



PRE-DRYING BETTER COCOA BEANS

INNOVATIVE TECHNOLOGY FOR ENERGY-EFFICIENT OPERATIONS



Improved cocoa thermal processing

Great care is needed when transforming cocoa beans into the world's best chocolates. Flavour, texture and colour are dependent on managing the temperature, moisture and handling of the cocoa at each processing step.

Solex is a worldwide provider of customized heat transfer solutions for bulk solids to a wide range of industries.

The Solex Advantage

The Solex heat exchanger technology provides a proven solution to uniformly heat cocoa beans. The Solex ensures that all beans achieve and maintain the desired temperature and moisture at each processing step. The Solex equipment can accurately and consistently heat or cool beans to the target temperature evenly through the bed. This enables the operator to "dial in" the optimal control parameters for each batch of bean.



Waste heat utilization

The Solex heat exchanger is uniquely designed to every process condition which provides the largest heat transfer surface area compared to traditional technologies in a compact design. This innovative design can accommodate the utilization of low grade waste heat (when available).

Small footprint & modular design

The vertical orientation of the Solex heat exchanger affords a small installation footprint, allowing it to easily retrofit into existing and new plants. Solex dryers, heaters and coolers may be configured with modular exchanger banks making it ideal for plant capacity increases as well as an easy installation.

Operational flexibility

Water, steam or condensate are used as heat transfer mediums inside the Solex heat exchanger plates. These mediums can be used in combination with designated exchanger banks. Our proprietary thermal modeling software reports the bean to bean temperature profile, moisture profile and drying rate which is used for predicting the optimal control settings for specific beans.

Low operating cost

The indirect heat transfer medium flowing inside the Solex heat exchanger plates is working with sensible heat to provide thermal efficiencies better than 90%. The drying air maintains heat from the plates to maximize the specific enthalpy, which correlates to much less air required to remove the moisture. The discharge device controlling the coffee bean flow requires very little power as it works with gravity.



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