



**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 16938-2008

Replacing GB/T 16938-1997

**Fasteners -- General requirements for bolts, screws, studs and
nuts**

紧固件 螺栓、螺钉、螺柱和螺母 通用技术条件

(English Translation)

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Foreword

This standard is identical with ISO 8992:2005 "--- fastener bolts, screws, studs and nuts - General technical conditions" (in English), the main To be amended as follows.

--- ISO 8992 is not given marking and packaging references, this standard be prescribed (Chapter 2, Zi 3).

This standard replaces GB/T 16938-1997 "Fasteners Bolts, screws, studs and nuts - General technical requirements." This standard and GB/T 16938-1997 compared to the main changes are as follows.

--- Adjustment, supplemented with reference standards (Chapter 2, Chapter 3);

--- Increasing the self-tapping threaded fasteners of the technical conditions and reference standards (Table 2). The standard proposed by China Machinery Industry Federation.

1 Scope

General technical conditions specified in this standard applies to standardized bolts, screws, studs and nuts, it is also recommended to make non-standard fasteners use. It specifies the national standard tolerances, mechanical and functional properties, geometry, surface defects and quality conditions and other technical requirements that can be referenced.

2 Normative references

The following documents contain provisions which, through reference in this standard and become the standard terms. For dated references, subsequent Amendments (not including errata content) or revisions do not apply to this standard, however, encourage the parties to the agreement are based on research Whether the latest versions of these documents. For undated reference documents, the latest versions apply to this standard.

GB/T terminal 2 fasteners threaded part (GB/T 2-2001, idt ISO 4753:1999)

GB/T 3 common thread ending, from the shoulder, undercuts and chamfers (GB/T 3-1997, eqv ISO 3508. 1976, ISO 4755. 1983)

GB/T 90.1 fasteners acceptance inspection (GB/T 90.1-2002, ISO 3269:2000, IDT)

GB/T 90.2 Fasteners marking and packaging

GB/T 197 common thread tolerance (GB/T 197-2003, ISO 965-1:1998, ISO general purpose metric screw threads-Tolerances-Part 1. Principles and basic data, MOD)

GB/T 944.1 with a Phillips screw groove (GB/T 944.1-1985, eqv ISO 4757. 1983)

GB/T 2516 common thread limit deviation (GB/T 2516-2003, ISO 965-3:1998, ISO general purpose metric screw threads-Tolerances-Part 3. Deviations for constructional screw threads, MOD)

GB/T 3098.1 Mechanical properties of fasteners Bolts, screws and studs (GB/T 3098.1-2000, idt ISO 898-1:1999)

GB/T 3098.2 Mechanical properties of fasteners - Nuts - Coarse thread (GB/T 3098.2-2000, idt ISO 898-2:1992)

GB/T 3098.3 Mechanical properties of fasteners set screws (GB/T 3098.3-2000, idt ISO 898-5:1998)

GB/T 3098.4 Mechanical properties of fasteners fine thread (GB/T 3098.4-2000, idt ISO 898-6:1994)

GB/T 3098.5 Mechanical properties of fasteners self-tapping screw (GB/T 3098.5-2000, idt ISO 2702:1992)

GB/T 3098.6 Mechanical properties of fasteners stainless steel bolts, screws and studs (GB/T 3098.6-2000, idt ISO 3506-1. 1997)

GB/T 3098.7 Mechanical properties of fasteners rolling screws (GB/T 3098.7-2000, idt ISO 7085:1999)

GB/T 3098.9 Mechanical properties of fasteners torque type steel hexagon nuts (GB/T 3098.9-2002, idt ISO 2320:1997)

GB/T 3098.10 Mechanical properties of fasteners non-ferrous metal manufacturing bolts, screws, studs and nuts (GB/T 3098.10-1993, idt ISO 8839. 1986)

GB/T 3098.11 Mechanical properties of fasteners drilling tapping screws (GB/T 3098.11-2002, idt ISO 10666:1999)

