



SLOVENSKI STANDARD SIST EN ISO 10673:2001

01-julij-2001

Okrogle ravne podložke za vijake z ujeto podložko majhnih in normalnih mer, razred izdelave A (ISO 10673:1998)

Plain washers for screw and washer assemblies - Small, normal and large series - Product grade A (ISO 10673:1998)

Flache Scheiben für Kombi-Schrauben - Kleine, normale und große Reihe - Produktklasse A (ISO 10673:1998)

Rondelles plates pour vis a rondelle plate incorporée - Séries étroite, normale et large - Grade A (ISO 10673:1998)

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Ta slovenski standard je istoveten z: EN ISO 10673:1998

ICS:

21.060.30 Podložke, varovalni elementi Washers, locking elements

SIST EN ISO 10673:2001

en

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EUROPEAN STANDARD

EN ISO 10673

NORME EUROPÉENNE

EUROPÄISCHE NORM

July 1998

ICS 21.060.00

Descriptors: voir le document ISO

English version

Plain washers for screw and washer assemblies - Small, normal and large series - Product grade A (ISO 10673:1998)

Rondelles plates pour vis à rondelle plate incorporée -
Séries étroite, normale et large - Grade A (ISO
10673:1998)

Flache Scheiben für Kombi-Schrauben - Kleine, normale
und große Reihe - Produktklasse A (ISO 10673:1998)

This European Standard was approved by CEN on 19 June 1998.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the Central Secretariat has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and United Kingdom.

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EUROPEAN COMMITTEE FOR STANDARDIZATION
COMITÉ EUROPÉEN DE NORMALISATION
EUROPÄISCHES KOMITEE FÜR NORMUNG

Central Secretariat: rue de Stassart, 36 B-1050 Brussels

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EN ISO 10673:1998

Foreword

The text of the International Standard ISO 10673:1998 has been prepared by Technical Committee ISO/TC 2 "Fasteners" in collaboration with Technical Committee CEN/TC 185 "Threaded and non-threaded mechanical fasteners and accessories", the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 1999, and conflicting national standards shall be withdrawn at the latest by January 1999.

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

NOTE FROM CEN/CS: The foreword is susceptible to be amended on reception of the German language version. The confirmed or amended foreword, and when appropriate, the normative annex ZA for the references to international publications with their relevant European publications will be circulated with the German version.

Endorsement notice

The text of the International Standard ISO 10673:1998 has been approved by CEN as a European Standard without any modification.

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INTERNATIONAL STANDARD

ISO
10673

First edition
1998-07-01

Plain washers for screw and washer assemblies — Small, normal and large series — Product grade A

*Rondelles plates pour vis à rondelle plate incorporée — Séries étroite,
normale et large — Grade A*

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Reference number
ISO 10673:1998(E)

ISO 10673:1998(E)**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. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

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.

International Standard ISO 10673 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

Annex A of this International Standard is for information only.

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Plain washers for screw and washer assemblies — Small, normal and large series — Product grade A

1 Scope

This International Standard specifies the characteristics of plain steel washers, small, normal and large series, of product grade A with hardness classes 200 HV and 300 HV for metric screw and washer assemblies according to ISO 10644.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO 3269:1988, *Fasteners — Acceptance inspection*.

ISO 4042:—¹⁾, *Fasteners — Electroplated coatings*.

ISO 4759-3:1991, *Tolerances for fasteners — Part 3: Plain washers for bolts, screws and nuts with nominal thread diameters from 1 mm up to and including 150 mm — Product grades A and C*.

ISO 6507-1:1997, *Metallic materials — Vickers hardness test — Part 1: Test method*.

ISO 10644:1998, *Screw and washer assemblies with plain washers — Washer hardness classes 200 HV and 300 HV*.

3 Classification

Washers of product grade A for metric screw and washer assemblies are classified into three types:

- type S: small series, preferably for hexagon socket head cap screws and for cheese head screws.
- type N: normal series, preferably for hexagon head screws.
- type L: large series, preferably for hexagon head screws.

¹⁾ To be published. (Revision of ISO 4042:1989)

4 Dimensions

4.1 Washers type S (small series)

See figure 1 and table 1.

