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

GB/T 5780-2000  
eqv ISO 4016:1999

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**Hexagon head bolts –Product grade C**

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## Contents

<b>Foreword</b> .....	
<b>ISO Forward</b> .....	1
<b>ISO Introduction</b> .....	1
<b>1. Scope</b> .....	1
<b>2. Normative References</b> .....	1
<b>3. Dimension code</b> .....	1
<b>4. Technical conditions and cited standards</b> .....	12
<b>5. Markings</b> .....	12

## Foreword

This Standard is equivalent to ISO 4016: 1999 *Hexagon Head Bolt—Product Grade C*.

This Standard is one integral part of the national standard for “Fasteners tightened by hexagonal wrench” series products. These series products shall include:

- a) Hexagon head bolt: GB/T 27, GB/T 28, GB/T 29.1, GB/T 29.2, GB/T 31.1, GB/T 31.2, GB/T 31.3, GB/T 32.1, GB/T 32.2, GB/T 32.3, GB/T 5780, GB/T 5781, GB/T 5782, GB/T 5783, GB/T 5784, GB/T 5785 and GB/T 5786 ;
- b) Hexagon nuts : GB/T 41, GB/T 56, GB/T 802, GB/T 804, GB/T 805, GB/T 808, GB/T 889.1, GB/T 889.2, GB/T 923, GB/T 6170, GB/T 6171, GB/T 6172.1, GB/T 6172.2, GB/T 6173, GB/T 6174, GB/T 6175, GB/T 6176, GB/T 6178, GB/T 6179, GB/T 6180, GB/T 6181, GB/T 6182, GB/T 6184, GB/T 6185.1, GB/T 6185.2, GB/T 6186, GB/T 9457, GB/T 9458, GB/T 9459 and GB/T18195 ;
- c) Hexagon flange bolts : GB/T 5789, GB/T 5790 and GB/T 16674 ;
- d) Hexagon flange nuts : GB/T 6177.1, GB/T 6177.2, GB/T 6183.1, GB/T 6183.2, GB/T 6187.1 and GB/T 6187.2 ;
- e) Bolt connection pairs for bolt connected structures : GB/T 1228, GB/T 1229, GB/T 1230, GB/T 3632, GB/T 16939, GB/T 18230.1, GB/T 18230.2, GB/T 18230.3, GB/T 18230.4, GB/T 18230.5, GB/T 18230.6 and GB/T 18230.7 ;
- f) Hexagon head screw, wood screw, tapping screw and assy: GB/T 838, GB/T 102, GB/T 5285, GB/T 6563, GB/T 9456, GB/T 15856, GB/T 16824.1, GB/T 16824.2, GB/T 9074.11, GB/T 9074.12, GB/T 9074.13, GB/T 9074.14, GB/T 9074.15, GB/T 9074.16, GB/T 9074.17, GB/T 9074.20, GB/T 9074.21, GB/T 9074.22 and GB/T 9074.23.

As ISO 4016 does not stipulate recess type (Figure 1).

As ISO 4016 does not stipulate packaging technical requirements, this Standard shall set forth the stipulations (Table 3)

As ISO 4016 does not stipulate simplified markings, this Standard has given the examples for simplified markings by the simplifying principles set forth in GB/T 1237 (Article 5.2).

This Standard does not adopt the table of contents attached to ISO 4016, the contents of which have been contained in the preface of this Standard.

## **ISO Forward**

ISO (International Standardization Organization) is a worldwide united organization jointed by national standard communities of all countries (ISO membership group). The formulation work of international standards is done through each ISO technical committee. If a membership group is interested in the project conducted by certain technical committee, he may joint this committee. It is also possible for the governmental or non-governmental organizations in connection with ISO to participate in this work. ISO is closely connected with International Electrotechnical Commission (IEC) as to electrotechnical standardization.

International standards are drafted according to the rules given in Part III of ISO/IEC Guidance.

The drafts of international standards adopted by technical committee shall be distributed to all membership groups for vote by ballot. The formal publication of international standards shall be agreed by at least 75% of membership groups by ballot.

International standard ISO 4016 is formulated by ISO/TC 2 Fasteners Technical Committee.

The second edition has done some cancellations and supplementations to the first edition (ISO 4016: 1988), belonging to technical modifications.

## **ISO INTRODUCTION**

This international standard is one integral part of “Fasteners tightened by outer hexagonal wrench”

ISO series products. These series products shall include:

- a) Hexagon head bolts (ISO 4014 ~ 4016 and ISO 8675);
- b) Hexagon head screw (ISO 4017, ISO 4018 and ISO 8676);
- c) Hexagon head nuts (ISO 4032 ~ 4036 and ISO 8673 ~ 8675);
- d) Hexagon flange bolts (ISO 4162 and ISO 15071);
- e) Hexagon flange nuts (ISO 4161 and ISO 10663);
- f) Bolts and nuts for bolt connected structures (ISO 4775, ISO 7411 ~ 7414 and ISO 4717).

## Hexagon head bolts –Product grade C

### 1. Scope

This Standard is applicable to the hexagon head bolts that the thread specification is M5~ M6, the performance grades are of Grade 3.6, 4.6 and 4.8, product grades are of Grade C

If other technical requirements are needed, they should be selected from applicable standards (such as GB/T 196, GB/T 3106, GB/T 3098.1, GB/T 3.98.6 and GB/T 3103.1).

### 2. Normative References

The articles contained in the following standards shall become the article of this Standard when they are cited therein. When this Standard is published, all the indicated editions are effective. As all standards shall be modified, all parties applying this Standard shall study the possibilities to use the latest version of the following standards.

GB/T 90 – 1985 Fasteners – Acceptance inspection, marking and packing (eqv ISO 3269: 1984)

GB/T 196–1981 General purpose metric screw threads—Basic dimensions (for diameter from 1 ~ 600mm)

GB/T 197–1981 General purpose metric screw threads—Tolerances and fits (for diameter from 1 to 355mm)

GB/T 1237–2000 Fasteners – Marking methods (eqv ISO 8991: 1986)

GB/T 3089.1 – 2000 Mechanical properties of fasteners – Bolts, screws and studs (idt ISO 898-1: 1999)

GB/T 3103.1–1982 (approved in 1988) Fasteners tolerances – Bolts, screws and nuts (eqv ISO 4759-1: 1978)

GB/T 3106–1982 (approved in 1988) Nominal length of bolts, screws and studs and thread length of general purpose bolts (eqv ISO 888: 1976)

GB/T 5267–1985 Electroplated coating on threaded fasteners

GB/T 5276–1985 Fasteners – bolts, screws, studs and nuts – dimension code and annotation (eqv ISO 225: 1983)

GB/T 5781 – 2000 Hexagon head bolts- Full thread Grade C (eqv ISO 4018: 1999)

GB/T 16938 – 1997 Fasteners – Bolts, screws, studs and nuts – universal technical conditions (idt ISO 8992: 1986)

ISO 10683: 2000 Fasteners – Non- electrolytic zinc powder coating

### 3. Dimension

Note: Dimension codes and indications shall conform to GB/T 5276.

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