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

GB/T 70.4-2015

**Hexagon socket button head screws with collar
(English Translation)**

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Foreword

The serial national standards of GB/T 70 "Internal Wrenching Screws (Hexagon Socket Part)" include.

- GB/T 70.1 Hexagon Socket Head Cap Screws;
- GB/T 70.2 Hexagon Socket Button Head Screws;
- GB/T 70.3 Hexagon Socket Countersunk Head Screws;
- GB/T 70.4 Hexagon Socket Button Head Screws with Collar;
- GB/T 5281 Hexagon Socket Head Shoulder Screws.

This Part belongs to Part 4 of GB/T 70.

This Part was drafted as per the rules specified in GB/T 1.1-2009.

This Part adopts re-drafting method to modify and use ISO 7380-2. 2011 Button Head Screws - Part 2. Hexagon Socket Button Head Screws with Collar (English Edition).

Compared with ISO 7380-2.2011, this Part has the major changes as follows.

- In the normative references, use national standards to replace the international standards (see Chapter 2);
- Since the description of "Property Class" and "Marking Code" of the screws reducing the carrying capacity in ISO 7380-2 is wrong, which is not adopted in this Part (see Chapter 4 and Chapter 5);
- This Part specifies the package technical requirements, which are not specified in ISO 7380-2 (see Table 2);

--- This Part specifies the surface oxidation treatment, which is not specified in ISO 7380-2 (see Table 2, 5.2);

--- This Part gives the simplified marking example, while ISO 7380-2 doesn't specify the simplified marking (see 5.2).

This Part was proposed by China Machinery Industry Federation.

This Part shall be under the jurisdiction of National Technical Committee for Standardization of Fastener (SAC/TC 85).

Drafting organizations of this Part. China Productivity Center for Machinery.

Participating drafting organizations of this Part. Ningbo Jinding Fastening Piece Co.,
Hexagon Socket Button Head Screws with Collar

1 Scope

This Part of GB/T 70 specifies the type and dimension, technical conditions and markings of hexagon socket button head screws with collar for Thread Specification M3~M16, Property Class 08.8, 010.9, Product Grade A, and the carrying capacity is reduced as per Table 3.

This Part is applicable to the hexagon socket button head screws with collar that are screwed into the internal threads of the machine by using an Allen key.

2 Normative References

The following documents are essential to the application of this document. For the dated documents, only the versions with the dates indicated are applicable to this document; for the undated documents, only the latest version (including all the amendments) are applicable to this document.

GB/T 2 Fasteners - Ends of Parts with External Thread (GB/T 2-2001, idt ISO 4753.1999)

GB/T 70.5 Gauging of Hexagon Sockets (GB/T 70.5-2008, ISO 23429.2004, IDT)

GB/T 90.1 Fasteners - Acceptance Inspection (GB/T 90.1-2002, idt ISO 3269.2000)

GB/T 90.2 Fasteners - Marking and Packaging

GB/T 193 General Purpose Screw Threads - Diameters and Pitches (GB/T 193-2003, ISO 261.1998, MOD)

GB/T 1237 Designation System for Fasteners (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 3103.1 Tolerances for Fasteners - Bolts, Screws and Nuts (GB/T 3103.1-2002, ISO 4759-1.2000, IDT)

GB/T 5267.1 Fasteners - Electroplated Coatings (GB/T 5267.1-2002, ISO 4042.1999, IDT)

GB/T 5267.2 Fasteners - Non-Electrolytically Applied Zinc Flake Coatings (GB/T 5267.2-2002, ISO 10683.2000, IDT)

GB/T 5276 Fasteners - Bolts, Screws, Studs and Nuts - Symbols and Descriptions of Dimensions (GB/T 5276-1985, eqv ISO 225.1983)

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 9145 General Purpose Metric Screw Threads - Limits of Sizes for the Screw Threads of Medium Quality and Preferable Plan (GB/T 9145-2003, ISO 965-2.1998, MOD)

GB/T 16938 Fasteners - General Requirements for Bolts, Screws, Studs and Nuts (GB/T 16938-2008, ISO 8992.2005, IDT)

3 Dimension

The types and dimensions of screws can refer to Figure 1 and Table 1.

The dimension codes and markings shall conform to GB/T 5276.

5.2 Marking example

The marking of hexagon socket button head screws with collar for Thread Specification M12, Nominal Length $l=40\text{mm}$, Property Class 08.8, untreated surface, Product Grade A is shown as follows.

Screw GB/T 70.4 M12x40

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