

# PREVENT & SAVE

## Quick Guide to Returnable Totes & Pallet Containers

### 1. Introduction

One of the most significant packaging waste prevention opportunities that exists for any business is to have a closed loop packaging reuse system for supplier, work in progress or finished product packaging. Secondary and tertiary packaging formats tend to present the greatest opportunities to do this and returnable totes and pallet containers are a great way to achieve it.

Along with adopting reuse loop systems such as Chep and LPR for wooden or plastic pallets, switching from standard single trip cardboard cases to returnable totes or crates can present significant cost savings and reduce packaging waste.

Returnable totes/ containers can be used across most industries in some way such as internal movement of in process raw materials, movement or storage of work in progress materials or finished goods that need to be sent for further processing off site. However from a consumer goods point of view they are most commonly used to transport foods such as meat, bread, fresh produce and other consumer goods such as pharmaceuticals, stationery and toys.



**Open Top Bale Arm Crates are commonly used to supply meat and fresh produce to customers.**

## **2. Challenges and Opportunities**

There are a number of challenges associated with the use of returnable totes and pallet containers which needs to be considered prior to implementing such a system.

### **A. Transport Costs**

Transport costs can be considered as one of the most significant expenses associated with returnable systems unless some of the mitigating factors discussed in section 3 below apply. It is also essential to consider how your returnable packaging will come back to you as this will add significant cost if you need to arrange especially to have empty packaging picked up.

### **B. How will it be returned?**

Returnable packaging is easiest to manage when you have the following

1. You have a direct route between your premises and your customers or suppliers so that you can readily backhaul empty containers.
2. How much space will the packaging occupy both during the return journey and when it returns to the site. You need to consider the style that best suits your business taking into account that certain styles cannot be nested or folded to reduce their size.

### **C. Container Loss/ Attrition Rate**

It is important to consider that returnable containers are often not returned for a number of reasons such as theft, damage or businesses just not remembering to return them when you need them most. It is important to understand what your working stock requirements are so that you have a contingency and who will be responsible for managing the pool.

Stocks may need to be replenished annually to ensure that you have a sufficient quantity at all times.

You also need to consider whether to apply a deposit on the crates which is refunded once the packaging has been returned. This provides an incentive to the company to ensure that packaging returns are maximized.

### **D. Upfront Costs**

If you decide to move to returnable totes it is also possible that you will need to pay for the cost of a mould upfront in order for you to ensure a guaranteed supply of totes when you need to replace a quantity of these. The cost of moulds are significantly higher than the cost of new dies/ formes for a cardboard box for example. You will therefore need to examine the payback period for such an investment. It is possible to rent crates which eliminates some of these costs.

### E. Flexibility

Standard returnable crates tend to be used for certain categories in a business and as a solution are generally a one size fits all. That can provide some challenges in terms of matching a primary pack size to a crate size and therefore ensuring overall efficiency in pack footprint. Developing a suitable cardboard case can therefore be a far more efficient and flexible way to do this.

### F. Washing

Hygiene requirements mean that a washing step is an essential element to consider for returnable plastic totes and crates and is particularly applicable for the food industry. Where a system for washing crates internally does not exist and is unlikely to be put in place a business such as [Glan Aris](#) or [All Star Logistics](#) can provide such a service.



Bale Arm Crates awaiting filling on a production line.

## 3. Returnable Tote/ Crate Styles

Returnable totes exist in a number of styles which can be either open top or have an attached or separate lid.



### Open Top

In the case of open top the product (in just its primary pack) is placed in the crate and these open crates are then stacked on to a pallet. The pallet is then wrapped with pallet wrap and will often be shipped with a dust cover to protect the top layer from dust or other airborne matter. This style is most commonly seen in the food industry for the transport of fresh produce and meat products.

## Containers with Lids

Returnable containers with either attached or separate lids are often used for applications such as the transport of items such as stationery, toys or storage of documents. They are also commonly used in the pharmacy sector to distribute goods between central warehousing and stores within the pharmacy chain.



Containers with lids can either have the lid attached or the lid can be sold separately. They can generally be nested and can provide a volume reduction up to about 75%.

The nature of the product involved and its primary packaging need to be considered in order to choose the correct style. Other important considerations when choosing the right container are as follows: -

### Nesting

Nesting can be important to allow a returnable system for two main reasons.

1. If the container nests into the one below it then this can reduce the volume required for its transport and storage when emptied by 70 to 80%.

Another advantage of this container type is that containers can also be securely stacked when full making the load inherently more stable than a cardboard box. This means that less tertiary packaging such as single use layer pads and pallet wrap may be needed to stabilize the pallet load.

Non-nesting stackable containers do not do provide this advantage and can occupy a lot more space as a result. You therefore end up carrying a lot of volume and not a lot of weight which comes at a significant cost on the return journey. Despite the light weight, most transport companies will charge for that volume as they don't have space to carry other goods as a result.

## Stacking Containers

Stacking containers are standard containers that do not fold or collapse after use and do not nest when empty. If considering this type of container, it is important that you consider whether you will have the space to store them internally and also that your overall costs may be higher for both storage and for the return journeys as you will not achieve any volume reduction when returning the empty crates.



## Collapsible/ Folding

Another way to reduce the volume your returnable totes or pallet containers occupy in storage and transport is to make them collapsible so that they fold until almost fully flat. Such containers can reduce the volume these containers by up to 80% and therefore save on transport and storage costs. This can be applied to both totes and pallet containers.

## Pallet Containers

Returnable pallet containers have similar advantages to returnable totes however they also have some additional advantages in terms of packaging waste prevention when their application is suitable.

As pallet containers act as a single unit they usually eliminate secondary packaging completely and sometimes can even eliminate the use of primary packaging. One example of where these are quite commonly used is in the transport of meat for further cutting or processing into processed products such as sausages or burgers. Again containers can be collapsible so that they fold to reduce their volume for the return journey or can be nested such as in the case of the Multitank solution provided in Ireland by [Interpac Ltd](#). To see the case study in relation to the Multitank solution please [click here](#).



Collapsible/ Folding Pallet Containers are useful where space would not allow full sized containers to be stored on site.

#### **4. Suppliers**

Suppliers of returnable totes and pallet container solutions in Ireland include the following companies: -

Irish Box Company <http://www.irishboxcompany.ie/>

Plastic Providers <http://www.plasticproviders.com/>

Dolav Ireland Ltd <http://www.dolav-ireland.ie/>

Interpac Ltd (Multitank Solution)

For further information on returnable totes/ crates/ trays and pallet containers please contact our Packaging Technologists Brian Walsh or Colm Munnely.

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