

Test object : Table for ambulance stretcher  
Type : PB-410  
Customer : PROMEBA, S.L.

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**TEST REPORT**  
**ON**  
**MEDICAL VEHICLES AND THEIR EQUIPMENT**  
**TABLE FOR AMBULANCE STRETCHER**

**This test report is for documentation of test results only  
and shall not be deemed legally binding within the German StVZO/EG-FGV.**

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## 1. Introduction

Upon customers request, TÜV Rheinland Kraftfahrt GmbH has tested a table for an ambulance stretcher. The test was conducted to determine if the maintain systems (restraint systems) and the fixation of the equipment meets the requirements specified under section 3. of this test report.

The present report documents the tests carried out and may be presented to Technical Services for use within the type approval procedure.

- 1.1. Name and address of the customer : PROMEBA, S.L.  
Ctra. C-16, Km 59,5  
08650 Sallent (Barcelona), Spain

## 2. Description of the test object

Test object : Table for ambulance stretcher  
Manufacturer : see 1.1.  
Type : PB-410  
Technical description : The test was conducted on a table for an ambulance stretcher (stretcher support) manufactured by PROMEBA, S.L.. For details see index of technical description of the manufacturer (see attachment 1).  
During the dynamic tests the table was loaded with a rigid stretcher dummy simulating the ambulance stretcher, type PC-650, manufactured by PROMEBA, S.L.. The stretcher dummy is fixed (3 point fixation) to the table by means of two front retention hooks and one rear lock assembly.  
The ambulance stretcher, type PC-650, is tested referring the test requirement DIN EN 1789:08.2007. Test result and product features are documented in the Test Report no. 103XS0073-00 issued by TÜV Rheinland Kraftfahrt GmbH.  
The stretcher table type PB-410 is a manually operated stretcher support. The product is equipped with following product features: loading position (520 mm), Trendelenburg position ( $\pm 10^\circ$ ) and lateral movement ( $\pm 148$  mm). Product weight is approx. 85 kg.  
During all tests the setting of the adjustment device for lateral movement was in center position.

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### 3. Test requirements and test facility

- 3.1. Test requirement : Medical vehicles and their equipment - Road ambulances; German version EN 1789:2007+A2: 2014, Sections 4.5.9 and 5.4
- 3.2. Test facilities : - Crash test facility at TÜV Rheinland Kraftfahrt GmbH  
- "Inverse Crash"- test facility at TÜV Rheinland TNO Automotive International B.V. (TTAI)

### 4. Description of test set-up

- 4.1. Date of tests : 2009-11-30, 2009-12-01, 2009-12-09, 2010-02-24, 2010-03-11, 2010-06-10
- 4.2. Test location : - D-Cologne  
- NL-Helmond
- 4.3. Description of test set-up : The test of the table for an ambulance stretcher with regards to it's behaviour in the case of a collision was carried out on a crash test simulation facility.  
The test object, see section 2. of this report, was installed on the rigid platform of the test trolley and tested dynamically. The movement of the test object during test was determined using high-speed video recording.  
The accelerations/decelerations met the requirements for dynamic tests as defined in section 5.3. of the test requirement.  
The test object, see section 2. of this report, was loaded with a stretcher dummy (m=51kg), simulating the PROMEBA ambulance stretcher type PC-650. The stretcher dummy was loaded with a ballast dummy fixed by means of laboratory lashing straps. Following ballast dummies (m=75 kg) were used for the tests:  
- ECE-R 16, Annex 7  
- Hybrid II (50th percentile, male)  
The set-up does not consider the interface with an actual road ambulance floor. The evaluation of the stretcher assembly and the patients restraint system was not objective of the test series.

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#### 4.4. Tests carried out

Test object	Impact direction	Remarks
Base frame, type <b>PB-410</b> , for ambulance stretcher type PC-650; See description of the test object in section 2. of this test report	forward	none
	rearward	
	transverse right	
	vertical	
Remark: Due to the design of the test object and its fixation it was not necessary to perform the test in impact direction "transverse left".		

#### 4.5 Acknowledged Testing Laboratory

The Testing Laboratory of TÜV Rheinland Kraftfahrt GmbH is designated as Technical Service Kraftfahrt-Bundesamt (Approval Authority of the Federal Republic of Germany), under registration number: KBA-P00010-96. The designation covers - amongst other test procedures - the (European) Directives 2007/46/EC, 74/408/EEC, 76/115/EEC, 77/541/EEC, 96/79/EC and 96/27/EC and the UN Regulations (former ECE Regulations) No. 14, 16, 17, 94 and 95.

