
INTERNATIONAL STANDARD



3911

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Wheels/rims — Nomenclature, designation, marking, and units of measurement

Roues/jantes — Nomenclature, désignation, marquage et unités de mesure

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FOREWORD

ISO (the International Organization for Standardization) is a worldwide federation of national standards institutes (ISO Member Bodies). The work of developing International Standards is carried out through ISO Technical Committees. Every Member Body interested in a subject for which a Technical Committee has been set up 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.

Draft International Standards adopted by the Technical Committees are circulated to the Member Bodies for approval before their acceptance as International Standards by the ISO Council.

International Standard ISO 3911 was drawn up by Technical Committee ISO/TC 22, *Road vehicles*, and was circulated to the Member Bodies in October 1975.

It has been approved by the Member Bodies of the following countries :

Australia	Iran	Spain
Austria	Japan	Sweden
Belgium	Korea, Rep. of	Switzerland
Brazil	Mexico	Turkey
Bulgaria	Netherlands	United Kingdom
Czechoslovakia	New Zealand	U.S.A.
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The Member Bodies of the following countries expressed disapproval of the document on technical grounds :

Germany
Italy

Wheels/rims — Nomenclature, designation, marking, and units of measurement

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1 SCOPE AND FIELD OF APPLICATION

This International Standard covers the nomenclature, designations, marking and units of measurement for wheels/rims. The nomenclature and accompanying drawings are intended to define fundamental wheel/rim terms rather than to provide a comprehensive tabulation of all wheel design features. Equivalent terms relating to wheels/rims, in English, French and German, are given in an annex.

2 DEFINITIONS

2.1 wheel : A rotating load-carrying member between the tyre and the axle. It usually consists of two major parts :

- a) the rim;
- b) the wheel disc.

The rim and wheel disc may be integral, permanently attached, or detachable.

2.1.1 rim : That part of the wheel on which the tyre is mounted and supported.

2.1.2 wheel disc : That part of the wheel which is the supporting member between the axle and the rim.

2.1.3 single wheel : A wheel which supports one tyre on one end of an axle.

2.1.4 dual wheel : A wheel of the type shown in figure 2, or a wheel with sufficient inset and configuration so that two such wheels, when assembled with each other, support two tyres on one end of an axle.

2.1.5 inset wheel : A wheel so constructed that the centre line of the rim is located inboard of the attachment face of the disc. Inset is the distance from the attachment face of the disc to the centre line of the rim (figure 1a)).

2.1.6 zero set wheel : A wheel so constructed that the centre line of the rim is coincident with the attachment face of the disc (figure 1b)).

2.1.7 outset wheel : A wheel so constructed that the centre line of the rim is located outboard of the attachment face of the disc. Outset is the distance from the attachment face of the disc to the centre line of the rim (figure 1c)).

NOTE — Track, the distance between the centre lines of the tyres on an axle, increases as the outset of the wheels is increased.

2.1.8 dual spacing : The distance between the centre lines of the rims to provide the required clearance between the tyres (figures 2 and 5).

2.2 wheel types

2.2.1 disc wheel : A permanent combination of a rim and wheel disc (figures 1 and 2).

