

SV – Bulk Solids Cooling System

Technology Leading & Innovation Driven



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Technical Features

✓ Mass Flow

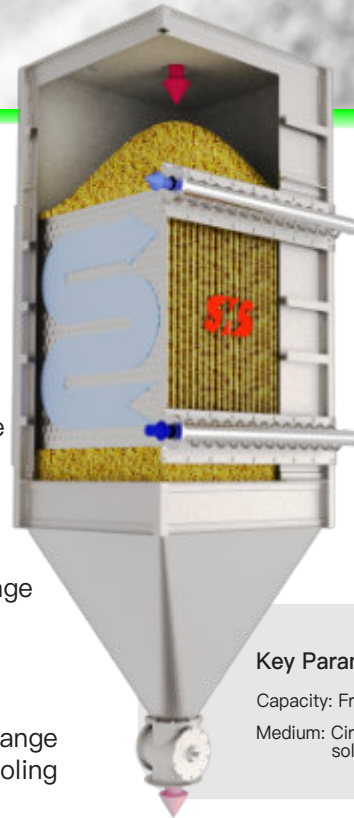
The mass flow discharge feeder ensures consistent product velocity throughout the cooler and controls the rate of product flow.

✓ Indirect Cooling

The cooling medium is heated through the heat exchange plate without direct contact with the powder.

✓ Temperature Uniformity

Powder flows slowly and evenly between the heat exchange plates, undergoing composite heat transfer with the cooling medium inside the plates, achieving uniform cooling.

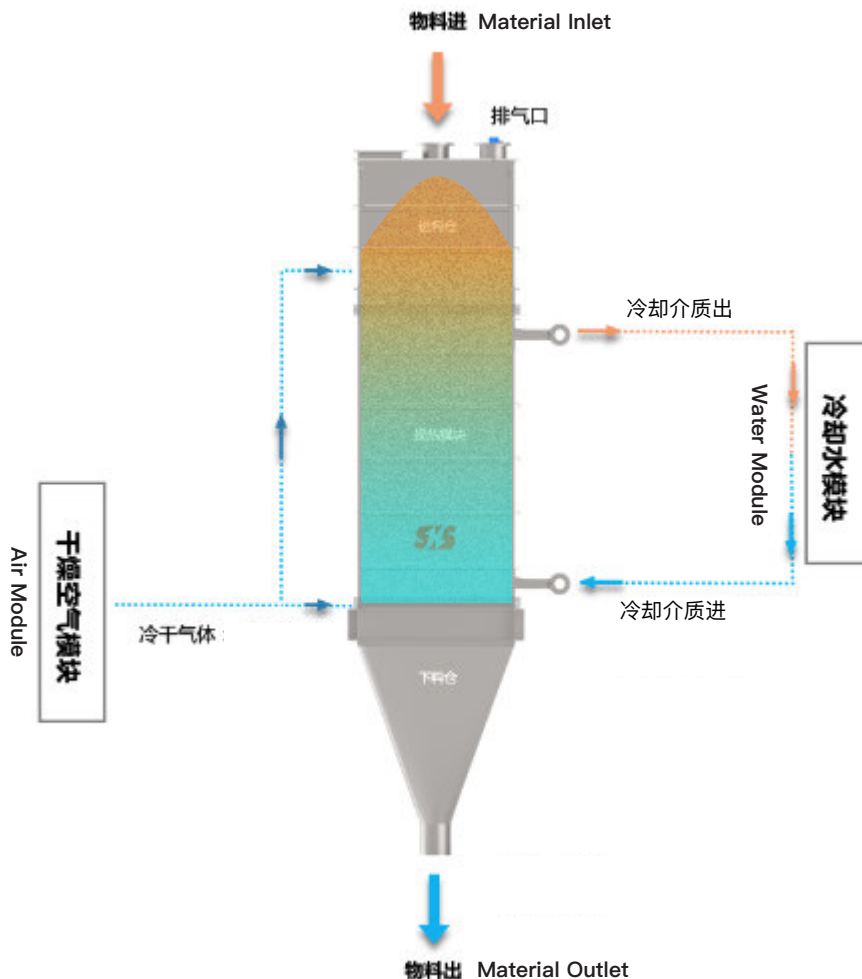


Key Parameters:

Capacity: From 100 kg/h to 150,000 kg/h
Medium: Circulating water, ethylene glycol solution, etc.

