

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 7519 (1974): Hammer Drive Screws [PGD 31: Bolts, Nuts and Fasteners Accessories]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”



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*Indian Standard* REAFFIRMED  
SPECIFICATION FOR  
HAMMER DRIVE SCREWS..... 2001

1. **Scope** — Covers the requirements for hammer drive screws.
2. **Dimensions**
  - 2.1 As given in Table 1.
  - 2.2 The preferred length and screw number combination shall be as given in Table 2.
  - 2.3 The recommended mating hole sizes shall be as given in Appendix A.
3. **Tolerances**
  - 3.1 As given in Tables 1 and 2.
  - 3.2 The screw head shall be concentric with the shank within a tolerance of 2 percent of the maximum head diameter, the tolerance being one-half of the total indicator reading.
4. **Material** — Screw shall be made of steel, suitably hardened to meet the performance requirements specified in this specification.
5. **Finish** — Hammer drive screws may have either a dull or bright finish according to the process used for hardening. They may also be supplied with plated or other protective and/or decorative finish as agreed upon between the manufacturer and the purchaser.
6. **General Requirements**
  - 6.1 Hammer drive screws shall have fully formed threads, extending from the base of the pilot to the head, except that threads at the starting end and under the head may be incomplete for a length equal to one-half of the maximum screw diameter due to the natural flow of material in the thread-forming operation.
  - 6.2 Dimensions given in Table 1 are for uncoated screws. These dimensions may be exceeded after plating.
  - 6.3 Screws when driven into holes, of sizes recommended in steel test plates having hardness 128/171 HV or in cast iron plates shall produce mating threads without shearing of the threads on the screws or breaking the screws.
7. **Sampling** — The sampling and criteria of acceptance shall be in accordance with IS : 2614-1969 Methods for sampling of fasteners (*first revision*).
8. **Designation** — Shall be designated by the screw number, length of screw, the number of this standard and protective coating if any.
 

*Example:*

Hammer Drive Screw of screw number 4, length 9.5 mm with protective phosphate coating, shall be designated as:

Screw No. 4 × 9.5 IS : 7519 Phosphate coated
9. **Packing** — Unless otherwise specified, the number of screws in each carton shall be 100, 500 and 1 000. Each carton shall have screws of one size only.
10. **Marking**
  - 10.1 Such marks that are required may be stamped (raised or sunk to 0.75 mm) on the heads of all the screws not below 10 mm screw head size, subject to agreement between the manufacturer and the purchaser.

Adopted 20 December 1974

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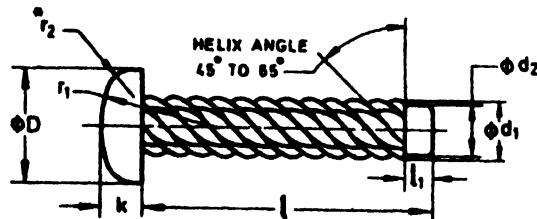
**IS : 7519 - 1974**

**10.2** Each carton shall be labelled with manufacturer's name or trade-mark, screw number and quality of screws.

**10.3** *ISI Certification Marking* — Details available with the Indian Standards Institution.

**TABLE 1 DIMENSIONS FOR HAMMER DRIVE SCREWS**  
(Clauses 2.1 and 3.1)

All dimensions in millimetres.



Screw No.	Diameter $d_1$		Diameter of Head $D$		Height of Head $k$		Head Radius $r_1$ Nom	Diameter of Pilot $d_2$		Number of Thread Starts
	Max	Min	Max	Min	Max	Min		Max	Min	
00	1.52	1.45	2.51	2.29	0.86	0.66	2.30	1.25	1.17	6
0	1.90	1.83	3.23	3.00	1.24	1.04	3.00	1.60	1.52	6
2	2.54	2.46	4.12	3.71	1.75	1.50	3.80	2.11	2.03	8
4	2.95	2.85	5.36	4.90	2.18	1.91	5.00	2.44	2.34	7
6	3.56	3.45	6.60	6.10	2.62	2.31	6.25	2.95	2.85	7
8	4.24	4.12	7.85	7.29	3.05	2.72	7.44	3.45	3.35	8
10	4.62	4.50	9.12	8.48	3.48	3.12	8.71	3.84	3.71	8
12	5.38	5.23	10.36	9.70	3.89	3.53	9.91	4.50	4.39	8
14	6.15	5.99	11.62	10.90	4.32	3.94	11.12	5.13	5.03	9

Note — Dimensions for length  $l$  and length of pilot point  $l_1$  are given in Table 2.

\*The shape of the head shall closely approximate to a half ellipse. Radius  $r_2$  struck off underside of head should blend with diameter  $D$  and radius  $r_1$ .

**TABLE 2 PREFERRED LENGTH AND SCREW NUMBER COMBINATIONS FOR HAMMER DRIVE SCREWS**  
(Clauses 2.2 and 3.1)

All dimensions in millimetres.

LENGTH $l$		$l_1$	SCREW NUMBER									
BASIC	TOL		MIN	00	0	2	4	6	8	10	12	14
2.4	±0.4	0.50										
3.2												
4.0		1.20										
4.8												
6.4		±0.8	1.60									
8.0												
9.5	2.00											
12.5												
16.0												
19.0												

Note — The preferred lengths are between bold stepped lines.

## APPENDIX A

(Clause 2.3)

## RECOMMENDED MATING HOLE SIZES FOR HAMMER DRIVE SCREWS

Screw No.	Mating Hole Diameter in mm, Tolerance H1 1	
	Thin Sheet Metal, Non-ferrous Castings, Phenol	Cast Iron, Thick Sheet Metal
00	1.30	1.40
0	1.65	1.75
2	2.20	2.30
4	2.55	2.70
6	3.10	3.30
8	3.70	3.90
10	4.10	4.30
12	4.80	5.00
14	5.50	5.80

**Note 1** — The material shall be thick enough to provide adequate thread engagement and the thickness should not normally be less than the screw diameter.

**Note 2** — In application in plastics the fragility of the sections and the brittleness of the plastic have to be considered.

## EXPLANATORY NOTE

Hammer drive screws are used for permanent fastening of name plates, rating plates and similar parts to iron, brass, aluminium castings, steel and phenol formaldehyde plastics. The hammer drive screws may be used only in material that is thick enough to permit a sufficient engagement of the threads for satisfactory fastening.