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**Waterkant.group**  
ISICOLD and STARE /  
ACUSTARE





# ISICOLD Cooling Pad

# # ISICOLD Cooling Pad

Re-thinking the cold chain



# # ISICOLD Cooling Pad

Re-thinking the cold chain

The **ISICOLD Cooling Pad** is a sustainable cooling solution that maintains the desired temperature within the range of **-36 °C to +10 °C for up to 25 hours guaranteed.**

It is 100% self-developed, patented by ISICOLD and verifiable unique. **No chemicals** are used so the contents are harmless, **even certified as food grade.**

For each new product our specialists calculate the exact procedures for the product and its transport route, for which we have even developed our own software.



# # ISICOLD Cooling Pad

Sustainable, cost-efficient and harmless to health

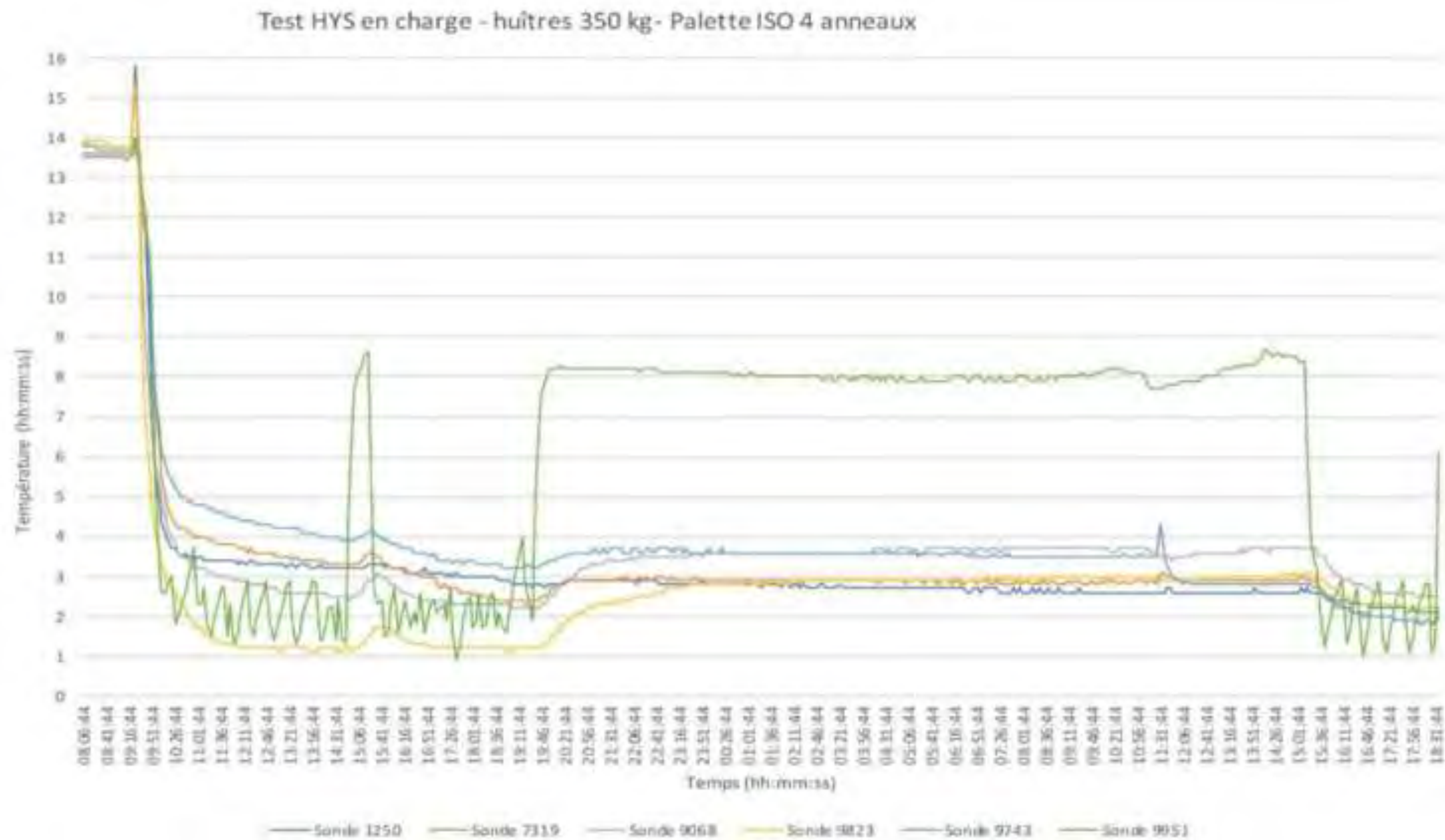
The ISICOLD cooling pad **reduces the energy demand** in cooling as well as in production. It also **reduces disposal costs due to its durability** and reusability, which significantly **improves your carbon footprint.**

Whether for transporting frozen or chilled goods, **for seafood, bottled wines, pizzas in boxes or fruit for special occasions,** the cooling pad offers options that only an active refrigeration unit can.





**# The temperature was kept stable**  
at the set level – without additional technical  
cooling support





# # CO<sub>2</sub>-Balance Gel and Dry-Ice

After 5 uses the CO<sub>2</sub> Balance evens out to zero

Kalkulation auf 1.000 Kg Gel-Pack ISICOLD			
Gegenstand	Messung (kg CO <sub>2</sub> /to)	Verbrauch	Ergebnis total (kg CO <sub>2</sub> )
Gel	0,132	0,96	0,127
Folie PE	1920	0,0064	12,288
Folie PET	3770	0,0017	6,447
Kartonage	390	0,0032	1,248
Energieverbrauch in Herstellung	0,0569	8,5	0,484
Energieverbrauch in Kühlung	0,0569	19,2	1,092
Transport (KG CO <sub>2</sub> /to.km)	0,0853	280	23,884
Entsorgung	340	0,005	1,7
		<b>Total CO<sub>2</sub></b>	<b>42,270 kg</b>

Kalkulation auf 1.000 Kg Trockeneis			
Gegenstand	Messung (kg CO <sub>2</sub> /to)	Verbrauch	Ergebnis total (kg CO <sub>2</sub> )
Vormaterial gasifiziert	1000	1	1000
Transport Rohmaterial ab Werk	1000	0,1	100
Transport (KG CO <sub>2</sub> /to.km)	0,0853	300	25,59
Folie PET	3770	0,0017	6,447
Verlust bei Entgasung	1000	0,01	10
Energieverbrauch bei Herstellung	0,0569	15	0,854
Verlust nach Produktion	1000	0,03	30
Transport (KG CO <sub>2</sub> /to.km)	0,0853	80	6,824
Verlust bei Lieferung und Nutzung	1000	0,1	100
Entsorgung	340	0,001	0,34
		<b>Total CO<sub>2</sub></b>	<b>1280,054 kg</b>



# # CO<sub>2</sub>-Balance Gel and Dry-Ice

Less administrative effort, as it is not a hazardous substance

Besides Cooling, our gel pack has another benefit: dry ice is subject to the regulations for hazardous substances, our gel pack is **not hazardous** and is infact considered **food-safe**.



