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

GB/T 16674.3-2023

**Hexagon bolts with flange - Small series - Product grade A with
driving feature of product grade B**

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foreword

This document is in accordance with the provisions of GB/T 1:1-2020 "Guidelines for Standardization Work Part 1: Structure and Drafting Rules for Standardization Documents"

drafting:

This document is part 3 of GB/T 16674 "Hexagon Flange Bolts": GB/T 16674 has released the following parts:

---GB/T 16674:1 Small series of hexagon flange bolts;

---GB/T 16674:2 Small series of hexagon flange bolts with fine teeth;

---GB/T 16674:3 Small series of hexagonal flange bolts, grade A (wrenching characteristics according to grade B):

This document is modified to adopt ISO 4162:2012 "Small series of hexagon flange bolts, grade A (wrenching characteristics according to grade B)":

Compared with ISO 4162:2012, this document has made the following structural adjustments:

--- Added "Terms and Definitions" and "Signs and Labels" Chapter 2;

---Chapter 4 corresponds to Chapter 3 of ISO 4162:2012, Chapter 5 corresponds to Chapter 4 of ISO 4162:2012, and Chapter 7 corresponds to

Chapter 5 of ISO 4162:2012:

The technical differences between this document and ISO 4162:2012 and their reasons are as follows:

---Delete the provisions of ISO 4162: If other technical requirements are required, choose from ISO 3506-1 (see Chapter 1), which does not belong to this part

Sub-specified content;

- Delete level 9:8 to comply with the provisions of the basic standard on product performance levels (see Chapter 1, Table 2);
- Replaced ISO 4753 with the normatively quoted GB/T 2 to adapt to the technical conditions of our country (see Figure 1);
- Replaced ISO 8992 with the normatively quoted GB/T 16938 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 261 with the normatively quoted GB/T 193 to adapt to my country's technical conditions (see Table 2);
- Replaced ISO 965-2 with the normatively quoted GB/T 9145 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 898-1 with the normatively quoted GB/T 3098:1 to adapt to the technical conditions of our country (see Table 2, Chapter 6);
- Replaced ISO 3506-1 with the normatively quoted GB/T 3098:6 to adapt to my country's technical conditions (see Table 2, Chapter 6);
- Replaced ISO 4759-1 with the normatively quoted GB/T 3103:1 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 4042 with the normatively quoted GB/T 5267:1 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 10683 with the normatively quoted GB/T 5267:2 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 6157-1 with the normatively quoted GB/T 5779:1 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 3269 with the normatively quoted GB/T 90:1 to adapt to the technical conditions of our country (see Table 2);
- Replaced ISO 225 with the normatively quoted GB/T 5276 to adapt to the technical conditions of our country;
- Added normative references GB/T 90:2 (see Table 2), GB/T 3099:4 (see 6:2), GB/T 1237 (see Chapter 7), to comply with my country's basic standard for fasteners;
- Change the angle of the flange support surface to $0:75^{\circ} \pm 0:5^{\circ}$, consistent with GB/T 16674:1 and GB/T 16674:2 (see Figure 3);
- GB/T 5267:4 only specifies the passivation treatment process, but does not specify the inspection method, and the passivation treatment of stainless steel is changed from the normative reference to

Informative references (see Table 2);

---Deleted the reference to ISO 6157-3 (GB/T 5779:3) in surface defects (see Table 2), 8:8 and 10:9 products surface defects

It only needs to comply with GB/T 5779:1;

--- Increase the technical requirements for packaging (see Table 2) to meet the basic standards for fasteners in my country;

--- Increased the provisions of marking and labeling (see Chapter 6) to adapt to the technical conditions of fastener products;

--- Change the marking example to a simplified marking example (see Chapter 7) to comply with the provisions of GB/T 1237:

The following editorial changes have been made to this document:

--- Replaced the corresponding international documents with the Chinese documents quoted for information, and changed the references:

Please note that some contents of this document may refer to patents: The issuing agency of this document assumes no responsibility for identifying patents:

Introduction

Among the bolt products, hexagon head bolts are widely used in production and use, and are irreplaceable fastener products: hex flange bolts

The head is composed of two parts, the hexagonal head and the flange surface, and its "support area to stress area ratio" is greater than that of ordinary hexagonal head bolts:

The bolt can withstand higher preload and has better anti-loosening performance, so it is widely used in automobile engines, heavy machinery and other products: GB/T 16674

"Hexagonal Flange Bolts" aims to standardize the technical requirements and head inspection methods of hexagonal flange bolts, and consists of the following three parts:

---GB/T 16674:1 Small series of hexagon flange bolts: The purpose is to standardize the type of A-level small series of hexagon flange bolts

Type dimensions, technical conditions and marks:

---GB/T 16674:2 Small series of hexagon flange bolts with fine teeth: The purpose is to standardize the small series of fine teeth hexagonal flange surface screws

The type, size, technical condition and marking of bolts:

---GB/T 16674:3 Small series of hexagonal flange bolts, grade A (wrenching characteristics according to grade B): The purpose is to standardize the A-level small series

List the type dimensions, technical conditions and marks of hexagon flange bolts (wrenching characteristics according to grade B):

GB/T 16674:1, GB/T 16674:2 and GB/T 16674:3 are respectively modified to adopt ISO 15071, ISO 15072 and ISO 4162, and the

Different types of small series of hexagonal flange bolts are included in the GB/T 16674 series, which is convenient to use: GB/T 16674:3 in addition to hexagonal

Except for the product grade specified in the head wrench part as Class B, the rest is the same as GB/T 16674:1:

Small series of hexagon flange bolts

Class A (wrench characteristics according to Class B)

1 Scope

This document specifies the type size, technical conditions, marking labels and mark:

This document is applicable to thread specifications M5~M16, small series, performance grades 8:8, 10:9, A2-70, product grade A (wrench special

According to grade B) hexagonal flange bolts:

2 Normative references

The contents of the following documents constitute the essential provisions of this document through normative references in the text: Among them, dated references

For documents, only the version corresponding to the date is applicable to this document; for undated reference documents, the latest version (including all amendments) is applicable to

this document:

GB/T 2 The end of externally threaded parts of fasteners (GB/T 2-2016, ISO 4753:2011, MOD)

GB/T 90:1 Fastener acceptance inspection (GB/T 90:1-2023, ISO 3269:2019, MOD)

GB/T 90:2 Marking and packaging of fasteners

GB/T 193 Common thread diameter and pitch series (GB/T 193-2003, ISO 261:1998, MOD)

GB/T 1237 Fastener Marking Method (GB/T 1237-2000, eqvISO 8991:1986)

GB/T 3098:1 Mechanical properties of fasteners Bolts, screws and studs (GB/T