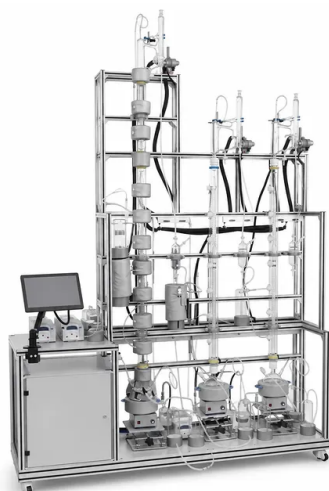


Continuous Batch Extractive Distillation Educational Pilot Plant

Item Number: LPK-SFZL



Introduction

Versatile pilot plant for continuous, batch, and extractive distillation training. High-borosilicate glass column for visualizing hydraulics, 15.6-inch touchscreen with data logging, precise reflux ratio control 1-99, and durable corrosion-resistant frame. Ideal for chemical engineering education and process research.

[Learn More](#)

Parameter	Specification
Operation Modes	Continuous distillation, batch distillation, extractive distillation
Column Construction	High-precision, transparent high-borosilicate glass columns
Control System	15.6-inch integrated touchscreen terminal with real-time data storage and processing
Reflux Ratio Control	Automatic split-type control, adjustable ratio range: 1-99
Thermal & Mixing Control	Reboiler vessels equipped with adjustable magnetic stirring and heating mantles
Feed & Product Management	Precision peristaltic pumps for steady liquid feed; graduated glass feed and product receivers
Pressure Monitoring	Visual U-tube differential pressure gauge for column pressure drop evaluation
Structure & Mobility	Corrosion-resistant aluminum alloy frame with adjustable, heavy-duty casters
Overall Dimensions	≤ 2200 mm × 580 mm × 3200 mm (Length × Width × Height)

Target Curricula & Classic Textbooks	Associated Unit Operations & Theoretical Concepts	Educational Laboratory Modules
Unit Operations of Chemical Engineering	Distillation, McCabe-Thiele method, reflux ratio, column efficiency, plate and packed column hydraulics, batch distillation calculations.	Determination of overall column efficiency, McCabe-Thiele construction validation, and study of reflux ratio influence on distillate purity.
Transport Processes and Unit Operations	Vapor-liquid equilibrium (VLE), mass transfer in separation processes, continuous distillation of binary mixtures, extractive distillation fundamentals.	Binary mixture separation, continuous steady-state distillation run, and evaluation of mass transfer coefficients.
Chemical Engineering Design	Column sizing, reboiler and condenser heat duties, process instrumentation, control loops, and pilot-scale system safety.	Mass and energy balance calculations, process control optimization via touchscreen interface, and hydraulic limit identification (flooding/weeping).