

# Where advanced technology meets "human touch"

At Hapag-Lloyd we make sure your temperature-sensitive cargo arrives at its destination in perfect condition. Highly sensitive and perishable commodities - such as food, beverages and pharmaceuticals - require first-class expertise and advanced technology to transport.

We know that equipment quality is vital. This is why we have been continuously investing in new

reefer equipment over the last years and have one of the most modern reefer fleets on the market. However, it is also the "human touch" that we believe sets us apart. That is why we rise to the challenge of safeguarding the quality of your cargo beyond keeping it cool. We can ensure that your products are kept in optimal conditions, no matter where or when.



#### **RELIABLE**

High-value reefer cargo requires particularly careful handling. We not only offer modern equipment and extensive experience, but also special internal processes that provide an additional layer of protection for your high-value cargo.

# Whatever your cargo needs — we've got it

#### **SAFE AND SECURE**

Hapag-Lloyd is one of the few reefer carriers that have invested into reefer remote monitoring technologies. We record all data relevant to quality, such as temperature, humidity, O<sub>2</sub> and CO<sub>2</sub> levels as well as fresh air supply settings. With today's technology we are able to successfully track the location, temperatures and events of highly sensitive cargo. Our 24/7 technical expert team can respond to automated alerts triggered by extended power-off times during transit.

#### **SUSTAINABLE**

Hapag-Lloyd has reduced its energy consumption by more than 50% in recent years without compromising temperature control. In fact, we have even improved our performance. All refrigerants used in our reefers are CFC-free, which reduce their carbon foot-print. We aim to further reduce our carbon footprint by 20% in the near future.

#### **VENTILATED**

For goods like fresh fruits or ferns, a precisely controlled ventilation system provides additional care for your cargo. Hapag-Lloyd containers have ventilation flaps that can be opened with a delay of up to 72-hours – an important advantage for cargo which has not been sufficiently pre-cooled.

#### COLD

Hapag-Lloyd refrigerated containers can maintain a constant temperature between -40°C/-40°F and 30°C/86°F. Even with outside temperatures of up to 50°C/122°F our refrigerated container technology allows us to keep your cargo fresh and deliver it to its destination in optimal condition.

#### DRY

Our reefer containers can also reduce relative humidity with set values between 50% and 95%. For flower bulbs, Hapag-Lloyd reefers have a special 'bulb mode' which automatically provides an optimal atmosphere for transportation.

#### **FRESH**

We provide a wide range of technologies for Controlled Atmosphere such as ExtraFresh and ExtraFresh Plus.

These technologies control the atmosphere within the container, delaying respiration process and extending the shelf life of fruits and vegetables. Spoiling and mold is minimised.

#### **PRECISE**

Having precise control over the transport conditions has the highest priority for us. Our advanced refrigerated container technology allows us to reduce the maximum temperature deviation to 0.5°C. What's more our remote reefer monitoring technology enables us to track the condition of your cargo anytime and anywhere.



We have the best solutions for nearly each and every cargo

PROTEIN (7) (8) (1)

FISH 🐽

DAIRY (1)

FRUIT (3) (3) (3) (3) (3) (3)

WINE (1)

perfect condition. Our global network of reefer experts is here to help you with any questions you might have about transport conditions, temperatures, transit times and our technologies for specific commodities.



# We've got what it takes to move your reefer cargo

## While preparing your refrigerated transport we recommend that you consider

- Optimal temperature requirements
- Fresh air ventilation requirements (in cbm/hour)
- Transport time
- Practical shelf life of the product
- Cargo volume
- Packaging materials and cartons used
- Recommended stowage pattern
- Required documentation, including legal requirements

### Before and during stuffing, we recommend you that consider

- The container is set at the optimal temperature and ventilation levels
- Cargo is never stowed above the red load line
- Cargo is stable and evenly stowed (weight should be distributed evenly for maximum stability and the entire floor should be covered)
- The total cargo weight does not exceed the maximum payload of the container

- The total weight of the container (including container, cargo, chassis and genset) does not exceed the road limitations in any country crossed during transport
- If cargo is palletised, placing dunnage material in the centre channel between pallets can prevent shifting cargo
- Cargo is blocked and braced as necessary
- Frozen or chilled cargo requirements are followed

#### For frozen cargo

- Pre-freeze cargo before stuffing
- Ensure that fresh-air ventilation is CLOSED

#### For chilled cargo

- Pre-cool cargo before stuffing
- Set unit at no lower than carrying temperature (a lower set point will not improve the cooling process and may damage cargo)
- Set fresh-air ventilation as required



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