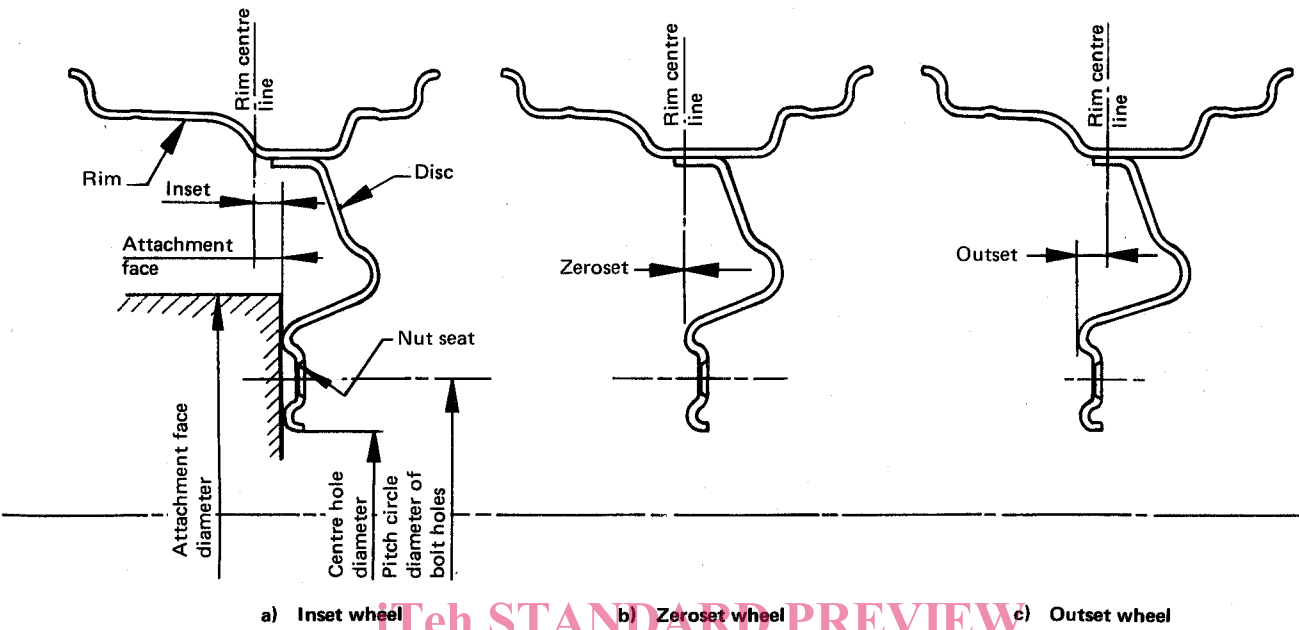


FIGURE 1 — Passenger car and light truck disc wheel nomenclature

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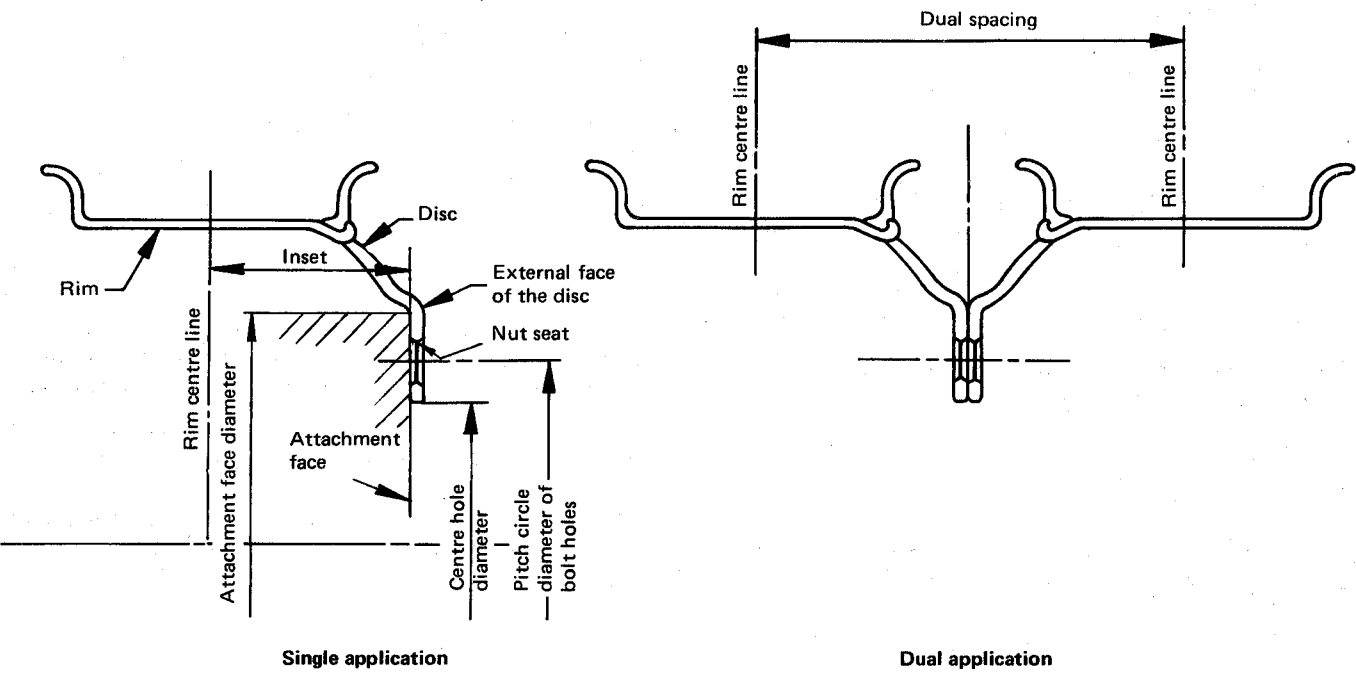


FIGURE 2 — Truck disc wheel nomenclature

2.2.2 divided wheel : A wheel so constructed that its two main parts, the rim portions of which may or may not be the same in width, when securely fastened together, combine to form a rim having two fixed flanges (figure 3).

