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**NATO STANDARD**

**AMedP-2.1**

**STRETCHERS, BEARING BRACKETS  
AND ATTACHMENT SUPPORTS**

**Edition B, Version 1**

**NOVEMBER 2020**



**NORTH ATLANTIC TREATY ORGANIZATION**

**ALLIED MEDICAL PUBLICATION**

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**NORTH ATLANTIC TREATY ORGANIZATION (NATO)**

**NATO STANDARDIZATION OFFICE (NSO)**

**NATO LETTER OF PROMULGATION**

24 November 2020

1. The enclosed Allied Medical Publication AMedP-2.1, Edition B, Version 1, STRETCHERS, BEARING BRACKETS AND ATTACHMENT SUPPORTS, which has been approved by the nations in the Military Committee Medical Standardization Board, is promulgated herewith. The agreement of nations to use this publication is recorded in STANAG 2040.
2. AMedP-2.1, Edition B, Version 1, is effective upon receipt and supersedes AMedP-2.1, Edition A, Version 1, which shall be destroyed in accordance with the local procedure for the destruction of documents.
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4. This publication shall be handled in accordance with C-M(2002)60.



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**RECORD OF SPECIFIC RESERVATIONS**

[nation]	[detail of reservation]
BGR	The standard will apply to the transport helicopters and aircraft, as well as to newly acquired ground ambulances in the Armed Forces. The standard's requirements will not apply to old ambulances type "UAZ-469".
CAN	CAF stretchers are a general supply item. As such there is no singular control in place to guide CAF purchase and development in this area. At this time, we cannot enforce this STANAG.
DEU	<p>Stretchers and attachment supports used in the Bundeswehr meet the requirements of AMedP-2.1 Edition A. In the current Edition B, tolerances for stretcher dimensions have been increased. As a result, some stretchers are not compatible with attachment supports, or do not fit into medical evacuation vehicles used by German land and air forces.</p> <p>Furthermore, some essential technical specifications, like weight and load restrictions for stretchers, are missing.</p> <p>From the German perspective, the newly listed specifications of AMedP-2.1 ED B can be implemented only in parts because of excessive tolerances. Overall, it is therefore concluded that these new specifications make interoperability more difficult for the mutual exchange of stretchers within the alliance.</p> <p>Germany ratifies AMedP-2.1 Edition B but reserves the right to apply the more precise specifications of AMedP-2.1 Edition A for future armaments projects.</p>
FRA	Whilst implementing AMedP-2.1, France reserves the right to apply more precise specifications in its armament projects.
GBR	Stress criteria should be included in the main STANAG (2040) with reference to STANAG 3204 Annex E for air worthiness. Consideration should also be given to including direct contamination control measures in regard to material and fire retardant qualities etc. Is it possible to include a requirement for CE marking in STANAG 2040 (accepting that this is an EU standard and perhaps not all NATO countries can/could comply.?)

USA	The U.S. Military Health Services have reviewed STANAG 2040/AMedP-2.1 and have reservation in achieving the interchangeability of litters/stretchers used by NATO Forces. The U.S. Military Health Services have multiple types of litters/stretchers for multiple evacuation platforms in its inventory that have been commercially procured or developed, some of which are not in compliance with the litter/stretcher dimensions prescribed in the AMedP. The US has no objection to the standard being ratified and promulgated however the reservation is reported that US litters and stretchers have minor variations.
<p>Note: The reservations listed on this page include only those that were recorded at time of promulgation and may not be complete. Refer to the NATO Standardization Document Database for the complete list of existing reservations.</p>	

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<b>CHAPTER 1 INTRODUCTION</b>
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**1.1. AIM**

The aim of this publication is to:

- a. Achieve interchangeability of stretchers used by NATO Forces.
- b. Ensure that means of suspension and fixtures used within suitable forms of transportation can receive these stretchers.
- c. Ensure that restraining aids, which safely keep the patient in the required position and prevent undue movement are available.

**1.2. AGREEMENT**

Participating nations agree that general purpose stretchers, bearing brackets and attachment supports used by NATO Forces will conform to the dimensions shown herein and that restraining aids will be available.

