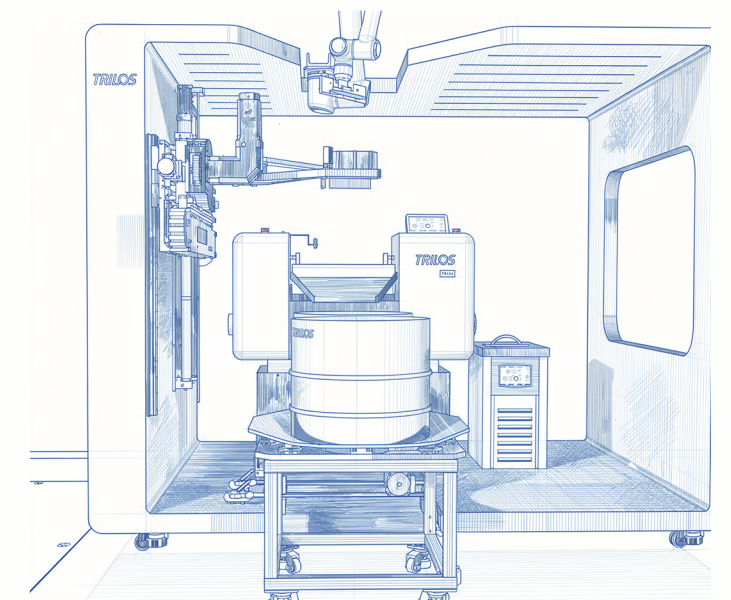
TRILOS three roll mills are suitable for general use and meet high accuracy requirement. They are versatile in a wide range of application areas.



Automated Feeding System



The TRILOS Automated Feeding System is an intelligent automatically feeding system designed for TRILOS Three Roll Mill. It effectively reduce labor force and operational time. It is still in development stage and will come soon.



The TRILOS IoT Platform

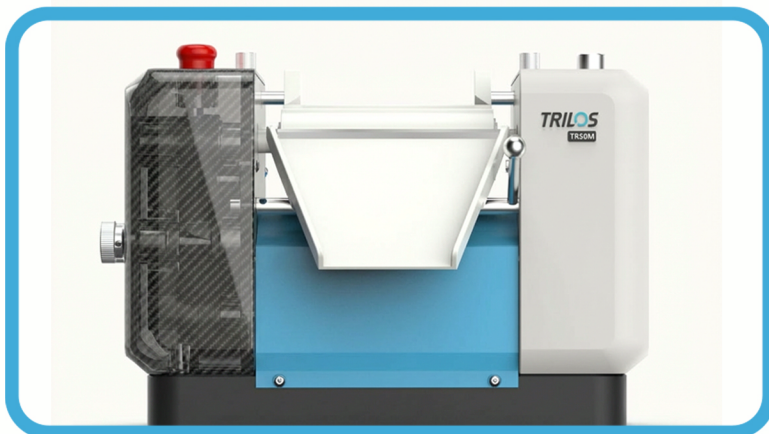
Make Automated Production Possible



TRILOS has committed to automation and intelligence for years. We integrate our automation and intelligence technology with our machinery. Our self-developed IoT platform enables remote control, historical data storage and process parameter presetting.