Dangerous Goods Master Document



Palettisation et Chargement





# # ISICOLD Cooling Pad

Advantages at a glance

- **Cost reduction due to recyclability**
- **Reduction of energy use**
- **Reduction of CO<sub>2</sub> footprint by 27** compared to dry ice (certified to 47,270 kg CO<sub>2</sub> to 1.280,054 kg CO<sub>2</sub> for one ton of material by ADEME (Agence de la Transition Ecologique de la Republique Francaise), GES and KLM/AirFance)
- **Ideal for air-freight, medicine-, food- & organ transport** approved by regulatory authorities for the EU, North- and South America and Asia as well as the international Air Cargo Regulators
- **Certified and licensed for food contact and medical applications**, the gel is **absolutely harmless** to humans, animals and nature when consumed





# ISICOLD Cooling Box

# # ISICOLD Cooling Box

The patented temperature miracle

Whether you want to **protect medicines in the cold chain, safely transport vaccines or insulin, organ transport for hospitals,** transport fine **champagne**, excellent **wines**, delicious **caviar**, freshly caught **fish and lobster, mussels** or other sensitive **foods**, ISICOLD specialises in securing this process in terms of constant refrigeration.

The **patented cooling box made of EPS** has unique properties that ensure a particularly long-lasting, reliable and sustainable **constant temperature**.

**Our specialists calculate the perfect solution from warehouse to transport to delivery on site** – regardless of whether the route is covered by bike, car, lorry, helicopter or airliner.





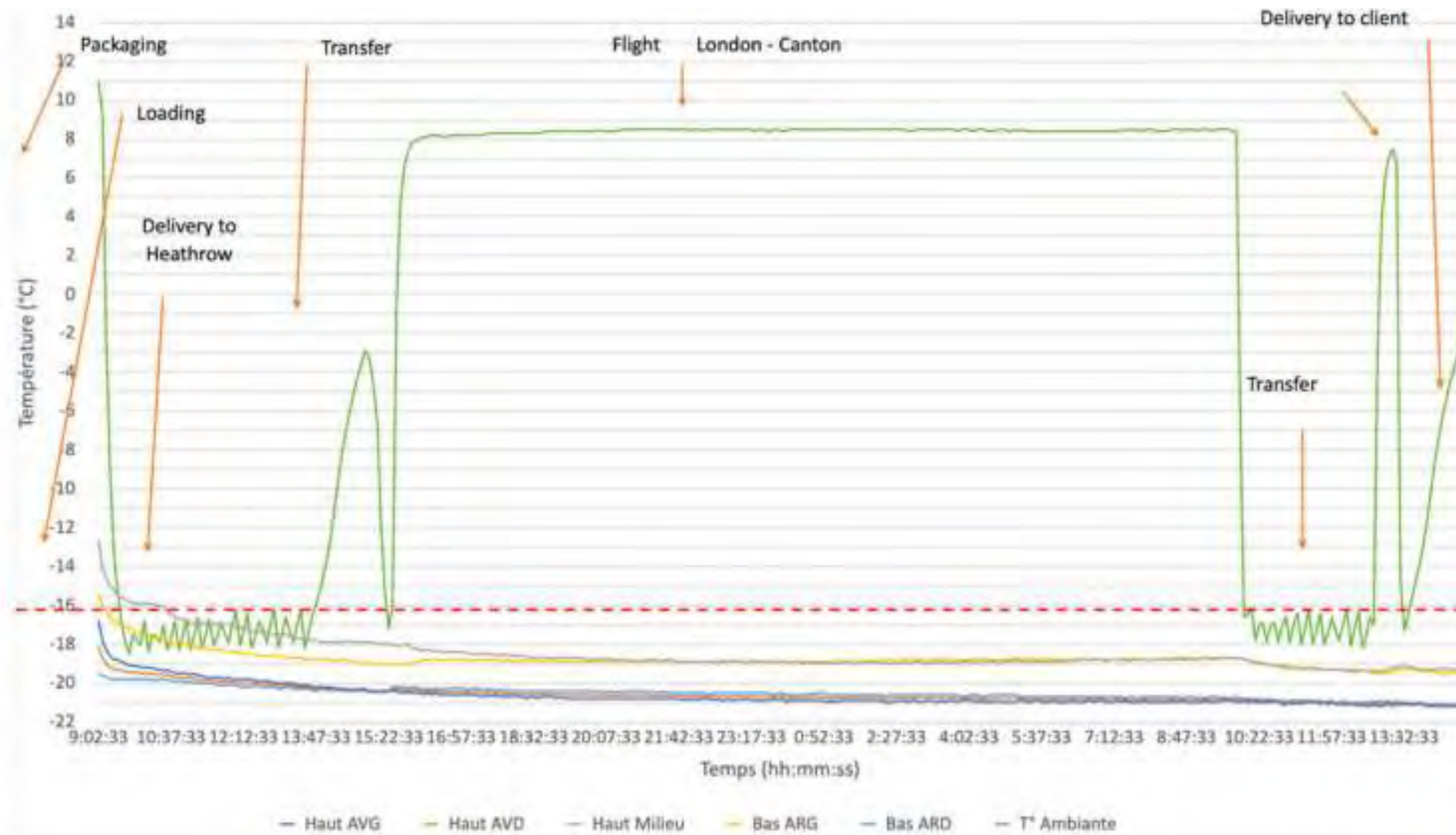
# # ISICOLD Cooling Box

The patented temperature miracle





# In the stress test, digital thermometers were placed inside and outside the ISICOLD Cooling Box



# # ISICOLD Cooling Box

## Technical Data

Specifications	Modular Box	Ring element
Ext. dimensions (mm)	1.200 x 800 x 690	1.200 x 800 x 215
Int. dimensions (mm)	1060 x 660 x 430	1060 x 660 x 215
Material thickness (mm)	70	70
Volume (L)	300	150
Empty weight (kg)	7,1	1,4
Elements	1 piece / lid	1 piece



# # ISICOLD Cooling Box

Advantages at a glance

- Ideal for **target cooling ranges from -20 °C to +20 °C**
- Heat transfer coefficient **(K): 0.38**
- Avoids energy transfer during immobilisation
- Supports **500 kg payload**
- **Extreme space saving**, especially when used with ISICOLD cooling pads
- 100% recyclable
- **Can be extended in height** using ring elements
- Pallet incl.





