

Single Cell Flotation Machine Laboratory Mineral Processing Cell Benchtop Ore Separation Equipment

Item Number: KT-JT1



Introduction

This high-performance single cell flotation machine is engineered for precision laboratory mineral separation and metallurgical testing, delivering exceptional air suction efficiency, low power consumption, self-contained slurry circulation, and intuitive liquid level control for accurate non-ferrous and non-metallic beneficiation.

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Application	Description	Key Benefit
Non-Ferrous Metal Beneficiation	Bench-scale separation of copper, lead, zinc, nickel, and molybdenum sulfide and oxide ores.	Enables precise determination of recovery rates, collector selectivity, and optimal pulp pH parameters.
Ferrous Ore Upgrading	Processing and upgrading of fine iron, manganese, and chromium ore samples through selective flotation.	Maximizes iron grade concentrates while reducing silica and phosphorus contaminants prior to pilot testing.
Non-Metallic Mineral Purification	Purification of industrial non-metallic minerals including fluorite, talc, quartz, barite, and feldspar.	Delivers clear separation between valuable industrial minerals and gangue minerals under controlled reagent dosages.
Fine Coal Cleaning & De-Ashing	Flotation separation of ultra-fine coal pulp to eliminate ash-forming minerals and pyrite sulfur content.	Improves clean coal yields while establishing accurate washability and froth kinetics data for coal processing plants.
Reagent Suite & Kinetic Evaluation	Testing of novel collectors, depressants, dispersants, and frothing agents across variable pulp densities.	Provides scalable, highly reproducible baseline data for developing economic and efficient metallurgical flowsheets.
Metallurgical Research & Scale-Up	Pilot laboratory studies performed by university departments, mining institutes, and assay laboratories.	Allows reliable bench-scale modeling that directly correlates to full-sized industrial flotation cell performance.

Model Item Identifier	Flotation Cell Capacity (L)	Impeller Diameter (mm)	Impeller Rotational Speed (rpm)	Scraper Speed (rpm)	Feed Grain Size (mm)
KT-JT1-0.5	0.5	Ø 45	2590 / 2340 / 2130	30	-0.2 (< 0.2 mm)
KT-JT1-0.75	0.75	Ø 45	2590 / 2340 / 2130	30	-0.2 (< 0.2 mm)
KT-JT1-1	1.0	Ø 55	2100 / 1900 / 1700	30	-0.2 (< 0.2 mm)
KT-JT1-1.5	1.5	Ø 50	1910 / 1750 / 1590	30	-0.2 (< 0.2 mm)
KT-JT1-3	3.0	Ø 60	1890 / 1708 / 1544	30	-0.2 (< 0.2 mm)
KT-JT1-8	8.0	Ø 70	1400	30	-0.2 (< 0.2 mm)