

Specification for

Agricultural discs: classification, main fixing dimensions and general requirements

[ISO title: Equipment for working the soil — Disks —
Classification, main fixing dimensions and specifications]

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- Agricultural Engineers' Association*
- Agricultural Machine Parts Export Association*
- British Agricultural and Garden Machinery Association Ltd.
- British Lawn Mower Manufacturers' Federation
- Department of Industry (Mechanical Engineering)
- Health and Safety Executive
- Institution of Agricultural Engineers Incorporated
- Ministry of Agriculture, Fisheries and Food*
- National Farmers' Union*
- National Institute of Agricultural Engineering*
- Royal Welsh Agricultural Society

The organizations marked with an asterisk in the above list, together with the following, were directly represented on the committee entrusted with the preparation of this British Standard:

National College of Agricultural Engineering

This British Standard, having been prepared under the direction of the Agricultural Machinery and Implement Standards Committee, was published under the authority of the Executive Board and comes into effect on 31 December 1979

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National foreword

This British Standard, prepared under the direction of the Agricultural Machinery and Implement Standards Committee, is identical with ISO 5679 *“Equipment for working the soil — Disks — Classification, main fixing dimensions and specifications”* published by the International Organization for Standardization (ISO).

Terminology and conventions. The text of the International Standard has been approved as suitable for publication, without deviation, as a British Standard. Some terminology and certain conventions are not identical with those used in British Standards; attention is especially drawn to the following.

The comma has been used throughout as a decimal marker. In British Standards it is current practice to use a full point on the baseline as the decimal marker.

Wherever the words “International Standard” appear, referring to this standard, they should be read as “British Standard”.

The information referred to in ISO/TR 4122 is given as National appendix A.

A British Standard does not purport to include all the necessary provisions of a contract. Users of British Standards are responsible for their correct application.

Compliance with a British Standard does not of itself confer immunity from legal obligations.

Summary of pages

This document comprises a front cover, an inside front cover, pages i and ii, pages 1 to 10, an inside back cover and a back cover.

This standard has been updated (see copyright date) and may have had amendments incorporated. This will be indicated in the amendment table on the inside front cover.

0 Introduction

The main purpose of this International Standard is to ensure interchangeability for a minimum number of types and sizes of disks to meet the requirements of a wide range of conditions of work.

The standard specifies three types of disks. This division into distinct designs of disks was found to be preferable to classification according to use with a particular implement, because of lack of clear demarcation in usage of the various designs.

It will be appreciated that some apparent irregularities in sequence of nominal size or dimensions in the tables arises from different fields of usage of a particular type of disk.

The dimensional tolerances given are not unnecessarily tight and are consistent with the requirements of interchangeability.

1 Scope

This International Standard specifies interchangeability dimensions for agricultural disks of the same type and nominal size, classified as types A, B and C.

2 Field of application

This International Standard is applicable to disks as working parts of ploughs, harrows and disk-tillers.

3 Reference

ISO/TR 4122, *Equipment for working the soil — Dimensions of flat disks — Type A*.

4 Classification

Disks shall be classified as follows:

Type A — Flat disks (see ISO/TR 4122)

Type B — Concave disks which may have the following variants:

Variant 1 — disks with square centre hole (see Figure 1)

Variant 2 — disks with round centre hole (see Figure 2)

Variant 3 — disks with several fixing holes (see Figure 3) with or without centre hole

Type C — Concave disks with a flat area around the centre hole square (see Figure 4).

NOTE All variants of disks may have cutouts.

5 Specification

5.1 Nominal dimensions

The nominal dimensions of the disks shall be as given in Table 1 for concave disks with centre hole, and in Table 2 for concave disk with several fixing holes.

5.2 Cutting edge bevelling

Flat disks shall have the cutting edge bevelled on both sides. The concave disks shall be bevelled on either the concave or the convex side. The thickness of the edge shall not be greater than 0,8 mm.

5.3 Eccentricity and wobble

Eccentricity and wobble of flat disks, type A, shall not exceed 0,5 % of the outside diameter of the disk.

Eccentricity and wobble of disks type B and C shall not exceed the tolerances given in Table 3.

5.4 Flatness

5.4.1 Distortion of flat disks, type A, when the disk is laid on a flat surface shall not exceed:

— 1,6 mm for disks with diameters up to and including 510 mm;

— 2,5 mm for disks with diameters over 510 mm.

5.4.2 Distortion of concave disks, type B, shall not exceed 5 mm when the disk is laid on a flat surface.

Local distortions of the disk edge, at not more than three points, shall not exceed 0,3 % of the outside diameter of the disk. Local distortions shall be measured radially.