# STARE Cooling Box





# # The new STARE Cooling Box-System

A wide variety of boxes for different applications



# # The new STARE Cooling Box-System

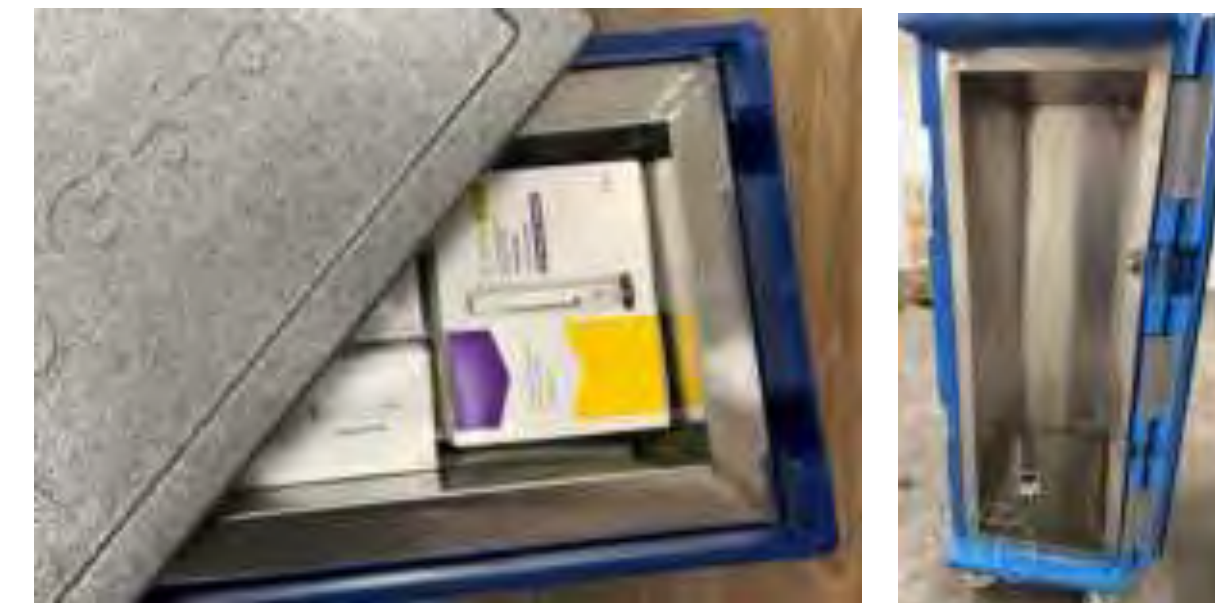
Constant cooling for the transport of sensitive goods

The time has come for optimised load carriers that offer advantages in both handling and logistics: **The STARE box.**

**Developed by MSI in France under the direction of our partner Vincent Lédandart.**

It is either **brought to the desired temperature in the range from -25 °C to +8 °C within 30 seconds** using a dedicated element or by storing it "overnight" in a cold store, and your **goods are protected in the cold chain for at least 24 hours.**

Easy to cool - easy to transport - easy to clean - less handling with more loading volume.



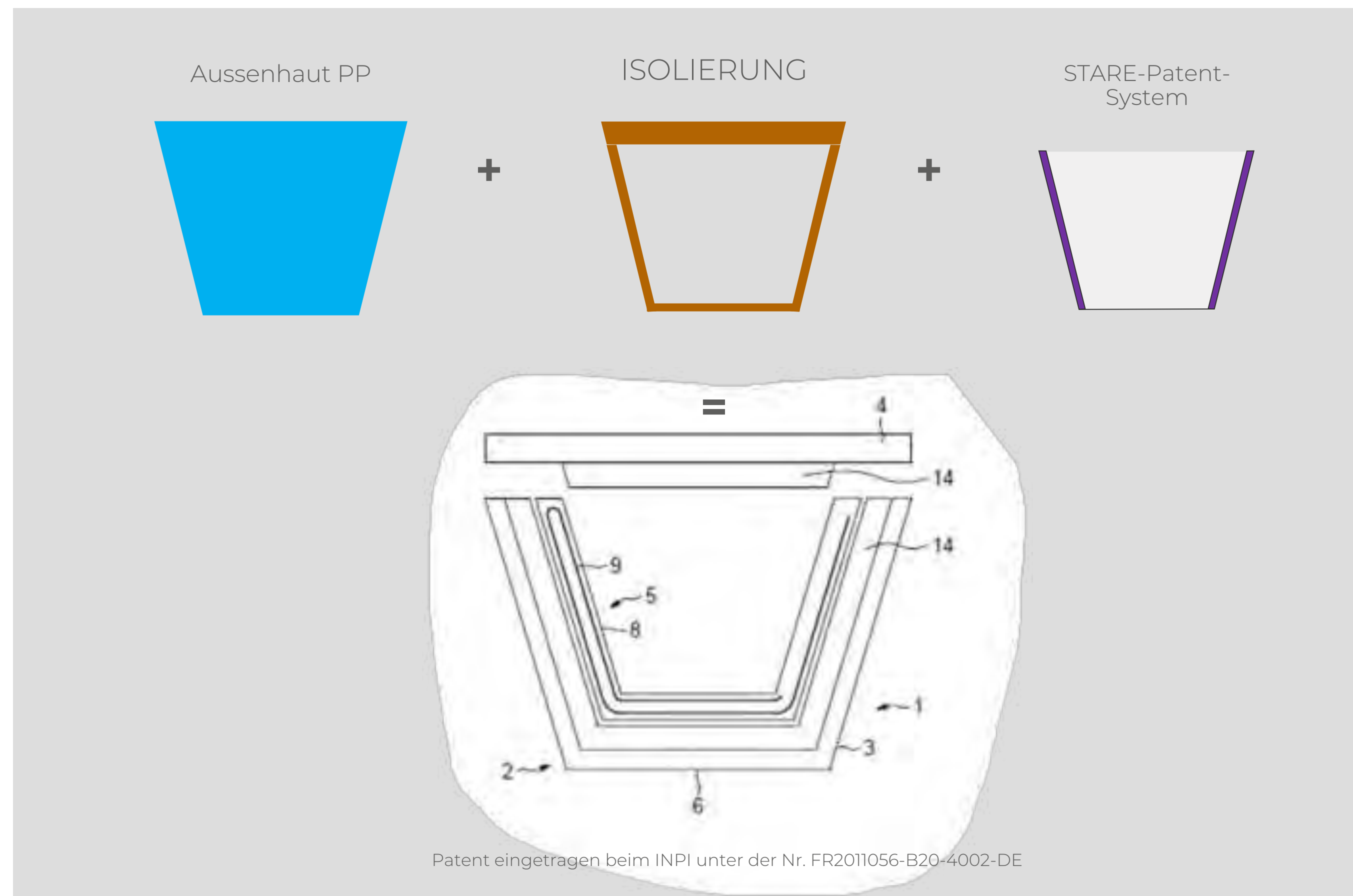
In cooperation with





# # The new STARE Cooling Box

The STARE process (technical system for storing and returning energy)



## Selection of components

During development, we opted for the use of materials that can later be recycled in a **circular material cycle**.

