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Irish Standard  
I.S. EN ISO 16047:2005

# Fasteners - Torque/clamp force testing (ISO 16047:2005)

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## I.S. EN ISO 16047:2005

*Incorporating amendments/corrigenda/National Annexes issued since publication:*  
EN ISO 16047:2005/A1:2012

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<i>This document replaces:</i>	<i>This document is based on:</i> EN ISO 16047:2005	<i>Published:</i> 1 February, 2005
This document was published under the authority of the NSAI and comes into effect on: 22 April, 2005		ICS number: 21.060.01
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ICS 21.060.01

English Version

## Fasteners - Torque/clamp force testing (ISO 16047:2005/Amd 1:2012)

Éléments de fixation - Essais couple/tension (ISO 16047:2005/Amd 1:2012)

Verbindungselemente - Drehmoment/Vorspannkraft-Versuch (ISO 16047:2005/Amd 1:2012)

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## **Contents**

**Page**

<b>Foreword.....</b>	<b>3</b>
----------------------	----------

## **Foreword**

This document (EN ISO 16047:2005/A1:2012) has been prepared by Technical Committee ISO/TC 2 “Fasteners” in collaboration with Technical Committee CEN/TC 185 “Fasteners” the secretariat of which is held by DIN.

This Amendment to the European Standard EN ISO 16047:2005 shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by March 2013, and conflicting national standards shall be withdrawn at the latest by March 2013.

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### **Endorsement notice**

The text of ISO 16047:2005/Amd 1:2012 has been approved by CEN as a EN ISO 16047:2005/A1:2012 without any modification.

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I.S. EN ISO 16047:2005

EUROPEAN STANDARD

EN ISO 16047

NORME EUROPÉENNE

EUROPÄISCHE NORM

February 2005

ICS 21.060.01

English version

## Fasteners - Torque/clamp force testing (ISO 16047:2005)

Eléments de fixation - Essais couple/tension (ISO  
16047:2005)

Verbindungselemente - Drehmoment/Vorspannkraft-  
Versuch (ISO 16047:2005)

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**I.S. EN ISO 16047:2005**

**EN ISO 16047:2005 (E)**

**Foreword**

This document (EN ISO 16047:2005) 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.

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**Endorsement notice**

The text of ISO 16047:2005 has been approved by CEN as EN ISO 16047:2005 without any modifications.



I.S. EN ISO 16047:2005  
**INTERNATIONAL  
STANDARD**

**ISO  
16047**

First edition  
2005-02-01

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## **Fasteners — Torque/clamp force testing**

*Éléments de fixation — Essais couple/tension*



Reference number  
ISO 16047:2005(E)

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Published in Switzerland

# Contents

Page

Foreword .....	iv
<b>1 Scope .....</b>	<b>1</b>
<b>2 Normative references .....</b>	<b>1</b>
<b>3 Terms and definitions .....</b>	<b>2</b>
<b>4 Symbols and their designations .....</b>	<b>3</b>
<b>5 Principle of test .....</b>	<b>4</b>
5.1 General .....	4
5.2 Determination of coefficients of friction .....	4
5.3 Determination of torque coefficient $K$ ( $K$ -factor) .....	5
5.4 Determination of ratio $T/F$ .....	5
<b>6 Apparatus .....</b>	<b>5</b>
6.1 Testing machine .....	5
6.2 Test fixture .....	5
<b>7 Test parts .....</b>	<b>6</b>
7.1 General .....	6
7.2 Test-bearing plates or test washers .....	7
7.3 Test nuts for testing bolts, screws and studs .....	8
7.4 Test bolts or test screws for testing nuts .....	8
<b>8 Testing under standard conditions .....</b>	<b>9</b>
<b>9 Testing under specific conditions .....</b>	<b>9</b>
<b>10 Evaluation of results .....</b>	<b>9</b>
10.1 Determination of torque coefficient $K$ .....	9
10.2 Determination of coefficient of total friction $\mu_{\text{tot}}$ .....	10
10.3 Determination of coefficient of friction between threads $\mu_{\text{th}}$ .....	10
10.4 Determination of coefficient of friction between bearing surfaces $\mu_{\text{b}}$ .....	11
10.5 Determination of yield clamp force $F_y$ .....	11
10.6 Determination of yield tightening torque $T_y$ .....	11
10.7 Determination of ultimate clamp force $F_u$ .....	11
10.8 Determination of ultimate tightening torque $T_u$ .....	11
<b>11 Test report .....</b>	<b>11</b>
11.1 General .....	11
11.2 Description of fasteners to be tested .....	12
11.3 Description of test parts .....	13
11.4 Testing machine .....	13
11.5 Test fixture .....	14
11.6 Environmental conditions .....	14
11.7 Specific conditions .....	14
11.8 Test results .....	14
<b>Bibliography .....</b>	<b>15</b>

## **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.

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The main task of technical committees is to prepare International Standards. 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.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights.

ISO 16047 was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 1, *Mechanical properties of fasteners*.

# Fasteners — Torque/clamp force testing

## 1 Scope

This International Standard specifies the conditions for carrying out torque/clamp force tests on threaded fasteners and related parts.

It is applicable, basically, to bolts, screws, studs and nuts made of carbon steel and alloy steel, whose mechanical properties are specified in ISO 898-1, ISO 898-2 or ISO 898-6, having ISO metric threads with thread sizes M3 to M39. It is also applicable to the combination of other externally and internally threaded fasteners with a triangular ISO thread according to ISO 68-1.

It is not applicable to set screws and similar threaded fasteners that are not under tensile stresses, nor to screws which form their own mating thread or threaded fasteners having additional self-locking features.

Unless otherwise agreed, the tests are carried out at room temperature. However, tests carried out under standard conditions are made at a temperature of 10 °C to 35 °C.

This method allows determination of the tightening characteristics of threaded fasteners and related parts.

## 2 Normative references

The following referenced documents are indispensable for the application of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 68-1, *ISO general purpose screw threads — Basic profile — Part 1: Metric screw threads*

ISO 273:1979, *Fasteners — Clearance holes for bolts and screws*

ISO 898-1, *Mechanical properties of fasteners made of carbon steel and alloy steel — Part 1: Bolts, screws and studs*

ISO 898-2, *Mechanical properties of fasteners — Part 2: Nuts with specified proof load values — Coarse thread*

ISO 898-6, *Mechanical properties of fasteners — Part 6: Nuts with specified proof load values — Fine pitch thread*

ISO 4014, *Hexagon head bolts — Product grades A and B*

ISO 4017, *Hexagon head screws — Product grades A and B*

ISO 4032, *Hexagon nuts, style 1 — Product grades A and B*

ISO 4033, *Hexagon nuts, style 2 — Product grades A and B*

ISO 4042:1999, *Fasteners — Electroplated coatings*

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