INTERNATIONAL STANDARD

ISO 500-2

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Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3 —

Part 2: Narrow-track tractors, dimensions for master shield and clearance zone

Tracteurs agricoles — Prises de force montées à l'arrière des types 1, 2 et 3 —

Partie 2: Tracteurs à voie étroite, dimensions du bouclier protecteur et de la zone de dégagement

Reference number
ISO 500-2:2004(E)

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Foreword

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International Standards are drafted in accordance with the rules given in the ISO/IEC Directives, Part 2.

The main task of technical committees is to prepare International Standards. Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

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.

ISO 500-2 was prepared by Technical Committee ISO/TC 23, *Tractors and machinery for agriculture and forestry*, Subcommittee SC 4, *Tractors*.

This first edition of ISO 500-2, together with the first editions of ISO 500-1 and ISO 500-3, cancels and replaces ISO 500:1991, which has been technically revised.

ISO 500 consists of the following parts, under the general title *Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3*:

— *Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone*

— *Part 2: Narrow-track tractors, dimensions for master shield and clearance zone*

— *Part 3: Main PTO dimensions and spline dimensions, location of PTO*

Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3 —

Part 2: Narrow-track tractors, dimensions for master shield and clearance zone

1 Scope

This part of ISO 500 specifies the dimensions of the master shield and clearance zones for rear-mounted power take-offs (PTO) of types 1 and 2 on narrow-track (track width 1 150 mm or less) agricultural tractors.

2 Normative references

The following referenced documents are indispensable for the application 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 500-1:2004, *Agricultural tractors — Rear-mounted power take-off types 1, 2 and 3 — Part 1: General specifications, safety requirements, dimensions for master shield and clearance zone*

ISO 789-1:1990, *Agricultural tractors — Test procedures — Part 1: Power tests for power take-off*

ISO 5673-2, *Agricultural tractors and machinery — Power take-off drive shafts and power-input connection — Part 2: Specification for use of PTO drive shafts, and position and clearance of PTO drive line and PIC for different attachments*[1)]

ISO 6489-1, *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 1: Dimensions of hitch-hooks*

ISO 6489-2, *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 2: Specifications for clevis coupling 40*

ISO 6489-3, *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 3: Tractor drawbar*

ISO 6489-4, *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Part 4: Dimensions of piton-type coupling*

ISO 24347, *Agricultural vehicles — Mechanical connections between towed and towing vehicles — Dimensions of ball-type coupling device (80 mm)*[2)]

1) To be published. (Revision of ISO 5673:1993)

2) To be published.

3 Terms and definitions

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

3.1
power take-off shaft
PTO
external shaft on the rear of the tractor to provide rotational power to implements

[ISO 500-1:2004, definition 3.1]

3.2
type A tractor
agricultural tractor with a fixed or adjustable minimum track width on at least one axle of 950 mm or less and tractor PTO power of less than 20 kW as determined in accordance with ISO 789-1

3.3
type B tractor
agricultural tractor with a fixed or adjustable minimum track width on at least one axle of more than 950 mm but not more than 1 150 mm