GB/T 3098.13 fasteners - Torsional test and mechanical properties of bolts and screws with torque nominal diameter 1 ~ 10mm (GB/T 3098.13-1996, eqv ISO 898-7:1992)

GB/T 3098.15 mechanical properties of stainless steel fasteners nuts (GB/T 3098.15-2000,

idt ISO 3506-2:1997)

GB/T 3098.16 mechanical properties of stainless steel fasteners set screws (GB/T 3098.16-2000, idt ISO 3506-3:1997)

GB/T 3098.21 mechanical properties of stainless steel fasteners self-tapping screw (GB/T 3098.21-2008, ISO 3506-4:2003, IDT)

GB/T 3103.1 Tolerances for fasteners - Bolts, screws, studs and nuts (GB/T 3103.1-2002, ISO 4759-1:2000, IDT)

GB/T 3104 Fasteners Hexagon width across product (GB/T 3104-1982, eqv ISO 272. 1982)

GB/T 3105 ordinary bolt and screw head radius (GB/T 3105-2002, idt ISO 885:2000)

GB/T 3106 Bolts, screws and studs - Nominal lengths, and thread lengths for general purpose bolts (GB/T 3106-1982, eqv ISO 888. 1976)

GB/T 5267.1 fasteners plating layer (GB/T 5267.1-2002, ISO 4042:1999, IDT)

GB/T 5267.2 fasteners non-electrolytic zinc flake coating (GB/T 5267.2-2002, ISO 10683:2000, IDT)

GB/T 5267.3 fasteners hot-dip galvanizing layer (GB/T 5267.3-2008, ISO 10684:2004, IDT)

GB/T 5278 fastener cotter pin holes and wire holes (GB/T 5278-1985, idt ISO 7378. 1983)

GB/T 5279 countersunk head screw fastener head shape and measurement (GB/T 5279-1985, idt ISO 7721. 1983)

GB/T 5280 with a self-tapping screw thread (GB/T 5280-2002, idt ISO 1478:1999)

GB/T 5779.1 Fasteners - Surface discontinuities - Bolts, screws and studs for general requirements (GB/T 5779.1-2000, idt ISO 6157-1. 1988)

GB/T 5779.2 nut fastener surface defects (GB/T 5779.2-2000, idt ISO 6157-2:1995)

GB/T 5779.3 Fasteners - Surface discontinuities - Bolts, screws and studs for special requirements (GB/T 5779.3-2000, idt ISO 6157-3. 1988)

GB/T 6188 bolts and screws with the hexagon-shaped flowers (GB/T 6188-2008, ISO 10664:2005, IDT)

GB/T 9145 common thread moderate accuracy, preferably series limit size

GB/T 22028 hot dip galvanized zinc coating to accommodate the inner thread

GB/T 22029 hot-dip galvanized external screw thread on the receiving zinc coating

ISO 16048 Fasteners corrosion resistant stainless steel passivation

Fastener Quality Assurance System ISO 16426

3 Technical conditions and reference standards

Technical conditions and standards referenced in Table 1 and Table 2.

4 General technical requirements

Standard bolts, screws, studs and nuts should provide the following sections.

- a) the mechanical properties of (performance levels, materials);
- b) product rating (tolerance);
- c) standardization of geometric features (such as when required);
- d) surface coating (eg requirements); special technical requirements (such as agreeing).

All data related to manufactured goods. Except as otherwise specific standard or between supply and demand, not otherwise specified manufacturing process.

The manufacturing method used, products should be able to guarantee a complete surface and edges, without burrs. In general, do not require such removal or grooved Forging, stamping or trimming and other processes caused by small burrs. However, any impact on product performance or safety hazard when touching burrs shall Removed.

Beyond the bearing surface of bolts and screws slitting burr it is not allowed. Unless otherwise specified, allow bolts and screws left center hole.

Unless provided for a surface coating, surface treatment products should be.

--- Without treatment for steel products, or --- Simple process for stainless steel or non-ferrous metal products.

If there is no other agreement, delivery of bolts, screws, studs and nuts should be cleaned and coated with anti-rust oil.