



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

GB/T 5285-2017

Hexagon head tapping screws

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Foreword

This standard is one of the national standards for the "self-tapping screws" series. The series includes.

- GB/T 845 cross recessed pan head self-tapping screws;
- GB/T 846 cross recessed countersunk head tapping screws;
- GB/T 847 cross recessed countersunk head self-tapping screws;
- GB/T 2670.1 Hexagonal flower-shaped pan head tapping screw;
- GB/T 2670.2 Hexagonal flower-shaped countersunk head tapping screws;
- GB/T 2670.3 Hexagonal flower-shaped semi-sunk head self-tapping screws;
- GB/T 5282 slotted pan head tapping screws;
- GB/T 5283 slotted countersunk head tapping screw;
- GB/T 5284 slotted semi-recessed head self-tapping screws;
- GB/T 5285 Hex head self-tapping screws;
- GB/T 9456 cross recessed hex head self-tapping screws;
- GB/T 13806.2 precision mechanical fasteners cross recessed self-tapping screws scraping end;
- GB/T 16824.1 hexagonal flange self-tapping screws;
- GB/T 16824.2 Hex flange face self-tapping screws.

This standard was drafted in accordance with the rules given in GB/T 1.1-2009.

This standard replaces GB/T 5285-1985 "hexagon head self-tapping screws", compared with GB/T 5285-1985, the main technical changes are as follows.

- Increase the R type (see Figure 1 and Table 1);
- Increase general technical conditions according to GB/T 16938 (see Table 2);
- For steel screws, increase the technical requirements for untreated and non-electrolytic zinc sheet coating according to GB/T 5267.2 (see Table 2);
- Add stainless steel screw products and technical requirements (see Table 2);
- Add "If other technical requirements or surface treatment are required, the supply and demand agreement should be provided" (see Table 2).

This standard uses the redrafting method to modify the use of ISO 1479.2011 "hexagon head self-tapping screws."

The technical differences with ISO 1479.2011 and their reasons are as follows.

- In the normative reference documents, replace the international standards with Chinese standards (see Chapter 2), increase the reference to GB/T 90.2 (see Table 2) and GB/T 1237 (see 5.1) to meet the basic standards of fasteners in China.
- Increase packaging technical requirements (see Table 2) to meet the basic standards of fasteners in China.
- Modify the tag example as a simplified tag example (see 5.2) to comply with the provisions of GB/T 1237.

This standard was proposed by the China Machinery Industry Federation.

This standard is under the jurisdiction of the National Fastener Standardization Technical Committee (SAC/TC85).

This standard is drafted by. China Machine Productivity Promotion Center.

Participated in the drafting of this standard. the quality supervision and testing center for general parts and components of the machinery industry.

This standard is interpreted by the National Fastener Standardization Technical Committee.

The previous versions of the standards replaced by this standard are.

- GB/T 5285-1976, GB/T 5285-1985.

Hexagon head tapping screw

1 Scope

This standard specifies the type size, technical conditions and markings of the hexagonal

head tapping screws.

This standard applies to hex head self-tapping screws with thread specifications ST2.2~ST9.5 and product grade A.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 90.1 fastener acceptance inspection (GB/T 90.1-2002, idtISO 3269.2000)

GB/T 90.2 fastener packaging and signs

GB/T 1237 fastener marking method (GB/T 1237-2000, eqvISO 8991.1986)

GB/T 3098.5 Self-tapping screws for mechanical properties of fasteners (GB/T 3098.5-2016, ISO 2702.2011, MOD)

GB/T 3098.21 fastener mechanical properties stainless steel self-tapping screws (GB/T 3098.21-2014, ISO 3506-4.2009, MOD)

GB/T 3103.1 fastener tolerance bolts, screws, studs and nuts (GB/T 3103.1-2002, idtISO 4759-1.2000)

GB/T 5267.1 Fastener Plating (GB/T 5267.1-2002, ISO 4042.1999, IDT)

GB/T 5267.2 fastener non-electrolytic zinc sheet coating (GB/T 5267.2-2002, ISO 10683.2000, IDT)

GB/T 5267.4 fastener surface treatment corrosion-resistant stainless steel passivation treatment (GB/T 5267.4-2009, ISO 16048.2003,

IDT)

GB/T 5276 fastener bolts, screws, studs and nuts size code and label (GB/T 5276-2015, ISO 225.

2010, MOD)

GB/T 5280 self-tapping screw thread (GB/T 5280-2002, idtISO 1478.1999)

General technical requirements for GB/T 16938 fastener bolts, screws, studs and nuts (GB/T 16938-2008, ISO 8992.

2005, IDT)

3 type size

The dimensions of the self-tapping screws are shown in Figure 1 and Table 1.

The size code and label should conform to GB/T 5276.

a) Type C

b) Type F

c) R type

a The pocket type is chosen by the manufacturer.

b Dimension a shall be measured at the small diameter of the first buckle full thread.

figure 1

Table 1 Dimensions are in millimeters

Thread size ST2.2 ST2.9 ST3.5 ST4.2 ST4.8 ST5.5 ST6.3 ST8 ST9.5

Pa 0.8 1.1 1.3 1.4 1.6 1.8 1.8 2.1 2.1

a max 0.8 1.1 1.3 1.4 1.6 1.8 1.8 2.1 2.1

Da max 2.8 3.5 4.1 4.9 5.5 6.3 7.1 9.2 10.7

Max 3.20 5.00 5.50 7.00 8.00 8.00 10.00 13.00 16.00

Min 3.02 4.82 5.32 6.78 7.78 7.78 9.78 12.73 15.73

e min 3.38 5.40 5.96 7.59 8.71 8.71 10.95 14.26 17.62

Max 1.6 2.3 2.6 3.0 3.8 4.1 4.7 6.0 7.5

Min 1.3 2.0 2.3 2.6 3.3 3.6 4.1 5.2 6.5

Kw min 0.9 1.4 1.6 1.8 2.3 2.5 2.9 3.6 4.5

r min 0.10 0.10 0.10 0.20 0.20 0.25 0.25 0.40 0.40

reference

Type C 2.0 2.6 3.2 3.7 4.3 5.0 6.0 7.5 8.0

F type 1.6 2.1 2.5 2.8 3.2 3.6 3.6 4.2 4.2

Type R - - 2.7 3.2 3.6 4.3 5.0 6.3 -

Lb

Nominal

Type C and Type R F