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<b>CHAPTER 2    GENERAL</b>
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**2.1. INTERCHANGEABILITY**

The provisions of this publication are to be observed so that the aim of interchangeability of general purpose stretchers and the ability to secure these stretchers in various forms of transportation within NATO Forces can be attained. It is appreciated that, in addition to general purposes stretchers, special types of stretchers are required. Requirements for special stretchers are not contained in this publication. Stretchers produced in accordance with this publication must meet general requirements for airworthiness, and must be certified for the use aboard aircraft in accordance with STANAG 3204 with reference to annex E.

The means of suspension must conform with those of the type of aircraft in which the stretchers will be carried. The stretcher with its accessories, harness system and its restraining aid must meet general requirements for roadworthiness. It must stand the acceleration and the delay of 10G in straight, diagonal and vertical direction to withstand the high acceleration that occur in crash situations. The stretcher fabric must be skid-proofed, made of material that is insensitive to environmental influences, easy to sanitize and correspond to international standards of fire safety and flame retardancy.

**2.2. DEFINITIONS**

The following terms and definitions are used for the purpose of this publication only:

- a. Stretcher  
A type of litter which provides a rigid frame and a flat horizontal surface on which a patient or casualty can be transported in a lying position.
- b. Restraining Aid  
A means of securing a patient or casualty in a required position to prevent undue movement. This term is not synonymous with the term Safety Harness described in paragraph 1.c, annex E, STANAG 3204.
- c. Means of suspension, Bearing Brackets and Attachment Supports  
Means of receiving and attaching stretchers in all suitable means of transportation.

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<b>CHAPTER 3 STATEMENT OF DETAILS</b>
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**3.1. DIMENSIONS OF STRETCHERS**

Frame and Support: Annex A (A.1)

**3.2. DIMENSIONS OF STRETCHERS**

Support and Handles: Annex A (A.2)

**3.3. SUSPENSIONS SYSTEMS FITTED INSIDE A VEHICLE**

- a. The outer edges of attachment supports (slings or hooks) will be not more than 2120 mm apart.
- b. The inside edges of attachment supports will be not less than 2000 mm apart.
- c. Attachment supports shall be capable of accepting and securing handles of a maximum diameter of 42 mm and a minimum diameter of 30 mm. Closed suspension systems (slings) must have openings of 45 mm to accept 40 mm stretcher handles.

**3.4. BEARING BRACKETS**

- a. The outer edges of the bearing brackets will be 1065 mm apart.
- b. The brackets (traverse) shall be capable of accepting and securing stretchers having overall widths of 590 mm maximum and 540 mm minimum.

**3.5. SUPPORT SYSTEMS FITTED INSIDE TRANSPORTATION**

The support system will have the dimensions shown in a. and b. below and will be constructed so as to fulfill the requirements shown in c. and d.

- a. Channel width will be 60 mm.
- b. The distance or width between the outside edges of both supports, thickness of the edge not included (therefore the useful width) will be 590 mm.
- c. The length of the channels will be sufficient to accommodate the stretcher described in Annex A.
- d. The height and depth of channels are optional, but each nation will ensure that arrangements are made to secure adequately the stretcher when it is in place.

### **3.6. RESTRAINING AIDS**

Restraining aids (tension belts) are to be furnished with each stretcher. No specification concerning pattern, length or width of the material is prescribed. Restraining aids may be removable or firmly attached to the stretcher. They will secure the patient and a cover or rest pad to the stretcher.

Fettering devices may be used if necessary. No specifications for such devices are prescribed.

