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**ISO**

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION

**ISO RECOMMENDATION  
R 168**

**STRETCHERS, STRETCHER CARRIERS  
AND HOSPITAL TROLLEYS  
DIMENSIONS**

**1st EDITION  
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## BRIEF HISTORY

The ISO Recommendation R 168, *Stretchers, Stretcher Carriers and Hospital Trolleys. Dimensions*, was drawn up by Technical Committee ISO/TC 75, *Stretchers and Stretcher Carriers*, the Secretariat of which is held by the British Standards Institution (B.S.I.).

This Technical Committee was set up in 1950, following a proposal from the British Standards Institution to undertake the "standardization of those dimensions of stretchers and of stretcher carriers in ambulances, essential to secure interchangeability".

In October 1950, the ISO/TC 75 Secretariat submitted to the Members of the Technical Committee a draft proposal, which was later, in April 1952, distributed to all the ISO Member Bodies as a first Draft ISO Recommendation (No. 11).

The numerous observations sent in during this first consultation led to extensive correspondence among the Members of the Technical Committee and reached a conclusion with the drawing up of a revised text which was discussed at the first plenary meeting of Technical Committee ISO/TC 75, held in London, in October 1957.

This revised text was thereafter circulated to the Members of the Technical Committee in March 1958, and was duly approved by postal ballot as the second Draft ISO Recommendation (No. 11).

On 22 May 1959, the Second Draft ISO Recommendation (No. 11) was distributed to all the ISO Member Bodies and was approved by the following Member Bodies:

Burma	Ireland	Portugal
Chile	Israel	Spain
France	Italy	United Kingdom
Germany	Japan	Yugoslavia
Greece	Netherlands	
India	New Zealand	

No Member Body opposed the approval of the Draft.

The Draft ISO Recommendation was then submitted by correspondence to the ISO Council, which decided, in December 1960, to accept it as an ISO RECOMMENDATION.

## STRETCHERS, STRETCHER CARRIERS AND HOSPITAL TROLLEYS

### DIMENSIONS

#### 1. SCOPE

This ISO Recommendation specifies the essential dimensions of stretchers and of stretcher carriers, to ensure interchangeability in transport and thus to facilitate the passage of sick or injured persons from one country to another and their movement in different forms of transport, by eliminating the need to transfer patients from one stretcher to another with possible danger, additional suffering and delay.

#### 2. STRETCHER

The stretcher should comply with the following dimensions (see Fig. 1).

2.1 *Length L.* The overall length of stretchers should be

$$7 \text{ ft } 6 \text{ in } \begin{matrix} - \\ 0 \\ \hline \frac{1}{4} \text{ in} \end{matrix} \quad (2 \text{ } 290 \text{ mm } \begin{matrix} - \\ 0 \\ \hline 6 \text{ mm} \end{matrix})$$

2.2 *Width B.* The width should not exceed 23 in (585 mm).

2.3 *Size of poles.* The cross section of stretcher poles should not exceed 2 in (50 mm) in diameter or 2 in (50 mm) square, with corners rounded to a radius not less than  $\frac{1}{4}$  in (6 mm).

NOTE. Length of canvas is not specified, as this does not affect the interchangeability of stretchers and stretcher carriers. It is suggested that this length should be 5 ft 11 in (1 800 mm) minimum and 6 ft 2 in (1 880 mm) maximum.

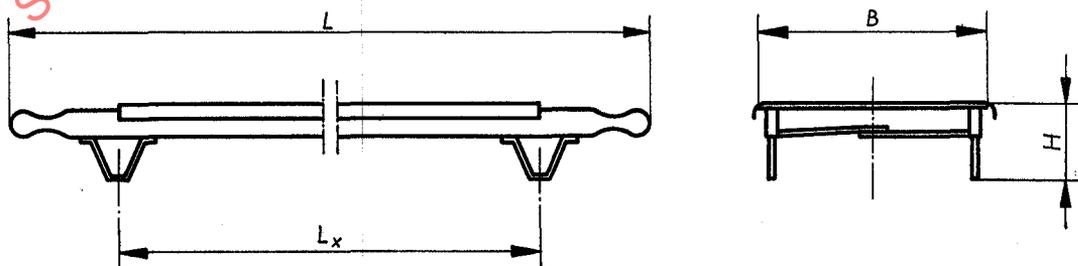


FIG. 1.—Stretcher

## 3. RUNNERS AND WHEELS

The stretcher runners or wheels should comply with the following dimensions.

