International Standard 4161

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

Hexagon nuts with flange — Product grade A

Écrous hexagonaux à embase cylindro-tronconique — Grade A

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Price based on 3 pages

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of developing International Standards is carried out through ISO technical committees. Every member body interested in a subject for which a technical committee has been authorized 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.

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 4161 was developed by Technical Committee ISO/TC 2, *Fasteners*, and was circulated to the member bodies in December 1981.

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

Australia	Germany, F.R.	Norway
Belgium	Hungary	Poland
Brazil	India	Romania
Canada	Ireland	South Africa, Rep. of
China	Italy	Spain
Czechoslovakia	Korea, Dem. P. Rep. of	Sri Lanka
Denmark	Korea, Rep. of	Sweden
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Finland	Netherlands	USA
France	New Zealand	

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

Japan
United Kingdom
USSR

Printed in Switzerland

Hexagon nuts with flange — Product grade A

1 Scope and field of application

This International Standard specifies the characteristics of hexagon nuts with flange with thread sizes from M 5 to M 20 inclusive, in product grade A.

If other specifications are required, it is recommended that they should be selected from existing International Standards, for example ISO 261, ISO 898, ISO 965, ISO 3506.

2 References

ISO 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and designations of dimensions.*

ISO 261, *ISO general purpose metric screw threads — General plan.*

ISO 898, *Mechanical properties of fasteners.*

ISO 965, *ISO general purpose metric screw threads — Tolerances.*

ISO 3269, *Fasteners — Acceptance inspection.* [1)]

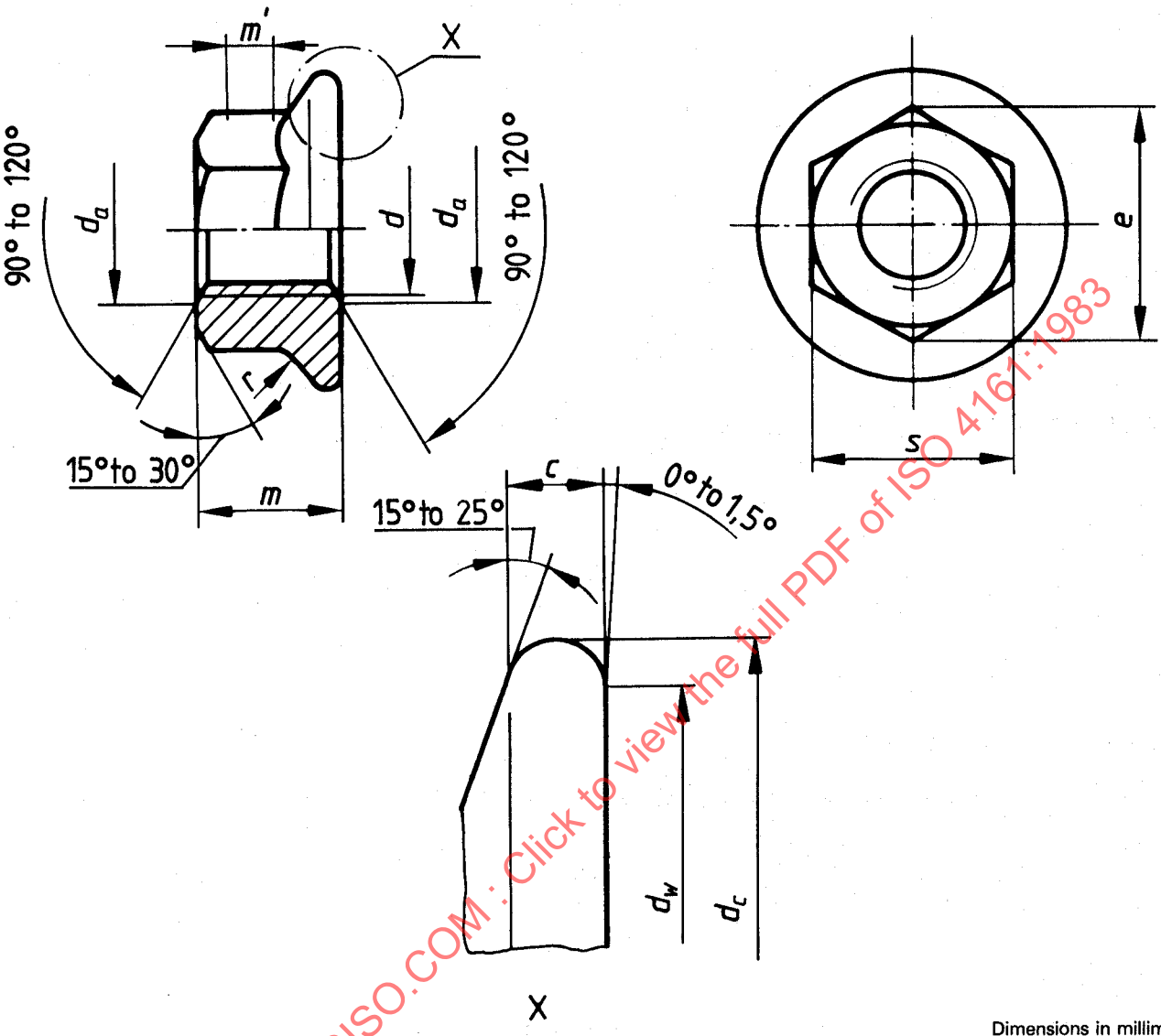
ISO 3506, *Corrosion-resistant stainless steel fasteners — Specifications.*

ISO 4042, *Threaded components — Electroplated coatings components.* [1)]

ISO 4759/1, *Tolerances for fasteners — Part 1: Bolts, screws and nuts with thread diameters* ≥ 1,6 *and* ≤ 150 mm *and product grades A, B and C.*

1) At present at the stage of draft.

3 Dimensions



Dimensions in millimetres

Thread size d		M 5	M 6	M 8	M 10	M 12	(M 14) [1]	M 16	M 20
P [2]		0,8	1	1,25	1,5	1,75	2	2	2,5
c	min.	1	1,1	1,2	1,5	1,8	2,1	2,4	3
d_a	min.	5	6	8	10	12	14	16	20
	max.	5,75	6,75	8,75	10,8	13	15,1	17,3	21,6
d_c	max.	11,8	14,2	17,9	21,8	26	29,9	34,5	42,8
d_w	min.	9,8	12,2	15,8	19,6	23,8	27,6	31,9	39,9
e	min.	8,79	11,05	14,38	16,64	20,03	23,36	26,75	32,95
m	max.	5	6	8	10	12	14	16	20
	min.	4,7	5,7	7,6	9,6	11,6	13,3	15,3	18,9
m' [3]	min.	2,2	3,1	4,5	5,5	6,7	7,8	9	11,1
s	max.	8	10	13	15	18	21	24	30
	min.	7,78	9,78	12,73	14,73	17,73	20,67	23,67	29,16
r [4]	max.	0,3	0,36	0,48	0,6	0,72	0,88	0,96	1,2

1) The size in brackets should be avoided if possible.
2) P = pitch of the thread.
3) Minimum wrenching height.
4) Radius r applies both at the corners and the flats of the hexagon.