Light Weight Shell

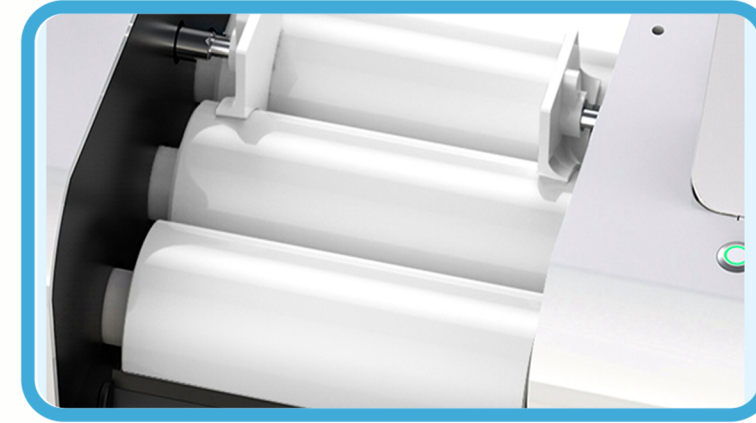
Humanization Design



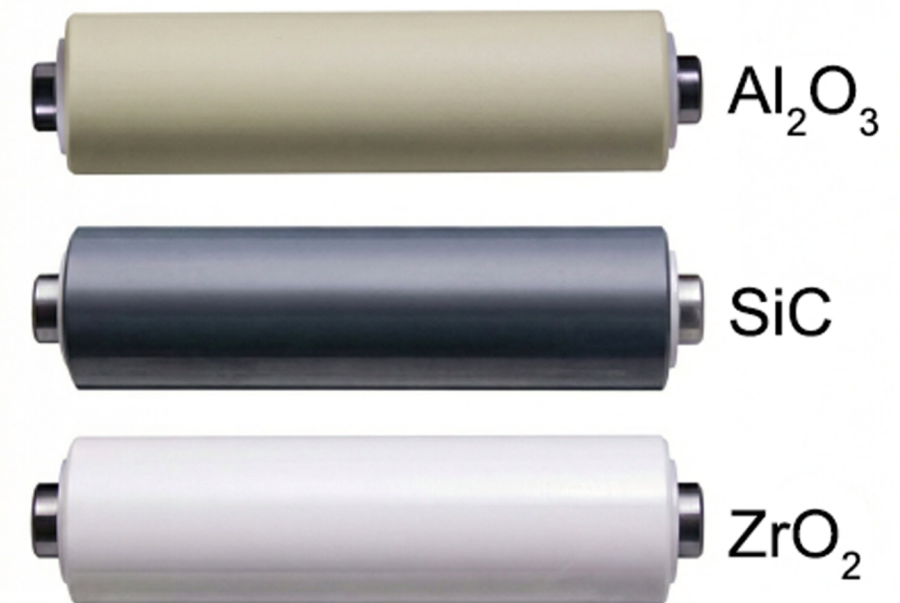
The shells of TRILOS Three Roll Mill are made of aerospace grade carbon fiber and aluminium alloy, featured by light weight and high specific strength, protecting the shells from minor impact and damage.

High-Quality Rolls

Flexible And Reliable Choice



TRILOS Three Roll Mill uses high-performance precision ground ceramic rolls. Stainless steel, ZrO_2 , Al_2O_3 and SiC are available for roll materials.



