

LEADING LITHIUM EXTRACTION TECHNOLOGY & PROCESSES

BICHEMICAL TECHNOLOGY LIMITED.



COMPANY PROFILE

WE LEAD IN THE LITHIUM EXTRACTION

We lead in the lithium extraction technologies from salt lake brines, providing comprehensive solutions across integrated plant services, operations and maintenance.

Driven by cutting-edge exploration and process innovation, we deliver precise solutions that reduce capital and life-cycle costs, enhance operational efficiency, increase reliability, and improve safety—all while minimizing environmental impact.

We empower the high-quality advancement of the new energy industry, creating enduring value for our clients and consistently delivering superior outcomes through our unwavering commitment to excellence.

WHY WE ARE DIFFERENT



Dedication

Over 90% of our team is based in salt lake regions, driving exceptional results in lithium extraction.



Inspiration

We continuously inspire innovation in efficiency and recovery, enhancing every aspect of our operations.



Transformation

We've redefined the industry with breakthrough technologies, significantly reducing costs and increasing production capacity.

PERFORMANCE INSIGHT

5+

Global R&D Centers

300+

Professionals

20+

Projects

90%+

Lithium yield

1000000+ t/a LCE

Achieved Production Scale

800000+ t/a LCE

Operational Production Scale

1500000+ t/a LCE

Under-construction Production Scale

OUR COMPETITIVE ADVANTAGES



Comprehensive Risk Management

- Proactive risk assessment and mitigation strategies
- Tailored solutions with continuous support
- Ensures stable and efficient project operations



Superior Technical and Operational Support

- Robust technical support infrastructure
- Strict safety and environmental protocols
- Customized solutions for project-specific needs



Supply Chain Integration and Assurance

- Global supply chain network for reliable, cost-effective resources
- Comprehensive spare parts logistics ensuring smooth operations



Data-Driven Decision Making

- Expert testing team and extensive experimental data
- Real-time production monitoring for optimal efficiency
- Accurate, data-driven operational management



Economies of Scale and Value Maximization

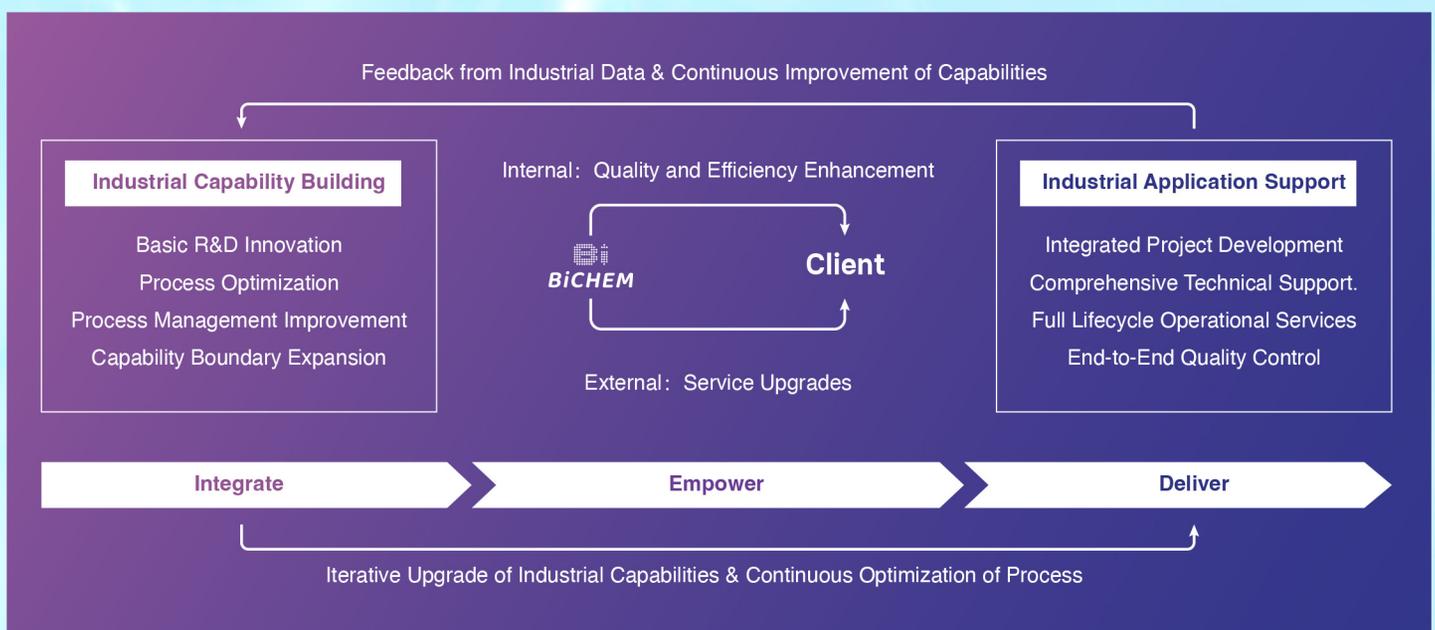
- Leveraging scale to reduce costs and optimize resources
- Maximizing benefits for partners with flexible resource management



Market Leadership and Brand Excellence

- Exceptional service quality backed by deep industry expertise
- Expanding global presence, fostering strong partnerships and building brand trust

OUR PRINCIPLES AND STRATEGY



OUR INNOVATION APPROACH:

DRIVING OPERATIONAL EXCELLENCE TO INDUSTRY LEADERSHIP



Operational Innovation

Focused on Production Excellence

In-depth Production Insights

Deeply embedded in production environments to quickly identify and resolve challenges throughout the process.

