
**Passenger cars — Test track for a severe
lane-change manoeuvre —**

Part 2:

Obstacle avoidance

*Voitures particulières — Piste d'essai de déboîtement latéral brusque —
Partie 2: Évitement d'obstacle*

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Contents

Page

Foreword	iv
Introduction.....	v
1 Scope.....	1
2 Normative references.....	1
3 Terms and definitions	1
4 Specifications	1
4.1 Dimensions of the obstacle avoidance track	1
4.2 Marking of the obstacle avoidance track.....	2
Annex A (informative) Test method	4

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Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 3888-2 was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 9, *Vehicle dynamics and road-holding ability*.

This second edition cancels and replaces the first edition (ISO 3888-2:2002), of which it constitutes a minor revision.

ISO 3888 consists of the following parts, under the general title *Passenger cars — Test track for a severe lane-change manoeuvre*:

- *Part 1: Double lane-change*
- *Part 2: Obstacle avoidance*

Introduction

The main purpose of this International Standard is to provide repeatable and discriminatory test results.

The dynamic behaviour of a road vehicle is a very important aspect of active vehicle safety. Any given vehicle, together with its driver and the prevailing environment, constitutes a closed-loop system that is unique. The task of evaluating the dynamic behaviour is therefore very difficult since the significant interaction of these driver-vehicle-environment elements are each complex in themselves. A complete and accurate description of the behaviour of the road vehicle must necessarily involve information obtained from a number of different tests.

Since this test method quantifies only one small part of the complete vehicle handling characteristics, the results of these tests can only be considered significant for a correspondingly small part of the overall dynamic behaviour.

Moreover, insufficient knowledge is available concerning the relationship between overall vehicle dynamic properties and accident avoidance. A substantial amount of work is necessary to acquire sufficient and reliable data on the correlation between accident avoidance and vehicle dynamic properties in general and the results of these tests in particular. Consequently, any application of this test method for regulation purposes will require proven correlation between test results and accident statistics.

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Passenger cars — Test track for a severe lane-change manoeuvre —

Part 2: Obstacle avoidance

1 Scope

This part of ISO 3888 defines the dimensions of the test track for a closed-loop, severe lane-change manoeuvre test for subjectively determining the obstacle avoidance performance of a vehicle, one specific part of vehicle dynamics and road-holding ability. It is applicable to passenger cars as defined in ISO 3833 and light commercial vehicles up to a gross vehicle mass of 3,5 t.

2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 3833:1977, *Road vehicles — Types — Terms and definitions*

3 Terms and definitions

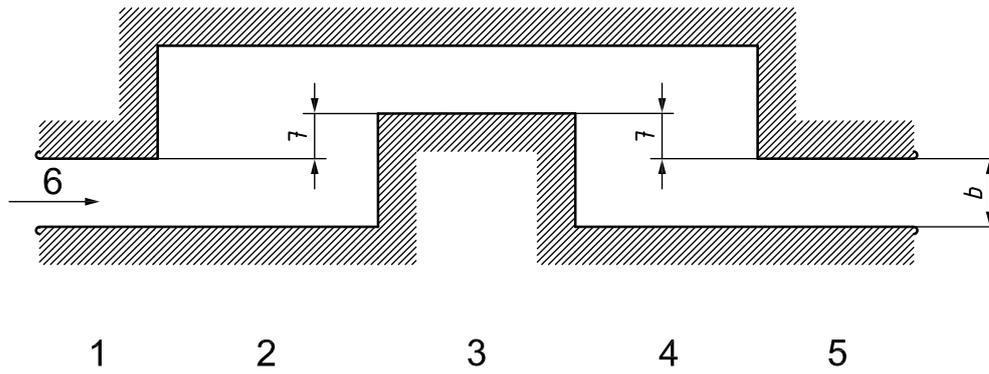
For the purposes of this document, the terms and definitions given in ISO 3833 apply.

4 Specifications

4.1 Dimensions of the obstacle avoidance track

The track for the severe lane-change obstacle avoidance manoeuvre shall be as shown in Figure 1 and the dimensions shall be as given in Table 1. The test vehicle shall be driven through this track.

