
International Standard



7411

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

Hexagon bolts for high-strength structural bolting with large width across flats (thread lengths according to ISO 888) — Product grade C — Property classes 8.8 and 10.9

Vis à tête hexagonale à serrage contrôlé pour constructions métalliques, à surplats série large (longueurs filetées conformes à l'ISO 888) — Grade C — Classes de qualité 8.8 et 10.9

First edition — 1984-11-15

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.

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. They are approved in accordance with ISO procedures requiring at least 75 % approval by the member bodies voting.

International Standard ISO 7411 was prepared by Technical Committee ISO/TC 2, *Fasteners*.

Hexagon bolts for high-strength structural bolting with large width across flats (thread lengths according to ISO 888) — Product grade C — Property classes 8.8 and 10.9

0 Introduction

This International Standard is part of the complete ISO product standard series on hexagon drive fasteners. The series comprises:

- a) hexagon head bolts (ISO 4014, ISO 4015 and ISO 4016);
- b) hexagon head screws (ISO 4017 and ISO 4018);
- c) hexagon nuts (ISO 4032, ISO 4033, ISO 4034, ISO 4035 and ISO 4036);
- d) hexagon flanged bolts;¹⁾
- e) hexagon flanged screws;¹⁾
- f) hexagon flanged nuts (ISO 4161);
- g) structural bolting (ISO 4775 and ISO 7411 to ISO 7417).

1 Scope and field of application

This International Standard gives specifications for large series hexagon, high-strength structural bolts with metric dimensions in property classes 8.8 and 10.9, and thread sizes from M12 up to and including M36, with thread lengths according to ISO 888.

If in special cases specifications other than those listed in this International Standard are required, it is recommended that they are selected from existing International Standards, for example, ISO 261, ISO 888, ISO 898 and ISO 965.

Bolts to this International Standard when matched with the appropriate nut (see ISO 4775) have been designed to provide an assembly with a high level of assurance against failure by

thread stripping on overtightening. This applies to all property classes and finishes except 8.8S U²⁾ and 10.9S U²⁾ bolts which may be adopted by agreement between the purchaser and the supplier. 8.8S U and 10.9S U bolts must be matched with 6H galvanized nuts to ISO 4775 and the resulting assembly may show failure by thread stripping on overtightening.

NOTE — Attention is drawn to the importance of ensuring that the bolts are correctly used if satisfactory results are to be obtained. For recommendations concerning proper application, reference should be made to an appropriate bolting code.

2 References

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

ISO 888, *Bolts, screws and studs — Nominal lengths, and thread lengths for general purpose bolts.*

ISO 898, *Mechanical properties of fasteners.*

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

ISO 1461, *Metallic coatings — Hot dip galvanized coatings on fabricated ferrous products — Requirements.*

ISO 3269, *Fasteners — Acceptance inspection.*

ISO 4753, *Fasteners — Ends of parts with external metric ISO thread.*

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.*

ISO 4775, *Hexagon nuts for high-strength structural bolting with large width across flats — Product grade B — Property classes 8 and 10.*

1) These will be the subject of a future International Standard.

2) See clause 7.