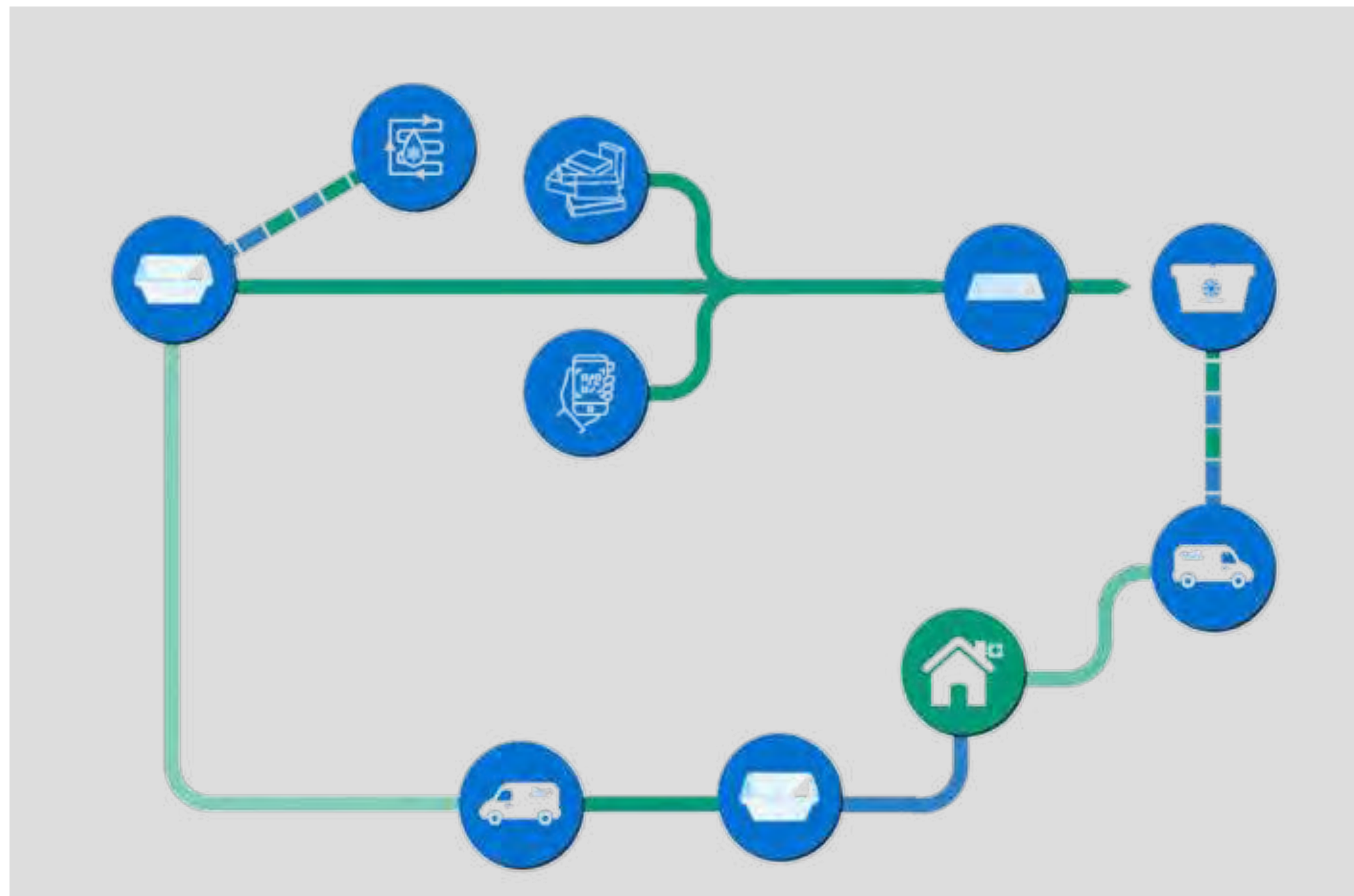
In addition to the outer skin and the visible metal insert, the STARE box has layers of 15 mm / 20 mm / 30 mm, which are partially nested to offer the obvious advantages and can all be reused **after sorted recycling**.

Our own, internationally patented coolant is, as you would expect from us, food-safe and guarantees to keep the temperature you set within the range from **-25 °C to +8 °C** for **at least 24 hours**.



# # The new STARE Cooling Box

Recyclable, sustainable and durable



## Target process with the STARE system

In contrast to conventional refrigerated transport, no cooling elements (e.g. ice/dry ice) need to be brought to a negative temperature and used, so there can be no contact between the goods and the negative temperature, and goods no longer need to be specially protected or kept away from the cooling element by room dividers, for example.

This gives you a volume advantage. You take the refrigerated box, load it and close it. Then the transport process begins. When the empty box returns, it is temporarily stored at the specific target temperature so that it is ready for use again the next day.

**You save time, material, workflow and generate a multiple of space.**

# # The new STARE Cooling Box

Optimisation of loading volume and loading speed using the example of a **14L PHARMA BOX**

Specifications	Conventional Box	STARE Pharma Box
Total weight	5,20 kg	5,20 kg
Usable volume	7,2 Litres	<b>14,1 Litres</b>
Possibility of transporting large-volume medication	none	possible
Handling	90 seconds	<b>30 seconds</b>
Temperature stability	8h to 16h	<b>24h +</b>
Service life	***	*****
Recycling	**	*****
Energy consumption	**	*****





