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Hexalobular socket head screws

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Contents

	Page
Introduction	1
1 Scope	1
2 Normative references	1
3 Terms and definitions	4
4 Types	4
5 Shape and dimensions, product specifications and examples of product designation	4
6 Marking	22
6.1 Marking on products	22
6.2 Marking on packaging	22
Annex JA (informative) Comparison table between JIS and corresponding International Standards	23

Foreword

This Japanese Industrial Standard has been revised by the Minister of Economy, Trade and Industry through deliberations at the Japanese Industrial Standards Committee as the result of proposal for revision of Japanese Industrial Standard submitted by The Japan Research Institute for Screw Threads and Fasteners (JFRI)/Japanese Standards Association (JSA) with the draft being attached, based on the provision of Article 12 Clause 1 of the Industrial Standardization Law applicable to the case of revision by the provision of Article 14. Consequently **JIS B 1107:2015** is replaced with this Standard.

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Hexalobular socket head screws

Introduction

This Japanese Industrial Standard has been prepared based on **ISO 14580:2011** (Edition 2), **ISO 14581:2013** (Edition 1), **ISO 14582:2013** (Edition 1), **ISO 14583:2011** (Edition 2) and **ISO 14584:2011** (Edition 2), and by incorporating the part, corresponding to this Standard (shape and dimensions, product specifications, examples of designation) without any modifications of the technical contents, but also adding some **JIS** specification contents that are not given in the said corresponding International Standards.

The vertical lines on both sides and dotted underlines indicate addition to the corresponding International Standards. A list of modifications with the explanations is given in Annex JA.

1 Scope

This Standard specifies the characteristics of hexalobular socket head screws.

If, in special cases, specifications other than those listed in this Standard are required, they can be selected from existing Standards, for example **JIS B 0205-2**, **JIS B 0209-3**, **JIS B 1009**, **JIS B 1021**, **JIS B 1051** and **JIS B 1054-1** upon the agreement between the purchaser and manufacturer.

NOTE The International Standards corresponding to this Standard and the symbol of degree of correspondence are as follows.

ISO 14580:2011 *Hexalobular socket cheese head screws*

ISO 14581:2013 *Fasteners—Hexalobular socket countersunk flat head screws*

ISO 14582:2013 *Fasteners—Hexalobular socket countersunk head screws, high head*

ISO 14583:2011 *Hexalobular socket pan head screws*

ISO 14584:2011 *Hexalobular socket raised countersunk head screws* (overall evaluation: MOD)

In addition, symbols which denote the degree of correspondence in the contents between the relevant International Standard and **JIS** are **IDT** (identical), **MOD** (modified), and **NEQ** (not equivalent) according to **ISO/IEC Guide 21-1**.

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this Standard. The most recent editions of the standards (including amendments) indicated below shall be applied.

JIS B 0101 *Screw threads and fasteners—Vocabulary*

JIS B 0143 *Fasteners—Bolts, screws, studs and nuts—Symbols and descriptions of dimensions*

NOTE Corresponding International Standard: ISO 225:2010 *Fasteners—Bolts, screws, studs and nuts—Symbols and descriptions of dimensions* (IDT)

JIS B 0205-2 *ISO general purpose metric screw threads—Part 2: General plan*

NOTE Corresponding International Standard: ISO 261:1998 *ISO general purpose metric screw threads—General plan* (IDT)

JIS B 0205-3 *ISO general purpose metric screw threads—Part 3: Selected sizes for screws, bolts and nuts*

NOTE Corresponding International Standard: ISO 262:1998 *ISO general purpose metric screw threads—Selected sizes for screws, bolts and nuts* (IDT)

JIS B 0209-2 *ISO general purpose metric screw threads—Tolerances—Part 2: Limits of sizes for general purpose external and internal screw threads—Medium quality*

NOTE Corresponding International Standard: ISO 965-2:1998 *ISO general purpose metric screw threads—Tolerances—Part 2: Limits of sizes for general purpose external and internal screw threads—Medium quality* (IDT)

JIS B 0209-3 *ISO general purpose metric screw threads—Tolerances—Part 3: Deviations for constructional screw threads*

