

## Technical Training Video Transcription

### PART 1 - Introduction to Envirotainer Containers

#### **Scene 1**

The challenges facing shippers of temperature-sensitive healthcare products are numerous. They start with the fact that their industry is heavily regulated and their products often require processing at different facilities located across the globe. If at any time during storage or distribution the product temperature deviates beyond the specified range, it could become unusable.

Regulatory authorities have increased their focus on the distribution of temperature sensitive products and it has become a requirement that all associated persons must be trained. This video serves to meet that requirement by providing general awareness training on the Envirotainer container.

#### **Scene 2**

There are two versions of the Envirotainer container. The “t” version provides cooling only, and, the “e” version can either heat or cool. The different container models available include the CLD, LD-3 and LD-9 size unit load devices.

The “e” version containers can heat or cool as required to maintain product temperature. It uses internal rechargeable batteries to power electric heaters and a compressor-based refrigeration system. It is specified to maintain product temperature within a zero to twenty degrees Celsius set point.

#### **Scene 3**

The “e” version container is typically used to transport healthcare or other high value, temperature-sensitive products with “refrigerated”, “do not freeze” or “controlled room temperature” requirements. The “e” version container is discussed in a different section of this video and, for now, we will focus on the “t” version container.

The “t” version containers use dry ice as refrigerant and Alkaline D cell batteries for electrical power. It is typically used for products that have “Deep Frozen”, “Frozen”, “Refrigerated” or “Protect from Freezing” temperature requirements.

#### **Scene 4**

As with other “cooling only” solutions, the “t” version container is sensitive to cold ambient temperatures. It is not recommended to use “t” version containers to ship “Controlled Room Temperature” products unless it is qualified by the shipper.

## **Scene 5**

The CLD container was designed for smaller loads and can be handled by two persons or with a forklift. It has two fans: one for cooling and another to circulate the air in the container when the cooling fan is off. The “CLD” can typically operate for up to eighty-four hours on a set of batteries and its dry ice bunker can hold up to thirty-five kilograms of dry ice.

## **Scene 6**

The RKN container can hold one pallet and is handled with a forklift. It has one cooling fan and can operate for up to seventy-two hours on a set of batteries. Its dry ice bunker can hold up to one hundred and eighty kilograms of dry ice.

## **Scene 7**

The RAP container can accommodate up to four “U.S.” size or five “Euro” pallets. It can be moved with a forklift when empty, but a roller bed or slave pallet must be used after it is loaded. It has two cooling fans, and can operate for up to seventy-two hours on a set of batteries. Its dry ice bunker can hold up to three hundred kilograms of dry ice.

## **Scene 8**

The “t” version container maintains product temperature by regulating the flow and temperature of the air inside the container. Sixteen “D cell” alkaline batteries provide power to the control unit and fan. When cooling is required, the fan draws warm air from inside the container and pushes it around the dry ice bunker. The heat from the air is transferred through the aluminum bunker surface and so the air does not come in contact with the dry ice. The cooled air is returned to the cargo area through the air guides where it circulates around the product and back to the fan.

For redundancy and increased power, there are two battery circuits. Each circuit’s battery voltage is displayed on the container’s control unit. Only Alkaline batteries should be used in the Envirotainer container.

## **Scene 9**

The container has spacers on the walls to ensure airflow around the product even if it has shifted against the wall. To also allow airflow on the floor, the product must be placed on a pallet or spacers at least two centimeters high. The spacers should be placed parallel to each other and lengthwise towards the bunker. The cargo should not be loaded beyond the red lines.

## **Scene 10**

The airflow on the CLD container is different. When cooling is required, the fan draws air from the lower inlet and, after it is circulated around the bunker, blows the air out the air guides in the container lid.

When the cooling fan is off, the circulation fan draws air from the upper inlet and blows it from the bottom. It is very important not to block either the top or bottom fan inlets or load above the red line.

## **REVIEW**

To review some of the major points from this section:

- Select the proper container for the product temperature requirements
- For the “t” version containers, limit exposure to ambient temperatures outside the container’s specified range
- Load product on a pallet or spacers and do not block airflow
- For RKN and RAP containers, secure the product load into position using straps