# # The new STARE Cooling Box

Established standard formats are the basis for our range

## Basic format L x W:

400mm x 300mm

600mm x 400mm

800mm x 600mm

1200 mm x 800mm

## Loading volume:

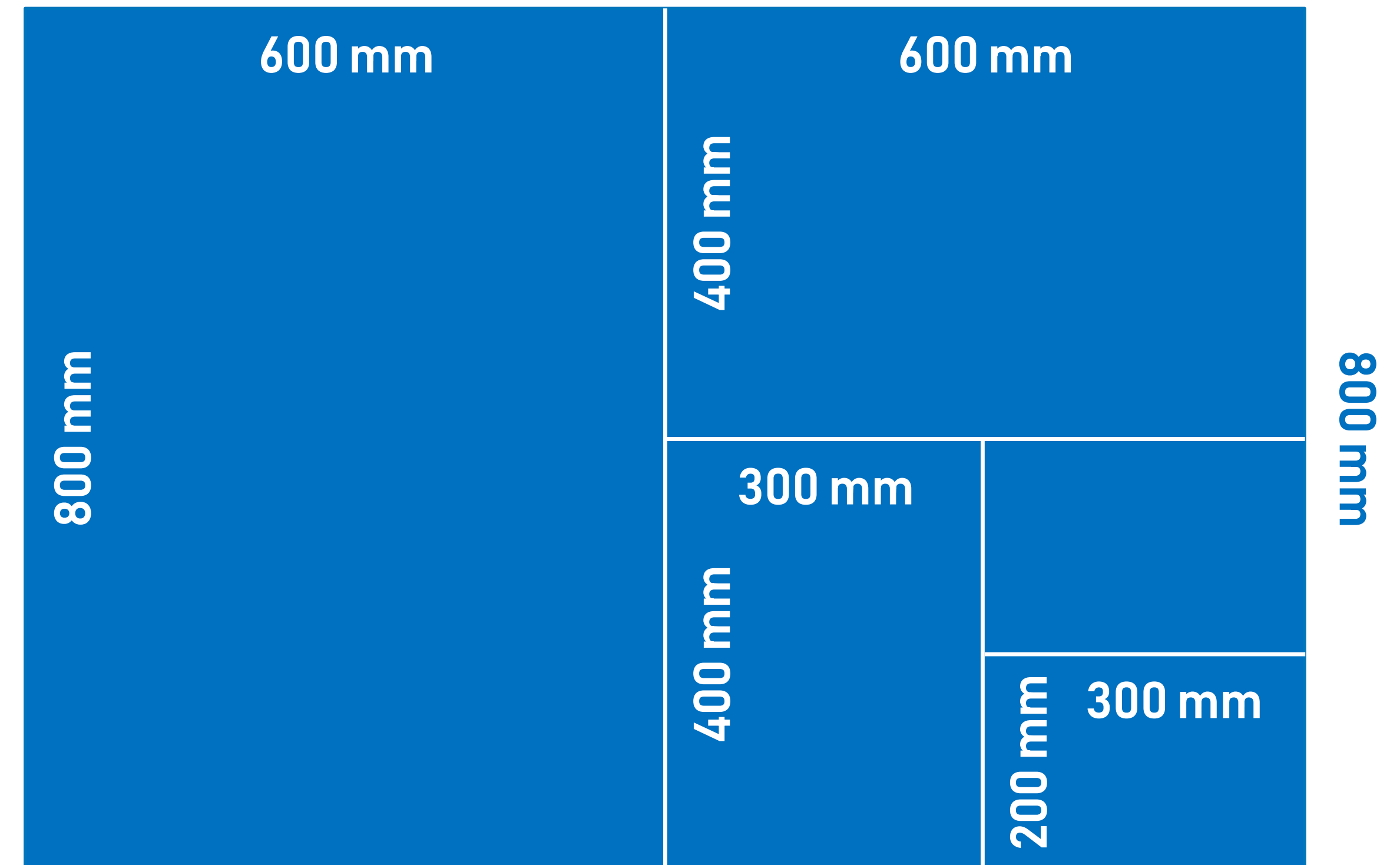
14 Litres

35 Litres / 50 Litres

170 Litres / 370 Litres

360 Litres

## EUROPALLET 1200 mm





# # The new STARE Cooling Box

Temperature standards categorise the areas of application

Loading volume	Frozen	Fresh	Pharma
14 Litres	√	√	√
35 Litres	√	√	√
50 Litres	√	√	√
170 Litres	√	√	
360 Litres	√	√	
370 Litres	√	√	

Of course, the temperature ranges can be customised in the range from -25 °C to +25 °C, and the required constant temperature can be extended beyond the guaranteed 24 hours.

# # The new STARE Cooling Box

Advantages at a glance

- **Unrivalled temperature homogeneity**
- Direct contact of the medication with the walls possible
- Choice of load type
- **No handling of the cooling elements necessary**
- **Significant reduction in energy consumption** for freezing/  
storage/defrosting/holding
- **Possibility of conditioning to the exact desired temperature**
- Reduction in preparation time per container
- **Increase in usable volume by + 60%** = fewer containers transported, far better  
utilisation of capacity
- Sensitive goods can also be transported at a safe temperature on  
**medium and short distances** using vehicles **without active cooling**
- **Service life 6 years** – for the entire system





# # Special solutions



# # We are delighted to make special solutions for you. For example, we have ...

... accompanied KLM/AirFrance in carrying out a test on behalf of the Skyteam Alliance and together with the French Air Freight Authority and the Ministry of Nature Conservation. The aim of the test was to find out how much CO2 could be saved on a short-haul flight within the EU. The test took place on 04.05.22 and went from Charles-De-Gaulle to Lisbon.

The test was carried out with an A220, which was operated with ASF. All machines and vehicles in the test were electrically powered, and processes such as lighter food trolleys, waste separation, recycled trays, porcelain or melamine crockery, wooden



Abb.: „Le Parisien“

stirrers, compostable napkins, vegetarian cold meals made from French products - and of course the ISICOLD cooling pads - were used.

We are quite proud of the result; the flight demonstrated a saving of 57% compared to conventional air travel.



**# We even have an extra**  
trolley solution for onboard services





# # References

Customers who already use ISICOLD and STARE products



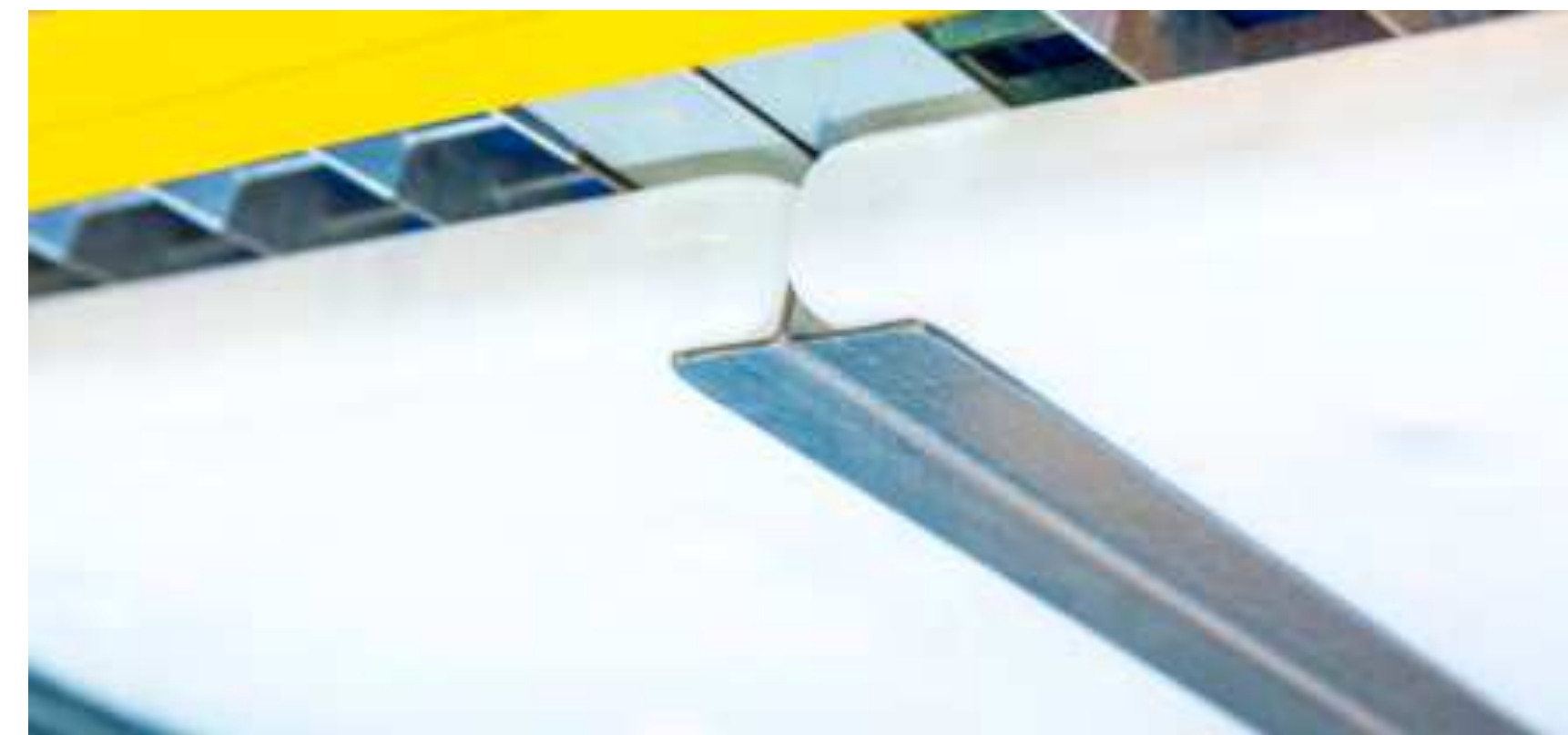
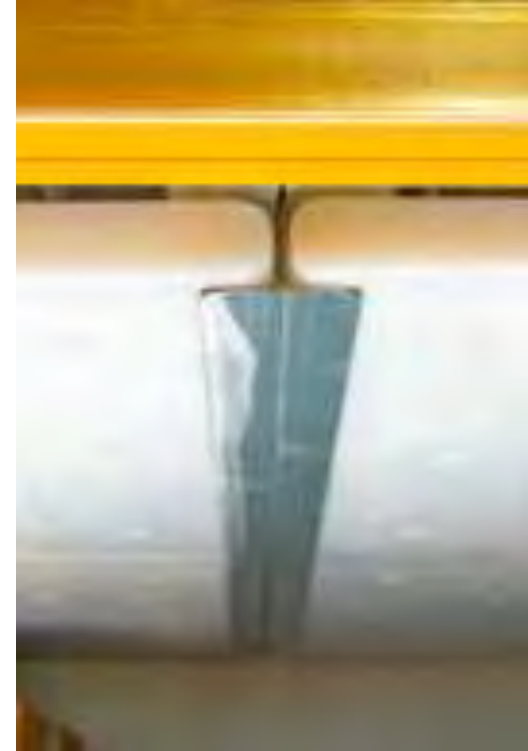