The lengths of track sections are fixed, while the track width, b , is a function of vehicle width. The total length of the track shall be 61 m.



- Key**
- 1 section 1
 - 2 section 2
 - 3 section 3
 - 4 section 4
 - 5 section 5
 - 6 driving direction
 - 7 lane offset

Figure 1 — Obstacle avoidance track with designation of sections

Table 1 — Obstacle avoidance track dimensions

Dimensions in metres

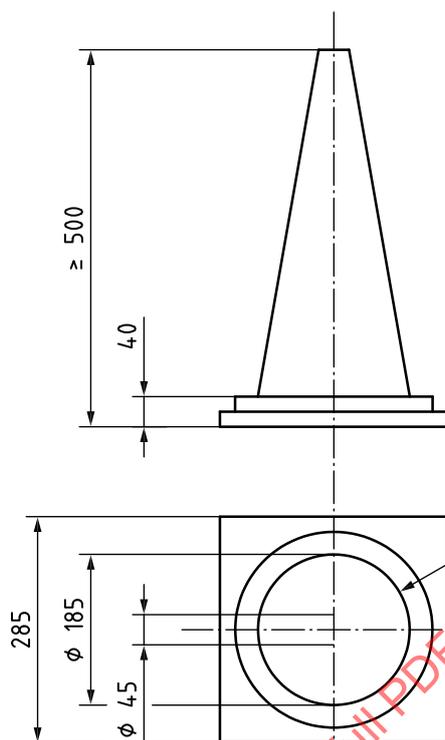
Section	Length	Lane offset	Width <i>b</i>
1	12	—	$1,1 \times \text{vehicle width} + 0,25$
2	13,5	—	—
3	11	1	vehicle width + 1
4 ^a	12,5	—	—
5	12	—	$1,3 \times \text{vehicle width} + 0,25$, but not less than 3 m

^a To ensure high lateral accelerations at the end of the track, section 4 is 1 m shorter than section 2.

4.2 Marking of the obstacle avoidance track

The obstacle avoidance track shall be marked with cones of a minimum height of 500 mm (see Figure 2). The cones shall be placed at the points shown in Figure 3, and the track limits shall be tangential to the base circles of the cones.

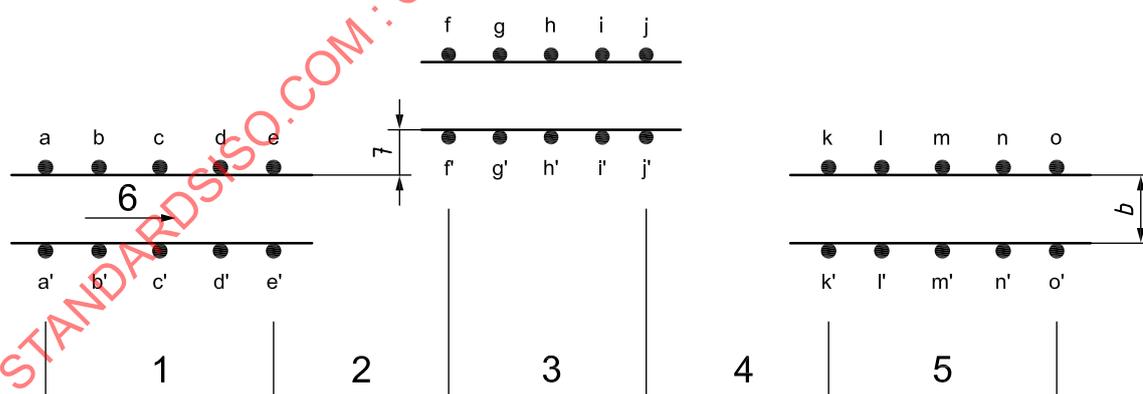
Dimensions in millimetres



Key

- 1 base circle of cone

Figure 2 — Cone used for obstacle avoidance track delimitation



Key

- 1 section 1
- 2 section 2
- 3 section 3
- 4 section 4
- 5 section 5
- 6 driving direction
- 7 lane offset

NOTE Letters indicate placement of individual cones.

Figure 3 — Placing of cones for marking obstacle avoidance track