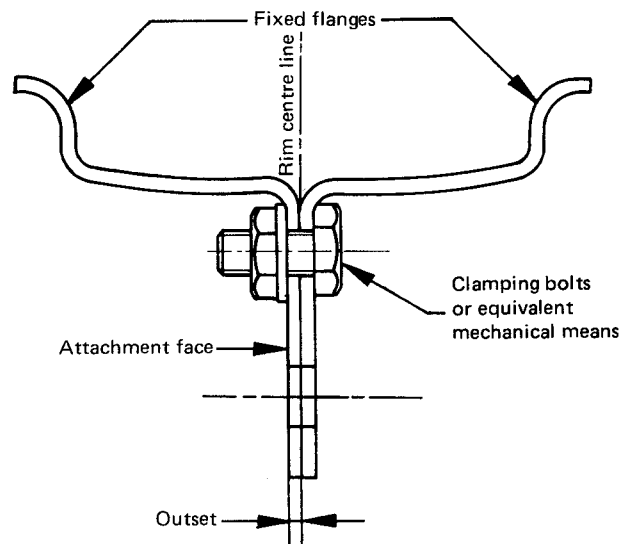


FIGURE 3 — Divided wheel nomenclature
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2.2.3 wire wheel : A wheel so constructed that its rim is joined to the centre member (shell) by a series of wire spokes (figure 4).

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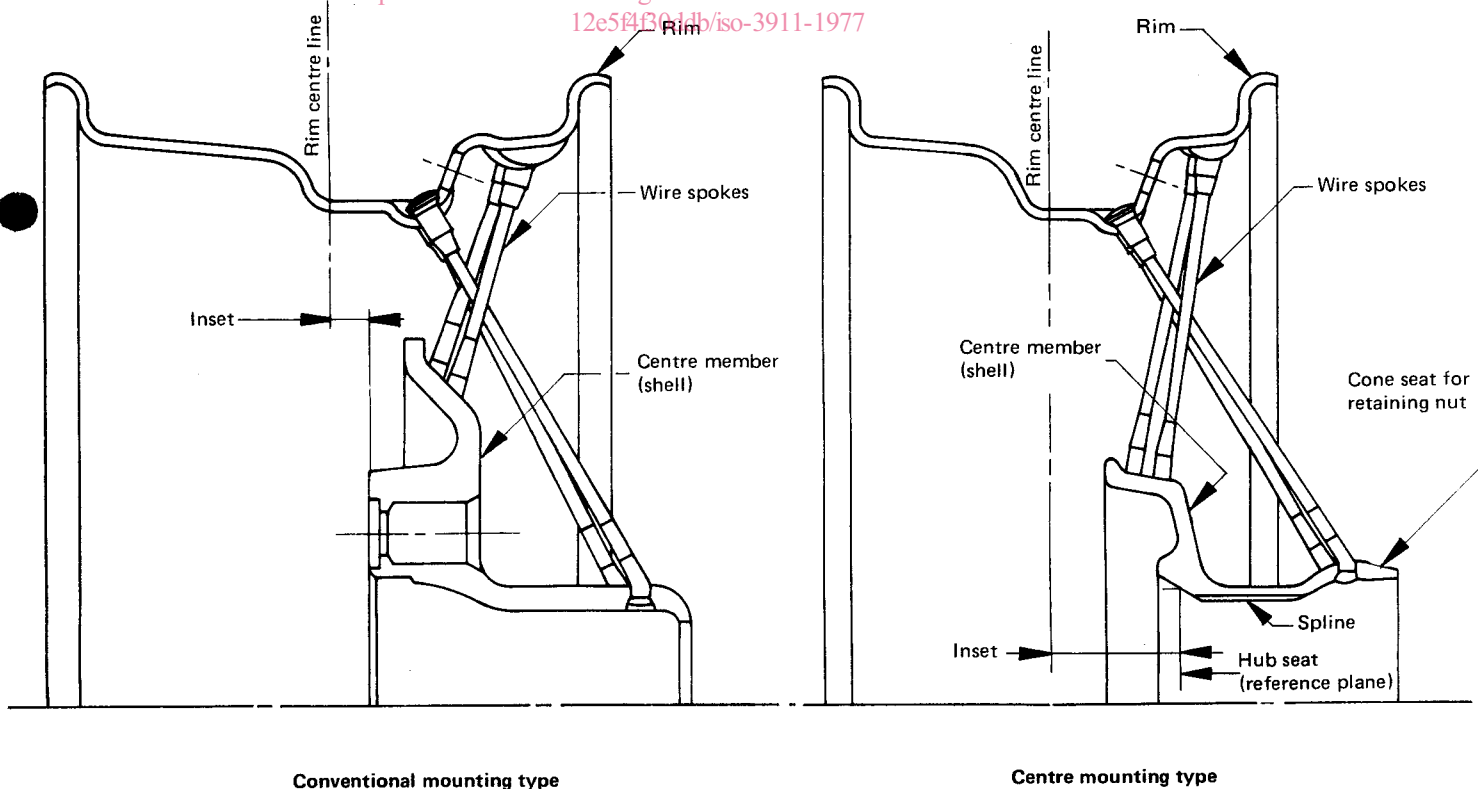


