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

GB/T 70.2-2015

**Hexagon socket button head screws
(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 2 of GB/T 70.

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

This Part replaced GB/T 70.2-2008 Hexagon Socket Button Head Screws; compared with GB/T 70.2-2008, this Part has the major changes as follows.

- Determine the screw products specified in this Part belong to "the fastener products reducing the carrying capacity" (see Chapter 1, Table 2, Table 3);
- Give "thread length b between coarse ladder solid line and unshaded area" (see Table 1);
- Adjust and increase the length specifications of screws; e.g.. the maximum length specification of M3 is increased from 12mm to 30mm; while M16 is increased from 50mm to 90mm (see Table 1);
- Delete the surface oxidation treatment and increase nontreatment to the steel

screws (see Table 2);

--- Increase the stainless-steel screw products (see Chapter 1, Table 2, Table 3);

--- Add "Class 012.9" (see Chapter 1, Table 2, Table 3);

--- Add "when considering the use of Class 012.9/012.9, it shall be cautiously performed. Fastener manufacturer's capabilities, service conditions and tightening methods shall be considered carefully. In addition to surface treatment, the use environment may also cause the stress corrosion cracks of the fasteners" (see Note a in Table 2);

--- Add "avoid the electroplating treatment for the Class 012.9/012.9 screws; more information can refer to GB/T 5267.1" (see Note d in Table 2);

Hexagon Socket Button Head Screws

1 Scope

This Part of GB/T 70 specifies the type and dimension, technical conditions and markings of hexagon socket button head screws with Thread Specification M3~M16, Property Class 08.8, 010.9, 012.9, 012.9, A2-70, A2-80, A3-70, A3-80, A4-70, A4-80, A5-70 and A5-80, Product Grade A, and the carrying capacity is reduced as per Table 3.

This Part is applicable to the hexagon socket button head screws 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 3098.6 Mechanical Properties of Fasteners - Stainless Steel Bolts, Screws and Studs (GB/T 3098.6-2014, ISO 3506-1.2009, 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 5267.4 Passivation of Corrosion-Resistant Stainless-Steel Fasteners (GB/T 5267.4-2009, ISO 16048.2003, 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 5779.3 Fasteners - Surface Discontinuities - Bolts, Screws and Studs for Special Requirements (GB/T 5779.3-2000, idt ISO 6157-3.1988)

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 the provisions of GB/T 5276.

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