# ACUSTARE



# # ACUSTARE

Your cold store designed to be even more energy-efficient



# # ACUSTARE

Your cold store designed to be even more energy-efficient

According to the VDKL, the annual electricity consumption of a medium-sized cold store with 50,000 cubic metres is around 2,000 to 3,000 megawatt hours, while large cold stores easily consume 8,000 to 10,000 megawatt hours.

The price of electricity is still at a very high level. The forecast for the next few years does not foresee any noticeable relief.

We asked ourselves, is it possible to **sustainably reduce energy consumption** in cold stores? And also provide more security in the event of a power failure?



# # ACUSTARE

Your cold store designed to be even more energy-efficient

The answer is simple: **Yes!** With our newly developed **ACUSTARE** system.

The ACUSTARE panels are hollow HDPE panels filled with the **ISICOLD cooling gel** developed by us, which are attached to the walls and shelves of cold stores using a climate control system.

Within **24 hours**, they reach the **desired cooling temperature** without having to be **activated**.

This passive cooling unit also **stabilises** the **temperature of your cold store** (autonomously).





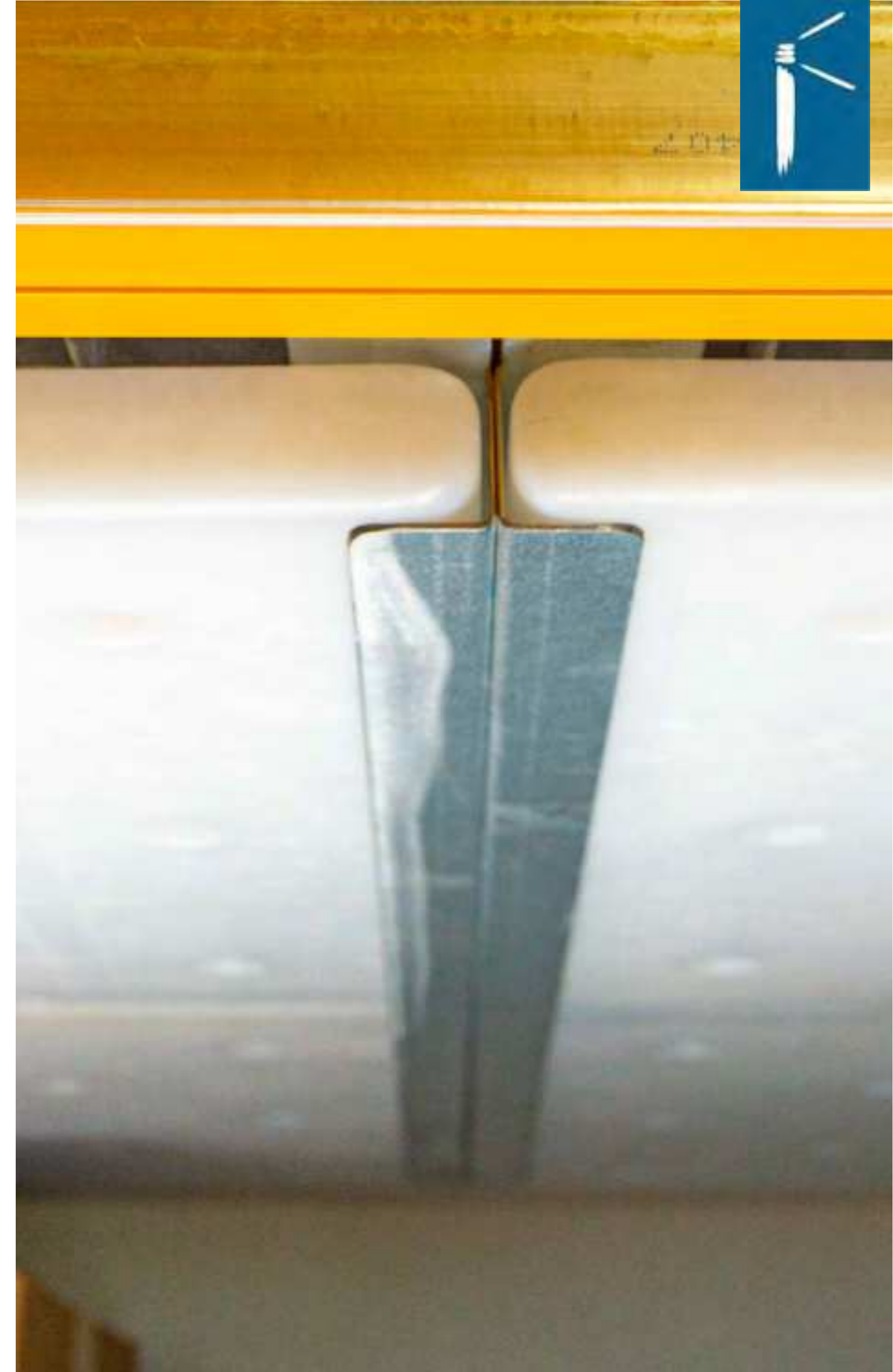
# # ACUSTARE

Your cold store designed to be even more energy-efficient

If the compressors are switched off, our tests have shown that ACUSTARE maintains the **temperature** for a **guaranteed 36 hours**. The associated passive cooling also means that your refrigeration system has less work to do.