Working Mechanism

The material enters the interior of the heat exchanger from the top, filling the heat exchanger with material up to the feeding compartment. At this point, cooling water enters the interior of the plates from the lower end of the heat exchange module and is discharged from the upper part of the heat exchange module. The discharge speed of the discharger at the top of the feeding compartment is adjusted based on the feed quantity to maintain a balanced material level in the feeding compartment.



Auto Control System

Structure

Inlet Hopper: Material inlet.

Level Radar: Online detection of material level inside the silo, forming a closed-loop interlock with discharge control to ensure balanced material inflow and outflow.

Exhaust Port: Vent for the cold and dry gas injected during equipment operation.

Inspection Port: Inspection port for the inlet compartment.

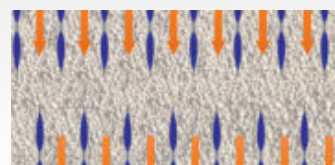
Mesh Screen: Optional component, chosen based on material properties and specific conditions, used to filter large abnormal particles.



Pillow Plate Bank Module

Easy to maintain, plates are detachable.

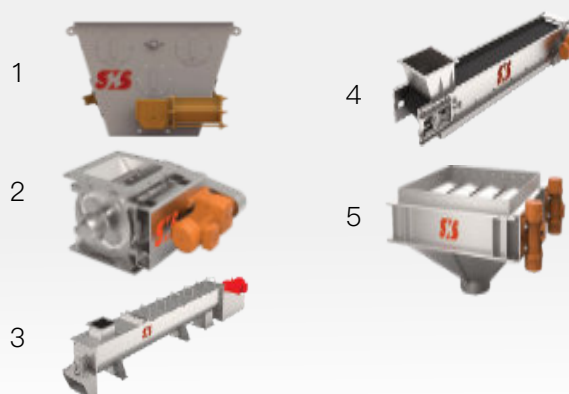
The heat exchange module is equipped with a front-opening cleaning door that can be opened for cleaning when necessary. The plates are connected to the manifold with flexible hoses. By disconnecting the pipe fittings on the exterior of the casing, the plates can be pulled out from the front of the heat exchange module for cleaning or replacement.



Discharge Feeders

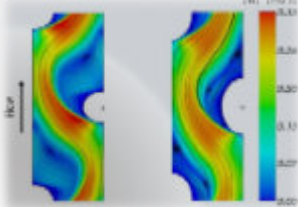
The discharge control device is tailored to different material properties and operating conditions and commonly comes in the following types:

1. Hinged Door
2. Rotary Valve
3. Archimedean Screw
4. Variable Frequency Belt
5. Vibrating Louver Structure



Technical Advantages

1. Energy saving up to 90%



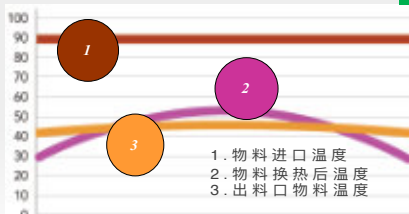
SV powder flow heat exchanger has a high heat transfer coefficient, the use of fiber laser welding process to manufacture the pillow plate heat exchange module, Through heat exchange software simulation and calculation, improve heat exchange efficiency, reduce energy consumption, compared with traditional air cooling technology, consumption is reduced by up to 90%. Compared with the traditional powder heat transfer method, there is no need to use high-energy fans and electricity Machine and other equipment, while effectively eliminating heat loss.

2. Modulized Design

SV powder flow heat exchanger is composed of multiple heat exchange modules, which can still be expanded according to capacity requirements after installation, and is the best solution for capacity optimization and improvement. Simple and compact structure, low installation cost. The amount of waste gas treatment is very small, and the initial investment is small.