NOTE Corresponding International Standard: ISO 965-3:1998 *ISO general purpose metric screw threads—Tolerances—Part 3: Deviations for constructional screw threads* (IDT)

JIS B 1003 *Fasteners—Ends of parts with external ISO metric thread*

NOTE Corresponding International Standard: ISO 4753:2011 *Fasteners—Ends of parts with external ISO metric thread* (IDT)

JIS B 1009 *Fasteners—Bolts, screws and studs—Nominal lengths and thread lengths*

NOTE Corresponding International Standard: ISO 888:2012 *Fasteners—Bolts, screws and studs—Nominal lengths and thread lengths* (IDT)

JIS B 1010 *Designation system for fasteners*

JIS B 1013 *Countersunk head screws—Head configuration and gauging*

NOTE Corresponding International Standard: ISO 7721:1983 *Countersunk head screws—Head configuration and gauging* (IDT)

JIS B 1015 *Hexalobular internal driving feature for bolts and screws*

NOTE Corresponding International Standard: ISO 10664:2014 *Hexalobular internal driving feature for bolts and screws* (IDT)

JIS B 1017 *Countersinks for countersunk head screws*

JIS B 1021 *Tolerances for fasteners—Part 1: Bolts, screws, studs and nuts—Product grades A, B and C*

NOTE Corresponding International Standard: ISO 4759-1:2000 *Tolerances for fasteners—Part 1: Bolts, screws, studs and nuts—Product grades A, B and C* (IDT)

JIS B 1041 *Fasteners—Surface discontinuities—Part 1: Bolts, screws and studs for general requirements*

NOTE Corresponding International Standard: ISO 6157-1:1988 *Fasteners—Surface discontinuities—Part 1: Bolts, screws and studs for general requirements* (IDT)

JIS B 1044 *Fasteners—Electroplated coatings*

NOTE Corresponding International Standard: ISO 4042:1999 *Fasteners—Electroplated coatings* (IDT)

JIS B 1046 *Fasteners—Non-electrolytically applied zinc flake coatings*

NOTE Corresponding International Standard: ISO 10683:2000 *Fasteners—Non-electrolytically applied zinc flake coatings* (IDT)

JIS B 1047 *Passivation of corrosion-resistant stainless-steel fasteners*

NOTE Corresponding International Standard: ISO 16048:2003 *Passivation of corrosion-resistant stainless-steel fasteners* (IDT)

JIS B 1051 *Mechanical properties of fasteners made of carbon steel and alloy steel—Bolts, screws and studs with specified property classes—Coarse thread and fine pitch thread*

NOTE Corresponding International Standard: ISO 898-1:2013 *Mechanical properties of fasteners made of carbon steel and alloy steel—Part 1: Bolts, screws and studs with specified property classes—Coarse thread and fine pitch thread* (IDT)

JIS B 1054-1 *Mechanical properties of corrosion-resistant stainless steel fasteners—Part 1: Bolts, screws and studs*

NOTE Corresponding International Standard: ISO 3506-1:2009 *Mechanical properties of corrosion-resistant stainless steel fasteners—Part 1: Bolts, screws and studs* (IDT)

JIS B 1057 *Mechanical properties of non-ferrous metal fasteners*

NOTE Corresponding International Standard: ISO 8839:1986 *Mechanical properties of fasteners—Bolts, screws, studs and nuts made of non-ferrous metals* (MOD)

JIS B 1091 *Fasteners—Acceptance inspection*

NOTE Corresponding International Standard: ISO 3269:2000 *Fasteners—Acceptance inspection* (IDT)

JIS B 1099 *Fasteners—General requirements for bolts, screws, studs and nuts*

NOTE Corresponding International Standard: ISO 8992:2005 *Fasteners—General requirements for bolts, screws, studs and nuts* (IDT)

JIS B 1101 *Slotted head screws*

NOTE Corresponding International Standard: ISO 1207:1992 *Slotted cheese head screws—Product grade A* (MOD)

3 Terms and definitions

For the purpose of this Standard, the terms and definitions given in **JIS B 0101** apply.

