

ATP Cold Chain & Perishable Goods Temperature Transport Manual

Technical compliance code under the United Nations ATP Agreement (*Agreement on the International Carriage of Perishable Foodstuffs*), dictating reefer body certifications and permissible thermal ranges.

1. Prescribed Thermal Ranges and Permissible Tolerances

Commodity Classification	Target Set-Point	Maximum Permissible Peak	Primary Stowage Requirement
Deep-Frozen Meat & Seafood	-18°C	-15°C (Brief loading excursion only)	Continuous refrigeration run; unobstructed T-floor bars
Ice Cream & Frozen Confections	-20°C	-18°C	Uninterrupted genset power with dual compressor failsafe
Chilled Fresh Red Meat & Poultry	+2°C to +4°C	+7°C (Beef) / +4°C (Poultry)	Hanging meat rails constructed with food-grade stainless
Dairy, Butter, and Charcuterie	+2°C to +6°C	+6°C	Narrow temperature band suppressing bacterial fermentation
Fresh Horticulture (Fruits/Vegetables)	+4°C to +12°C	Commodity specific	Active air circulation and ethylene gas dissipation vents

2. ATP Reefer Classifications & The FRC Standard

Under ATP regulations, insulated transport equipment is formally categorized by heat transfer coefficient and cooling power:

- IR (Heavily Insulated):** Reinforced insulated body with a heat transfer coefficient (K-value) $\leq 0.40 \text{ W/m}^2\text{-K}$.
- FRC Classification (The Premier Standard):** Heavy insulated body equipped with a mechanical refrigeration plant capable of sustaining **internal temperatures down to -20°C against external ambient conditions of +30°C**. FRC certification is legally mandatory for cross-border frozen transport.
- Digital Temperature Recording:** Compulsory on-board data logging compliant with EN 12830 standards, retaining auditable temperature records for a minimum of 1 year.