
International Standard



7653

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Road vehicles — Commercial vehicles — Couplings between power take-offs (PTO) and ancillary driven units

Véhicules routiers — Véhicules utilitaires — Liaisons entre prises de puissance et organes récepteurs de puissance

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Descriptors : road vehicles, commercial road vehicles, power takeoff, couplings, dimensions, designation.

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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7653 was prepared by Technical Committee ISO/TC 22, *Road vehicles*.

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Road vehicles — Commercial vehicles — Couplings between power take-offs (PTO) and ancillary driven units

1 Scope and field of application

This International Standard lays down the dimensions of couplings between power take-offs (PTO) and ancillary driven units mounted on commercial vehicles, such as hydraulic pumps, etc.

This International Standard applies to ancillary equipment of commercial vehicles that require a hydraulic or mechanical power system and that take power off the main drive line of the vehicle.

2 References

ISO 7646, *Road vehicles — Gearbox flanges for commercial vehicles and buses — Type A*.¹⁾

ISO 7647, *Road vehicles — Gearbox flanges for commercial vehicles and buses — Type S*.¹⁾

3 Specifications

3.1 Types of couplings

This International Standard defines two types of couplings:

- Type A: Indirect coupling
- Type D: Direct coupling

Type A is designed for flange coupling (indirect coupling) but it may also be used for direct coupling if optional features as shown in figure 1 are provided.

3.2 Interchangeability

Indirect couplings shall comply with the requirements of figure 1.²⁾

Direct couplings shall comply with the requirements of figure 2.

Details not specified are left to the manufacturer's choice.

3.3 Flanges

Flanges for type A splined shafts shall comply with ISO 7646 or ISO 7647.

4 Designation

Example for the designation of a PTO with type D connection:

PTO Coupling ISO 7653 - D

1) At present at the stage of draft.

2) If the flange is supplied by the PTO manufacturer the shaft need not be in accordance with figure 1. However in this case the dimensions of the flange shall conform to ISO 7646 or ISO 7647.

Technical drawing of a splined shaft assembly. The drawing includes side and end views with various dimensions and a table of optional features.

Side View Dimensions:

- Shaft diameter: $\phi 80 \text{ H8}$
- Keyway width: 30 max.
- Keyway depth: 15 max.
- Keyway length: 26 min.
- Keyway position: $7,5 \text{ min.}$
- Keyway tolerance: $30 \text{ } ^0_{-1}$
- Keyway length tolerance: $M12 \times 20 \text{ min.}$
- Keyway position tolerance: $M12$
- Keyway length tolerance: 30 max.
- Keyway depth tolerance: 15 max.

End View Dimensions:

- Shaft diameter: $\phi 80 \text{ JS13}$
- Keyway width: 30 max.
- Keyway depth: 15 max.
- Keyway length: 26 min.
- Keyway position: $7,5 \text{ min.}$
- Keyway tolerance: $30 \text{ } ^0_{-1}$
- Keyway length tolerance: $M12 \times 20 \text{ min.}$
- Keyway position tolerance: $M12$
- Keyway length tolerance: 30 max.
- Keyway depth tolerance: 15 max.

Optional features (see 3.1):

- Keyway width: 30 max.
- Keyway depth: 15 max.
- Keyway length: 26 min.
- Keyway position: $7,5 \text{ min.}$
- Keyway tolerance: $30 \text{ } ^0_{-1}$
- Keyway length tolerance: $M12 \times 20 \text{ min.}$
- Keyway position tolerance: $M12$
- Keyway length tolerance: 30 max.
- Keyway depth tolerance: 15 max.

D	d	B
a11	k6	j6
36	32	6

Figure 1 – Type A indirect coupling – PTO side

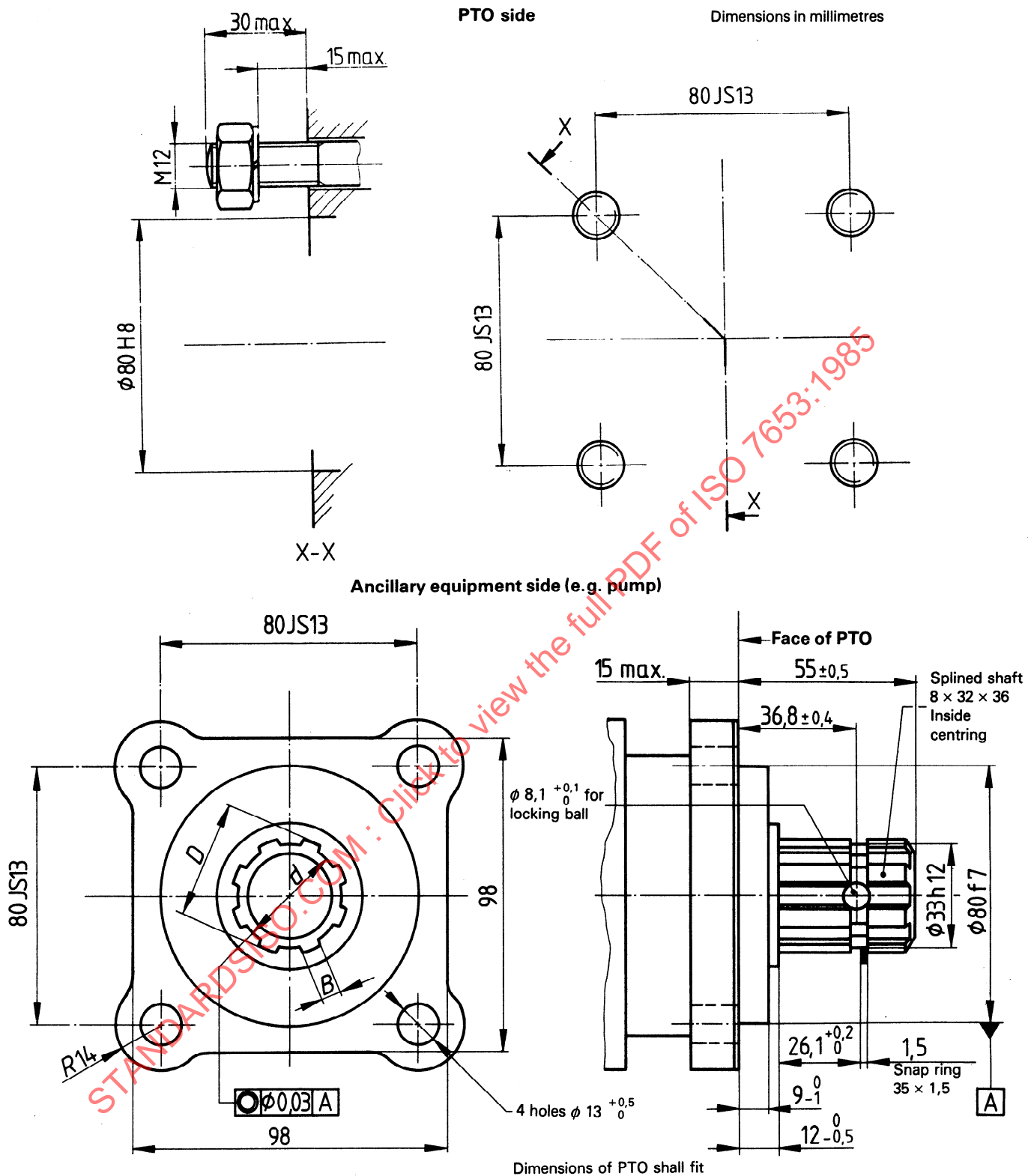


Figure 2 — Type D direct coupling

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