International Standard 5679

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

Equipment for working the soil — Disks — Classification, main fixing dimensions and specifications

Matériel de travail du sol — Disques — Classification, principales dimensions de fixation, et 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 5679 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	Romania
Austria	Germany, F.R.	South Africa, Rep. of
Belgium	Iran	Spain
Brazil	Italy	Sweden
Bulgaria	Korea, Dem. P. Rep. of	Switzerland
Chile	Korea, Rep. of	Turkey
Czechoslovakia	Philippines	United Kingdom
Denmark	Poland	USSR
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The member bodies of the following countries expressed disapproval of the document on technical grounds :

India
Mexico
New Zealand

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Equipment for working the soil — Disks — Classification, main fixing dimensions and specifications

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.

TABLE 1 — **Concave disks — Type B, variants 1 and 2, and type C**

Dimensions in millimetres

Nominal diameter $d_1 \pm 10$	**Size of square hole** a	**Diameter of round hole** d_2	**Radius of concavity** R	**Height of concavity** t^*	**Thickness** s
300	26	30	500	23	2-3
350	26	30	500	32	3-4
400	26	33	550	38	3-4
	31	35			
450	29	33	600	44	3-4
	31	65			
	(26)				
500	26	33	600	55	4-5
	31	65			
550	31	33	600	67	4-5
		65			
600	31	40	600	80	4-6
	41	65			
650	31	46	650	87	6-8
	41	65			
	(33)				
700	51	65	650	102	6-8
750	51	65	650	119	8

* Dimension t for reference.

NOTES

1 Flat area diameter of concave disk, type C, is to be equal to 25 % of nominal diameter. Tolerance for radius of concavity ± 5 % of R.

2 Dimensions in parentheses (—) are non preferred.

TABLE 2 – **Concave disks – Type B, variant 3**

Dimensions in millimetres

Nominal diameter $d_1 \pm 10$	Fixing holes				Radius of concavity R	Height of concavity t^*	Thickness s
	P.C.D. d_4	Size of square hole a	Diameter of round hole d_3	Number			
400	90	11	11	3	600	34	3-5
450	90	11	11	3	600	34	3-5
600	230	13	13	4	600	80	5-7
	270						
650	230	13 (11)	13 (11)	4	600	96	5-7
	270			(6)			
	(230)						
700	230	13 (17)	13 (17)	4	700	94	6-8
	270						
	(222)						
750	270	13 (11)	13 (11)	(4)	700	109	6-10
	(280)			6			
	355						
800	280	13 (11)	13 (11)	6	700	126	8-12
	355						
	(270)						

* Dimension t for reference.

NOTES

1 Tolerance for radius of concavity ± 5 % of R.

2 Dimensions in parentheses (–) are non preferred.

TABLE 3 – **Tolerances for eccentricity and wobble of disk types B and C**

Dimensions in millimetres

Nominal diameter d_1	Eccentricity max.	Wobble max.
400	2	4
450	2	4
500	3	5
550	3	5
600	4	8
650	4	8
700	6	8
750	6	10
800	6	10

