



**FEDERATION EUROPEENNE DE LA MANUTENTION**  
**SECTION II**  
**CONTINUOUS HANDLING**

**FEM**  
**2 276**

Description of unit loads  
**LUGGAGE**

1st edition E  
1985

PRELIMINARY REMARK

For each installation of continuous handling equipment for unit loads, the characteristics of the goods to be conveyed are important for its proper functioning, being part of the system. It is therefore important to provide a precise description of the product to be conveyed as early as the planning phase. The necessary indications and properties to be mentioned are contained in the International Standard ISO 3569.

Section II "Continuous Handling Equipment" of FEM (Fédération Européenne de la Manutention) presents hereunder one of a series of documents giving complementary information concerning a group of products to be conveyed and helping the user of continuous handling equipment to understand why it is necessary to supply such detailed information and what consequences can be expected in using the equipment for a unit load subject to variations, especially since the user might be encountering a problem of this nature for the first time.

1 - GENERAL

The word "luggage" covers such a wide variety of unit loads that a distinction must be made between those which are suitable for continuous handling and those requiring another form of handling.

The acceptance of luggage by the large transport companies, railways, airlines, etc. is mainly subject to criteria relating to the limits of manual handling, both by the traveller and by porters.

Bulky luggage, such as bicycles, skis, surfboards, golf clubs, etc, is certainly encountered relatively frequently, but must be treated specially since it cannot be transported on ordinary continuous handling equipment used for luggage.

Ordinary luggage, such as suitcases, travelling bags, sports grips, etc, is encountered most frequently and can generally be transported sufficiently easily on conventional horizontal or slightly inclined continuous handling equipment.

However, difficulties can arise when bridging differences in height (transport between different floors) with vertical conveyors and at transfer points. This has led to the need to develop and use continuous conveyors specially designed for luggage.

.../

Particularly when compared with the intermittently operating luggage trains also commonly used to transport luggage, the advantage of continuous conveyors lies in :

- their high capacity,
- the good, direct access to the collection and removal points for the traveller,
- the small workforce required.

Their disadvantage lies in :

- their limited capacity to carry bulky luggage unsuitable for continuous handling,
- the fixed conveying distance which is undesirable whenever the loading and unloading points are to vary.

In practice, therefore, the two methods of handling are frequently used side by side and, in some cases, are also combined.

Very extreme requirements may also be demanded, such as

- conveying hand luggage through a security detector, in which case only a short, simple length of a few metres is required,
- conveying luggage over extensively branched and interlinked conveyor systems with a large number of loading and unloading stations (e.g. at airports).

The consequences of any malfunction or misdirection when conveying luggage are generally serious or must be considered as such since considerable inconvenience may be caused to the individual travellers involved.

The best compromise in a particular case takes into account :

- the luggage receiving area,
- the luggage unloading area,
- the wide variety of possible items of luggage,
- the size and frequency of the peak loads (items of luggage per unit time),
- the type of problems to be expected,
- the consequences of a malfunction,
- the expenses necessary to correct the malfunction,
- the capital cost of the installation,
- the running costs

and can only be developed with the widest possible exchange of information between the manufacturer and the user.

The characteristics of the "luggage" unit load are discussed in the sequence indicated in the iso 3569 standard.

## 2 - SHAPE

A piece of luggage is generally in the form of a suitcase or bag.

Suitcases are mostly roughly parallelepiped, in shape rigid or semi-rigid, and are defined by their length (L), height (H) and width (B).