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

GB/T 2673.1-2025

Replacing GB/T 2673.1-2018

**Fasteners - Hexalobular socket screws - Part 1: Countersunk
flat head screws with reduced loadability**

紧固件 内六角花形螺钉 第1部分：降低承载能力内六角花形沉头螺钉
(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 is Part 1 of GB/T 2673. GB/T 2673 has the following parts published.

---GB/T 2673.1 Fasteners - Hexagon socket head cap screws - Part 1: Countersunk hexagon socket head cap screws with reduced load-bearing capacity;

---GB/T 2673.2 Socket head cap screws with countersunk head.

This document replaces GB/T 2673.1-2018 "Internal Hex Socket Countersunk Screws". Compared with GB/T 2673.1-2018, the only changes are structural adjustments.

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

a) The standard name and scope have been expanded to include countersunk hexagonal socket head cap screws due to their head design (head size and hexagonal socket pattern).

Description of reduced load-bearing capacity (see Chapter 1);

b) For M2~M4, partial threaded screws without shoulders and the normative reference of x_{max} to GB/T 3 have been added [see Figure 1b) and Footnote e)];

c) For M5~M10 shafts, the shoulder shape was changed from arc to tapered [see Figure

2b, 2018 version Figure 1c)], and x_{max} was added to GB/T 3 Normative references [see Figure 2b)];

d) Added head styling details (see Figure 3);

e) The rod diameter d_s was increased (see Table 1);

f) A minimum head height k_{min} was added as a reference dimension (see Table 1);

g) The radius r was increased for all head shapes (see Figures 1 and 2), and the size r_{min} was increased (see Table 1);

h) The minimum standard length has been changed (see Table 1, 2018 version);

i) The calculated minimum tensile load values for steel screws M2 and M2.5 have been added (see Table 3), due to GB/T 3098.1 and GB/T 3098.6 does not specify the minimum ultimate tensile load for its full load-bearing capacity, therefore the same formula has been used.

The corresponding calculations are shown in Appendix A, Table A.1.

j) The performance grades of steel screws were changed to 4.8 (M3 and M6), 8.8 (M5), and 50 (M3, M6, and...) the minimum ultimate tensile load for stainless steel screws of sizes M8 and 70 (M3, M6, M8, and M10) was determined and modified to a more precise value.

Values (see Table 3, 2018 edition);

k) Added performance level 10.9 (see Table 2);

l) Added signs and labels (see 6.2);

m) Added a reference to GB/T 152.2 for countersunk heads (see 4.2).

This document is modified to adopt ISO 14581:2022 "Fasteners - Reduced load capacity of internal hexagon countersunk screws".

The technical differences from ISO 14581:2022 and the reasons therefor are as follows.

---The section in ISO 14581:2022 stating "For additional technical requirements, the stainless steel group can be selected from ISO 3506-1, and from..." has been removed.

Dimensions are selected according to ISO 888 or ISO 4753.(See Chapter 1), which is not part of the content specified in 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 3508 has been replaced with the normatively referenced GB/T 3 to adapt to my

country's technical conditions (see Figure 1);

---ISO 885 has been replaced with the normatively referenced GB/T 3105 to adapt to my country's technical conditions (see Table 1);

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

---ISO 8992 has been replaced with the normatively referenced GB/T 16938 to adapt to my country's technical conditions (see Table 2);

---ISO 965-1 has been replaced with the normatively referenced GB/T 197 to adapt to my country's technical conditions (see Table 2);

---ISO 898-1 has been replaced with the normatively referenced GB/T 3098.1 to adapt to my country's technical conditions (see Tables 2 and 3).

Chapters 6 and 7);

---ISO 3506-1 has been replaced with the normatively referenced GB/T 3098.6 to adapt to my country's technical conditions (see Tables 2 and 3).

Chapters 6 and 7);

---ISO 4759-1 has been replaced with the normatively referenced GB/T 3103.1 to adapt to my country's technical conditions (see Table 2);

---ISO 4042 has been replaced with the normatively referenced GB/T 5267.1 to adapt to my country's technical requirements (see Table 2);

---ISO 10683 has been replaced with the normatively referenced GB/T 5267.2 to adapt to my country's technical conditions (see Table 2);

---ISO 7721 has been replaced with the normatively referenced GB/T 5279 to adapt to my country's technical conditions (see Chapter 4);

---ISO 6157-1 has been replaced with the normatively referenced GB/T 5779.1 to adapt to my country's technical requirements (see Table 2);

---ISO 3269 has been replaced with the normatively referenced GB/T 90.1 to adapt to my country's technical conditions (see Table 2);

---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);

---ISO 10664 has been replaced with the normatively referenced GB/T 6188 to adapt to my country's technical requirements (see Tables 1 and 2);

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

---GB/T 90.2 has been added as a reference to conform to my country's basic fastener standards (see Table 2);

---Packaging technical requirements have been added (see Table 2) 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 been made to this section.

---The standard title has been changed to "Fasteners - Hex Socket Screws Part 1: Reducing Load Capacity of Countersunk Hex Socket Screws" Screws;

---Informative references to GB/T 152.2, GB/T 819.1, GB/T 819.2, GB/T 2673.2, GB/T 3105 and GB/T 5267.4 replaces ISO 15065, ISO 7046-1, ISO 7046-2, ISO 14582, ISO 885 and ISO 16048;

---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).

Introduction

Hex socket head cap screws are a special type of hex socket screw that can replace slotted, Phillips head, and other socket head cap screws. Generally, the head...

The height can be reduced by about 1/3. Compared to hex socket head cap screws, a greater tightening torque can be applied, resulting in higher connection strength and reducing the overall structural dimensions.

The dimensions provided the necessary conditions. GB/T 2673, "Internal Hex Socket Countersunk Screws," aims to standardize the technical requirements and head size of internal hex socket countersunk screws.

The inspection method consists of the following two parts.

---GB/T 2673.1 Fasteners - Socket head screws - Part 1: Reduced load-bearing capacity socket head countersunk screws.

The purpose is to standardize the type, dimensions, head measurement, and technical requirements of Class A countersunk hexagon socket head cap screws with reduced load-bearing capacity.