The perfect cold chain around the clock

The Siber System - cryogenic transport cooling with dry ice snow
The innovative Siber System provides temperature regulation for chilled and frozen products for transportation times of more than 24 hours. With this new concept you ensure a perfect cold chain during delivery of your perishable goods.

Even sensitive fresh products are kept at a temperature between 0 °C and +4 °C, while frozen food is kept at a temperature below -18 °C.

The Siber System ensures the closed maintenance of the cold chain and traceability and complies with all European Food Regulations and HACCP requirements; e.g. Reg. (EC) 178/2002 and Reg. (EC) 852/2004.

**Injection unit**
- Supply with liquid CO₂
- By reducing the pressure, dry ice snow is produced and injected into the compartment.
- An electromagnetic protective device prevents any injection taking place when the injection unit is not connected.
- Injection takes some seconds.

**CO₂-snow compartment**
- Its function is to contain the dry ice snow and keep the cold temperature constant in the container during transportation. Equipped with a double compartment, the roll container is flexibel suitable for fresh as well as frozen products.
- The closed design of the container prevents cold losses as well as the risk that products come into direct contact with the CO₂ snow.

**CO₂-injection control unit**
- The quantity of snow to be injected is calculated automatically by the injection control unit. This depends on the container volume, transport period and the difference between product and ambient temperature.
- As an option, the Siber System can be equipped with all marketable data logger for tracking all the relevant data to control the temperature - such as CO₂ injection, door openings and internal temperature stability – in compliance with food regulations/HACCP.
The handling of the Siber System is easy and safe.

**Work process**
- The roll container is loaded with goods in the cold storage of the warehouse.
- The operator connects the injection unit to the CO₂ snow compartment and activates the CO₂ injection at the touch of a button.
- The injection unit automatically fills the compartment with the required amount of CO₂ snow for cooling.
- During the injection process, the generated CO₂ gas is extracted completely.
- At the end of the injection process the injection unit shuts down automatically.
- The operator closes the roll container, which is then prepared for loading at the loading ramp.
- The roll container can be unloaded directly at the cold shelves in the shops without interruption of the cold chain.

**Example of temperature maintenance**
Temperature curve during 24 hours for a 500-liter Isotherm roll container that is loaded to 80% of its volume with appropriately refrigerated goods, at an ambient temperature of 30 °C. The container is pre-cooled before loading.

### Example of temperature maintenance
- **Fresh products without cooling**
- **Fresh products with Siber System**
- **Frozen products without cooling**
- **Frozen products with Siber System**

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**Injection Unit**
1) Hanging of balancer
2) Supply of liquid CO₂
3) CO₂ gas extraction
4) Electromagnetic safety connection
5) Opening for CO₂ gas extraction

**Snow compartment**
1) CO₂ gas extraction
2) Electromagnetic safety connection
3) Controlled temperature transfer
Olivo containers
These rollable isotherm containers from our partner Olivo, which comply with European legislation, maintain the temperature of fresh and frozen food during transportation.

The container range, with a net capacity of 30 - 1300 liters, has been specially designed to meet your requirements, offering a simple and efficient transport solution in a controlled temperature environment.

www.olivo-logistics.com

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