
INTERNATIONAL STANDARD



500

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Agricultural tractors — Power take-off and drawbar — Specification

Tracteurs agricoles — Prise de force et barre d'attelage — Spécifications

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FOREWORD

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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 500 was developed by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, and was circulated to the member bodies in March 1977.

It has been approved by the member bodies of the following countries :

Australia	France	Poland
Austria	Germany, F.R.	Romania
Brazil	India	South Africa, Rep. of
Bulgaria	Iran	Spain
Canada	Korea, Dem. P. Rep. of	Sweden
Chile	Korea, Rep. of	Switzerland
Czechoslovakia	Mexico	Turkey
Denmark	New Zealand	United Kingdom
Finland	Philippines	U.S.S.R.

The member bodies of the following countries expressed disapproval of the document on technical grounds :

Belgium
Italy
U.S.A.

This International Standard cancels and replaces ISO Recommendation R 500-1966, of which it constitutes a technical revision.

Agricultural tractors – Power take-off and drawbar – Specification

1 SCOPE AND FIELD OF APPLICATION

This International Standard specifies requirements for :

- Types 1, 2 and 3 power take-off (PTO),
- the drawbar,
- the clearance zone around the power take-off,
- guarding of the power take-off,

on agricultural tractors, complying with the tests of ISO 789/1.

2 SPECIFICATIONS FOR THE TYPES OF POWER TAKE-OFF

2.1 General

The characteristics of the three types of PTO shall be in accordance with table 1.

2.2 Manufacturing requirements

The dimensions, in millimetres, of the main PTO on agricultural tractors shall comply with figures 1, 2 and 3 and tables 2, 3 and 4 as appropriate.

2.3 Direction of rotation of PTO

The direction of rotation of the PTO shall be clockwise when viewed from behind the tractor.

2.4 Location of PTO and drawbar

The relationship between the location of PTO and drawbar shall comply with figure 4.

3 DRAWBAR

The drawbar shall be situated in the longitudinal mid-plane of the tractor.

NOTE – The most important dimensions are given in figure 4.

The diameter of the hole in the drawbar should be 33 mm for all three types of PTO.

The thickness of the drawbar shall be not more than 32 mm.

4 CLEARANCE ZONE AROUND THE POWER TAKE-OFF

The clearance zone around the PTO shall be in accordance with figure 5.

5 GUARDING OF THE POWER TAKE-OFF

The master guard, as shown in figure 6, shall be supplied by the manufacturer and shall be fixed to the tractor unless an equivalent protective device ensures the same degree of protection (for example, supports of towing hook or clevis).

TABLE 1 – Characteristics of the types of PTO

Type	Nominal diameter mm	Number and type of splines	PTO rated rotational frequency* min ⁻¹	PTO maximum power at rated rotational frequency of engine kW
1	35	6 straight splines	540	48
2	35	21 } involute splines	1 000	92
3	45	20 }		185

* The rated rotational frequency of the PTO for the three types should be reached at between 80 and 90 % of the rotational frequency of the engine.

