DIN EN 1789:2010-11 (E)

Medical vehicles and their equipment - Road ambulances (includes Amendment A1:2010)

Contents

Page

Foreword 4

1 Scope 5

2 Normative references 5

3 Terms and definitions 7

4 Requirements 8
4.1 General requirements 8
4.1.1 General 8
4.1.2 Maximum overall dimensions 8
4.1.3 Wheel arch clearance 9
4.2 Performance 9
4.2.1 Acceleration 9
4.2.2 Braking 9
4.2.3 Safety system 9
4.3 Electrical requirements 9
4.3.1 General 9
4.3.2 Electromagnetic compatibility (EMC) 9
4.3.3 Battery and alternator 10
4.3.4 Electrical installation 11
4.4 Vehicle body 12
4.4.1 Fire safety 12
4.4.2 Driver's seat configuration 12
4.4.3 Minimum loading capacity 12
4.4.4 Bulkhead 12
4.4.5 Openings (doors, windows, emergency exits) 12
4.4.6 Loading area 13
4.5 Patient's compartment 14
4.5.1 General 14
4.5.2 Patient's compartment dimensions 15
4.5.3 Patient and attendant seating 21
4.5.4 Ventilation and anaesthetic gas scavenging systems 21
4.5.5 Temperature system 22
4.5.6 Interior lighting 22
4.5.7 Interior noise level 23
4.5.8 Holding system for infusion 23
4.5.9 Mounting systems 23

5 Testing 24
5.1 Testing of the interior noise level 24
5.2 Testing of the acceleration 24
5.3 Testing of maintain systems and fixations of the equipment in the patient's compartment 24
5.4 Testing of rounded edges 26

6 Medical devices 27
6.1 Provision of medical devices 27
6.2 Medical devices storage 27
6.3 Requirements for medical devices 28

6.3.1 General 28
6.3.2 Temperature 28
6.3.3 Humidity and ingress of liquids 28
6.3.4 Mechanical strength 28
6.3.5 Fixation of devices 29
6.3.6 Electrical safety 29
6.3.7 User interface 29
6.3.8 Gas installation 29
6.3.9 Marking and instructions 31
6.3.10 Maintenance 31
6.4 Mechanical strength - Test methods for medical devices for use in road ambulances 31
6.4.1 Vibration and bump test 31
6.4.2 Free fall 32
6.5 List of equipment 32

Annex A (informative) Recognition 39

A.1 Recognition and visibility of ambulances 39
A.2 Recognition of personnel 39

Annex B (informative) Test summary 40

Annex C (informative) Certificate of compliance 41

Annex ZA (informative) !!!!Relationship between this European Standard and the Essential Requirements of EU Directive 93/42/EEC on Medical Devices""""" 42

Bibliography 44