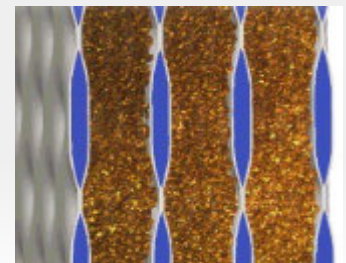
3. Heat Transfer is Uniform



Heat exchange of materials is accomplished through conduction between the powder and the heat exchange plates, resulting in more uniform heat transfer. This leads to thorough cooling of the particle core, eliminating the phenomenon of temperature rise during storage.

4. No loss, no degradation, no pollution

The slow and controlled material flow rate ensures the optimal quality of the product. This prevents product wear and decomposition, thereby preserving the particle properties and crystal shape, ensuring the best product quality. The material operates within a fully enclosed bin-style container, preventing dust and eliminating environmental pressure.



5. Easy Repair & Mainten



The SV Powder Flow Heat Exchanger is designed with a quick-opening door, allowing users to swiftly open the door panel for internal equipment cleaning. Each heat transfer plate can be pulled out from the front of the heat exchange module, making maintenance more convenient.



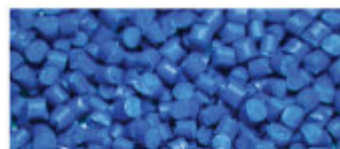
Applications



Fertilizers



Minerals & Sands



Polymers



Chemicals



Potash



Biosolids



Food Products



Energy transition



Oilseeds

Polymer PET



Cases

Food additive carrageenan





Compound fertilizer



Urea



Baking soda



Casting slag



Fertilizer



Aluminium hydroxide



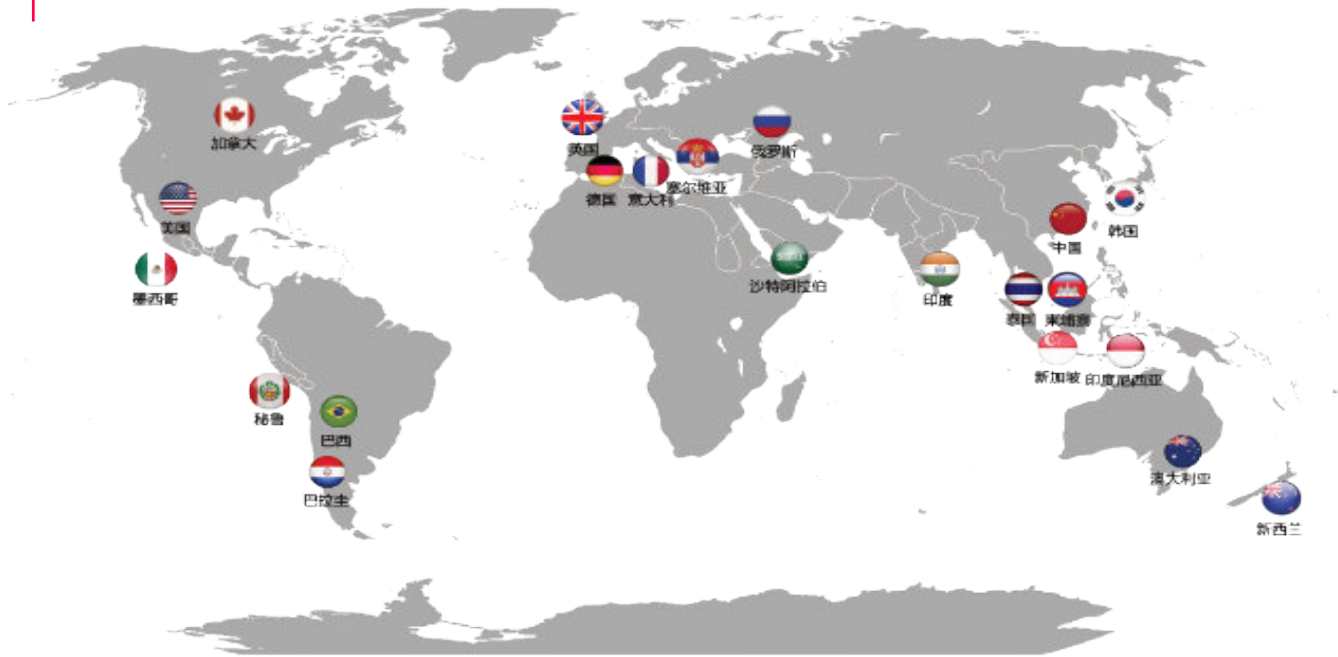
Compound fertilizer



Calcium ammonium nitrate



Business Footprint



Domestic Customers





After-sales Services

We consider our customers as long-term partners and provide them with high-quality energy-saving services. You can trust our experienced commissioning engineers to provide on-site guidance for commissioning and process operation optimization. We also offer employee training for our customers until the system operates smoothly and reliably.