4 Specifications

4.1 The tractor rear PTO shall be of type 1 or type 2, according to ISO 500-1.

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

4.3 The nominal PTO rated rotational frequency may be realized by one or more engine speed ranges.

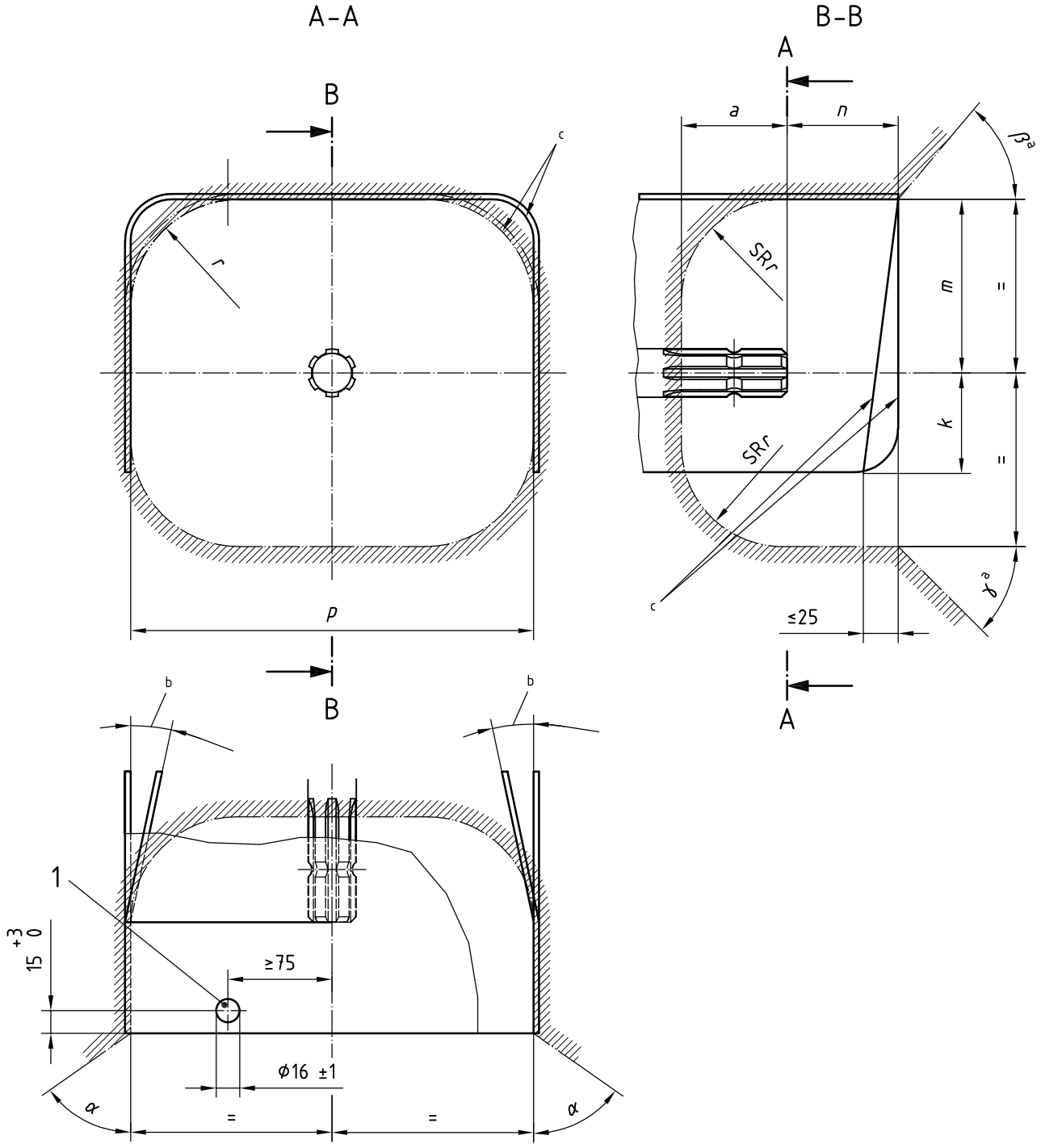
5 General requirements

Safety and PTO speed requirements shall be according to ISO 500-1.

6 Dimensions for tractor master shield aperture and clearance zone of PTO

The tractor master shield aperture and the clearance zone around the PTO shall be in accordance with Figure 1 and Table 1.

Dimensions in millimetres



Key

1	hole for coupling up the restraining member of the PTO drive shaft guard preventing guard rotation
	clearance zone
	master shield aperture

[a] The clearance may be restricted by movable and/or detachable devices. The clearance zone on towing vehicles shall be in accordance with ISO 6489, ISO 5673-2 and ISO 24347.

[b] Angle optional under consideration of clearance zone.

[c] Shape optional.

Figure 1 — Tractor master shield aperture and clearance zone around PTO

Table 1 — Tractor master shield controlling dimensions for the aperture and dimensions for clearance zone

Dimension (see Figure 1)	PTO types 1 and 2	
	Tractor type A	Tractor type B
a min.	76 mm	76 mm
α min.	60°	60°
β min.	50°	50°
γ min.	45°	45°
SRr max.	76 mm	76 mm
k min.	70 mm	70 mm
$m\ ^{+20}_{-5}$	110 mm	110 mm
$n\ ^{+5}_{-20}$	80 mm	80 mm
p	180 mm + 120 mm [a]	220 mm + 80 mm [a]
r max.	76 mm	76 mm

[a] If $p \leqslant 250$ mm, the master shield should be partly or completely movable to facilitate coupling and uncoupling the PTO drive shaft (see ISO 500-1:2004, 6.2).

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