FIGURE 4 — Wire wheel nomenclature

2.2.4 demountable rim wheel : A wheel so constructed that one or two demountable rims are clamped to the wheel disc which also serves as the hub and support for the brake drum or disc brake rotor (figure 5).

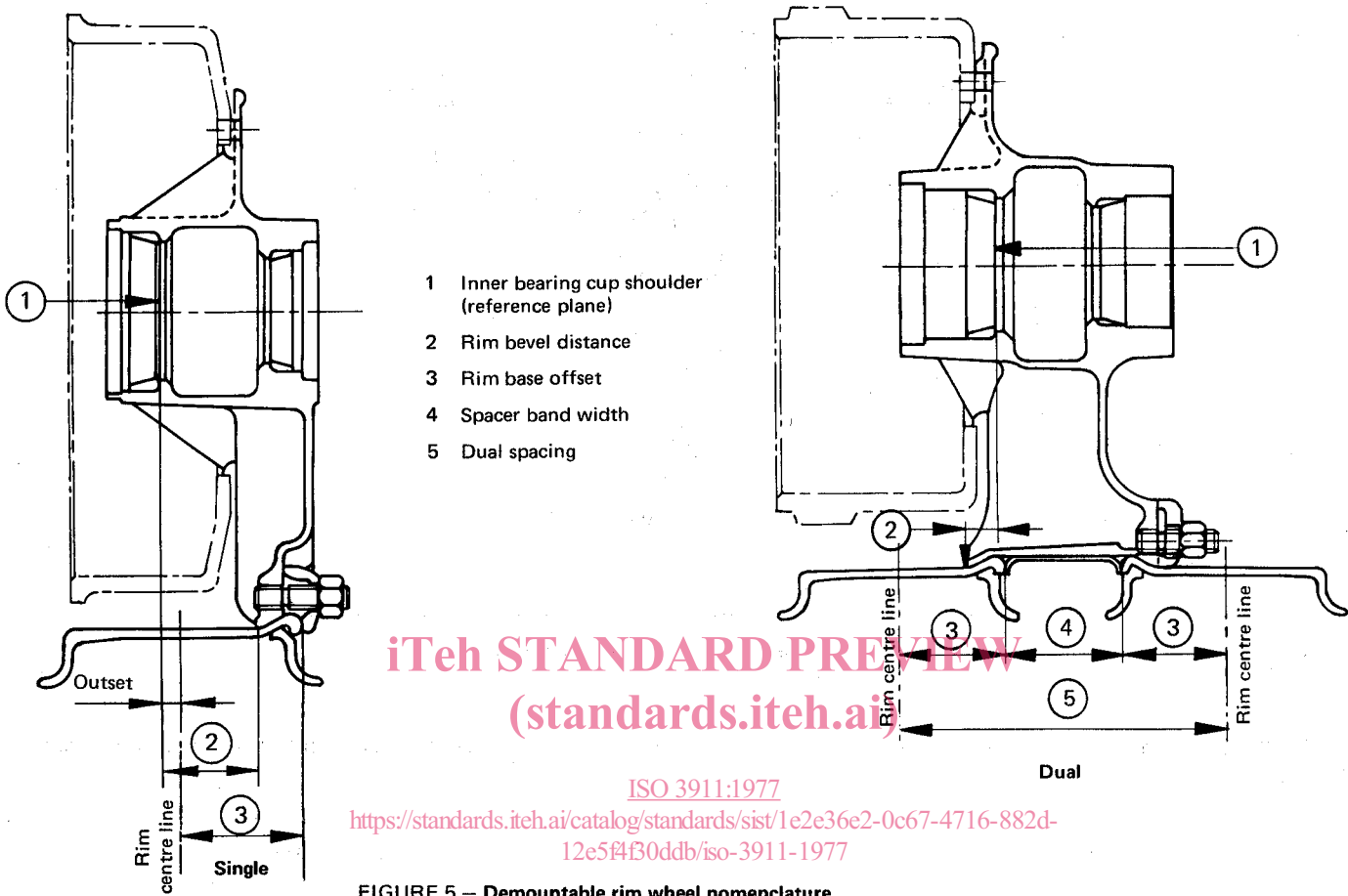


FIGURE 5 – Demountable rim wheel nomenclature