**ANNEX A      DIMENSIONS OF STRETCHERS**

**A.1. FRAME AND SUPPORT**

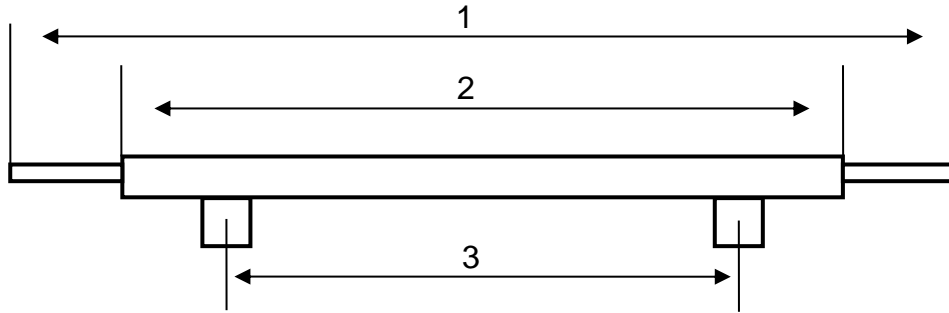


Figure 01 – Stretcher seen from the side

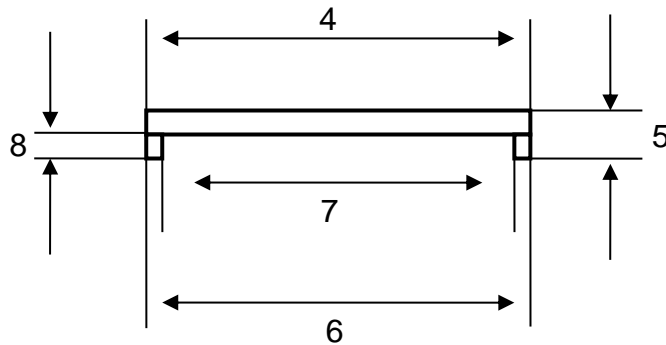


Figure 02 – Stretcher seen from the front/back

	<b>Millimeters</b>	<b>Remarks</b>
1	Min./Max. 2284-2300	Length, overall
2	Min./Max. 1810-1950	Length, of the cover
3	Min./Max. 1160-1180	Distance, lengthwise centre to centre
4	Min./Max. 545-584	Width, overall
5	Max. 171	Height
6	Max. 584	Maximum width between the outer faces of the support (1)
7	Min. 476	Minimum width between the inner faces of the support
8	Min. 30	Clearance ground – transverse joint

Notes:           (1)    Measured at the support bearing surfaces. At the height of 40 mm of the support this distance should be exact

A.2. SUPPORT AND HANDLES

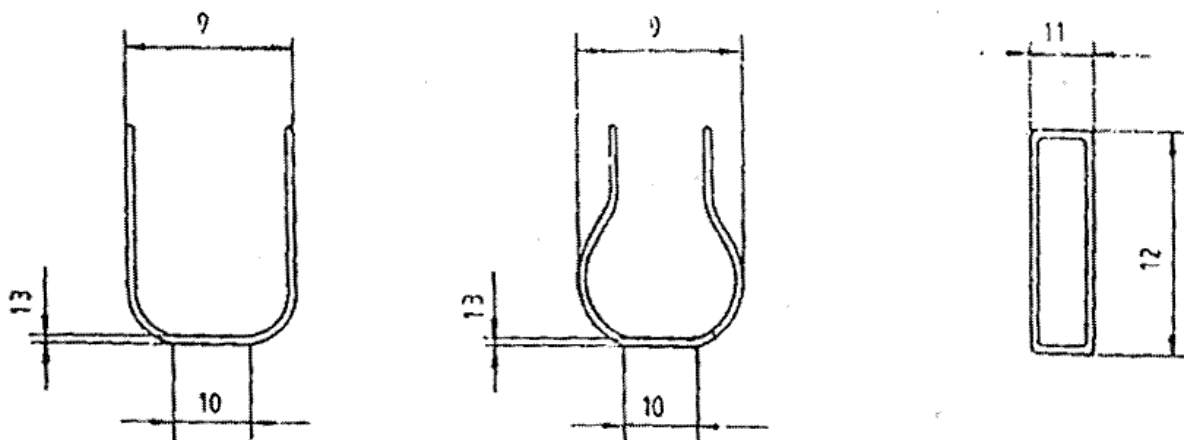


Figure 03 - Support seen from the front/back and from the side

	Millimeters	Remarks
9	Max. 92	Length of supports overall
10	Min. 40	Length of support (bearing surface)
11	Min./Max. 20-44	Width of support (bearing surface)
12	Min./Max. 100-140	Height of support
13	Max. 7	Thickness of support



Figure 04 – Handles seen from the side

	Millimeters	Remarks
14	Min. 152	Overall handle length
15	30	Diameter minimum
16	42	Diameter maximum

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