



International
Standard

ISO 5216

First edition
2024-04

Commercial road vehicles — Ball-bearing turntable — Interchangeability

Véhicules routiers utilitaires — Plateau tournant à roulement à billes — Interchangeabilité

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Published in Switzerland

Contents

	Page
Foreword	iv
1 Scope	1
2 Normative references	1
3 Terms and definitions	1
4 Standard ball-bearing turntables geometrical requirements	2
4.1 Radial section	2
4.2 Fixing holes	3
5 Designation	3
Bibliography	4

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Foreword

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This document was prepared by Technical Committee ISO/TC 22, *Road vehicles*, Subcommittee SC 40, *Specific aspects for light and heavy commercial vehicles, busses and trailers*.

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.

Commercial road vehicles — Ball-bearing turntable — Interchangeability

1 Scope

This document specifies dimensions of ball-bearing turntable when mounted on a vehicle which is part of vehicle combinations specified in of ISO 18868:2013, Clause 4, to ensure their interchangeability.

This document also applies to the following:

- drawbar trailers using a ball-bearing turntable to steer the front axle;
- ball-bearing turntables assembled with the fifth-wheel of the road tractor (truck) to improve steering manoeuvre.

2 Normative references

There are no normative references in this document.

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

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

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

3.1

ball-bearing turntable

ball race

bearing built specifically for trailer and semi-trailer application to enable the rotation of the swivelling support attached to the vehicle chassis, supporting vertical and horizontal loads and suitable for the application under a fifth wheel coupling

Note 1 to entry: See [Figure 1](#).

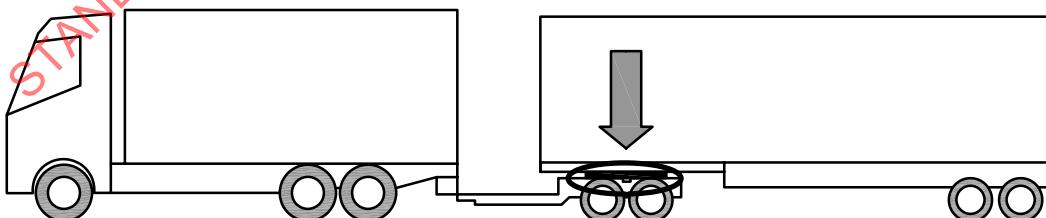


Figure 1 — Example of ball-bearing location

4 Standard ball-bearing turntables geometrical requirements

4.1 Radial section

The radial section shall be one of the types shown in [Figure 2](#). Dimensions of the types shall be according to [Table 1](#). Dimensions not specified are left to the discretion of the component manufacturer.