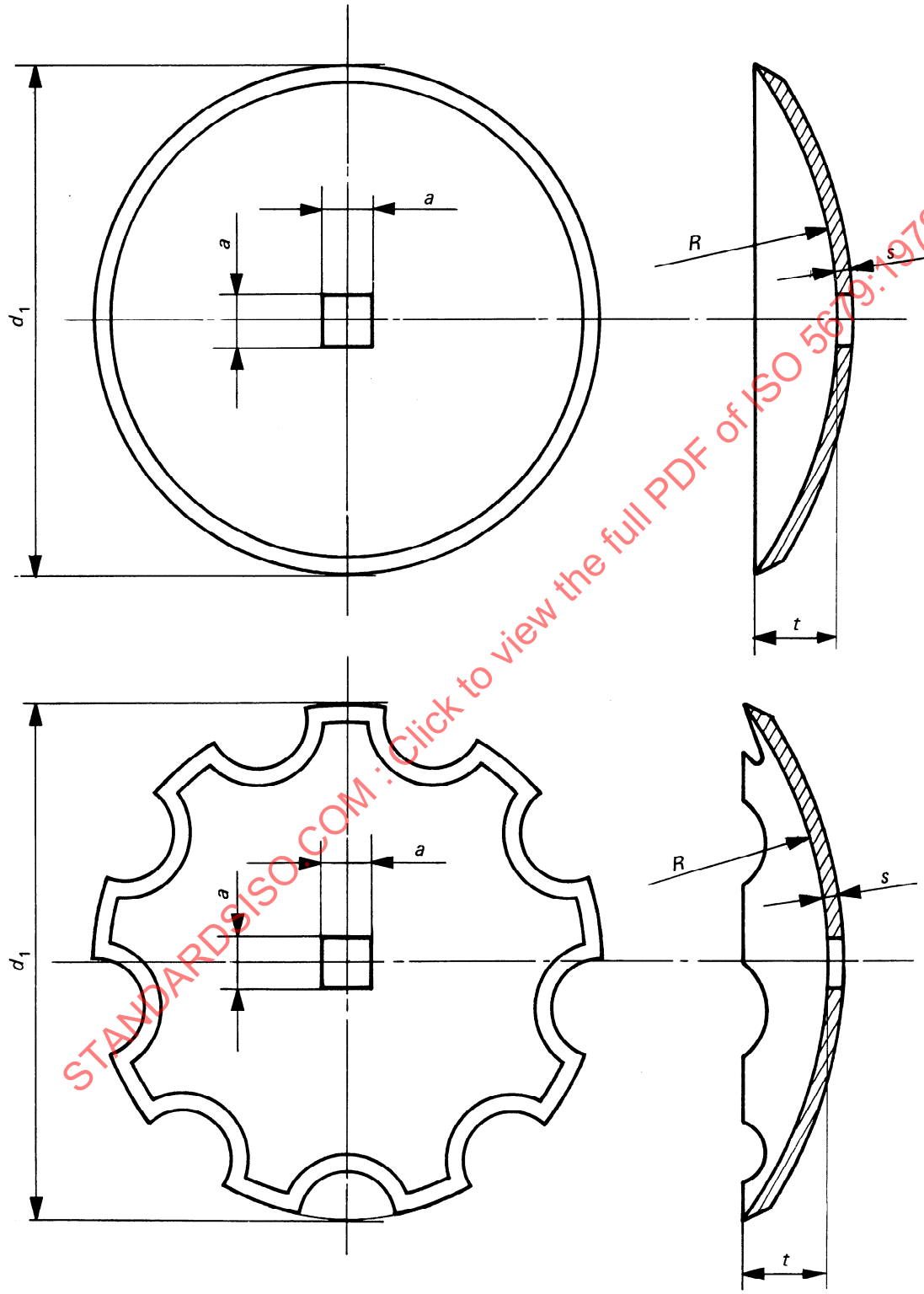


FIGURE 1 — **Concave disks with square centre hole — Type B, variant 1**

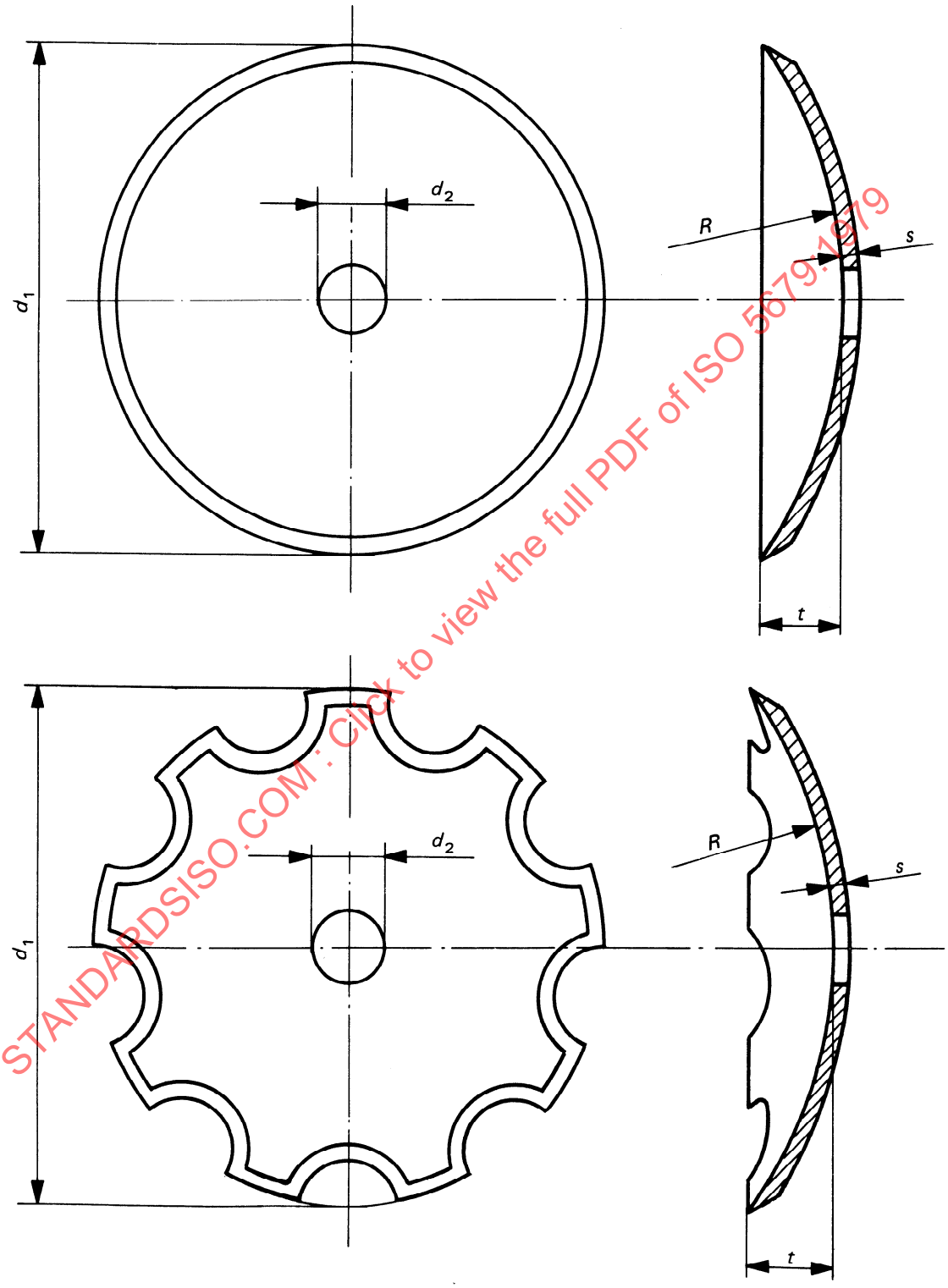


