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

**Part 1:
Double lane-change**

*Voitures particulières — Piste d'essai de déboîtement latéral
 Brusque —*

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Partie 1: Double déboîtement
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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation on the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the WTO principles in the Technical Barriers to Trade (TBT) see www.iso.org/iso/foreword.html.

This document has been prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 33, *Vehicle dynamics and chassis components*.

This second edition cancels and replaces the first edition (ISO 3888-1:1999), which has been technically revised. The main changes compared to the previous edition are as follows:

- Recognizing regenerative braking and active control systems.

A list of all parts in the ISO 3888 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

Introduction

The main purpose of this document 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 interactions of these driver-vehicle-environment elements are each complex in themselves. A complete and accurate description of the behaviour of the road vehicle involves 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. Acquiring sufficient and reliable data on the correlation between accident avoidance and vehicle dynamic properties in general and the results of these tests in particular involves a substantial amount of work. Consequently, any application of this test method for regulation purposes will involve proven correlation between test results and accident statistics.

[Annex A](#) provides further information on the test method.

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

Part 1: Double lane-change

1 Scope

This document specifies the dimensions of the test track for a closed-loop test method to subjectively determine a double lane-change which is one part of the vehicle dynamics and road-holding ability of passenger cars. It is applicable to passenger cars as defined in ISO 3833. It is also applicable to light commercial vehicles up to a gross vehicle mass of 3,5 t.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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, *Road vehicles — Types — Terms and definitions*

3 Terms and definitions

ISO 3888-1:2018

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

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <http://www.electropedia.org/>

3.1

vehicle width

overall width of the vehicle without rear view mirrors

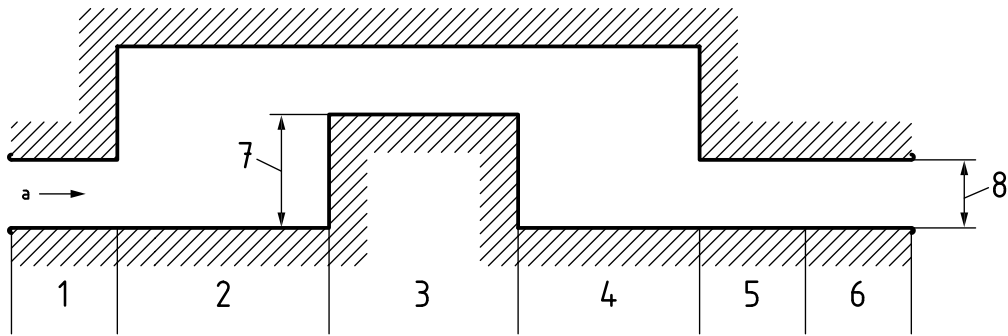
Note 1 to entry: ISO 612:1978, 6.2, defines the vehicle width as the distance between two planes parallel to the longitudinal median plane of the vehicle and touching the vehicle on either side of the said plane, and specifies that rear view mirrors are not contained between these two planes.

4 Specifications

4.1 Dimensions of the double lane-change track

Track dimensions for a double lane-change are represented in [Figure 1](#) and specified in [Table 1](#). The vehicle to be tested is driven through this track.

The lengths of track sections are fixed. The widths are a function of vehicle width. The total length of the track shall be 125 m.



Key

- 1 section 1
- 2 section 2
- 3 section 3
- 4 section 4
- 5 section 5
- 6 section 6
- 7 lane offset
- 8 width
- a Driving direction.

Figure 1 — Double lane-change track and designation of sections

Table 1 — Dimensions of the double lane-change track

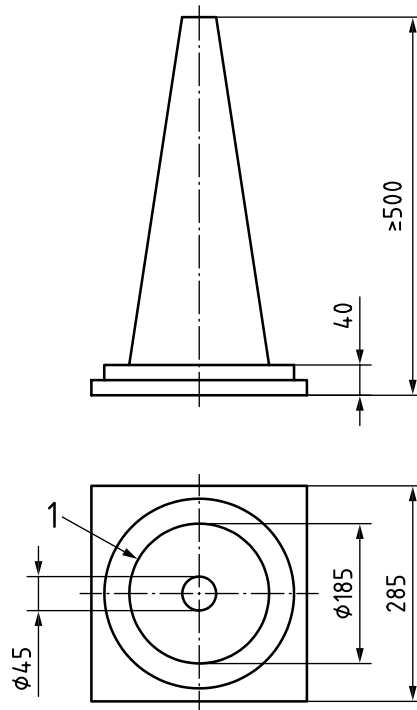
Dimensions in metres

Section	Length	Lane offset	Width
1	15	—	1,1 × vehicle width + 0,25
2	30	—	—
3	25	3,5	1,2 × vehicle width + 0,25
4	25	—	—
5	15	—	1,3 × vehicle width + 0,25
6	15	—	1,3 × vehicle width + 0,25

4.2 Marking of the double lane-change track

The double lane-change track should be marked with cones of minimum height 500 mm; suitable cones are depicted in Figure 2. The cones shall be placed at points specified by Figure 3, and the track limits should be tangential to the base circles of the cones.

Dimensions in millimetres



Key

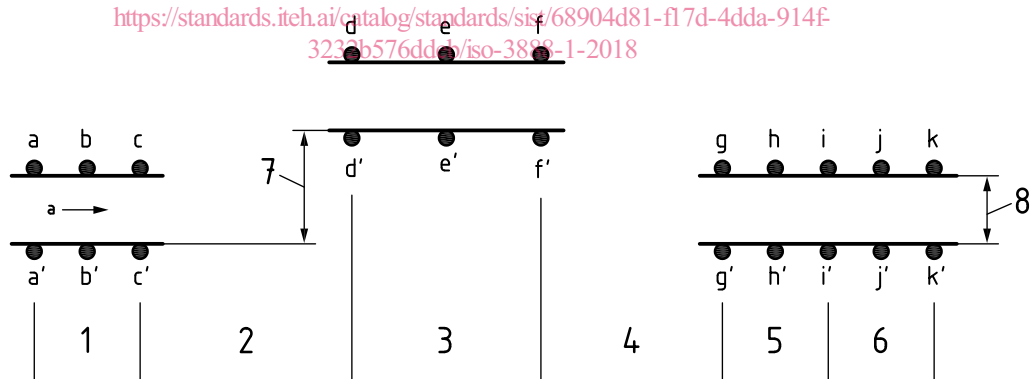
- 1 base circle of cone

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Figure 2 — Cone used for marking double lane-change track

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Key

- | | |
|-------------|----------------------|
| 1 section 1 | 6 section 6 |
| 2 section 2 | 7 lane offset |
| 3 section 3 | 8 width |
| 4 section 4 | a Driving direction. |
| 5 section 5 | |

Figure 3 — Placing of cones for marking the double lane-change track