ICS 21.060.20 SLOVENSKÁ TECHNICKÁ NORMA September 2025

STN	**Spojovacie súčiastky Samopoistné šesťhranné matice Vysoké matice (celokovové) s drážkou (drážkami) (ISO 7720: 2025)**	**STN EN ISO 7720** 02 1478

Fasteners - Prevailing torque hexagon nuts - High nuts (all metal) with slot(s) (ISO 7720:2025)

Táto norma obsahuje anglickú verziu európskej normy.
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 08/25

Obsahuje: EN ISO 7720:2025, ISO 7720:2025

141033

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN ISO 7720

June 2025

ICS 21.060.20

English Version

Fasteners - Prevailing torque hexagon nuts - High nuts (all metal) with slot(s) (ISO 7720:2025)

Fixations - Écrous hexagonaux autofreinés - Écrous hauts (tout métal) à fente(s) (ISO 7720:2025)

Verbindungselemente - Sechskantmuttern mit Klemmteil - Hohe Muttern (Ganzmetallmuttern) mit Schlitz(en) (ISO 7720:2025)

This European Standard was approved by CEN on 21 June 2025.

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

CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels

Ref. No. EN ISO 7720:2025 E

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European foreword

This document (EN ISO 7720:2025) 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 BSI.

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of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

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Endorsement notice

The text of ISO 7720:2025 has been approved by CEN as EN ISO 7720:2025 without any modification.

International Standard

ISO 7720

Fasteners — Prevailing torque hexagon nuts — High nuts (all metal) with slot(s)

Fixations — Écrous hexagonaux autofreinés — Écrous hauts (tout métal) à fente(s)

Fourth edition
2025-06

Reference number
ISO 7720:2025(en)

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Published in Switzerland

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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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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This document was prepared by Technical Committee ISO/TC 2, *Fasteners*, Subcommittee SC 12, *Fasteners with metric internal thread*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 185, *Fasteners*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This fourth edition cancels and replaces the third edition (ISO 7720:2012) which has been technically revised.

The main changes are as follows:

— the title and scope have been changed in order to address the nut height: high (instead of style 2); the design principles of these nuts have been clarified in Scope (see Note);

— property classes have been deleted from title and scope: style, relevant property classes and related quenching and tempering conditions for steel nuts have been specified in Clause 5 in accordance with ISO 898-2; property class 9 has been replaced by property classes 8 and 10; see Table 3;

— stainless steel nuts have been added in accordance with ISO 3506-2;

— M7, M18, M22, M27, M33 and M39 have been added;

— $d_{a,max}$ has been specified with two decimal places;

— $d_{w,min}$ for M5 has been changed from s_{min} – IT16 to s_{min} – IT15 in order to have a larger bearing surface area and thus less contact pressure;

— m_{min} has been added with values in accordance with style 1; $m_{w,min}$ = 0,8 m_{min} has been specified in accordance with ISO 4759-1;

— the overall (total) height of the nut, h_{max} and h_{min}, have been increased to accommodate the prevailing torque feature with slot(s);

— specifications for marking and labelling have been added as Clause 6.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

International Standard **ISO 7720:2025(en)**

Fasteners — Prevailing torque hexagon nuts — High nuts (all metal) with slot(s)

1 Scope

This document specifies the characteristics of prevailing torque (all metal) hexagon high nuts with slot(s), in steel and stainless steel, with metric coarse pitch thread M5 to M39, and with product grades A and B.

NOTE These nuts are designed with m_{min} as specified ISO 4032 and with an overall height h greater than in ISO 7042, in order to accommodate the prevailing torque feature with slot(s); this height h contributes to the nut resistance due to the number of engaged threads. h_{min} values have been calculated as a function of h_{max} together with a ratio h_{max}/D that progresses regularly with increasing diameter; therefore, the tolerance ($h_{max} - h_{min}$) does not follow the ISO code system for tolerances (IT system).

If in certain cases other specifications are requested, property classes and stainless steel grades can be selected from ISO 898-2 or ISO 3506-2.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements 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 225, *Fasteners — Bolts, screws, studs and nuts — Symbols and descriptions of dimensions*

ISO 898-2, *Fasteners — Mechanical properties of fasteners made of carbon steel and alloy steel — Part 2: Nuts with specified property classes*

ISO 965-1, *ISO general purpose metric screw threads — Tolerances — Part 1: Principles and basic data*

ISO 1891-4, *Fasteners — Vocabulary — Part 4: Control, inspection, delivery, acceptance and quality*

ISO 2320, *Fasteners — Prevailing torque steel nuts — Functional properties*

ISO 3269, *Fasteners — Acceptance inspection*

ISO 3506-2, *Fasteners — Mechanical properties of corrosion-resistant stainless steel fasteners — Part 2: Nuts with specified grades and property classes*

ISO 4042, *Fasteners — Electroplated coating systems*

ISO 4759-1, *Tolerances for fasteners — Part 1: Bolts, screws, studs and nuts — Product grades A, B and C*

ISO 6157-2, *Fasteners — Surface discontinuities — Part 2: Nuts*

ISO 8991, *Designation system for fasteners*

ISO 8992, *Fasteners — General requirements for bolts, screws, studs and nuts*

ISO 10683, *Fasteners — Non-electrolytically applied zinc flake coating systems*