3.1 *Width  $B_x$  between centres of runners* (see Fig. 2):

$$21\frac{1}{4} \text{ in } \begin{matrix} - \\ 0 \\ - \\ \frac{1}{4} \end{matrix} \text{ in} \quad (540 \text{ mm } \begin{matrix} - \\ 0 \\ - \\ 6 \end{matrix} \text{ mm})$$

3.2 *Width  $b$  of runner* (see Fig. 2):

$\frac{3}{4}$  in (20 mm) minimum

$1\frac{1}{4}$  in (32 mm) maximum

3.3 *Height  $H$  from base of runner to top of stretcher* (see Fig. 1):

6 in (152 mm) recommended

5.3 in (135 mm) minimum

6.9 in (175 mm) maximum

3.4 *Length  $L_x$  between centres of runners* (see Fig. 1):

$$5 \text{ ft } 0 \text{ in } \begin{matrix} - \\ 0 \\ - \\ \frac{1}{4} \end{matrix} \text{ in} \quad (1\,525 \text{ mm } \begin{matrix} - \\ 0 \\ - \\ 6 \end{matrix} \text{ mm})$$

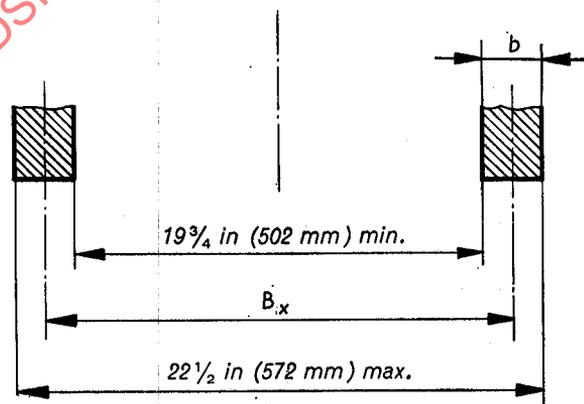


FIG. 2.—Stretcher runners  
(enlarged view)

#### 4. STRETCHER CARRIERS

When stretcher carriers consist of two U-section channels, each channel should have the following dimensions (see Fig. 3):

internal width  $b_s = 2\frac{3}{4}$  in (70 mm) minimum

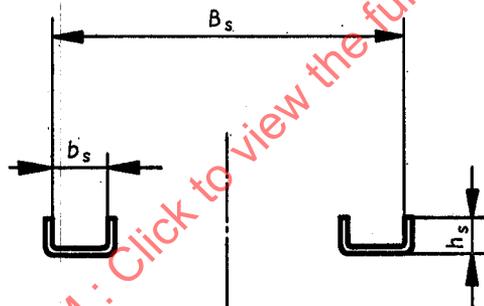
external height  $h_s = 1\frac{1}{4}$  in (32 mm) maximum.

The channels should be fixed parallel to each other so that the distance  $B_s$  between the inner faces of the outer vertical edges is

$$24 \text{ in } \begin{matrix} + \\ - \end{matrix} \frac{1}{8} \text{ in} \quad (610 \text{ mm } \begin{matrix} + \\ - \end{matrix} \frac{3}{15} \text{ mm})$$

The carriers should be at least 5 ft 6 in (1 675 mm) long, but in any case long enough to accommodate the stretcher in the loaded position without the risk of over-running.

For other types of carriers the above dimensions should be used where applicable.



Length: 5 ft 6 in (1 675 mm) minimum

FIG. 3. — Stretcher carriers

#### 5. HOSPITAL TROLLEY

The stretcher should be supported on the trolley by angle brackets attached to the uprights (see Fig. 4).

5.1 Length  $L_c$  between centres of support brackets:

4 ft 0 in (1 220 mm).

5.2 Width  $B_c$  between inner faces of the outer vertical edges of brackets:

24 in  $\pm \frac{1}{8}$  in (610 mm  $\pm$  3 mm).