The ACUSTARE system reduces the energy consumption of your refrigeration system by **significantly reducing** the number of appliance **start cycles**.

In an **independent energy test** with 30 measuring points within a cooling unit, we were also **able to prove** that the number of cooling intervals was at least **halved** when using ACUSTARE and **optimised by as much as 2/3**.



# # ACUSTARE

Your cold store designed to be even more energy-efficient

In the energy tests, 14 starts were recorded within 6.5 hours with a cooling unit without ACUSTARE. Using the new ACUSTARE system, there were **only 7 starts** – without using the optimised version with shelf units.

This **enormous energy saving** is partly due to the fact that we can set the plates precisely to the specified **temperature range between -25 °C and +8 °C**. This ensures that the systems do not overheat.

This ensures that the systems support each other optimally. Completely in your interest.



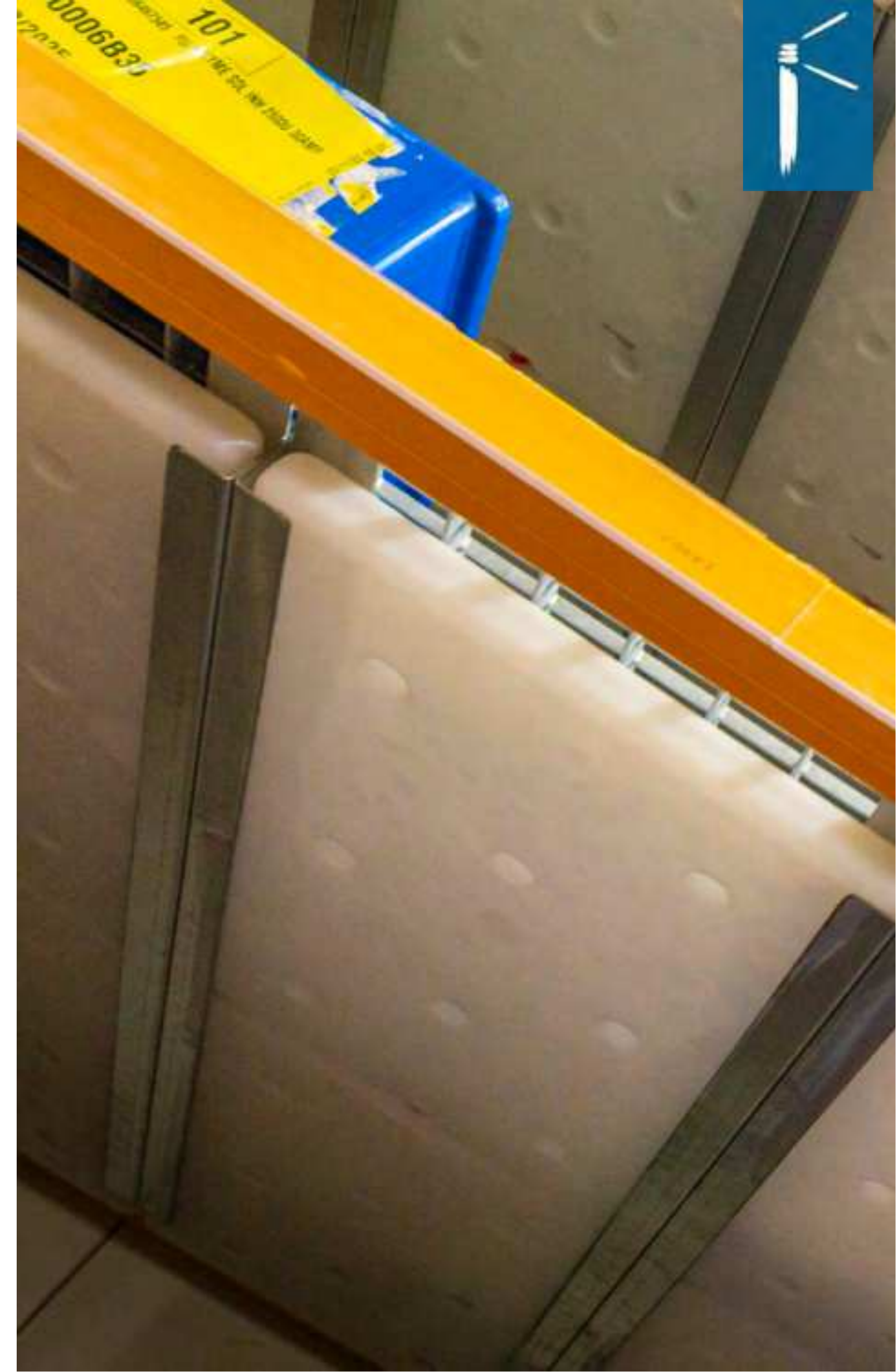
# # ACUSTARE

Your cold store designed to be even more energy-efficient

Our cooling system is designed to be quick and easy to install.

