



MACANDREWS YOUR SPECIALIST IN TEMPERATURE CONTROLLED CARGO

16
COUNTRIES

36
AGENCIES
ACROSS
EUROPE



CMA CGM
GROUP



MacAndrews, your intra-European leader in multimodal logistics solutions, is committed to providing its customers with the highest quality service and to handling valuable products most efficiently. With an organisation dedicated to Reefers and a network of experts in over 16 countries across Iberia, Morocco, Canary Islands, Scandinavia and Russia, access to the CMA CGM Group's wealth of equipment and technology, MacAndrews is your Reefer partner with local expertise in refrigerated transport.

CARGO HANDLING CARE

Pre-cooling

Reefer containers are designed to maintain a specific temperature of the cargo during transport. In majority of cases, goods have to be pre-cooled to the required optimal temperature for transport before stuffing into the Reefer container.

Cargo stowage

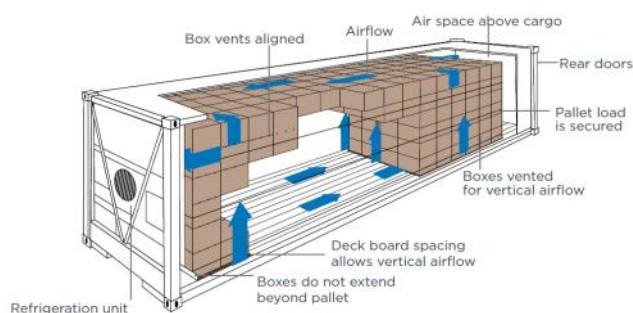
Block stowage is recommended, leaving no space between the cartons nor between the cartons and the container walls. In that way, air is forced up through the cargo and the entire floor space will be covered and refrigerated.

Air flow

All MacAndrews Reefer containers are equipped with bottom air delivery. The air is forced down the bulkhead and through the T bar floor, then under and up through the cargo load. This allows for maximum efficiency with air flow, provided pertinent stuffing procedures are respected. In order to remove the gas generated by respiration, fresh air can be exchanged from outside to inside at different rates from 0 to 260 m³/h (depending on the typed of cargo).



T floor and walls



THE RIGHT EQUIPMENT FOR YOUR CARGO

MacAndrews as part of the CMA CGM Group owns one of the largest and youngest fleets of Reefer containers designed for the transport of perishable goods in a temperature-controlled environment. The Reefer fleet consists of 20', 40' High Cube and 45' Pallet Wide containers equipped with the latest remote control system enabling a permanent monitoring of all units on board.

Low energy reefers to preserve environment

Our aim is always to identify the most eco-friendly solutions for reducing energy consumption and CO emissions. The average energy consumption per container has been reduced from 7 to 3.5 kWh for more than 30% of the Reefer fleet.

FRESHNESS FOR YOUR CARGO

Reefers are used to carry all kinds of cargo requiring temperature control, such as chilled or fresh produce (primarily fruits, vegetables and dairy products) and frozen foods (mainly meat and fish). Your perishable goods deserve the best possible controlled environment during transport to maintain their quality to their final destination. To ensure this, MacAndrews uses various technologies adapted to each of your products.

During the transport, fresh fruits and vegetables undergo different processes such as respiration, ageing, ripening, etc, transforming oxygen (O₂) into carbon dioxide (CO₂)

AMBIENT AIR

78%
Nitrogen (N₂)
21%
Oxygen (O₂)
1%
Noble gas



Transpiration: Water (H₂O)
Dehydration
Growth of aerobic microorganisms:
Decay
Decomposition of valuable ingredients:
Nutritional value reduced
Ethylene production: (C₂H₄)
Respiration: Carbon dioxide (CO₂) + Water (H₂O)
Ripening / Ageing



Humidity control (dehumidification)

Many perishable products require a low level of humidity inside the container to maintain the highest quality until delivery. Most of our containers are equipped with a system that can lower the humidity within the range of 95 to 55%.

Temperature control

SUPER FREEZER CONTAINERS : Ideal for products which require ultra fast freezing to keep the flavour and the taste of your products.

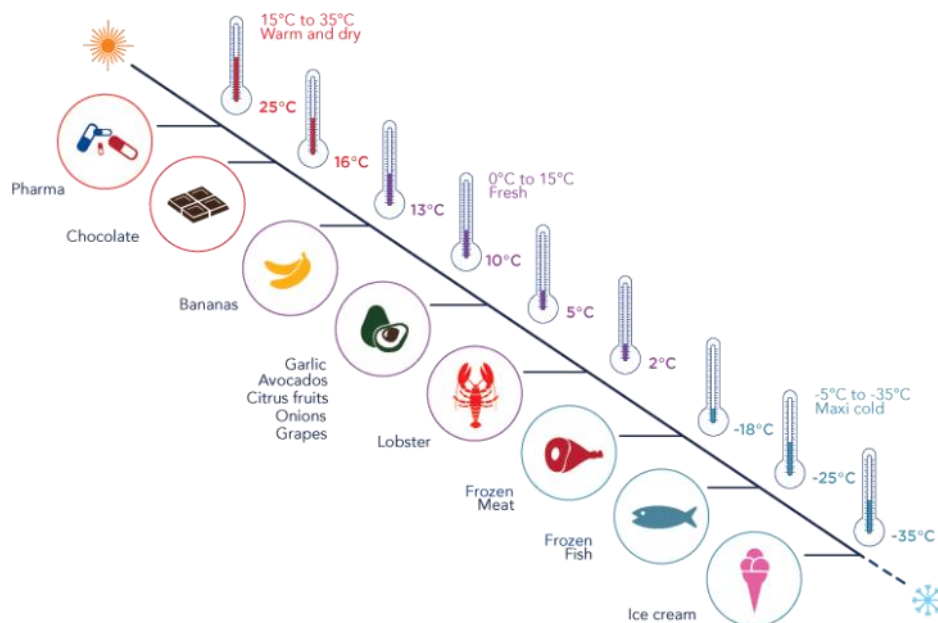
HIGH FREEZER CONTAINERS: Ideal for products (ice cream and fish) which require extremely low temperatures (down to -35°C).

COLD TREATMENT: A highly precise process where goods (mainly fruits) are kept at a low temperature during a predetermined, uninterrupted period to disinfest and kill pests.

MULTI-TEMPERATURE SYSTEM: Used for some commodities, such as tomatoes or potatoes, that may require temperature changes during transit.

Atmosphere control

Modifying the composition of the air in the container (especially CO_2 and O_2 levels) significantly slows the ripening process of fresh produce and lengthens shelf life.



DEDICATED REEFER BLOCK TRAINS

Our specially designed trademarked Reefer and Ambient Block Train services in Spain makes us the largest user of the rail network. We also operate rail links from Helsingborg port, connecting Scandinavian hinterlands.

WAREHOUSING SOLUTIONS

Fully-fledged, integrated logistics and transport services are part of our service offerings. We also offer hi-tech cold storage, sophisticated warehousing solutions and a domestic transport system offering customers comprehensive logistics solutions. Our main warehousing hub in Bilbao has 8 Bays for loading and unloading with 500 square metres of refrigeration allowing consolidation for delivering Spanish fresh produce throughout Europe, through vessels which call at the Port of Bilbao.

WHERE WE OPERATE

Dedicated Murcia to Bilbao Direct Reefer Trains weekly consisting of 28 reefers per block train.



CONTACT YOUR LOCAL REEFER SPECIALIST

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