

China Leading LiBr Absorption Heat Pump Fabrication Supplier - Hope Deepblue Is Revolutionizing the Industry



Chengdu, Sichuan Nov 27, 2025 ([Issuewire.com](https://www.issuewire.com)) - As the global community intensifies its race toward carbon neutrality, the industrial and HVAC sectors stand at a critical juncture. Energy efficiency is no longer merely a regulatory checkbox or a corporate social responsibility slogan; it has become the cornerstone of economic survival and environmental stewardship. Amidst this paradigm shift, Hope Deepblue Air Conditioning Manufacture Corp., Ltd. has emerged as a pivotal force. Recognized globally

as a [China Leading LiBr Absorption Heat Pump Fabrication Supplier](#), Hope Deepblue is redefining how modern industries manage thermal energy. By transforming industrial waste heat into a valuable asset, the company's lithium bromide (LiBr) absorption technology is empowering businesses worldwide to slash carbon footprints and operational costs simultaneously.

The Global Landscape: The Urgent Shift to Thermal Efficiency

The context for Hope Deepblue's ascent is a rapidly evolving global energy landscape. For decades, industrial processes in sectors such as metallurgy, petrochemicals, pharmaceuticals, and power generation have operated with a significant inefficiency: the venting of massive amounts of low-grade heat into the atmosphere. This "waste heat" represents a dual failure—a substantial loss of potential energy and an unnecessary contribution to thermal pollution.

According to recent industry analysis, nearly 20% to 50% of total industrial energy input is lost as waste heat. In an era where "Dual Carbon" goals (Carbon Peaking and Carbon Neutrality) are reshaping national policies, recovering this energy is paramount. Furthermore, global electrical grids are facing unprecedented strain due to the electrification of transport and heating. Traditional electric compression chillers exacerbate this peak-load pressure.

In contrast, absorption technology offers a vital solution for "grid-relief." By utilizing thermal energy rather than electricity to produce cooling and heating, absorption units help balance energy infrastructure, reducing the demand for expensive power plant expansions. This is the precise niche where Hope Deepblue excels.

Hope Deepblue: A Titan of Engineering and Innovation

Founded in 1997, Hope Deepblue is not just a manufacturer; it is a national key high-tech enterprise invested by the prestigious Continental Hope Group. This backing provides the company with robust financial stability and access to a broad ecosystem of technological resources. Located in the Chengdu High-tech West Zone, the company has established itself as the largest production base for absorption chillers and heat pumps in Western China.

Deep Dive into Technology: Mastery of Class I and Class II Heat Pumps

What distinguishes Hope Deepblue as a China Leading [LiBr Absorption Heat Pump](#) Fabrication Supplier is not just their manufacturing scale, but their profound technical mastery of the absorption cycle. Based on their specialized product portfolio, Hope Deepblue offers sophisticated solutions that leverage the chemical affinity between Lithium Bromide (the absorbent) and Water (the refrigerant) to manipulate thermal energy.

Their heat pump is primarily categorized into two distinct, high-performance classes, each addressing specific thermodynamic challenges:

- **Class I LiBr Absorption Heat Pump (The "Energy Multiplier"):**

This technology is designed for large-scale heating applications, such as district heating or industrial process pre-heating.

It is a high-efficiency thermal energy upgrade device driven by high-temperature heat source. Enabling the elevation of low-grade waste heat to higher temperatures for industrial or heating applications,

thereby significantly reducing primary energy consumption.

- **Class II LiBr Absorption Heat Pump (The "Temperature Booster"):**

Also known as the "Heat Transformer," this technology is a game-changer for industries requiring high-temperature process heat.

It is one kind of LT waste heat-driven device, which absorbs heat from waste hot water to generate hot water with a higher temperature than driven waste hot water. The most typical feature for this kind heat pump is that it can generate hot water with a higher temperature than waste hot water without other heat sources.

Realizing the Circular Economy: High-Impact Applications and Typical Project References

Hope Deepblue's technical mastery is best illustrated by its wide-ranging impact across diverse industrial and municipal sectors, transforming the concept of waste heat recovery into economic reality. The ability of the LiBr absorption heat pump to operate efficiently on various low-grade thermal sources makes it a versatile tool for achieving energy independence and compliance.

The core of their application success lies in two major areas: Large-Scale District Heating and High-Demand Industrial Waste Heat Recycling.

District Heating Revolution:

The Baotou Power Station: This landmark project showcased the colossal potential of the LiBr absorption heat pump. At the Baotou Rare Earth Aluminium Thermal Power Station, Hope Deepblue deployed massive Steam LiBr Absorption Heat Pumps, including a record-breaking single unit heating capacity of 68MW. The implementation of advanced heat pump technology enables the recovery of waste heat to elevate the temperature of circulating water in the heating station, expanding urban central heating and residential needs.—the project expanded the city's heating capacity by millions of square meters. This achievement allowed for the decommission of multiple high-polluting, coal-fired urban boilers, immediately and significantly curbing urban smog and demonstrating a path to massive, sustainable municipal heating.

Industrial Process Recycling:

Lingu Western Thermal Power Station Project: This system will primarily be used for exhaust heat recovery, where waste heat generated from industrial processes or energy production is captured and converted into useful thermal energy. The heat pump will then be utilized for district heating, supplying heat to residential, commercial, and industrial areas within the surrounding district. The integration of the heat pump ensures more efficient use of available energy by recovering waste heat and redistributing it for heating purposes, contributing to a more sustainable and energy-efficient heating solution for the region.

Global Footprint and International Certification

Hope Deepblue's impact extends far beyond the domestic market. The company has successfully exported its state-of-the-art units to many countries and regions, proving that Chinese high-end manufacturing can compete on the global stage.

The company's ability to meet stringent European standards for efficiency and reliability is powerfully highlighted by the [Køge heating plant in Denmark](#). There, Deepblue successfully deployed specialized heat pumps for advanced flue gas waste heat recovery, enabling the plant to maximize thermal efficiency for district heating in a challenging Nordic climate. Furthermore, the durability and precision of Deepblue's solutions have earned wider international confidence, leading to successful deployments for global energy giants like ENI in Italy and complex projects at prestigious institutions like Monterrey University in Mexico. These global successful references underscore the international reliability and longevity of Hope Deepblue's engineered solutions.

Their commitment to international standards is evidenced by their active participation in world-leading HVAC exhibitions such as MCE in Italy and CHILLVANTA in Germany. These platforms are reserved for the industry's elite, and Hope Deepblue's presence underscores its technological confidence. Crucially, their equipment carries prestigious certifications, including CE and PED certification (Pressure Equipment Directive). The PED certification is mandatory and notoriously difficult to obtain for entering the European Union market, signifying that Hope Deepblue's manufacturing quality and safety standards meet the strictest global requirements. They also hold ISO9001 and ISO14001 accreditations, ensuring consistent quality management.

Conclusion

As industries worldwide face the mounting pressure to decarbonize and optimize energy use, Hope Deepblue stands ready as a vital partner in the energy transition. By continuously refining their absorption technology, expanding their global service network, and adhering to the highest safety standards, they are not just manufacturing equipment; they are engineering a cooler, sustainable future.

For more information on their comprehensive range of absorption chillers, heat pumps, and system solutions, please visit their official website at <https://www.deepbluechiller.com/>.



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