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㉟ JIS B 4636-1 : 1998

Socket wrenches — 12.7 mm square drive

ICS 25.140.30

Descriptors : wrenches, socket wrenches, dimensional tolerances

Reference number : JIS B 4636-1 : 1998 (E)

Foreword

This translation has been made based on the original Japanese Industrial Standard established by the Minister of International Trade and Industry through deliberations at Japanese Industrial Standards Committee in accordance with the Industrial Standardization Law:

This Standard has unified the following six Standards with intending to conform to the corresponding International Standards.

The six Standards replaced with this Standard are as follows:

- JIS B 4636:1994 *Socket wrenches — Sockets*
- JIS B 4637:1994 *Socket wrenches — Extension bars*
- JIS B 4638:1994 *Socket wrenches — Spinner handles*
- JIS B 4639:1994 *Socket wrenches — Universal joints*
- JIS B 4640:1994 *Socket wrenches — Sliding T handles*
- JIS B 4641:1994 *Socket wrenches — Reversible ratchet handles*

JIS B 4636:1998 consists of following two parts:

- Part 1: *Socket wrenches — 12.7 mm square drive*
- Part 2: *Socket wrenches — 6.3 to 25 square drive*

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Socket wrenches — 12.7 mm square drive

Introduction This Standard is Japanese Industrial Standard prepared based on the International Standards shown in the Remarks, providing the types specified conventionally in the Japanese Industrial Standard and their shape and dimensions, quality, inspection, strength test, designation of products and marking in the body, and without modifying their technical contents in Annex, while supplements the provisions not specified in the corresponding International Standards (appearance, inspection, etc.) as a part of Japanese Industrial Standard.

The provisions or phrases underlined with dots in Annex are the matters not specified in the corresponding International Standards.

Remarks: The International Standards corresponding to this Standard are as follows:

- ISO 286-2:1988 *ISO system of limits and fits — Part 2: Tables of standard tolerance grades and limit deviations for holes and shafts*
- ISO/DIS 691 *Assembly tools for screws and nuts — Wrench and socket openings — Tolerances for general use*
- ISO 1174-1:1996 *Assembly tools for screws and nuts — Driving squares — Part 1: Driving squares for hand socket tools*
- ISO 1711-1:1996 *Assembly tools for screws and nuts — Technical specifications — Part 1: Hand-operated wrenches and sockets*
- ISO 2725-1:1996 *Assembly tools for screws and nuts — Square drive sockets — Part 1: Hand-operated sockets — Dimensions*
- ISO 3315:1996 *Assembly tools for screws and nuts — Driving parts for hand-operated square drive socket wrenches — Dimensions and tests*
- ISO 3316:1996 *Assembly tools for screws and nuts — Attachments for hand-operated square drive socket wrenches — Dimensions and tests*

1 Scope This Japanese Industrial Standard specifies the sockets for manual socket wrenches of 12.7 mm square drive to be used as assembly or disassembly tools for the hexagonal bolts and nuts.

