



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

GB/T 16824.1-2023

Hexagon washer head tapping screws

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Foreword

This document was drafted in accordance with the provisions of GB/T 1.1-2020

Directives for standardization - Part 1: Rules for the structure and drafting of standardizing documents.

This document is part 1 of GB/T 16824 Hexagon head tapping screws. The following parts of GB/T 16824 have been issued:

- GB/T 16824.1 Hexagon washer head tapping screws;
- GB/T 16824.2 Hexagon flange head tapping screws.

This document replaces GB/T 16824.1-2016 Hexagon washer head tapping screws.

Compared with GB/T 16824.1-2016, except for the structural adjustment and editorial revisions, the main technical changes are as follows:

- a) The radius r is changed to r_1 , and the dimension values are changed (see Figure

1 and Table 1; see Figure 1 and Table 1 of the 2016 edition);

- b) For the surface treatment, only the mark of untreated given in the marking example is allowed to be omitted (see Chapter 7; see Chapter 5 of the 2016 edition);

c) The requirements for marks and labels are added (see Chapter 6).

This document is modified in relation to ISO 7053:2019 Fasteners - Hexagon washer head tapping screws.

Compared with ISO 7053:2019, the following structural adjustments are made to this document:

- The chapter "Marks and labels" is added;
- Chapter 7 corresponds to Chapter 6 of ISO 7053:2019.

The technical differences between this document and ISO 7053:2019 and their reasons are as follows:

- ISO 8992 is replaced by the normative reference GB/T 16938 to adapt to the technical conditions in China (see Table 2);
- ISO 1478 is replaced by the normative reference GB/T 5280 to adapt to the technical conditions in China (see Table 2);

Hexagon washer head tapping screws

1 Scope

This document specifies the type and dimensions, technical conditions, marks and labels, and marking of hexagon washer head tapping screws.

This document is applicable to hexagon washer head tapping screws with thread specifications of ST 2.2~ST 8, made of steel and stainless steel, and of grade A.

2 Normative references

The following documents contain the provisions which, through normative reference in this document, constitute the essential provisions of this document. For the dated referenced documents, only the versions with the indicated dates are applicable to this document; for the undated referenced documents, only the latest version (including all the amendments) is applicable to this document.

GB/T 90.1 Fasteners - Acceptance inspection (GB/T 90.1-2023, ISO 3269:2019, MOD)

GB/T 90.2 Fasteners - Marking and packaging

GB/T 1237 Designation system for fasteners (GB/T 1237-2000, eqv ISO 8991:1986)

GB/T 3098.5 Mechanical properties of fasteners - Tapping screws (GB/T 3098.5-2016, ISO 2702:2011, MOD)

GB/T 3098.21 Mechanical properties of fasteners - Stainless steel tapping screws (GB/T 3098.21-2014, ISO 3506-4:2009, MOD)

GB/T 3103.1 Tolerances for fasteners - Bolts, screws, studs and nuts (GB/T 3103.1-2002, idt ISO 4759-1:2000)

GB/T 5267.1 Fasteners - Electroplate coating (GB/T 5267.1-2023, ISO 4042:2022, MOD)

GB/T 5267.2 Fasteners - Non-electrolytically applied zinc flake coatings (GB/T 5267.2-2021, ISO 10683:2018, MOD)

GB/T 5276 Fasteners - Bolts, screws, studs and nuts - Symbols and descriptions of

- the thread specification and nominal length;
- the stainless-steel fastener group and hardness level code;
- the type of surface treatment;
- the identification mark or name of the manufacturer and/or distributor;
- The manufacturing batch number specified in GB/T 3099.4;
- the number of packages.

7 Marking

The marking method shall be in accordance with the provisions of GB/T 1237.

Example 1: For a hexagon washer head tapping screw with a thread specification of ST3.5, a nominal

length l of 16 mm, a C-type end, and an untreated surface, which is made of steel, of product grade A,

and has the mechanical properties that are in accordance with GB/T 3098.5, the mark is as follows:

Tapping screw GB/T 16824.1 ST3.9x16

Example 2: For a hexagon washer head tapping screw with a thread specification of ST3.9,

a nominal

length l of 16 mm, an R-type end, and a simply-treated surface, which is made of stainless steel, of

product grade A, and has stainless steel group and hardness level of A4-20H, the mark is as follows:

Tapping screw GB/T 16824.1 ST3.9x16 A4-20H R

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