

මෙය රාජ්‍ය භාෂාවෙන් වෙනම මුද්‍රණය කර ඇත.

ශ්‍රී ලංකා ප්‍රමිති 423 : 1977

**SRI LANKA STANDARD 423 : 1977**

විෂ්ව දශම වර්ග කිරීම UDC 621-889

බඩු ප්‍රවාහණය සඳහා ගන්නා පැලෑටිවූ  
(මාන)

**PALLETS FOR THROUGH TRANSIT  
OF GOODS (DIMENSIONS)**

ලංකා ප්‍රමිති කාර්යාංශය

**BUREAU OF CEYLON STANDARDS**



**PALLETS FOR THROUGH TRANSIT OF  
GOODS (DIMENSIONS)**

**S. L. S. 423 : 1977**

Gr. 4

*Copyright Reserved*

**BUREAU OF CEYLON STANDARDS**

53, Dharmapala Mawatha,  
COLOMBO 3.



# **SRI LANKA STANDARD FOR PALLETS FOR THROUGH TRANSIT OF GOODS (DIMENSIONS)**

## **FOREWORD**

This Sri Lanka Standard Specification was adopted from the ISO Recommendations on Pallets for Through Transit of Goods on the recommendations made by the Ad-hoc Committee of the Bureau on Freight Containers. It was approved by the Metric Divisional Committee of the Bureau of Ceylon Standards and was authorised for adoption and publication by the Council of the Bureau on 1977-05-11.

This Standard Specification is in two Parts. Part 1 is technically identical to the ISO Recommendation R 198 : 1961 — Double-Deck Flat Pallets for Through Transit of Goods and Part 2 is technically identical to ISO Recommendation R 329 : 1963—Large Pallets for Through Transit of Goods.

This is the second of a series of standards on Pallets, the other standards of the series being.

1. SLS 422 : 1977 — Standard on Vocabulary of Terms Relating to Pallets.
2. SLS 424 : 1977 — Specification for Principal Dimensions of Pallet Trucks.

In this standard all standard values are given in metric units. The dimensions of pallets and their tolerances in inches are given in the Appendix. The limits of tolerance given in Clauses 1.3 and 2.3 are the amounts required to ensure that the maximum and minimum dimensions are the same with each system of measurement.

## **PART 1—DOUBLE—DECK FLAT PALLET FOR THROUGH TRANSIT OF GOODS**

### **1.1 Scope**

This Part of the Standard specifies the nominal sizes of flat pallets, actual overall sizes and their tolerances and the dimensions of the openings and entries.

**1.2 Nominal Sizes**

The nominal sizes of flat pallets for general purposes are as follows :

**Table 1 . 1 - Nominal Size**

Millimetres	
800	× 1200
1000	× 1200
800	× 1000

**1.3 Overall Sizes**

**1.3.1** The actual overall sizes of the decks of these pallets, which are equal to the nominal sizes given under Clause 1.2, and their tolerances are indicated in Table 1.2.

**Table 1 . 2-Actual Overall Sizes**

Nominal Dimensions of the Pallets	Actual length L	Actual Width B
mm × mm	mm	mm
800 × 1200	1200 $\begin{matrix} +20 \\ 0 \end{matrix}$	800 $\begin{matrix} +15 \\ 0 \end{matrix}$
1000 × 1200	1200 $\begin{matrix} +20 \\ 0 \end{matrix}$	1000 $\begin{matrix} +16 \\ 0 \end{matrix}$
800 × 1000	1000 $\begin{matrix} +16 \\ 0 \end{matrix}$	800 $\begin{matrix} +15 \\ 0 \end{matrix}$

**1.3.2** The pallets specified are all double-decked and are constructed so as to permit the entry of forks or fingers of fork lift trucks or pallet trucks, preferably from any side but at least from two opposite sides.

1.3.3 The distance from the underside of the top deck to the ground is 127 mm maximum, and the free height for the entry of forks or fingers, from any side, is 99 mm minimum.

1.3.4 The bearing surface of the bottom deck should be equal to or greater than 40 per cent of the overall surface of the top deck.

#### 1.4 Dimensions of Openings and Entries

The arrangement and the minimum entry dimensions which are provided to allow the entry of the forks of fork lift trucks, and pallet trucks and also the arrangement and minimum dimensions of the openings, should conform with Figure 1.1 and Table 1.3. However, for the pallets of

800 mm × 1200 mm

1000 mm × 1200 mm

and if the construction will permit, it is recommended that the minimum opening should be those given in Figure 1.2 and Table 1.4.

