

JIS

JAPANESE INDUSTRIAL STANDARD

Cross-recessed head wood screws

☞ JIS B 1112—1995

Translated and Published

by

Japanese Standards Association

In the event of any doubt arising,
the original Standard in Japanese is to be final authority.



1. Scope This Japanese Industrial Standard specifies the cross-recessed head wood screws (Hereafter, referred to as "wood screws".) made of steel wire, stainless steel and brass for general use.

Remarks: The standards cited in this Standard are given in the following:

JIS B 1012 Cross recesses for screws

JIS G 3505 Low carbon steel wire rods

JIS G 4315 Stainless steel wires for cold heading and cold forging

JIS H 3260 Copper and copper alloy wires

2. Classification The wood screws are classified into three types of round head wood screws, countersunk head wood screws and raised countersunk head wood screws according to the shapes of the heads.

3. Strength

3.1 Torsional strength The wood screws, when tested in accordance with the specifications of 7.1, shall not be broken at the root of the head and body before the threaded portion breaks.

3.2 Tensile strength The wood screws, when tested in accordance with the specifications of 7.2, shall not be broken at the root of the head and body before the threaded portion breaks, and the tensile strength⁽¹⁾ shall be 392 N/mm² or over for steel wood screws, 441 N/mm² or over for stainless steel wood screws and 343 N/mm² or over for brass wood screws.

Note (1) The tensile strength is obtained as

$$\frac{\text{Tensile load (N)}}{3.1416 \times \left(\frac{\text{Nominal diameter} \times 0.65}{2} \right)^2} \quad (\text{mm}^2)$$

4. Shapes and dimensions

4.1 Shape and dimensions of cross recesses The shape and dimensions of cross recesses formed in the heads of the wood screws shall be in accordance with the Type H of JIS B 1012. However, the wing length (m) and the penetration depth (q) of the cross recess shall be in accordance with Attached Tables 1 to 3.

4.2 Shape and dimensions other than cross recesses The shape and dimensions other than the cross recesses shall be in accordance with Table 1.

Table 1. Shape and dimensions other than cross recesses

Type according to shapes of head	Shape and dimensions
Round head wood screw	Attached Table 1
Countersunk head wood screw	Attached Table 2
Raised countersunk head wood screw	Attached Table 3

5. Appearance The surface of the wood screw shall be smooth, and be free from such defects as harmful cracks, flaws, burrs and flashes in use.
6. Materials The materials of the wood screws shall generally be in accordance with Table 2.

Table 2. Materials

Division	Material
Steel wood screws	SWRM8, SWRM10, SWRM12 and SWRM15 of JIS G 3505
Stainless steel wood screws	JIS G 4315
Brass wood screws	C2700W of JIS H 3260

7. Tests
- 7.1 Torsional test The torsional test shall be carried out by turning the head with a cross screw driver, fixing the threaded portion so that two threads or more of the complete threads are being left on the head side of the wood screw.
- 7.2 Tensile test The tensile test shall be carried out by applying a tensile load in axial direction, attaching an appropriate jig so that two threads or more of the complete threads are being left on the head side of the wood screw.
8. Inspection The inspection of the wood screw shall be in accordance with the following. However, the sampling inspection system in the lot inspection shall be as agreed between the purchaser and supplier.
- (1) Torsion inspection The torsion inspection shall be carried out by the method specified in 7.1, and the results shall conform to the requirements of 3.1. However, this inspection may be omitted as agreed between the purchaser and supplier.
- (2) Tension inspection The tension inspection shall be carried out by the method specified in 7.2, and the results shall conform to the requirements of 3.2. However, this inspection may be omitted as agreed between the purchaser and supplier.

Further, when this inspection is unable to be performed due to dimensional reasons, the tensile strength of the material used for the products is to be investigated as required, and if the value conforms to the requirement of 3.2, it may be considered to be acceptable.