- ✓ We offer customized after-sales service policies based on customer requirements.
- ✓ When the equipment experiences a malfunction and cannot operate, we provide remote or on-site fault diagnosis services and problem-solving solutions within 24 hours.
- ✓ In case of equipment component damage, leveraging our advanced manufacturing capabilities and well-established supplier network, we can swiftly provide high-quality replacement parts and related accessories. If necessary, we can also offer on-site repair services to ensure the





About Us

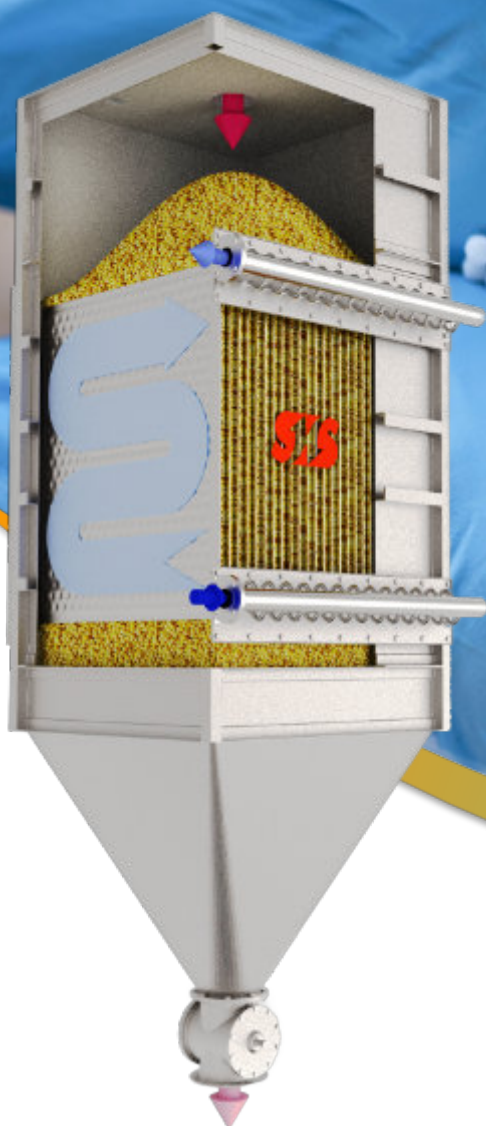
We are committed to the research and application of advanced heat transfer technologies, and have developed cutting-edge technologies and related products in advanced green low-temperature purification, solid heat exchange, waste heat recovery, flue gas whitening, and more. Our company is a leading energy-saving technology

company that integrates research and development, manufacturing, system control, and technical services. Currently, the company has obtained more than 70 national invention patents and utility model patents, including authorization and acceptance certificates.



Having served over 600 customers and completed more than 1000 projects worldwide, we have established mature products and system solutions in various specialized industries. Equipped with advanced automatic laser welding technology and lean processing and assembly workshops, our company is dedicated to delivering high-quality products as a perpetual commitment to our customers. We are ISO 9001 certified, ensuring the effective operation of our quality system.

In 2023, our company established a research institute in Wuhan and formed joint laboratories with universities, constantly pursuing technological innovation for the improvement of our capabilities and the future of the industry, creating more value for our customers. With a global perspective, we learn from excellent peers and clients, continuously challenge ourselves, innovate constantly, and strive to become a first-class energy-saving heat transfer technology company. Our aim is to provide high-quality energy-saving services and contribute to environmental conservation to the best of our abilities.



We consistently adhere to the "innovation-driven" philosophy, providing customers with high-quality solutions and services, and continuously creating value for our clients!



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