We don't drill, we don't glue, **we click!**

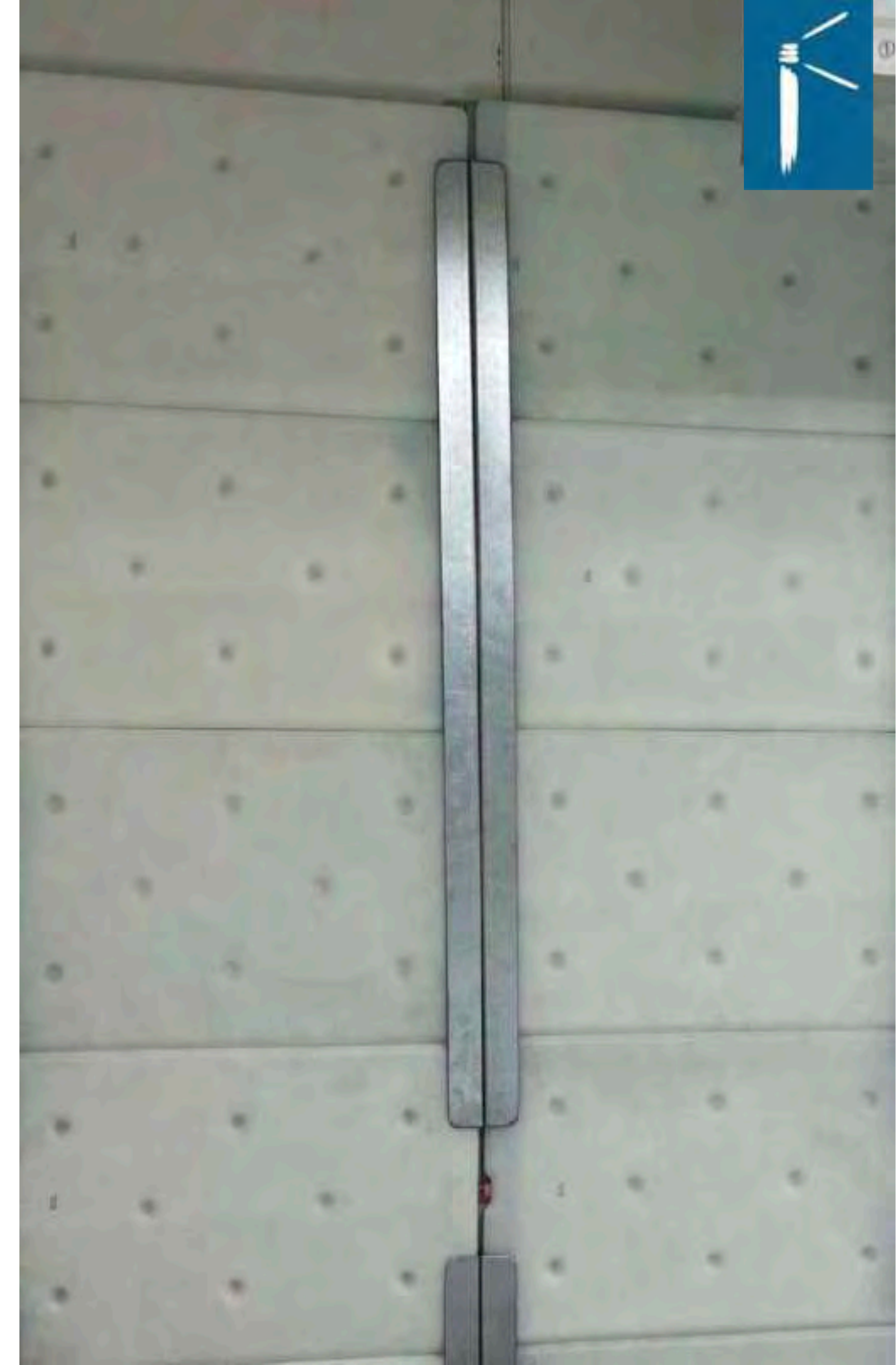
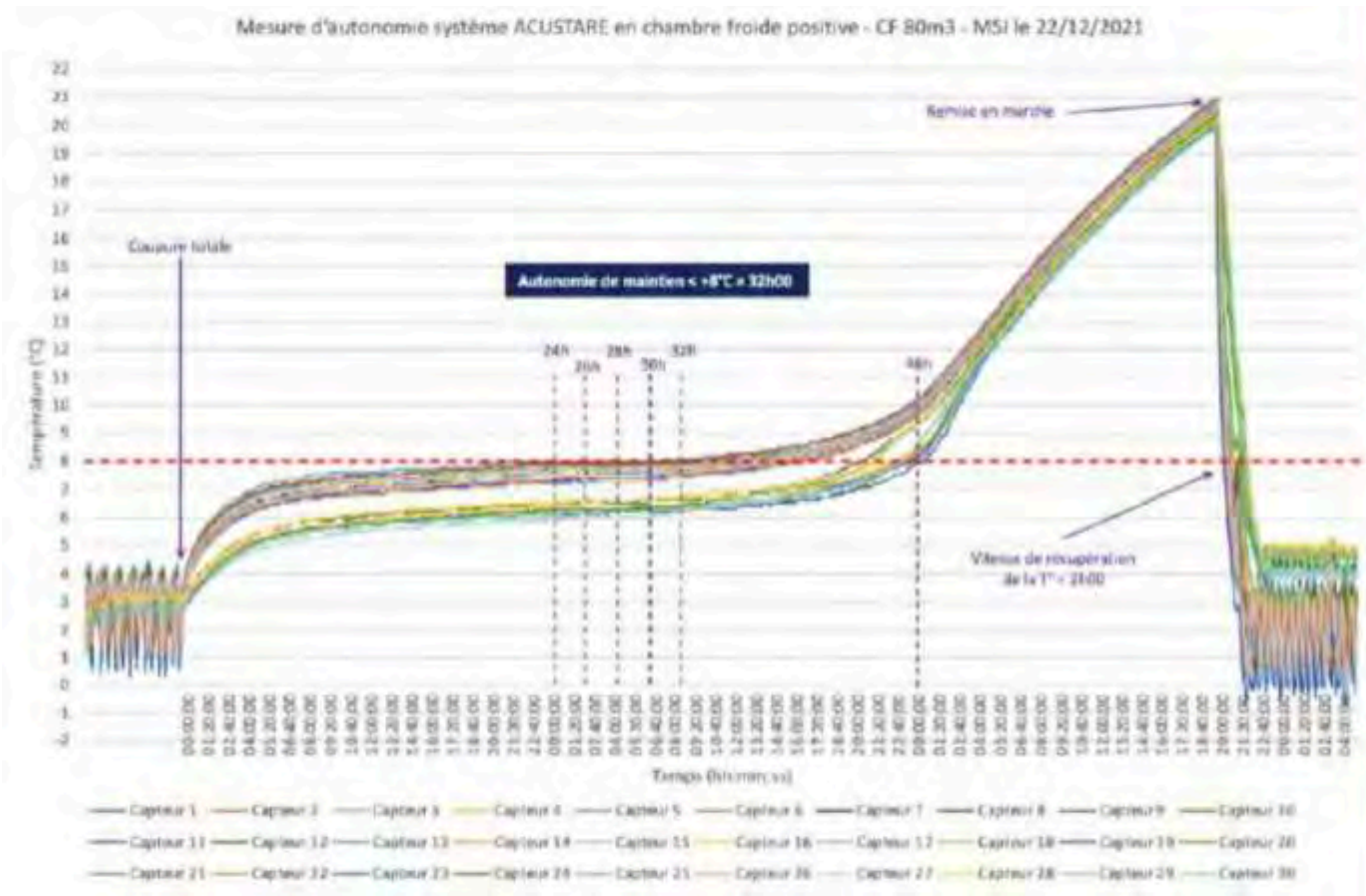
No additional ancillary or maintenance costs.





# # ACUSTARE

Your cold store designed to be even more energy-efficient.



# # ACUSTARE

## Advantages at a glance

- **Energy savings of up to 70%**
- **Straightforward installation** by our own teams
- **Permanently active**, 24 hours after installation
- Simple and **easy to expand**
- Installation on a **wall**, optionally under the **shelves**
- No drilling, no gluing, **installation via click system**
- **Sustainable**, as it is reusable
- No impairment or reduction of your storage volume
- **No ancillary and maintenance costs**





# # References

Customers who already use ACUSTARE





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