2 Types The types of the socket wrenches shall be as given in Table 1.

Table 1 Types of socket wrenches

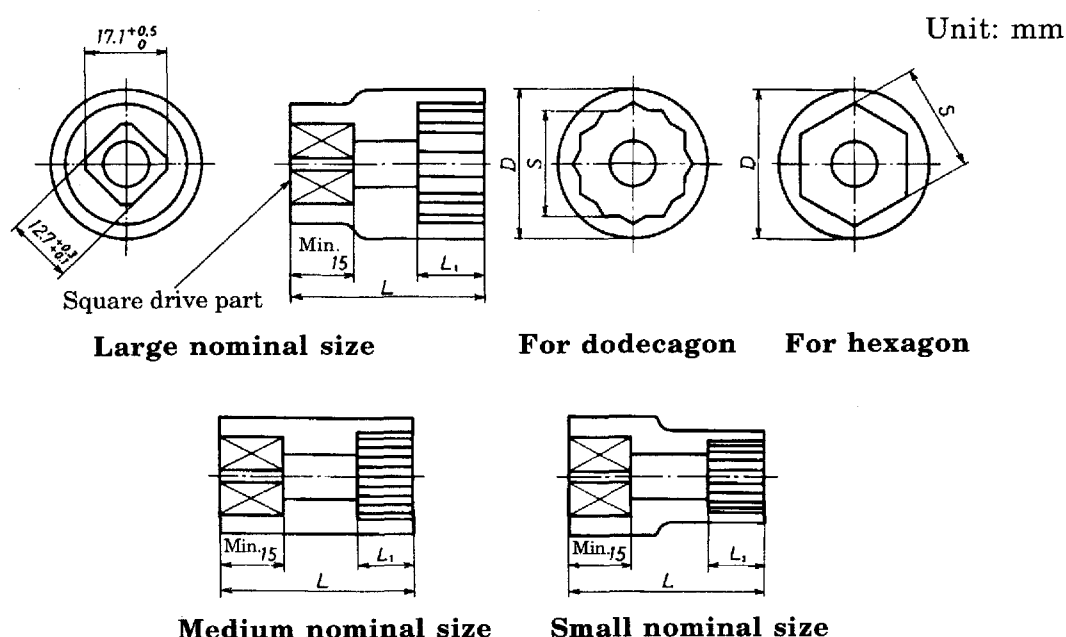
Name of product
Socket for socket wrench
Ratchet handle for socket wrench
Spinner handle for socket wrench
Slide handle for socket wrench
Universal joint for socket wrench
Extension bar for socket wrench

Remarks: As for the name of products, the socket for socket wrench may be abbreviated as "socket", and the ratchet handle for socket wrench may be abbreviated as "ratchet handle".

Further, the products other than sockets may be collected together as the handles for socket wrench, and abbreviated as "handles".

3 Shape and dimensions

3.1 Shape and dimensions of sockets The shape of the sockets shall be preferably as given in Fig. 1. The dimensions shall be as given in Table 2.



- Remarks 1 The socket shall be preferably provided with a groove or a small diameter hole so that handles are not easily detached from the square drive part when the handles are inserted in the square drive part.
- 2 The shape of the socket part may be either hexagonal or dodecagonal.

Fig. 1 Shape of sockets

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Table 2 Dimension and test torque of sockets

Unit: mm

Nominal size	Width across flats <i>S</i>		<i>D</i> Max.	<i>L</i> Max.	<i>L</i> ₁ Min.	Test torque (N · m)
	Basic dimension	Tolerance				
8	8	+0.15 +0.03	13	38	6	39
9	9		14			69
10	10	+0.19 +0.04	16		7	88
11	11		18			118
12	12	+0.24 +0.04	19		8	147
13	13		21			177
14	14	+0.27 +0.05	22		9	206
15	15		23			235
16	16		24		10	265
17	17	+0.30 +0.05	25	40		294
18	18		26			324
19	19	+0.36 +0.06	28		12	353
21	21		31		14	471
22	22		33	44		
23	23		34		15	
24	24		36		16	
26	26	+0.48 +0.08	37		18	
27	27		39	48		
29	29		41			
30	30		44		20	
32	32		46			

3.2 Shape and dimensions of ratchet handle The shape of the ratchet handle shall preferably be as given in Fig. 2. The dimensions shall be as given in Fig. 2.