Solution Development and Optimization

Collaborative expert teams design and refine customized solutions tailored to real-world challenges.

Agile Response and Execution

Streamlined processes to rapidly adjust and implement technical solutions, ensuring alignment with evolving production needs.



Strategic Innovation

Driven by Evolving Scenarios

Comprehensive Business Analysis

Closely monitor customer needs, comprehensively analyze complex business scenarios, and address core requirements.

Application Scenario R&D

Develop technologies around real-world applications, ensuring technical solutions are highly adaptable to actual production environments.

Innovation Application

Ensure every innovation is effectively applied in production to continuously create value.



Pioneering Innovation

Propelled by Industry Expansion

Industry Trends Perspective

Continuously research industry trends to maintain a leading position in technology and market presence.

Business Chain Expansion

Explore and extend innovation opportunities both upstream and downstream within the industry chain, based on core business.

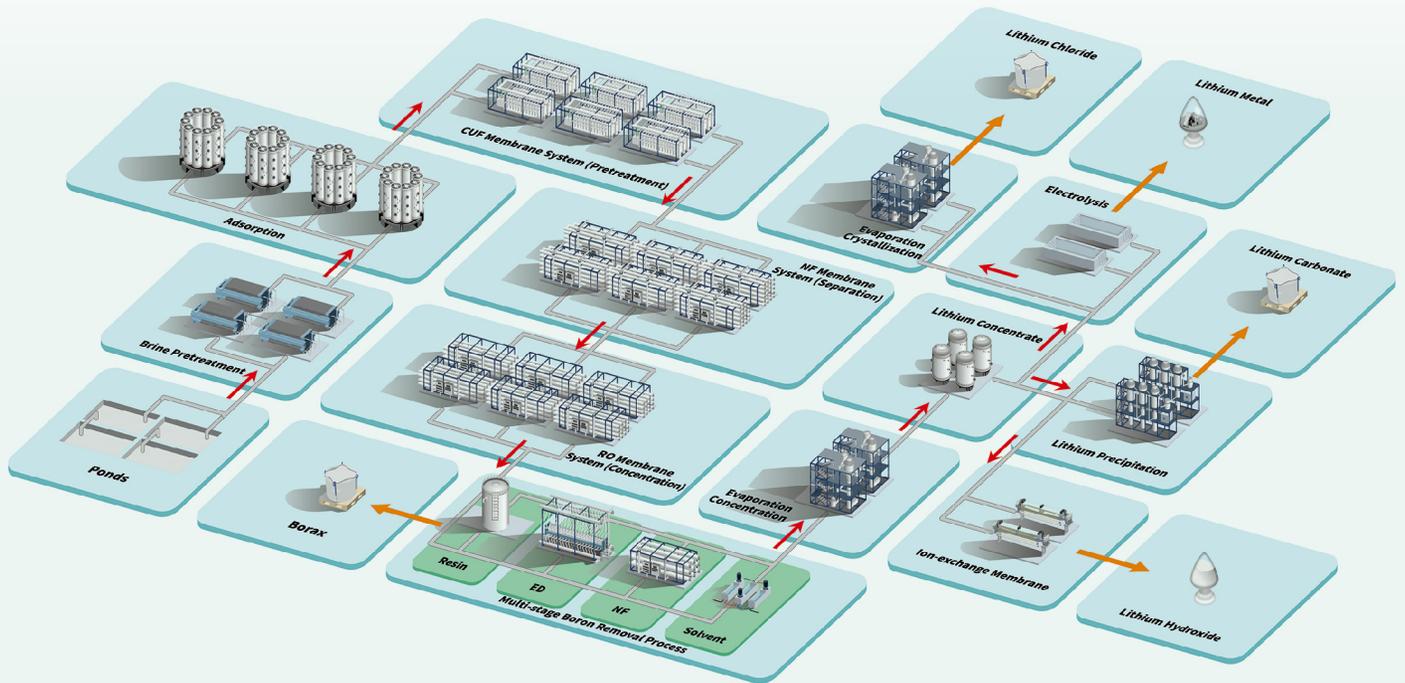
Collaborative Ecosystem Creation

Work together with industry partners to build a new ecosystem, advancing the industry jointly.

OUR BUSINESS



BICHEM Group stands at the forefront of lithium extraction, delivering integrated solutions that produce lithium carbonate, lithium chloride, lithium hydroxide, and lithium metal. Our unparalleled expertise and cutting-edge facilities ensure the highest quality products, empowering our global clientele with efficient and sustainable solutions tailored to their diverse needs.