### 5. Test result

The tested table for an ambulance stretcher was strong enough to resist to the load created by the dynamic test. The tested stretcher table or any item attached did not become a projectile or did leave their fixation. The dynamic movement of the test object did not exceed 150 mm in the tested directions. The displacement of the ballast dummy exceeded 150 mm during the individual test.

The tests were carried out in accordance with the relevant requirements of EN ISO/IEC 17025:2005 or EN ISO/IEC 17020:2012.

The test results refer only to the test objects described under section 2. of this report.

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## 6. Attachments

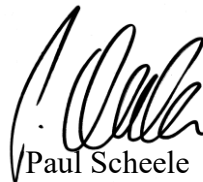
- 1 Foto documentation
- 2 Index of technical description of the manufacturer

This Test Report - including all attachments mentioned under section 6. - may be published and disseminated by the customer in the unabridged and complete version only.

Cologne, May 15, 2019

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Testing Laboratory  
Type Approval Vehicles/Vehicle Components  
at Technology Center Traffic Safety  
of TÜV Rheinland Kraftfahrt GmbH

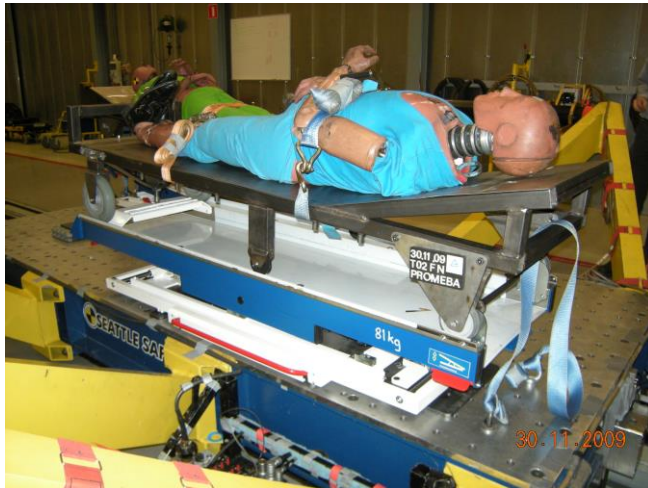


Paul Scheele  
Expert Technical Service

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Foto documentation

Attachment 1



Test in forward direction (after test)



Test in rearward direction (after test)



Test in transverse direction (after test)



Test in vertical direction (before test)

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Foto documentation

Attachment 1



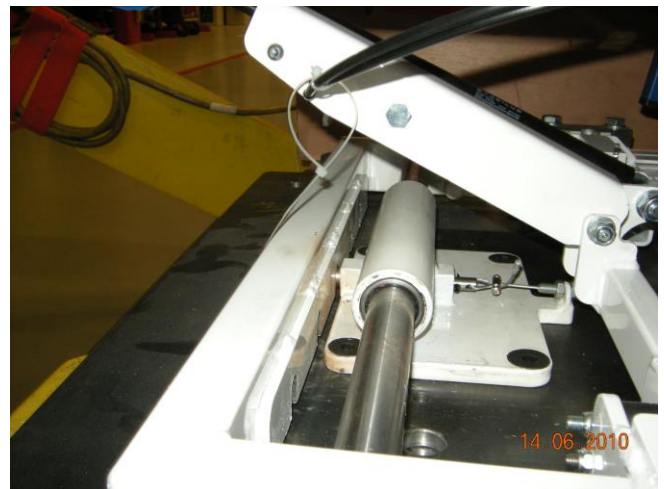
Stretcher fixation (rear lock)



Stretcher fixation (front retention hook)



Detail; Floor fixation brackets (foot end side)



Detail; Floor fixation brackets (head end side)

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## Index of technical description of the manufacturer

## Attachment 2

Page no.	Description	Drawing-No.	Date
01	Conjunt, Bancada PB-410, page 1/5	PB4100-00000A	26.08.2010
02	Conjunt pletina collada, Bancada PB-410, page 2/5		
03	Conjunt guia, Bancada PB-410, page 3/5		
04	Conjunt carro, Bancada PB-410, page 4/5		
05	Conjunt plataforma, Bancada PB-410, page 5/5		
06	Dimensiones de montaje, PB-410 y anclajes camilla	-	08.04.2010
-	-	-	-



PROMEBA stretcher table type PB-410 for  
 PROMEBA ambulance stretcher type PC-650