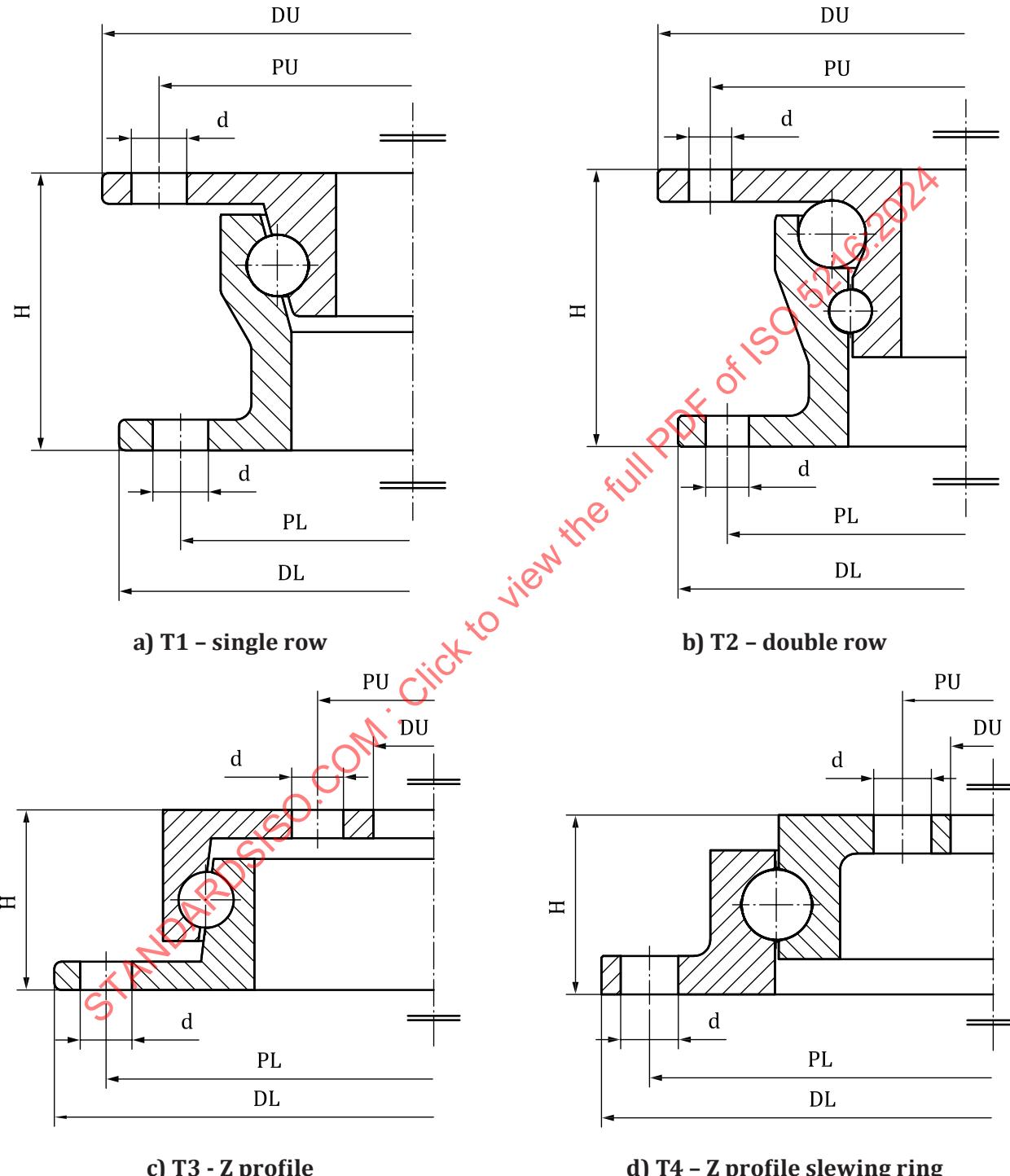


Figure 2 — Radial section types

Table 1 — Overall dimensions

TYPE	DL (max.) [mm]	PL [mm]	DU (max.) [mm]	PU [mm]	d [mm]	H [mm]	Axial load (min.) [kN]
T1	995	952	1 006	966	18	90	-
	1 005	960	1 016	974	18	90	70
	1 105	1 060	1 116	1 074	18	90	80
	1 205	1 160	1 216	1 174	18	90	130
	1 305	1 260	1 316	1 274	18	90	140
T2	881	852	895	866	16	80	80
	1 096	1 060	1 109	1 074	16	80	100
	988	952	1 001	966	18	90	120
	1 096	1 060	1 109	1 074	18	90	130
	1 196	1 160	1 208	1 174	18	90	100
TYPE	DL (max.) [mm]	PL [mm]	DU (min.) [mm]	PU [mm]	d [mm]	H [mm]	Axial load (min.) [kN]
T3	510	475	300	340	-	52	18
	660	625	450	490	-	52	25
	760	725	550	590	-	52	30
	860	825	650	690	-	52	35
	960	925	750	790	-	52	40
	1 060	1 025	850	890	-	52	45
T4	525	490	300	332	18	56	40
	655	620	430	462	18	56	80
	755	720	530	562	18	56	120
	855	820	630	662	18	56	150
	955	920	730	762	18	56	180
	1 055	1 020	830	862	18	56	210
	1 205	1 170	980	1 012	18	56	250

4.2 Fixing holes

Fixing holes are defined only by their dimension “d” and circle dimension “PU” and “PL”. Fixing holes distribution is defined by the ball-bearing turntables manufacturer.

5 Designation

Ball races in conformance with the requirements of this document shall be designated as follows:

- reference to this document;
- number of type according to [Figure 2](#);
- DL dimension according to [Table 1](#);
- axial load according to [Table 1](#).

EXAMPLE

— Ball-Bearing Turntable ISO xxxxx T1-1005-70

Bibliography

[1] ISO 18868:2013, *Commercial road vehicles — Coupling equipment between vehicles in multiple vehicle combinations — Strength requirements*

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