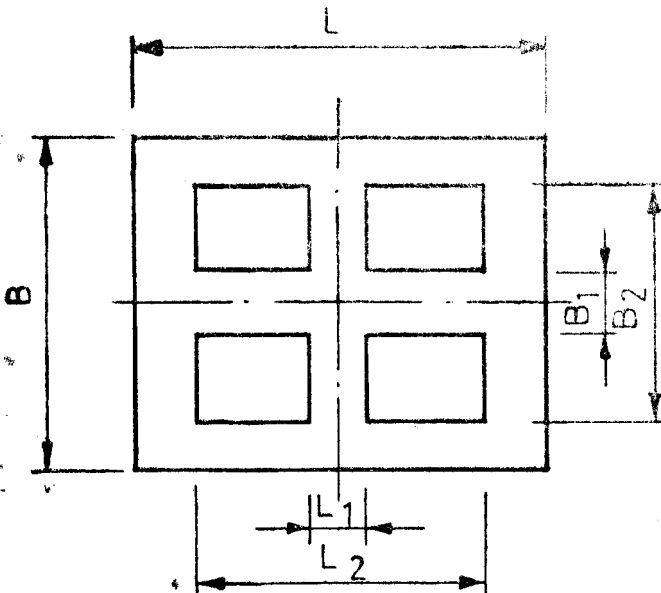
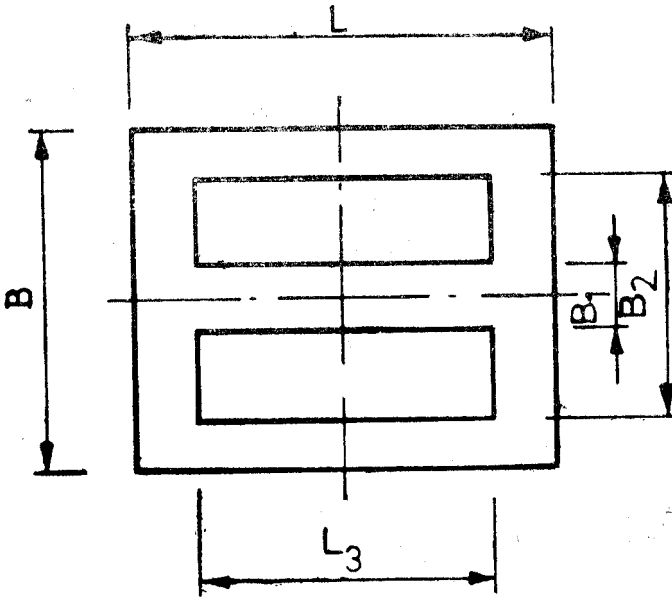


Fig. 1. 1 - Diagrammatic arrangement of openings and entry widths applicable to the three sizes of pallets (see Table 1.3)

**Table 1.3-Minimum Dimensions of the Openings  
According To Fig. 1 . 1**

Nominal Dimensions of the Pallets	Dimensions of the Openings			
	$L_1$ max	$L_2$ min	$B_1$ max	$B_2$ min
mm × mm	mm	mm	mm	mm
800 × 1200	150	760	150	590
1000 × 1200	150	760	150	710
800 × 1000	150	710	150	590



**Fig. 1. 2-Recommended diagrammatic arrangement of openings and entry widths for the sizes 800 mm × 1200 mm, 1000 mm × 1200 mm (see Table 1 . 4)**



**Table 1.4-Minimum Dimensions of the Openings  
According to Fig. 1.2**

Nominal Dimensions of the Pallets	Dimensions of the Openings		
	$L_3$ min	$B_1$ max	$B_2$ min
mm × mm	mm	mm	mm
800 × 1200	800	150	590
1000 × 1200	800	150	710

### 1.5 Other Requirements

**1.5.1** The width of wing for lifting wing pallets of the dimensions given in Clause 1.2 should be 65 mm minimum.

**1.5.2** Non-expendable pallets should be capable throughout their working life of supporting a uniformly distributed load of 1000 kg whilst being handled, and a uniformly distributed load of 4000 kg when stacked.

**1.5.3** The edges of the top surface of members of the bottom deck of non-reversible pallets should be chamfered on each side of the top face in the following way :

(a) The angle between the chamfered surface and the horizontal should be  $40 \pm 5^\circ$ .