Unit: mm

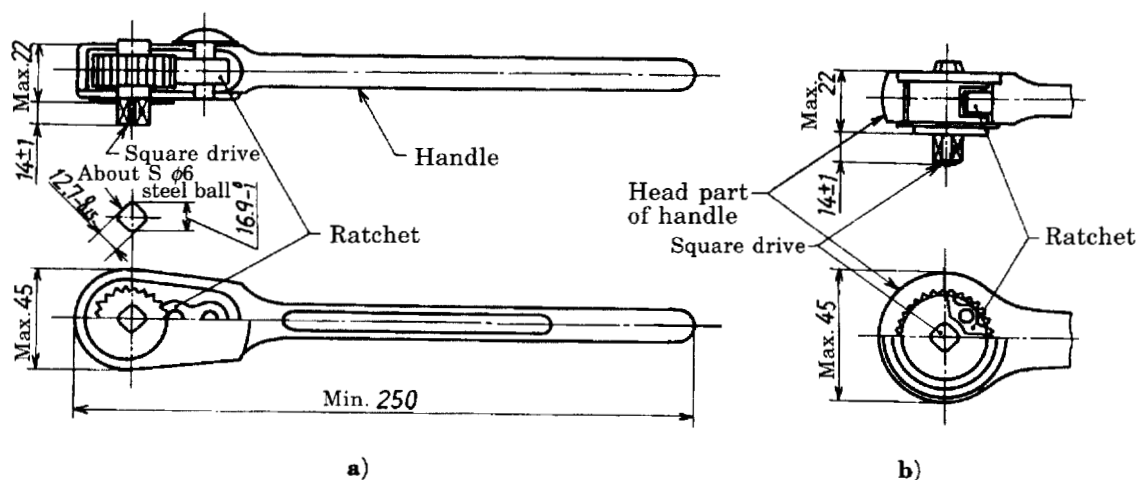
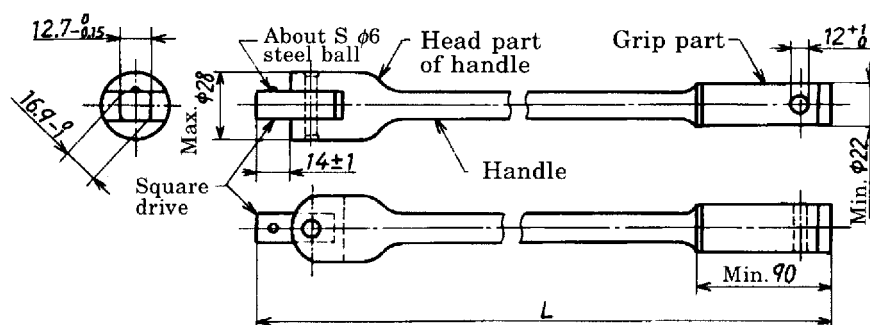


Fig. 2 Shape and dimensions of ratchet handle

3.3 Shape and dimensions of spinner handle The shape of the spinner handle shall preferably be as given in Fig. 3. The dimensions shall be as given in Fig. 3.

Remarks: The sectional shape of the handle need not be circular.

Unit: mm

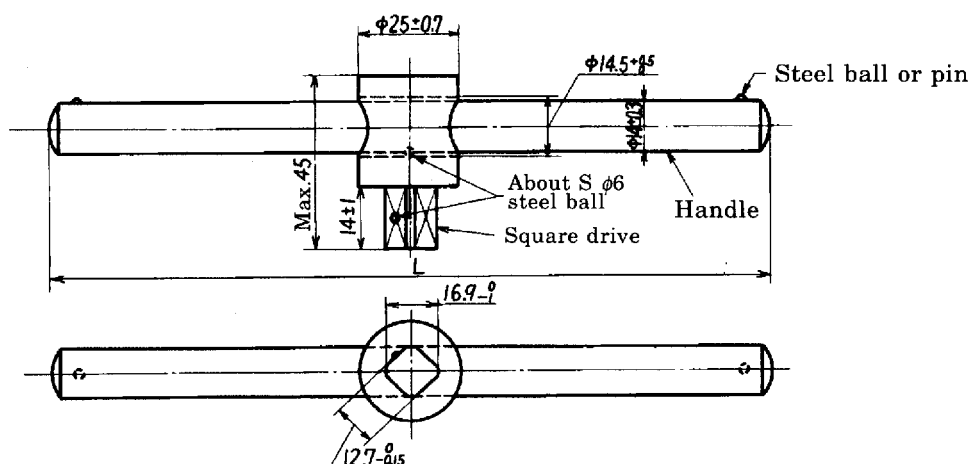


Nominal size	L	Tolerance
300	300	± 5
380	380	

Fig. 3 Shape and dimensions of spinner handle

3.4 Shape and dimensions of T-type slide handle The shape of the T-type slide handle shall preferably be as given in Fig. 4. The dimensions shall be as given in Fig. 4.

Unit: mm



Nominal size	L	Tolerance
250	250	± 5
300	300	

Fig. 4 Shape and dimensions of T-type slide handle