



EFFICIENT THERMAL TREATMENT OF NUTS, BEANS & SEEDS

PROVEN TECHNOLOGY FOR MORE EFFICIENT OPERATIONS

Optimized heating, cooling and drying

The thermal treatment of nuts, seeds and beans is an important step during processing to ensuring a high-quality, high-return final product. Heat exchange technology is vital in meeting market demands by providing the mechanisms that provide temperature control, as well as mitigate product attrition/contamination and more.

Yet today's technology is also being called upon to do more, notably in assisting with larger operational demands such as reducing emissions and energy consumption.

The Solex advantage

Whether as a final or intermediate process step, Solex's moving bed heat exchanger uses vertical plate technology to ensure precise control of both the moisture content and temperature of your product, while producing near-zero emissions and reducing energy demands by up to 90%.

Our technology indirectly heats, cools or dries the product as it passes between a series of stainless-steel pillow plates that contain a heat exchange medium such as water or thermal oil, thereby ensuring gentle handling and avoiding the potential for cross-contamination.



PROPRIETARY TECHNOLOGY FOR MORE EFFICIENT OPERATIONS

Accurate temperature control

With customized plate spacing and optimal residence time, Solex technology provides uniform heating, cooling or drying for each particle during processing. Solex heat exchange technology combines proprietary thermal modeling software with a mass flow discharge device that controls the rate of flow through the unit and ensures optimal product temperature at the outlet.

Efficient use of energy

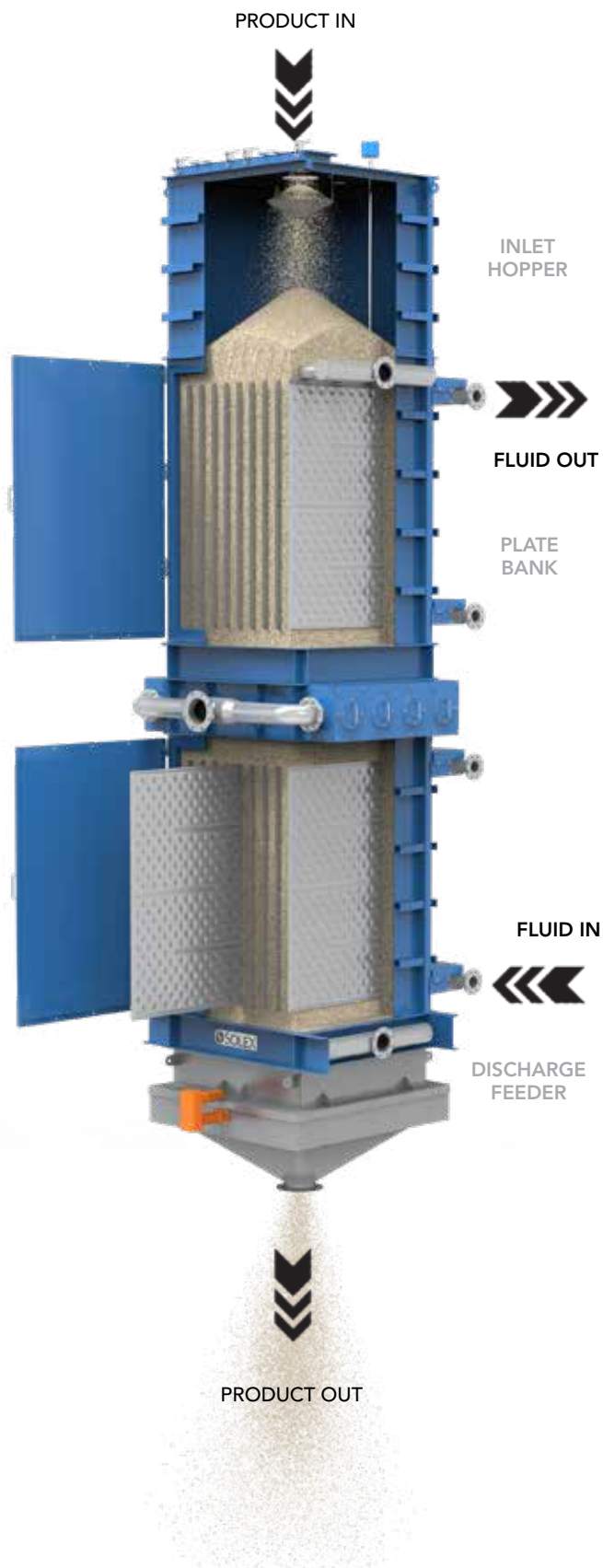
By relying on conduction instead of convection (e.g. air cooling) to thermally treat bulk solids, Solex technology eliminates the use of high-energy consumption chillers, fans and other components, thereby reducing energy consumption by up to 90% when compared with conventional fluid beds and rotary drums. In addition, the innovative plate-based design can accommodate the utilization of low-grade waste heat (when available).

Near-zero emissions/ contamination

Because the heat exchange medium flows counter-currently inside the plates, it never touches the product and thereby avoids bacterial or odour contamination as well as emissions, dust and fines.

Gentle handling

A mass flow discharge feeder regulates flow rate and creates uniform product velocity. There is no mechanical handling and moving of the particles, rendering the technology ideal for even the most friable grades. This gentle product handling prevents product abrasion and degradation, and produces a superior final product.



Solex Thermal Science Inc.
250, 4720 — 106 Ave. S.E.
Calgary, AB, Canada T2C 3G5
Tel: +1 403 254 3500
Email: info@solexthermal.com
www.solexthermal.com