2.2.5 reversible wheel : A wheel so constructed that its wheel disc can be mounted on either face to provide inset (narrow track) or outset (wide track) (figure 6).

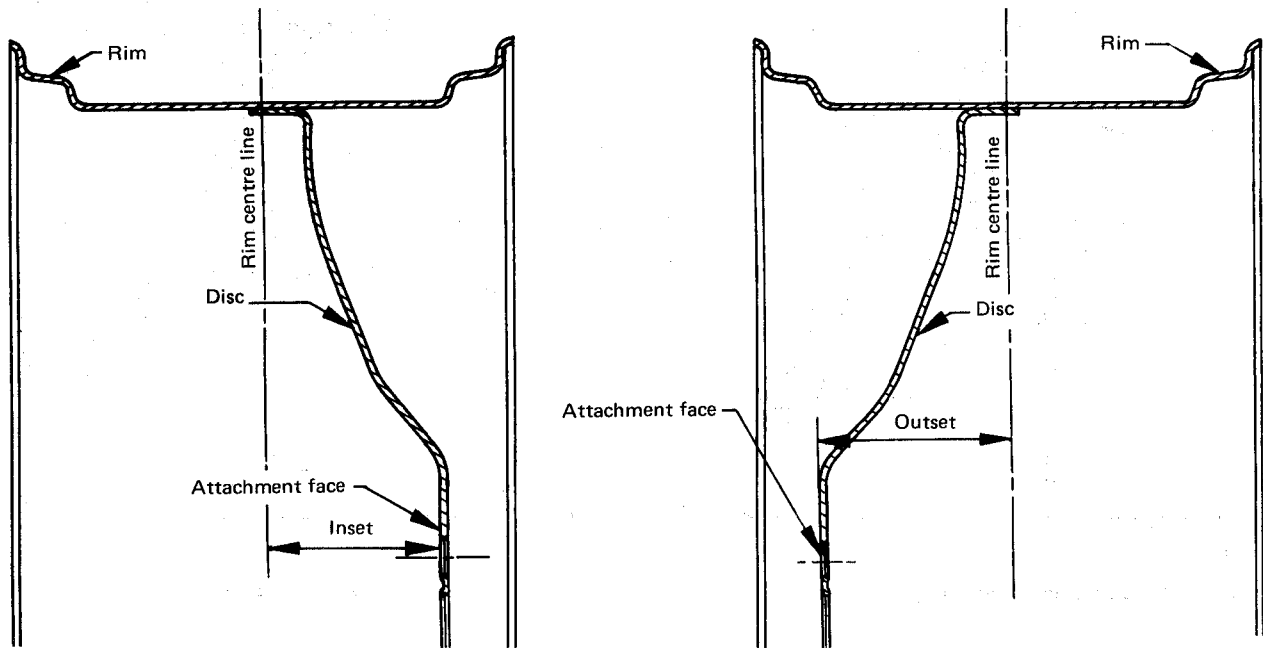


FIGURE 6 – Reversible wheel

2.2.6 adjustable wheel : A wheel so constructed that the rim can be repositioned axially relative to the wheel disc. Adjustments can be made a) manually or b) by power of the vehicle (figure 7).

