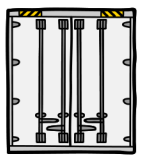
REEFER CONTAINER CHEAT SHEET

StilFresh

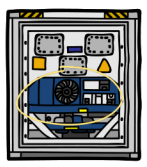
ALL TO KNOW ABOUT REEFER CONTAINERS

DOOR & SEAL



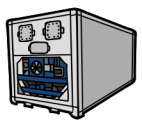
The door and its seals play a crucial role in maintaining the integrity of the internal environment by preventing warm air from entering and cold air from escaping.

CONTROL UNIT



The control unit monitors the temperature inside the container and adjusts the refrigeration unit as needed to maintain the set temperature. Some units can also control humidity levels.

WALLS

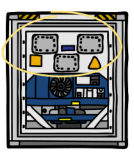


The walls are designed with a special insulation that prevents heat exchange, thus maintaining the desired internal temperature.

T-BAR FLOOR

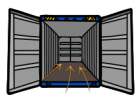
The 'T' shaped flooring in a reefer allows for efficient air circulation under the stored goods, ensuring an even distribution of cold air.

VENTILATION GRILL



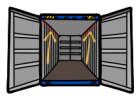
Used for the fresh air exchange system, it can open or close depending on the need for fresh air or a controlled atmosphere within the container.

BAFFLE PLATE



A baffle plate is installed to help regulate the air flow within the reefer container. It is typically used to avoid direct airflow onto the stored goods, which can lead to uneven cooling. Instead, it redirects the air flow along the floor, thereby promoting more uniform cooling.

LOAD LINE



Also known as the red or maximum load line, this is a marking inside the container that shows the maximum height to which goods should be loaded. It ensures that the air circulation is not obstructed, which is crucial for maintaining a uniform temperature throughout the container. Overloading above the load line can lead to inefficient cooling and potential spoilage of goods.

AIRFLOW

The airflow is typically directed from the back of the container to the front and from the bottom to the top. This design helps in maintaining the cargo's temperature by ensuring a consistent and even distribution of cold air throughout the container, circulating around all parts of the cargo and then returning to the cooling unit for re-cooling, thus creating a continuous flow that sustains the desired temperature.

PRE-STUFFING INSPECTION CHECKLIST

1. **VISUAL INSPECTION**
   Check exterior for visible damages like dents, cracks, or rust.
2. **DOOR INTEGRITY**
   Open and close doors to test the seal and examine gaskets.
3. **INTERIOR CLEANLINESS**
   Ensure the interior is free from residual materials, dirt, or debris.
4. **ODOUR CHECK**
   Smell the interior for any unusual or foul odours.
5. **WALL INSPECTION**
   Examine insulated walls for damage or wear.
6. **FLOOR CONDITION**
   Inspect floor grating for obstructions or damage.
7. **SYSTEM TEST**
   Test temperature control unit, ventilation system, and humidity sensors.
8. **MONITOR READINGS**
   Verify data logger readings align with settings, if applicable.
9. **CHECK POWER CONNECTORS**
   Inspect power supply connectors for wear or damage.
10. **DRAINAGE SYSTEM**
    Confirm drainage system is clear and functional.
11. **SAFETY FEATURES**
    Check locks and security features are in working order.
12. **DOCUMENTATION**
    Record findings and any remedial actions taken.

ISSUES AND WHAT TO LOOK FOR IN REEFER CONTAINERS

ISSUES	WHAT TO LOOK FOR
Unintentional Thawing	Review the temperature settings and confirm the proper functioning of the refrigeration unit.
Water on the Floor of the Container	Check for drainage issues or leaks from the container walls, and verify door seals.
Odour from the Container	Inspect the container for residues from previous cargo and verify cleanliness.
Gas Leakage	Examine refrigeration unit and any gas connections for signs of leakage.
Sweating of the Container	Investigate humidity and temperature settings, as well as vent settings for proper air circulation.
Inconsistent Power Supply to Refrigeration	Check the electrical connections and circuitry to ensure a stable power supply to the refrigeration unit.
Unusual Sounds from the Refrigeration Unit	Listen for any mechanical issues and inspect the refrigeration unit for loose parts or damage.
Return air temperature significantly higher than supply air temperature	Ensure pallets are below load line. Also check if proper dunnage is used to guide airflow.
Ice formation in container	Check the temperature settings and humidity controls. Examine vent settings for proper air circulation and assess the door seal for leaks that could let in moist air.

MINI GUIDE ON HOW TO STUFF A REEFER CONTAINER

STEP 1: PRE-TRIP INSPECTION
Conduct a pre-trip inspection to ensure the container is clean, in good condition, and all its systems are functioning well.

STEP 2: SET PARAMETERS
Program the temperature control unit, humidity sensors, and other settings based on the type of cargo you're transporting.

STEP 3: PRE-COOL THE CONTAINER
Before loading, run the container for a specific period to achieve the desired internal conditions.

STEP 4: INSPECT THE CARGO
Ensure that the cargo is in good condition and pre-cooled to the desired temperature if necessary.

STEP 5: PALLETIZE OR PACKAGE CARGO
Depending on the type of goods, they may need to be placed on pallets or in specific packaging that allows for optimal air circulation.

STEP 6: PLAN THE LAYOUT
Design a loading plan that optimizes space and allows for proper air circulation.

STEP 7: START LOADING
Begin loading the cargo according to the layout plan, usually starting from the back of the container towards the front.

STEP 8: MONITORING DEVICES
If using data loggers or other monitoring devices, place them strategically among the cargo.

STEP 9: VERIFY SETTINGS
Once the cargo is loaded, double-check the settings on the temperature control unit and other systems to ensure they are correct.

STEP 10: SEAL AND DOCUMENT
After ensuring all parameters are set and the cargo is secure, seal the container and complete any necessary documentation.

STEP 11: EXTERNAL POWER SOURCE
Connect the container to an external power source if it will be sitting before transit, to maintain internal conditions.

STEP 12: QUALITY CHECK
Conduct a final walk-through and inspection to ensure everything is in order.