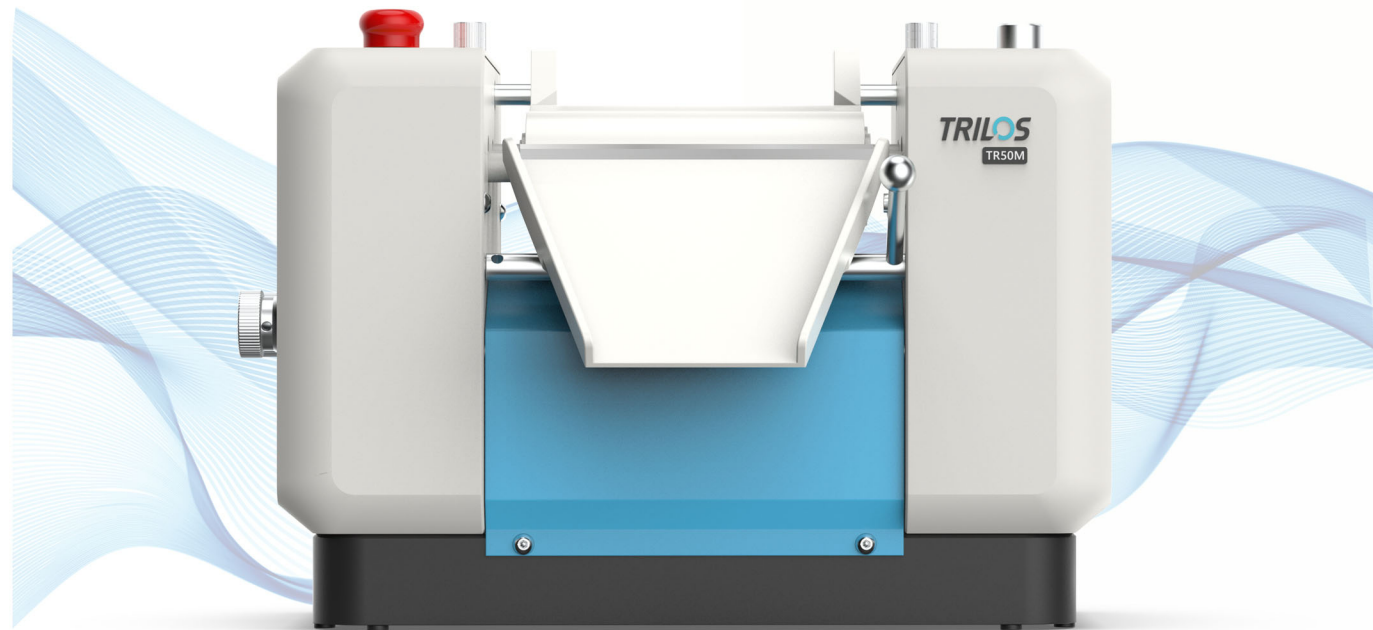
Customized Service

Accessories such as safety light curtains and barred charging hopper are available to meet specific operational safety standards and regulatory requirements.



TRILoS TR50M

Benchtop Three Roll Mill for Laboratory R&D and Small-Batch Trials



TRILoS TR50M is a compact benchtop three roll mill designed for laboratory research, formulation development, and small-scale sample preparation. Despite its compact dimension, TR50M delivers professional-level dispersion performance, making it an ideal tool for R&D engineers and laboratory technicians.

Features

- 5 μm Dispersion Performance
- Space-Saving Benchtop Design
- Aerospace Grade Carbon Fiber Shell
- High-Reliability Roll
- Flexible Ceramic Roll Options
- Manual Control
- Customized Service

Specifications

Model	TR50M	
Capacity	0.02~5 L/hr	0.005~1.32 gal/hr
Roll Diameter	50 mm	1.97 inch
Roll Length	150 mm	5.91 in
Power	0.12 kW	0.16 HP
Dimensions	390×215×370 mm	15.35×8.46×14.57 in
Weight	20 kg	44 lb

TRILOS TR80A

Pilot-Scale Three Roll Mill with Intelligent Control



TRILOS TR80A is a pilot-scale three roll mill designed for pilot-scale production and process validation. It bridges the gap between laboratory development and full-scale manufacturing. Featuring a digital touchscreen interface and adaptive apron system, TR80A significantly enhances operational precision and consistency.

Integration with the TRILOS IoT platform enables remote control and process parameters preset.

Features

- 1 μm Dispersion Performance
- TRILOS IoT Platform
- Intelligent Touchscreen Control System
- Adaptive Apron Technology
- Aerospace Grade Carbon Fiber Shell
- High-Reliability Roll
- Flexible Ceramic Roll Options
- Circulating Water Bath
- Customized Service

Specifications

Model	TR80A	
Capacity	0.02–20 L/hr	0.005–5.28 gal/hr
Roll Diameter	80 mm	3.15 in
Roll Length	200 mm	7.87 in
Power	1.5 kW	2 HP
Dimensions	750×340×490 mm	29.53×13.39×19.29 in
Weight	110 kg	243 lb

TRILOS TR120A

Production-Scale Three Roll Mill for Continuous Manufacturing



TRILOS TR120A is a heavy-duty industrial production three roll mill engineered for continuous, high-yield manufacturing. With large-diameter rolls and high torque output, TR120A delivers powerful shear forces suitable for demanding industrial materials.

It supports TRILOS IoT platform and TRILOS Automated Feeding System, enabling scalable, intelligent production environments.

Features

- 1 μm Dispersion Performance
- TRILOS IoT Platform
- Intelligent Touchscreen Control System
- Aluminium Alloy Shell
- High-Reliability Roll
- Flexible Ceramic Roll Options
- Circulating Water Bath
- Customized Service

Specifications

Model	TR120A	
Capacity	0.5–60 L/hr	0.13–15.85 gal/hr
Roll Diameter	120 mm	4.72 in
Roll Length	450 mm	17.72 in
Power	3.0 kW	4.1 HP
Dimensions	1150×660×1280 mm	45.28×25.98×50.39 in
Weight	350 kg	772 lb