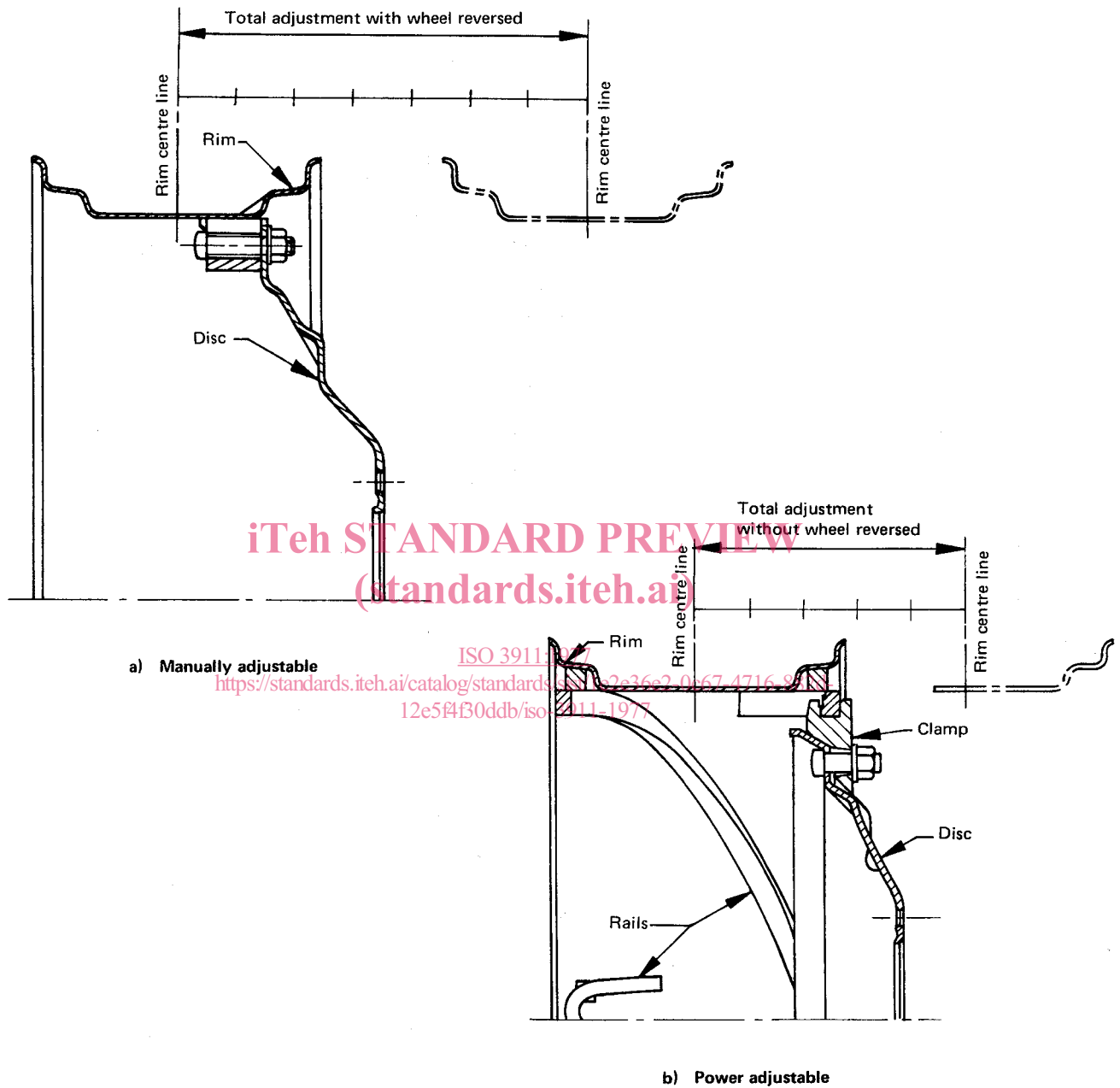


FIGURE 7 — Adjustable wheel

2.3 Rim nomenclature

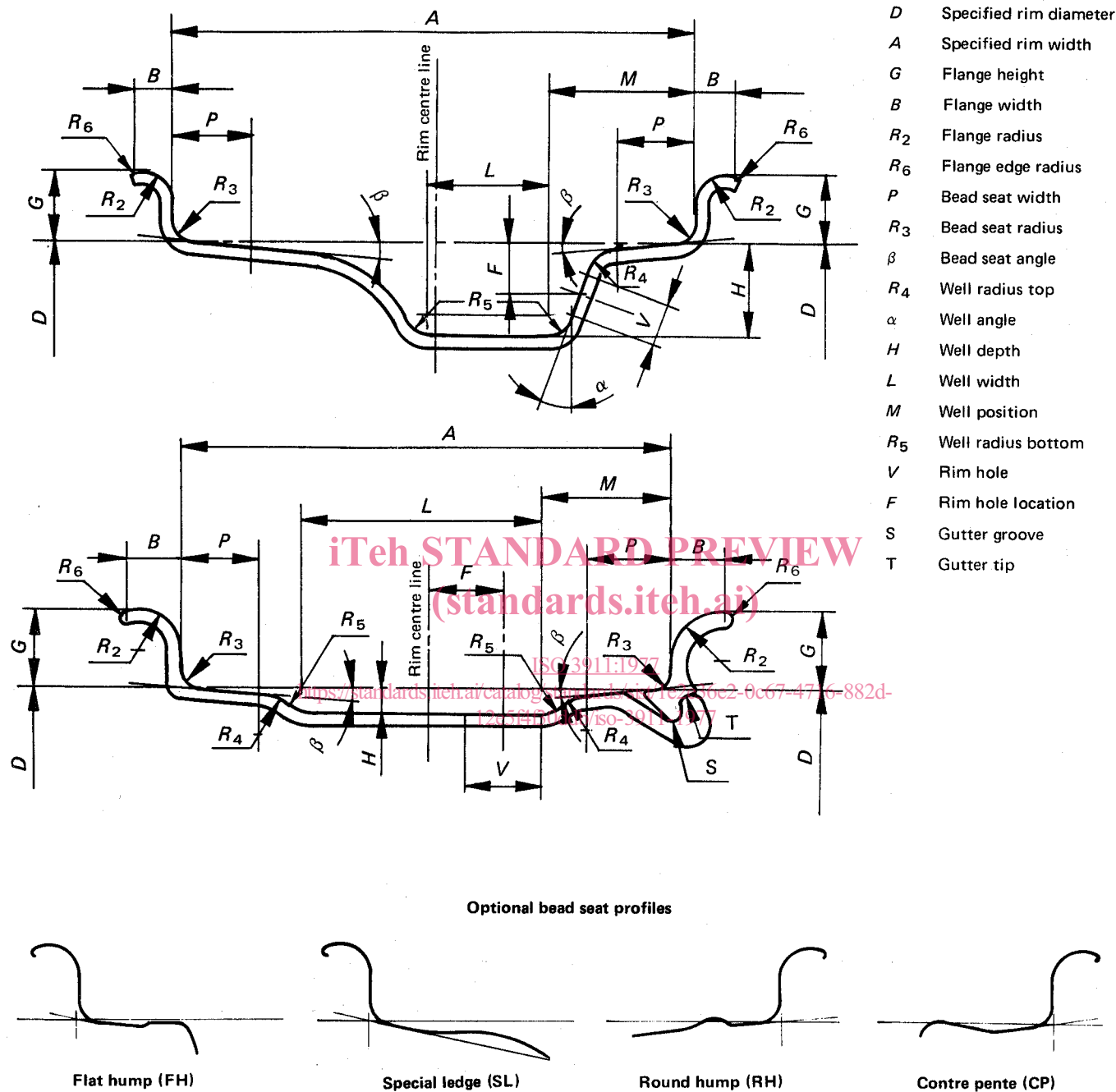


FIGURE 8 – Rim tyre side profile nomenclature

2.3.1 flange : That part of the rim which provides lateral support to the tyre (references A, B, G, R₂, R₃).

2.3.2 bead seat : That part of the rim which provides radial support to the tyre (references D, P, β , R₃).

2.3.3 well : That part of the rim so located with sufficient depth and width to enable the tyre beads to be mounted and demounted over the mounting side rim flange or bead

seat taper (references R₄, α , M, H, L, R₅).

2.3.4 rim hole (valve aperture) : The hole or slot in the rim which accommodates the valve for tyre inflation (references V, F).

2.3.5 gutter : The groove in the rim base in which rim parts such as a spring lock ring or a detachable spring flange fit and are retained by the gutter tip (references S, T).

2.4 Rim types

2.4.1 one-piece (drop-centre) rim : A rim which is of one-piece construction and incorporates a well (figure 9).