Each site is a complex, integrated system, where we apply our deep expertise in combining advanced equipment, specialized products, and chemical solutions to deliver the most comprehensive and effective solutions.



Ceramic Membranes

Extremely durable, providing efficient filtration of impurities in the lithium extraction process, even in harsh salt lake environments.



Nanofiltration Membranes

Selectively remove specific ions, crucial for separating lithium from other elements in brine solutions.



Reverse Osmosis Membranes

Ensure high-purity lithium extraction by effectively removing dissolved salts and impurities from brine.



Filter Cartridges

Capture fine particles during lithium extraction, protecting the efficiency of downstream processing units.



Lithium Extractants

Key chemical agents that enhance the separation of lithium from other components, optimizing recovery rates.



Lithium Adsorbents

Specialized materials designed to selectively capture and concentrate lithium ions from salt lake brine.



Scale Inhibitors

Prevent scale formation on critical equipment used in lithium extraction, maintaining operational efficiency and reducing maintenance.

OUR CUTTING-EDGE SOLUTION



Value-Driven Efficiency

Our advanced lithium extraction technologies offer exceptional efficiency, delivering high performance and cost-effectiveness without compromising quality. By optimizing lithium recovery and minimizing waste, we provide significant value to our clients through enhanced operational outcomes.



Operational Scalability

Our technology is built to scale, supporting both small and large-scale lithium extraction projects with ease. We provide flexible and adaptable solutions that grow with our clients' needs, ensuring that as operations expand, efficiency and performance remain optimal, with minimal downtime or inefficiencies.



Precision Engineering

With a team deeply embedded in salt lake environments, we deliver solutions that are tailored to real-world production challenges. Our systems are engineered for precision, combining advanced equipment with finely-tuned chemical processes to deliver high lithium recovery with minimal resource consumption.



Innovative Expertise

Our team of industry-leading experts provides deep technical knowledge and decades of practical experience in lithium extraction from salt lakes. This unique expertise allows us to design solutions that integrate seamlessly into client operations, ensuring smoother project execution and faster time to value.



Sustainability Integration

We embed sustainability at the core of our extraction processes, promoting energy efficiency, water conservation, and minimal environmental disruption. By using innovative recycling methods and cutting-edge technologies, we not only meet but exceed sustainability goals, ensuring a reduced environmental footprint across projects.



Data-Driven Performance Optimization

We employ advanced data monitoring systems, AI-driven analytics, and real-time chemical dosing technologies to fine-tune production processes. This allows us to maximize uptime, predict maintenance needs, and continuously optimize performance, resulting in higher output and reduced operational risks.

OUR INDUSTRY PRACTICES

Up to
25x
Concentration Factor



Lithium Yield
90%+



Up to
90%~100%
Water Recovery



Case A: Adsorption + Membrane Process: 13,000 t/a LCE

- 1st project extracting lithium from salt-lake brine with ultra-high Mg-Li ratio.
- 10,000 t/a LCE and expanded to 13,000 t/a LCE after 2 years.



Case B: Adsorption + Membrane Process: 25,000 t/a LCE

- Same client, 1st 20,000 t/a scale project and expanded to 25,000 t/a after 2 years.



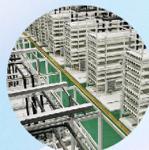
Case C: Adsorption + Membrane Process: 10,000 t/a LCE

- Successfully achieved direct lithium extraction from brine with a very low lithium concentration. (30-50ppm)



Case D: Adsorption + Membrane Process: 2,000 t/a LCE

- Battery-grade lithium carbonate standards.
- Also recovers boron.
- Uses only 56.21% of the water compared to similar salt lakes.



Case E: Membrane Process: 20,000 t/a LCE

- DLE of battery-grade lithium carbonate from sulfate-type salt lake brine with whole membrane solution.



Case F: Adsorption + Membrane Process: 15,000 t/a LCE

- DLE of battery-grade lithium carbonate from sulfate-type salt lake brine with adsorption method and membrane process.



Case G & H: Membrane Process: 5,000+ t/a LCE

- 2 production lines with total capacity over 5,000 t/a;
- Membrane separation, concentration and refining.



Case I: Adsorption Process: over 10,000 t/a LCE

- Based on the successful completion of a thousand-ton scale adsorbent performance experiment, operations have commenced to improve lithium recovery rates.



Case J: Solvent Process: 6,000 t/a LCE

- Extraction of Lithium from Lithium Precipitation Mother Liquor, with a concentration factor of 25x, a lithium yield of $\geq 98\%$, and a strong emphasis on environmental sustainability.

BICHEM WORLDWIDE

WITH A PRESENCE IN MAJOR MARKETS WORLDWIDE, WE ARE YOUR TRUSTED GLOBAL PARTNER FOR SUCCESS.



For more information, contact us via info@bichemical.org

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