4 Types

Hexalobular socket head screws shall be classified as given in Table 1.

Table 1 Types of hexalobular socket head screws

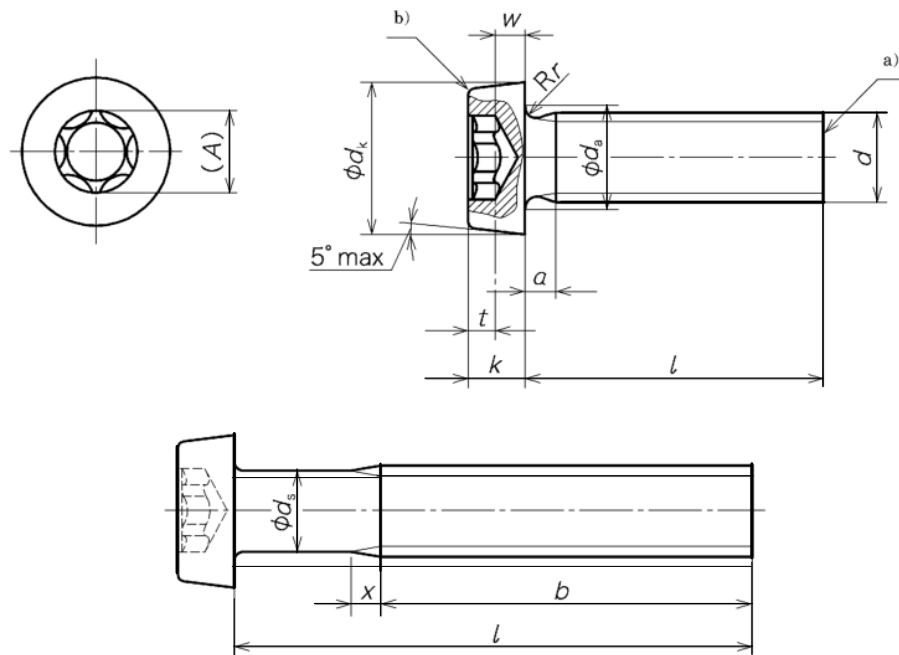
Type	Range of thread size	Corresponding International Standard (informative)
Hexalobular socket cheese head screws	M2 to M10	ISO 14580
Hexalobular socket pan head screws	M2 to M10	ISO 14583
Hexalobular socket raised countersunk head screws	M2 to M10	ISO 14584
Hexalobular socket countersunk flat head screws ^{a)}	M2 to M10	ISO 14581
Hexalobular socket countersunk head screws, high head ^{b)}	M3 to M10	ISO 14582
Notes ^{a)} Hexalobular socket countersunk flat head screws with reduced loadability ^{b)} Hexalobular socket countersunk flat head screws with full loadability		

5 Shape and dimensions, product specifications and examples of product designation

The shape and dimensions, product specifications and examples of product designation for hexalobular socket head screws shall be as given in Table 2.

Table 2 Shape and dimensions, product specifications and examples of product designation

Type	Shape and dimensions	Product specifications	Examples of product designation
Hexalobular socket cheese head screws	Figure 1, Table 3	Table 4	Table 5
Hexalobular socket pan head screws	Figure 2, Table 6	Table 7	Table 8
Hexalobular socket raised countersunk head screws	Figure 3, Table 9	Table 10	Table 11
Hexalobular socket countersunk flat head screws	Figure 4, Table 12	Table 13, Table 14	Table 15
Hexalobular socket countersunk head screws, high head	Figure 5, Figure 6, Table 16	Table 17	Table 18
Symbols of shape and dimensions shall be as specified in JIS B 0143 . The product designation shall be as given in JIS B 1010 .			



The shank diameter, d_s , is approximately equal to the pitch diameter, d_2 , or equal to the major thread diameter, d . However, the diameter shall be smaller than the maximum outside diameter of screw thread.

Notes ^{a)} As-rolled (RL) or chamfered (CH) end, as given in JIS B 1003.

^{b)} Edge may be rounded or flat.

Figure 1 Hexalobular socket cheese head screws