Galatek

Smart High-Throughput Feeding and Parallel Reaction System (Dual Chamber)

Precise Feeding

High Throughput

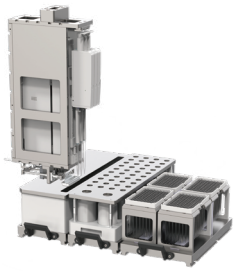
Fast and Reliable

Rich in Expansion

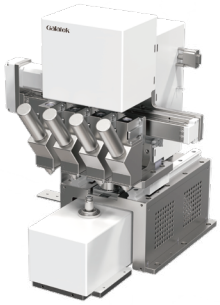
Copyright © Galatek

Smart High-Throughput Feeding and Parallel Reaction System (Dual Chamber)

The Smart High-Throughput Feeding and Parallel Reaction System (Dual Chamber) features a partitioned design for feeding and reaction chambers, supporting simultaneous reactions and enabling the whole process automation of fast and precise solid-liquid feeding, capping and uncapping, code scanning and tracking, and constant-temperature shaking reactions. The system enhances experimental accuracy and stability, improves data quality, manages and records data of the whole process, reduces labor cost, increases work efficiency, and eliminates losses caused by operational errors.



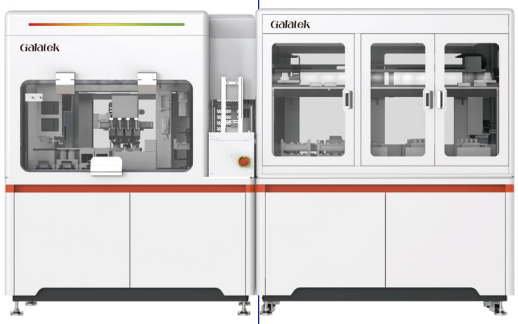
3-channel pipetting system, capable of 24-hour uninterrupted feeding



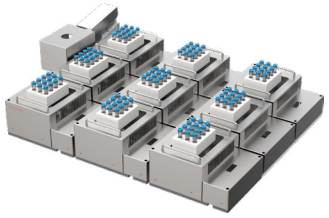
4-channel solid powder feeding module, capable of 24-hour uninterrupted feeding

Inert gas-protected transfer and loading hoppers, ensuring uninterrupted loading

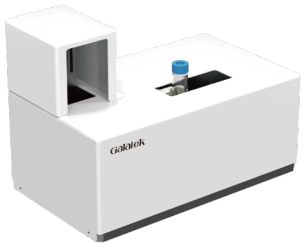
Precise Feeding, Ultra-High Throughput



Fast and Reliable, Rich in Expansion



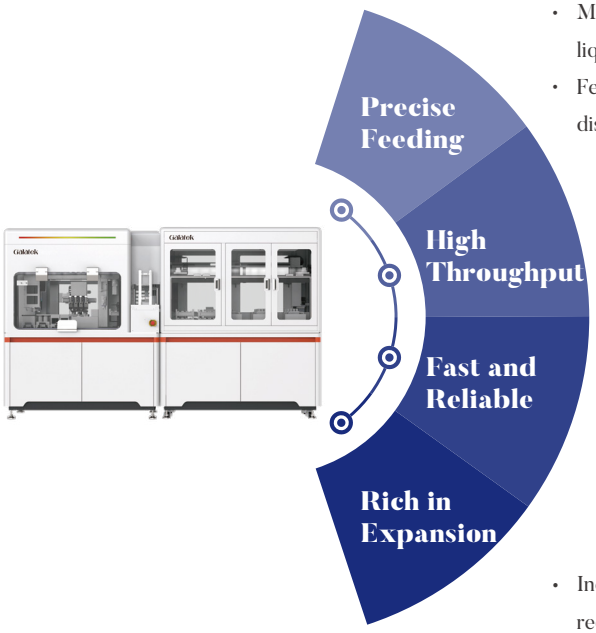
Up to 9 reaction shakers with temperature individually controlled, compatible with 8 mL and 40 mL reaction flasks; Integrated with an imaging module for high-resolution photos of the reaction system



Barcode scanning and linear shaking module

Inert gas-protected loading, solid-liquid feeding and reaction modules

Product Features



- Stable and flexible XYZ rail system accurately controls the pipetting module, reaction flask transfer, capping, and other related operations
- Meets the requirements for multi-channel solid powder feeding and multi-channel liquid dispensing
- Features efficient dispensing, self-developed powder dispensing module, intelligent dispensing algorithm, and automatic optimization of the dispensing speed

- Up to 9 constant-temperature shakers designed for different experimental conditions, enabling at least 108 reactions to run simultaneously
- Meets the 24/7 uninterrupted feeding requirements

- Dynamic scheduling with intelligent algorithms and automatic parameter optimization based on a historical error database
- Enables precise feeding of 108 parallel reactions in about 2 hours
- Equipped with barcode scanning and imaging module to ensure sample traceability and capture high-resolution images of the system before and after the reaction to assist in the process analysis and evaluation of the reaction system

- Inert gas-protected loading hopper, feeding, and reaction modules, meeting the requirements for anhydrous and oxygen-free feeding and reactions
- Compatible with various sizes of reaction flasks and reagent flasks to meet the needs of different scales of feeding and reaction

Parameters

Product Name		Smart High-Throughput Feeding and Parallel Reaction System (Dual Chamber)
Basic Parameters	Dimensions(L*W*H)	3,255 mm*1,000 mm*1,070 mm (+900 mm for the base rack)
	Power Supply	Voltage: 220 VAC; Frequency: 50 Hz; Rated power: 10 kW
	Operating Environment	Temperature: 5 - 40 , Humidity: 20%-80%RH, no condensation
	Net Weight	1,000 kg
	Throughput	108 reaction reservoirs
	Main Applications	High-throughput feeding, high-throughput reaction condition screening, high-throughput synthesis and high-throughput formulation research, etc.
	Constant-Temperature Shaker	Temperature range: 5°C - 150°C, supporting up to 9 shakers with individually controlled temperatures
Feeding System	Solids Feeding	Weighing range: ≥5 mg, precision of ±0.5 mg. Modules with other weighing ranges and precision can be customized
	Pipetting Performance	Pipetting precision: 1 μL<4%, 10 μL<3.5%, 100 μL<0.75%, 1000 μL<0.75% Pipetting accuracy: 1 μL<4%, 10 μL<2.5%, 100 μL<2.0%, 1000 μL<1.0%
	Rail Positioning Precision	±0.1 mm
Vision System		Capture high-resolution images of the pre- and post-reaction status of the reaction system
Barcode Scanning Module		Optional barcode module, compatible with common 1D and 2D barcodes

Application Directions

Automated Solids Feeding	Solvent Screening	Reaction Substrate and Raw Material Screening	DoE	Automated Liquid Feeding
Catalyst Screening	Automated Synthesis	Crystallization/ Polymorph Research	Research on New Chemical Materials	

Galatek

Germany, Singapore,
the United States,
Japan, China

officialmail@galatek.ai

Declaration

This copyright of this manual is owned by GalaTek GmbH (hereinafter referred to as "Galatek"). Without the written permission of Galatek, no individual or organization may copy, edit or translate the contents of this manual into other languages in through any means. All trademarks or logos in this manual belong to Galatek and its providers. Due to manual updates, product updates, parameter changes, etc., the information in this manual maybe changed, upgraded, omitted or incorrect, etc. Galatek shall not be liable for any losses caused by the provision or use of this manual. For more product information and technical services, please contact the official customer service e-mail. All trademarks mentioned in this brochure are protected by law. Galatek has the right to interpret this manual.

Copyright © Galatek