(b) The height of the vertical face of the member should be,

if of wood :  $10 \begin{matrix} +5 \\ 0 \end{matrix}$  mm,

if of metal : not more than 10 mm.

This requirement applies to a pallet of any material when the thickness of the member concerned exceeds 10 mm.

**PART 2-LARGE PALLETS FOR THROUGH TRANSIT OF GOODS**

**2.1 Scope**

This Part of the standard specifies the nominal sizes of large pallets, actual overall sizes and their tolerances and the dimensions of the openings and entries.

**2.2 Nominal Sizes**

The nominal sizes of large pallets are as follows :

**Table 2.1 Nominal Sizes**

Millimetres
1200 × 1600
1200 × 1800

**2.3 Overall Sizes**

**2.3.1** The actual overall sizes of the decks of these pallets, which are equal to the nominal sizes given under Clause 2.2, and their tolerances are indicated in Table 2.2.

**Table 2.2-Actual Overall Sizes and Tolerances**

Nominal Dimensions of the Pallets	Actual Width B	Actual Length L
mm × mm	mm	mm
1200 × 1600	1200 $\begin{smallmatrix} + 20 \\ 0 \end{smallmatrix}$	1600 $\begin{smallmatrix} + 26 \\ 0 \end{smallmatrix}$
1200 × 1800	1200 $\begin{smallmatrix} + 20 \\ 0 \end{smallmatrix}$	1800 $\begin{smallmatrix} + 29 \\ 0 \end{smallmatrix}$

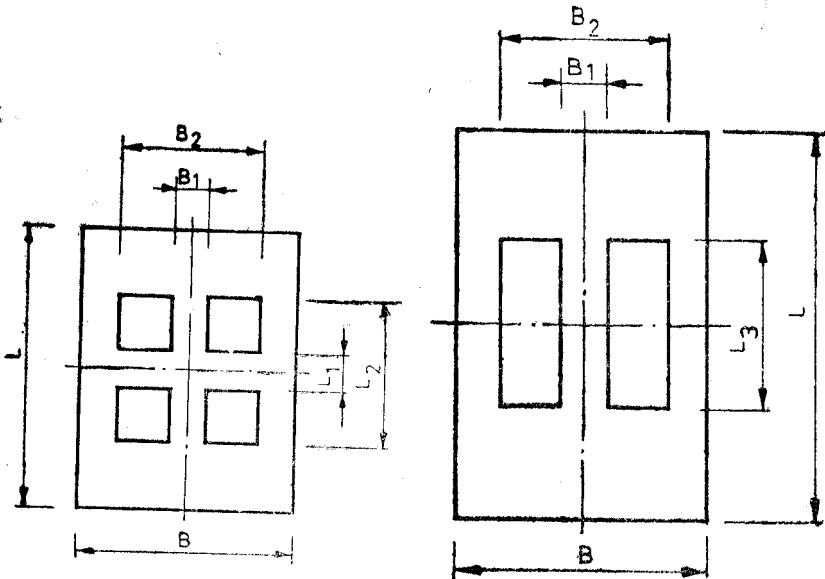
**2.3.2** The pallets are constructed so as to permit the entry of forks or fingers of fork lift trucks or pallet trucks, preferably from any side, but at least from two opposite sides. To allow in all cases for the entry of pallet trucks, the central bearer should have a width not greater than 175 mm.

**2.3.3** The distance from the underside of the top deck to the ground is 140 mm maximum and the free height for the entry of forks or fingers, from any side, is 99 mm minimum.

**2.3.4** For double-decked pallets, the bearing surface of the element or elements of the bottom deck should be equal to or greater than 40 per cent of the overall surface of the top deck. This 40 per cent is regarded as the absolute minimum and should be increased whenever practical.

## 2.4 Dimensions of Openings and Entries

**2.4.1** The arrangement and the minimum entry widths which are provided to allow the entry of the forks of lift trucks and pallet trucks, and also the arrangement and minimum dimensions of the openings in the bottom deck of double deck-pallets, should conform with Figure 2.1 or Figure 2.2, and with Table 2.3. The openings should be symmetrically disposed about the axes of the pallet.