FIGURE 2 – **Concave disks with round centre hole – Type B, variant 2**

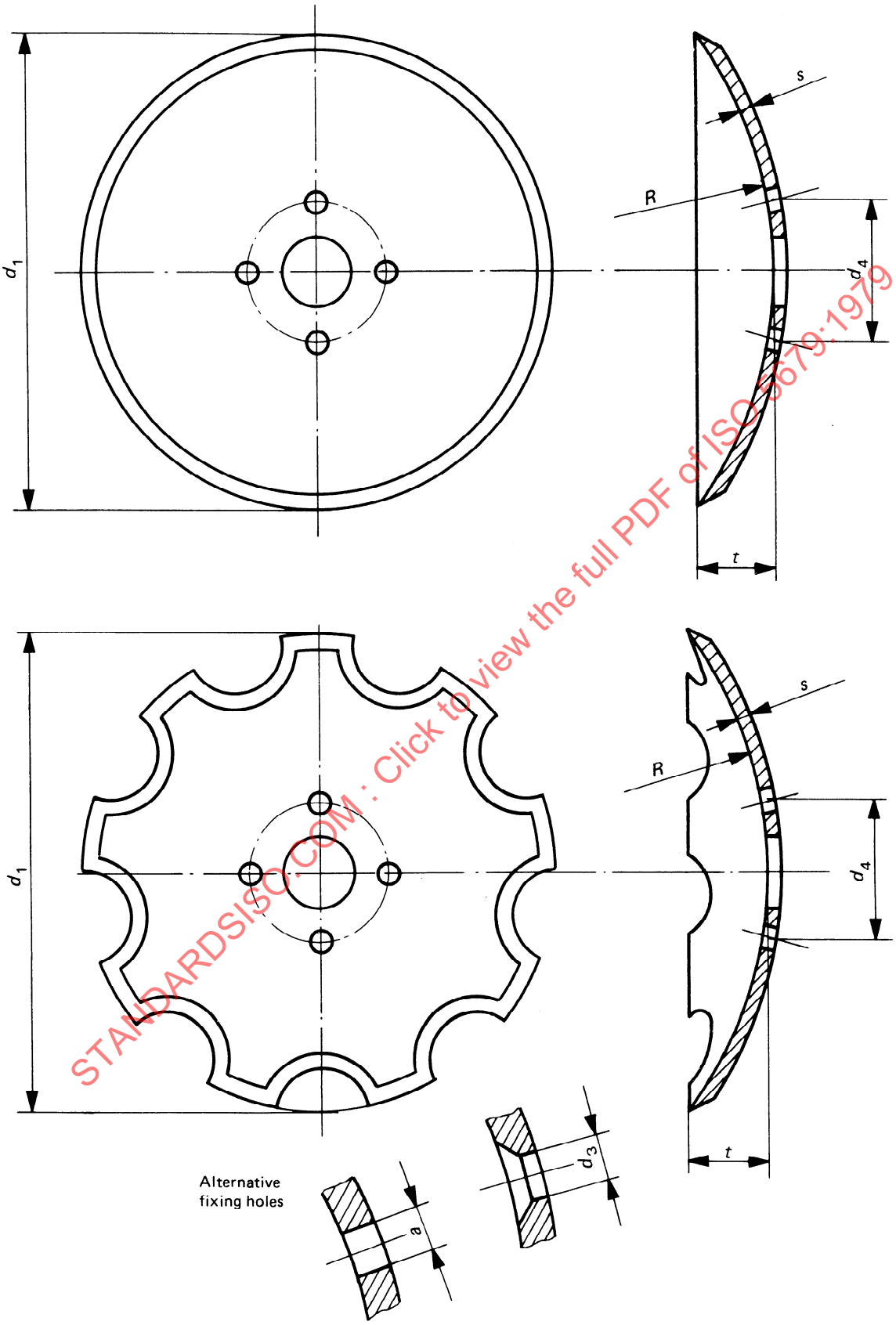
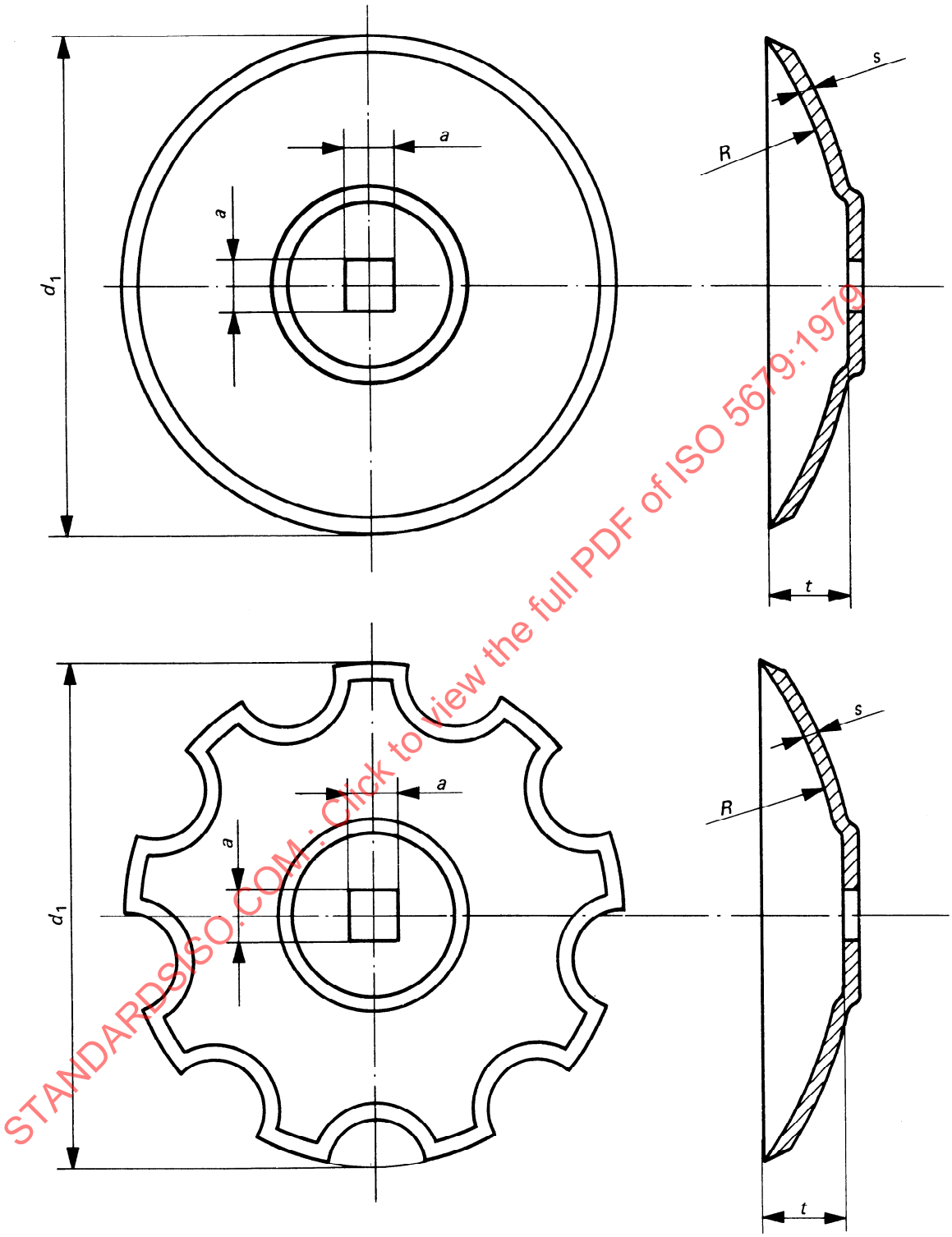


FIGURE 3 — **Concave disks with several fixing holes — Type B, variant 3**



Flat area to be tangential to the radius R

FIGURE 4 — **Concave disks with a flat area around the central hole square — Type C**