

इंटरनेट

मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 1369-2 (1993): Fasteners - Thread runout and undercuts, Part 2: Dimensions for screw thread undercuts for external ISO metric threads [PGD 31: Bolts, Nuts and Fasteners Accessories]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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भारतीय मानक

चूड़ी रन-आउट और अधः काट

भाग 2 बाहरी आई०एस०ओ० मीटरी चूड़ियों के लिए पेंच चूड़ी अधः काट के आयाम

(तीसरा पुनरीक्षण)

Indian Standard

**FASTENERS — THREAD RUN-OUTS AND
UNDERCUTS**

**PART 2 DIMENSIONS FOR SCREW THREAD UNDERCUTS FOR EXTERNAL
ISO METRIC THREADS**

(Third Revision)

UDC 621.882.14

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BUREAU OF INDIAN STANDARDS
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NATIONAL FOREWORD

This Indian Standard (Part 2) which is identical with ISO 4755 : 1983 'Fasteners — Thread undercuts for external metric ISO threads', issued by the International Organization for Standardization (ISO) was adopted by the Bureau of Indian Standards on the recommendations of the Bolts, Nuts and Fastener Accessories Sectional Committee (LM 14) and approval of the Light Mechanical Engineering Division Council.

An undercut of reasonable width allows threads to be cut on a component up to end without the end face of the screwing tool fouling the component. Design requirements are usually for a reasonable degree of control on the diameter at the root or crest of the undercut to avoid weakening the section at this point, and for sufficient radius at the end of the undercut to avoid stress concentration. The production requirement is for an adequate width of undercut to allow the use of dies and taps with a reasonable throat angle or taper lead.

It is well known that too narrow undercuts or the demand for perfect or full threads up to the shoulder or to the bottom of blind holes add substantially to manufacturing costs by necessitating the use of special taps and dies. This may require a second screwing operation, or resort to process, such as thread milling or grinding. It is suggested that where recommendations for any of the standard forms of undercut appear at first sight to be inapplicable, an endeavour shall be made to accommodate them by alterations in design, for example, by using through tapped holes. A counterbore or undercut on the first few threads of an internal thread may readily be drilled when tapping a hole and is much simpler to produce than equivalent undercut on the mating external thread.

The standard IS 1369 'Dimensions for screw thread run-outs and undercuts' was originally published in 1961 and subsequently revised in 1975 and 1982. The present revision has been taken up to harmonize it with the corresponding ISO standards and is being published in three parts as follows:

- IS 1369 (Part 1) Dimensions for screw thread run-outs for external ISO metric threads (Adoption of ISO 3508 : 1976)
- IS 1369 (Part 2) Dimensions for screw thread undercuts for external ISO metric threads (Adoption of ISO 4755 : 1983)
- IS 1369 (Part 3) Dimensions for thread run-outs and undercuts for internal threads (blind tapped holes) (*under preparation*)

While revising the specification, following changes have taken place:

- a) One type ($g_2 = 3 P$) has been covered in place of two types of undercuts ($g_2 = 2.5 P$ and $g_2 = 3.5 P$) covered in earlier version.
- b) Thread under-cut—short for external threads has been deleted.

The text of ISO standard has been approved as suitable for publication as Indian Standard without deviation. Certain conventions are, however, not identical to those used in the Indian Standards. Attention is particularly drawn to the following:

- a) Wherever the words 'International Standard' appear referring to this standard, they should be read as 'Indian Standard'.
- b) Comma (,) has been used as a decimal marker while in Indian Standards, the current practice is to use point (.) as the decimal marker.

Indian Standard
**FASTENERS — THREAD RUN-OUTS AND
UNDERCUTS**

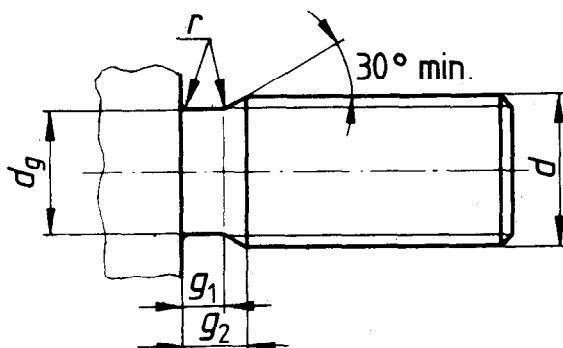
**PART 2 DIMENSIONS FOR SCREW THREAD UNDERCUTS FOR EXTERNAL
ISO METRIC THREADS**

(Third Revision)

1 Scope and field of application

This International Standard lays down the form and dimensions of thread undercuts for bolts, screws and similar externally threaded products, recommended for use in those cases where an undercut is needed for threaded components such as plugs, unless otherwise specified in the appropriate product standard.

2 Dimensions



Table

Dimensions in millimetres

Pitch of thread P	d_g h12 (h13) ¹⁾	g_1 ²⁾ min.	g_2 max. ($\approx 3P$)	r \approx
0,25	$d - 0,4$	0,4	0,75	0,12
0,3	$d - 0,5$	0,5	0,9	0,16
0,35	$d - 0,6$	0,6	1,05	0,16
0,4	$d - 0,7$	0,6	1,2	0,2
0,45	$d - 0,7$	0,7	1,35	0,2
0,5	$d - 0,8$	0,8	1,5	0,2
0,6	$d - 1$	0,9	1,8	0,4
0,7	$d - 1,1$	1,1	2,1	0,4
0,75	$d - 1,2$	1,2	2,25	0,4
0,8	$d - 1,3$	1,3	2,4	0,4
1	$d - 1,6$	1,6	3	0,6
1,25	$d - 2$	2	3,75	0,6
1,5	$d - 2,3$	2,5	4,5	0,8
1,75	$d - 2,6$	3	5,25	1
2	$d - 3$	3,4	6	1
2,5	$d - 3,6$	4,4	7,5	1,2
3	$d - 4,4$	5,2	9	1,6
3,5	$d - 5$	6,2	10,5	1,6
4	$d - 5,7$	7	12	2
4,5	$d - 6,4$	8	13,5	2,5
5	$d - 7$	9	15	2,5
5,5	$d - 7,7$	11	17,5	3,2
6	$d - 8,3$	11	18	3,2

1) h12 up to and including 3 mm thread diameter.

2) g_1 min. based on a minimum transition angle of 30°.

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Amendments are issued to standards as the need arises on the basis of comments. Standards are also reviewed periodically; a standard along with amendments is reaffirmed when such review indicates that no changes are needed; if the review indicates that changes are needed, it is taken up for revision. Users of Indian Standards should ascertain that they are in possession of the latest amendments or edition by referring to the latest issue of 'BIS Handbook' and 'Standards Monthly Additions'. Comments on this Indian Standard may be sent to BIS giving the following reference:

Dcc : No. LM014 (0136)

Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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