



Refrigeration Refined

RAFT - for refrigerated shipping containers. Enhances temperature management, improves out-turn quality of fresh produce, increasing profitability. Reduces energy consumption in reefer containers by as much as 11%.

RAFT Kit

Air is "lazy" and will take the path of least resistance. As a result, most of the chilled air inside a container will move around the pallets of produce rather than through them, which has a detrimental effect on freshness and quality. The RAFT Kit changes the direction of airflow from vertical to horizontal, and increases the air velocity which forces the chilled air through the packaged produce and results in more uniform produce temperatures. Product quality is improved. Waste is reduced. Installation is quick & simple.



Why use a RAFT Kit?

Fresh produce in reefer containers needs to be kept at an optimum temperature throughout the logistics chain. The RAFT Kit reduces produce temperature differentials markedly.

- Fresh produce is still "alive" (respiring) up to the time it is consumed. Effective refrigeration is key to prolonging the life of fresh produce to enable the shipper to get the produce to market in the best condition possible.
- Forced airflow such as that in a refrigerated container is, however, "lazy" and will take the path of least resistance. Uneven airflow through the produce is common in containers and results in significant pulp temperature differentials that can cause spoilage.
- The RAFT Kit directs the airflow through the produce evenly and more efficiently. The chilled air is forced to move over all pieces of produce in the container, reducing respiratory heat.



- The RAFT Kit increases the velocity of the cold air, thus increasing the efficiency of the refrigeration system and saving energy.
- Cooling is faster. Produce often warms during the handling and reefer loading process and once the doors are closed and the refrigeration is switched on, the RAFT Kit speeds up the cooling cycle. Consequently, energy consumption is reduced.

- Relative humidity in the reefer is increased by the RAFT Kit because of the reduction in temperature differentials. When the temperature differential between the return air and the cooling coils is too large, the refrigeration control system makes the coils colder. This results in ice forming on the coils. Consequently, the air is dried out and pulls more moisture out of the produce. A further consequence is that the produce loses mass, and the shipper loses profits.



- All of the above points are especially applicable to Cold-Steri shipments that require fast stabilization of temperatures.
- The RAFT Kit is an extremely inexpensive method of improving out-turn quality and profits.



How does a RAFT Kit work?

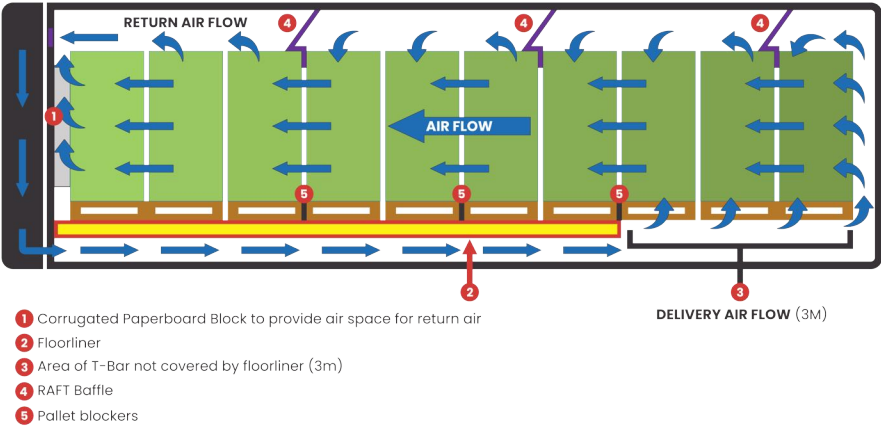
The RAFT Kit is made of 100% recyclable materials and is quickly installed before and during the loading of a container.

- The direction of airflow is changed from mostly vertical to mostly horizontal using patented corrugated paperboard baffles and a floor liner.
- The woven polypropylene liner is laid down on the T-Bar floor of the container and is clipped in place. This liner directs all of the chilled air to the rear of the container.
- During loading three corrugated paperboard baffles are placed in pre-determined, strategic positions on top of the palletised produce. These baffles block the air from merely flowing over the top of the produce and forces it through the cartons.

