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

GB/T 5784-2025

Replacing GB/T 5784-1986

**Fasteners - Hexagon head bolts - Reduced shank - Product
grade B**

紧固件 六角头螺栓 细杆 B级

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document replaces GB/T 5784-1986 "Hexagonal Head Bolts, Fine Rods, Class B". Compared with GB/T 5784-1986, the only differences are in the structural design.

Aside from integration and editorial changes, the main technical changes are as follows.

- a) The type of the under-head washer face has been added so that the manufacturer can choose it, and dimensional limits have been specified (see Figure 1);
- b) Added M3.5, M7, and M18 specifications (see Table 1 and Table 2);
- c) For $d \leq M5$, the $d_{w,min}$ value is changed from $s_{min-IT16}$ to $s_{min-IT15}$ in order to obtain a larger bearing area, thereby reducing the contact pressure;
For $d > M5$, the $d_{w,min}$ value should be recalculated according to GB/T 3103.1;
- d) The k_W and min values should be recalculated according to GB/T 3103.1;
- e) The e_{min} value of M3 was changed (see Table 1, 1986 edition);
- f) The performance grade of stainless steel bolts has been increased by 50 (see Table 3);
- g) Added technical requirements for non-electrolytic zinc sheet coating according to GB/T 5267.2, and technical requirements for hot-dip galvanizing according to GB/T 5267.3 (see...).

Table 3);

h) Added signs and labels (see Chapter 6).

This document is modified to adopt ISO 4015:2022 "Fasteners - Fine-barreled hexagonal head bolts (barrel diameter approximately equal to thread pitch diameter) - Class B".

The technical differences between this document and ISO 4015:2022, and the reasons therefor, are as follows.

---The statement in ISO 4015 that "if other technical requirements are required, the performance level can be selected from ISO 898-1, and from ISO 888 or..." has been removed.

The selection of dimensions in ISO 4753 (Chapter 1) is not part of the scope of this document.

---ISO 225 has been replaced with the normatively referenced GB/T 5276 to adapt to my country's technical requirements (see Chapter 4);

---ISO 4753 has been replaced with the normatively referenced GB/T 2 to adapt to my country's technical conditions (see Figure 1);

---ISO 888 has been replaced with the normatively referenced GB/T 3106 to adapt to my country's technical conditions (see Tables 1 and 2);

---ISO 8992 has been replaced with the normatively referenced GB/T 16938 to adapt to my country's technical conditions (see Table 3);

---ISO 898-1 has been replaced with the normatively referenced GB/T 3098.1 to adapt to my country's technical conditions (see Table 3, Chapter 6).

Chapter 7);

---ISO 965-1 has been replaced with the normatively referenced GB/T 197 to adapt to my country's technical conditions (see Table 3);

---ISO 3506-1 has been replaced with the normatively referenced GB/T 3098.6 to adapt to my country's technical conditions (see Table 3, Chapter 6).

Chapter 7);

---ISO 4759-1 has been replaced with the normatively referenced GB/T 3103.1 to adapt to my country's technical requirements (see Table 3);

---ISO 4042 has been replaced with the normatively referenced GB/T 5267.1 to adapt to my country's technical requirements (see Table 3);

---ISO 10683 has been replaced with the normatively referenced GB/T 5267.2 to adapt to my country's technical conditions (see Table 3);

---ISO 10684 has been replaced with the normatively referenced GB/T 5267.3 to adapt to my country's technical conditions (see Table 3);

---ISO 8991 has been replaced with the normatively referenced GB/T 1237 to adapt to my country's technical conditions (see Chapter 7);

---ISO 6157-1 has been replaced with the normatively referenced GB/T 5779.1 to adapt to my country's technical requirements (see Table 3);

---ISO 3269 has been replaced with the normatively referenced GB/T 90.1 to adapt to my country's technical conditions (see Table 3);

---ISO 1891-4 has been replaced with the normatively referenced GB/T 3099.4 to adapt to my country's technical requirements (see 6.2);

---Add reference to GB/T 90.2 (see Table 3) to conform to my country's basic fastener standards;

---Add packaging technical requirements (see Table 3) to comply with my country's basic fastener standards;

---The markup example has been changed to a simplified markup example (see Chapter 7) to conform to GB/T 1237.

The following editorial changes have also been made to this document.

---The standard name has been changed to "Fasteners. Hexagonal Head Bolts, Fine Rods, Class B";

---Use the informative references GB/T 3, GB/T 3098.25, GB/T 5267.4 and GB/T 5782 instead of ISO 3508.

ISO 3506-6, ISO 16048 and ISO 4017;

---The references have been changed.

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Fastener Standardization Technical Committee (SAC/TC85).

1 Scope

This document specifies the type, dimensions, technical requirements, markings, labels, and markings for Class B thin-bar hexagonal head bolts.

This document applies to coarse threads with thread specifications from M3 to M20,

performance grades of 5.8, 6.8, 8.8, A2-50, and A2-70, and product grades.

Grade B, thin shank (shank diameter approximately equal to thread pitch diameter), steel and stainless steel hexagonal head bolts (hereinafter referred to as "bolts").

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.
document.

GB/T 2 Ends of externally threaded fasteners (GB/T 2-2016, ISO 4753:2011, MOD) GB/T 90.1 Acceptance inspection of fasteners (GB/T 90.1-2023, ISO 3269:2019, MOD) GB/T 90.2 Fastener marking and packaging GB/T 197 Tolerances for Standard Threads (GB/T 197-2018, ISO 965-1:2013, MOD) GB/T 1237 Fastener Marking Method (GB/T 1237-2000, eqv ISO 8991:1986) GB/T 3098.1 Mechanical properties of fasteners - Bolts, screws and studs (GB/T 3098.1-2010, ISO 898-1:2009) MOD) GB/T 3098.6 Mechanical properties of fasteners - Stainless steel bolts, screws and studs (GB/T 3098.6-2023, ISO 3506-1.

2020, MOD)

GB/T 3099.4 Fastener Terminology - Control, Inspection, Delivery, Acceptance and Quality (GB/T 3099.4-2021, ISO 1891-4) 2018, MOD) GB/T 3103.1 Fastener Tolerances - Bolts, Screws and Nuts (GB/T 3103.1-2002, idtISO 4759-1.2000) GB/T 3106 Fasteners - Nominal length and thread length of bolts, screws and studs (GB/T 3106-2016, ISO 888.

2012, MOD)

GB/T 5267.1 Electroplating coatings for fasteners (GB/T 5267.1-2023, ISO 4042:2022, MOD) GB/T 5267.2 Non-electrolytic zinc sheet coating for fasteners (GB/T 5267.2-2021, ISO 10683:2018, MOD) GB/T 5267.3 Hot-dip galvanized coating for fasteners (GB/T 5267.3-2008, idtISO 10684.2004) GB/T 5276 Fasteners - Bolts, screws, studs and nuts - Dimension designations and markings (GB/T 5276-2015, ISO 225.

2010, MOD)

GB/T 5779.1 Surface defects of fasteners - General requirements for bolts, screws and studs (GB/T 5779.1-2000, idt) ISO 6157-1:1988 GB/T 16938 General technical conditions for fasteners-bolts, screws, studs and nuts (GB/T 16938-2008, ISO 8992.

2005, IDT)