**Fig. 2.1—1200 mm × 1600 mm    Fig. 2.2—1200 mm × 1800 mm**

Diagrammatic arrangement of openings and entries applicable to the two sizes of pallets (see Table 2.3)

**Table 2.3—Minimum Dimensions of the openings and Minimum Entry width According to Figure 2.1 or 2.2**

Nominal Dimensions of the Pallets	Dimensions of the Openings and Entries				
	B <sub>1</sub> max	B <sub>2</sub> min	L <sub>1</sub> max	L <sub>2</sub> min	L <sub>3</sub> min
(1)	(2)	(3)	(4)	(5)	(6)
mm × mm	mm	mm	mm	mm	mm
1200 × 1600	175	800	175	800	—
1200 × 1800	175	800	175	—	800

**2.5 Other Requirements**

**2.5.1** The pallets should have wings for lifting, and the width of these wings should be 75 mm minimum.

**2.5.2** Non-expendable pallets should be capable throughout their working life of supporting a uniformly distributed load of 2000 kg whilst being handled, and a uniformly distributed load of 8000 kg when stacked.

**2.5.3** The members of the bottom deck of non-reversible pallets should be chamfered on each side of the top face in the following way :

(a) The angle between the chamfered surface and the horizontal should be  $40 \pm 5^\circ$ .

(b) The height of the vertical face of the members should be,

if of wood :  $10 \begin{matrix} \pm 5 \\ 0 \end{matrix}$  mm,

if of metal : not more than 10 mm.

This requirement applies to a pallet of any material when the thickness of member concerned exceeds 10 mm.

APPENDIX A

A-1 Nominal Sizes of Pallets

Inches
32 × 48
40 × 48
32 × 40

## A-2 DIMENSIONS AND THEIR TOLERANCES

Nominal Dimensions of Pallets	Actual Length L	Actual Width B	Dimensions of the Openings				
			L <sub>1</sub> max	L <sub>2</sub> min	L <sub>3</sub> min	B <sub>1</sub> max	B <sub>2</sub> min
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
32 × 48	48 0 — $\frac{3}{4}$	32 0 — $\frac{1}{2}$	6	30	32	6	23 $\frac{1}{4}$
40 × 48	48 0 — $\frac{3}{4}$	40 0 — $\frac{5}{8}$	6	30	32	6	28
32 × 40	40 0 — $\frac{5}{8}$	32 0 — $\frac{1}{2}$	6	28	32	6	23 $\frac{1}{4}$

(All dimensions in inches)

## **SLS CERTIFICATION MARK**

*The Sri Lanka Standards Institution is the owner of the registered certification mark shown below. Beneath the mark, the number of the Sri Lanka Standard relevant to the product is indicated. This mark may be used only by those who have obtained permits under the SLS certification marks scheme. The presence of this mark on or in relation to a product conveys the assurance that they have been produced to comply with the requirements of the relevant Sri Lanka Standard under a well designed system of quality control inspection and testing operated by the manufacturer and supervised by the SLSI which includes surveillance inspection of the factory, testing of both factory and market samples.*

*Further particulars of the terms and conditions of the permit may be obtained from the Sri Lanka Standards Institution, 17, Victoria Place, Elvitigala Mawatha, Colombo 08.*



## **SRI LANKA STANDARDS INSTITUTION**

The Sri Lanka Standards Institution (SLSI) is the National Standards Organization of Sri Lanka established under the Sri Lanka Standards Institution Act No. 6 of 1984 which repealed and replaced the Bureau of Ceylon Standards Act No. 38 of 1964. The Institution functions under the Ministry of Science & Technology.

The principal objects of the Institution as set out in the Act are to prepare standards and promote their adoption, to provide facilities for examination and testing of products, to operate a Certification Marks Scheme, to certify the quality of products meant for local consumption or exports and to promote standardization and quality control by educational, consultancy and research activity.

The Institution is financed by Government grants, and by the income from the sale of its publications and other services offered for Industry and Business Sector. Financial and administrative control is vested in a Council appointed in accordance with the provisions of the Act.

The development and formulation of National Standards is carried out by Technical Experts and representatives of other interest groups, assisted by the permanent officers of the Institution. These Technical Committees are appointed under the purview of the Sectoral Committees which in turn are appointed by the Council. The Sectoral Committees give the final Technical approval for the Draft National Standards prior to the approval by the Council of the SLSI.

All members of the Technical and Sectoral Committees render their services in an honorary capacity. In this process the Institution endeavours to ensure adequate representation of all view points.

In the International field the Institution represents Sri Lanka in the International Organization for Standardization (ISO), and participates in such fields of standardization as are of special interest to Sri Lanka.