Surface roughness in micrometres

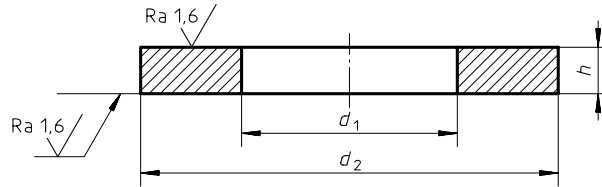


Figure 1

Table 1

Dimensions in millimetres

Nominal size (Nominal thread diameter, d)	Clearance hole		Outside diameter		Thickness		
	nom. (min.)	max.	nom. (max.)	min.	nom.	max.	min.
2	1,75	1,85	4,5	4,2	0,6	0,65	0,55
2,5	2,25	2,35	5	4,7	0,6	0,65	0,55
3	2,75	2,85	6	5,7	0,6	0,65	0,55
3,5	3,2	3,32	7	6,64	0,8	0,85	0,75
4	3,6	3,72	8	7,64	0,8	0,85	0,75
5	4,55	4,67	9	8,64	1	1,06	0,94
6	5,5	5,62	11	10,57	1,6	1,68	1,52
8	7,4	7,55	15	14,57	1,6	1,68	1,52
10	9,3	9,52	18	17,57	2	2,09	1,91
12	11	11,27	20	19,48	2	2,09	1,91

4.2 Washers type N (normal series)

See figure 2 and table 2.

Surface roughness in micrometres

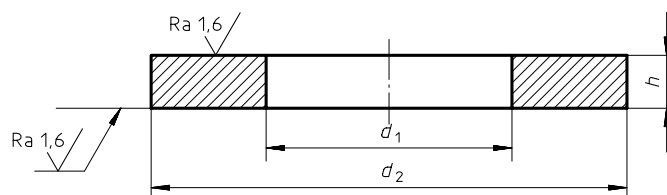


Figure 2

Table 2

Dimensions in millimetres

Nominal size (Nominal thread diameter, d)	Clearance hole		Outside diameter		Thickness		
	nom. (min.)	d_1 max.	nom. (max.)	d_2 min.	nom.	h max.	min.
2	1,75	1,85	5	4,7	0,6	0,65	0,55
2,5	2,25	2,35	6	5,7	0,6	0,65	0,55
3	2,75	2,85	7	6,64	0,6	0,65	0,55
3,5	3,2	3,32	8	7,64	0,8	0,85	0,75
4	3,6	3,72	9	8,64	0,8	0,85	0,75
5	4,55	4,67	10	9,64	1	1,06	0,94
6	5,5	5,62	12	11,57	1,6	1,68	1,52
8	7,4	7,55	16	15,57	1,6	1,68	1,52
10	9,3	9,52	20	19,48	2	2,09	1,91
12	11	11,27	24	23,48	2,5	2,6	2,4

4.3 Washers type L (large series)

See figure 3 and table 3.

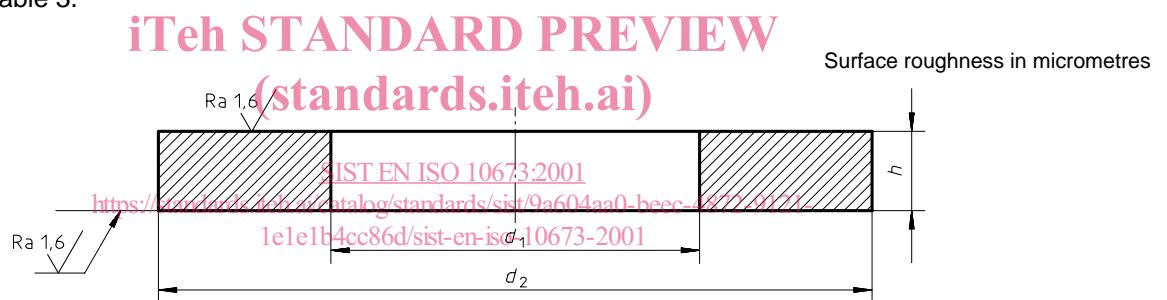


Figure 3

Table 3

Dimensions in millimetres

Nominal size (Nominal thread diameter, d)	Clearance hole		Outside diameter		Thickness		
	nom. (min.)	d_1 max.	nom. (max.)	d_2 min.	nom.	h max.	min.
2	1,75	1,85	6	5,7	0,6	0,65	0,55
2,5	2,25	2,35	8	7,64	0,6	0,65	0,55
3	2,75	2,85	9	8,64	0,8	0,85	0,75
3,5	3,2	3,32	11	10,57	0,8	0,85	0,75
4	3,6	3,72	12	11,57	1	1,06	0,94
5	4,55	4,67	15	14,57	1	1,06	0,94
6	5,5	5,62	18	17,57	1,6	1,68	1,52
8	7,4	7,55	24	23,48	2	2,09	1,91
10	9,3	9,52	30	29,48	2,5	2,6	2,4
12	11	11,27	37	36,38	3	3,11	2,89