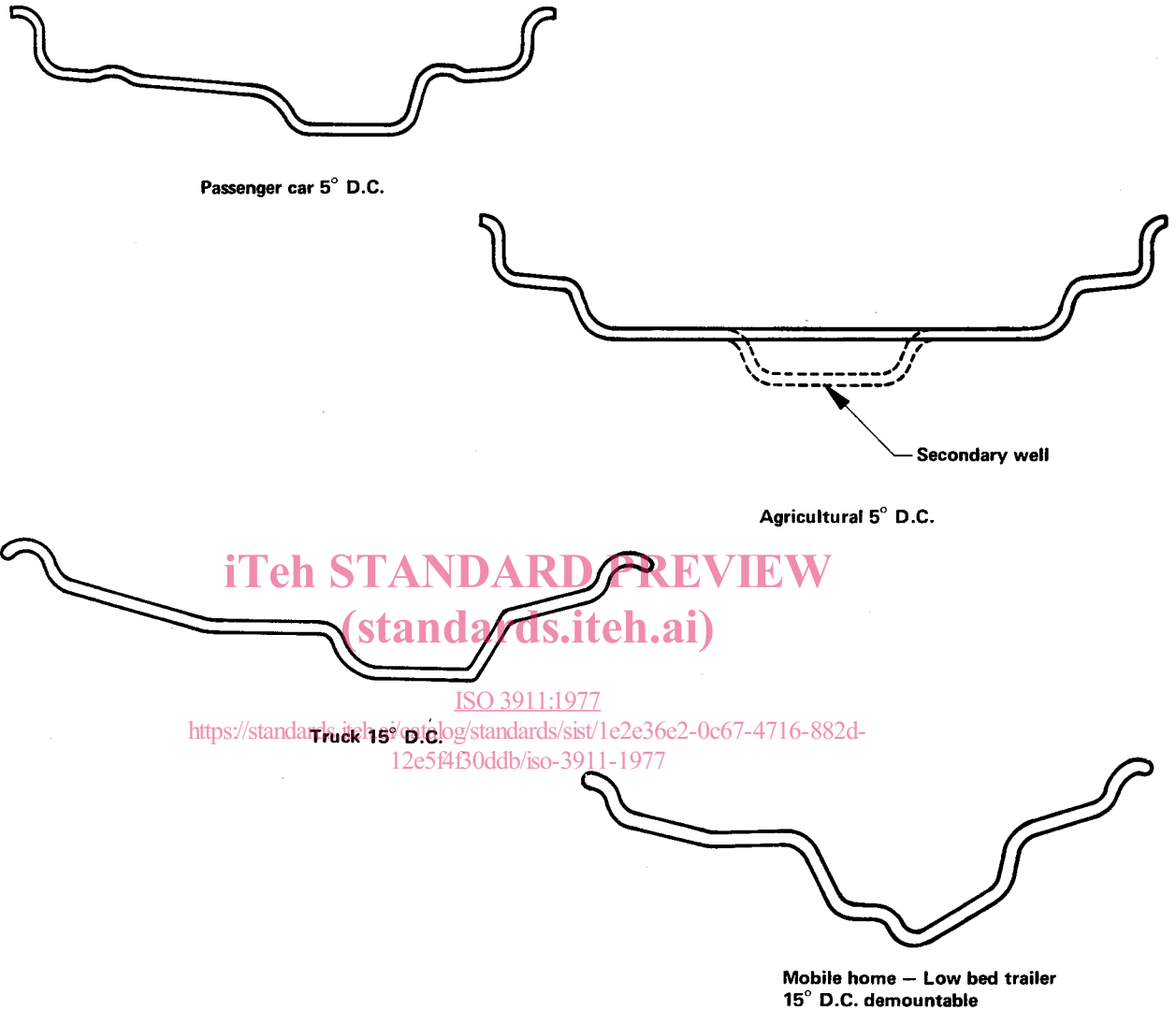


FIGURE 9 – One-piece (drop-centre) rim nomenclature

2.4.2 two-piece rim

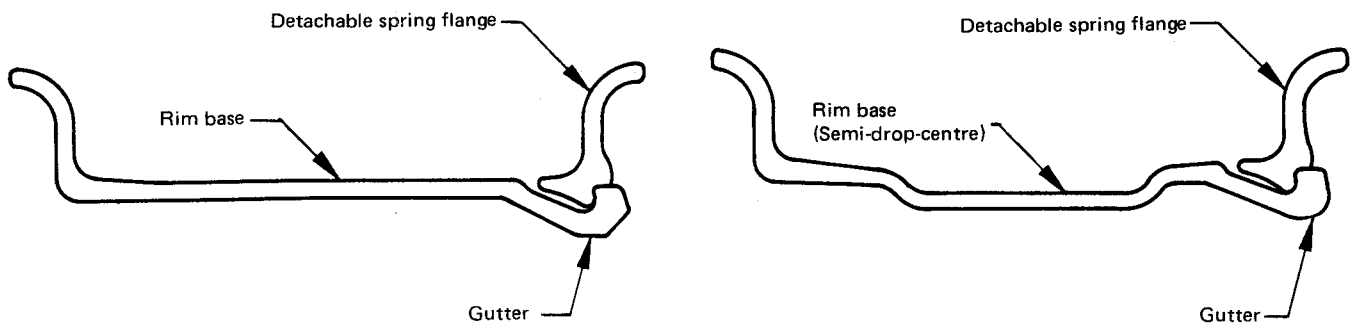


FIGURE 10 – Two-piece rim nomenclature