



The perfect cold chain around the clock

The Siber System - cryogenic transport cooling with dry ice snow





Transport cooling with the Siber System

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.

Loading of the Siber System roll containers with fresh products



Photo: Olivo

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.

Supply of storage tanks with liquid (CO₂) in tank trucks

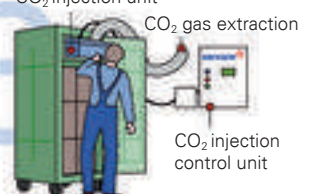


Isotherm roll containers with Siber CO₂ snow compartment



Loading of the containers in the warehouse

CO₂ injection unit



The handling of the Siber System is easy and safe.

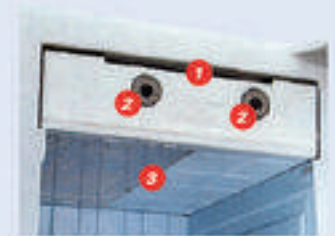


Transport with normal trucks to the shops and unloading directly at the cold shelves



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

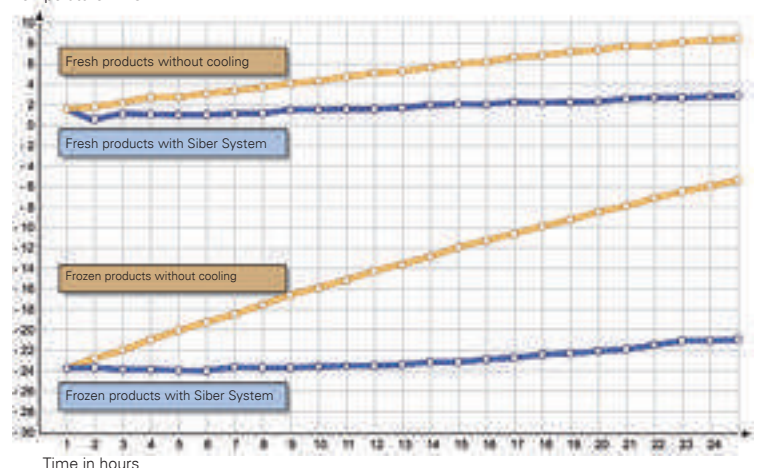
Work process

- 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.

Temperature in °C



Example of temperature maintenance



Photo: Olivo

Olivo product range

TYPE	ROLL 220	ROLL 300	ROLL 370	ROLL 500
External dimensions (mm)	600 x 800 x 1130	715 x 810 x 1140	600 x 800 x 1670	715 x 850 x 1700
Internal dimensions (mm)	430 x 620 x 830	556 x 635 x 845	430 x 620 x 1370	545 x 665 x 1380

TYPE	ROLL 550	ROLL 580	ROLL 670	ROLL 780
External dimensions (mm)	660 x 950 x 1855	715 x 810 x 1900	800 x 1030 x 1720	800 x 1000 x 1900
Internal dimensions (mm)	468 x 770 x 1528	550 x 640 x 1600	610 x 845 x 1280	610 x 820 x 1535

TYPE	ROLL 900	ROLL 1000	ROLL 1400
External dimensions (mm)	800 x 1200 x 1860	1000 x 1200 x 1680	1000 x 1200 x 2000
Internal dimensions (mm)	610 x 1000 x 1493	805 x 1000 x 1340	805 x 1000 x 1695

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

You can also download this brochure and many others as a PDF file from the Internet under: www.messergroup.com



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