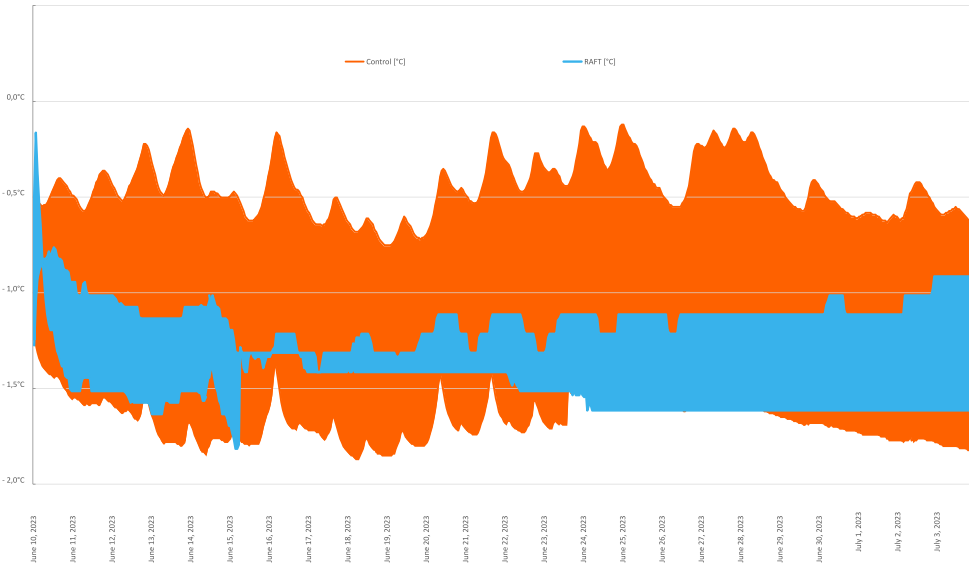


- Corrugated paperboard blockers are also positioned against some of the pallets, in strategic positions to assist airflow direction.
- Two specially designed paperboard blocks are positioned between the first two pallets and the front bulkhead of the reefer, creating a negative pressure area to assist with the return airflow. These blocks are hooked onto the pallet strapping of the first two pallets prior to loading.

RAFT- Reefer Air Flow Technologies



Pulp Temperature Ranges in Cold Steri Containers Packed with Citrus from South Africa to China



What Our Clients Experienced



Jan Coetzee

Technical Manager

12 April 2021

To Whom It May Concern,

We are making use of the RAFT Kit for the past two seasons in all our Plum containers. We believe that the RAFT Kit is improving the airflow in the container with better and more efficient cooling of the product.

As we are making use of dual temperature to ship our Plums, we have found that the RAFT Kit is improving the time to get the temperature down after the warm-up period.

Most important is that none of our loading points are expressing their concern or having any problems to insert the RAFT Kit into the container. It is an easy process and is done very quickly.

We will continue to use the RAFT Kit and are also looking to expand it to other commodities.



Dole Team

Dole South Africa

06 June 2022

To whom it may concern,
Dear Rayner and Cord strap team.

I am referring to the RAFT Kit. We would like to make use of the opportunity to inform you that we were very satisfied with your product.

In 2021 grapes season we struggled with steri failures for our Israel shipments. Probe 3 struggling to reach protocol at time of loading the container.

You introduced us to the RAFT Kit and I am pleased to inform you that the RAFT Kit solved our steri failure problem. Except for one container that took hours to load, we haven't had any steri failure issues throughout our 2022 grape season.

We will look at ways to make use of the RAFT Kit, not only in our grape containers, but also for our other commodities as well.



Call us to get your fresh produce to
its destination market-ready!

Scan to visit
our website



+27 10 590 5865



info@reeferairflow.com



rayner.botha@reeferairflow.com



nicole.verbiest@reeferairflow.com