
Cargo moves on virtually all passenger flights operated by scheduled airlines, but some aircraft have greater cargo carrying ability than others. A Boeing 747, for example, has room for almost 22 500 kg (50 000 lb.) of freight, even when fully loaded with passengers. A conventional all-cargo airplane of the 747 type will carry about 100 000 kg. Although airlines give priority to scheduling passenger service, they actively solicit air freight, and some even have all-freight aircraft. In addition, there are air carriers operating exclusively in the air freight market.

b. Airline Containers

Airline containers are called unit loading devices (ULDs). By consolidating "loose" general freight into larger units for loading and transporting, they decrease ground handling costs and maximize the use of space on board.

ULDs include containers (usually constructed of lightweight aluminum, fibreboard or fibreglass and available in various shapes and sizes), igloos and pallets. While flat underneath to permit fast loading and unloading, ULDs cannot be handled with an ordinary forklift truck. They are designed to restrain loads aboard the aircraft, thus forming a component of the aircraft's loading and restraint system. (See Appendix I, Freight Handling: Preparing the Goods for Shipment.)

c. Air/Surface Containers

Given the structure and weight differences between air and conventional containers, ULDs are generally inappropriate for carriage by surface, just as marine/rail containers are unsuitable for air transport.

However, several standard-dimension, ISO-size containers have recently been introduced to facilitate intermodal air/surface service. Constructed of durable aluminum, with such features as aluminum corner castings and reinforced corner posts, the tare weight of these containers is less than half that of conventional steel containers, yet they can be safely interchanged between road, rail, marine and air equipment. Among the newest developments in international transport is the sea-air container.

Intermodal Connections

1. General Service Features

One of the major technological achievements in international transportation during the past two decades has been the widespread introduction of cargo consolidation and unitization through the development of the container. The major advantage of containerization is the reduction and simplification of cargo handling and the facilitation of door-to-door transportation services.

These technological and operational advances have given rise to a number of intermodal transport (also called multimodal transport) options. Technically, "intermodal transport" refers to the through movement of goods using a combination of two or more transport modes.

2. Intermodal Transport Options

There are two distinct intermodal transport options. Under one, the shipper arranges transportation from origin to destination, prepares documentation and negotiates the terms of carriage with each participating carrier (this may be termed "segmented transportation"). Under the other, the shipper arranges for a carrier, freight forwarder or transportation broker to perform these tasks.

In the latter option, which is by far the more common, the following characteristics prevail:

1. The shipper deals with a "transport enterprise" (whether a carrier or non-carrier), which acts as a principal, undertakes to co-ordinate the through movement of cargo, and assumes responsibility for the performance of the transport contract.
2. The shipper and the "transport enterprise" agree to a single transport contract between them, which stipulates the terms and conditions of the entire transport movement.
3. The "transport enterprise" quotes one price for the entire transport movement to the shipper.

The major feature of multimodal transport services is condition 3; full responsibility includes accepting liability for loss, damage or delay arising from the performance of the cargo movement.