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मानक

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IS 4508 (1992): Open Ended Slugging Wrenches (Spanners)
[PGD 5: Assembly Hand Tools]



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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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IS 4508 : 1992
REAFFIRMED

भारतीय मानक

खुले मुंह वाले स्लग रिंच (पाने) – विशिष्ट

(पहला पुनरीक्षण)

Indian Standard

OPEN ENDED SLUGGING
WRENCHES (SPANNERS)— SPECIFICATION
(*First Revision*)

UDC 621.883.12

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BUREAU OF INDIAN STANDARDS
MANAK BHAVAN, 9 BAHADUR SHAH ZAFAR MARG
NEW DELHI 110002

June 1992

Price Group 1

FOREWORD

This Indian Standard (First Revision) was adopted by the Bureau of Indian Standards, after the draft finalized by the Assembly Hand Tools Sectional Committee had been approved by the Production Engineering Division Council.

These spanners which are also commonly known as 'Open ended slugging wrenches' are used for tightening and loosening of bolts/nuts by impact load which is applied by hammering on the striking end of the spanner arm.

This standard was first issued in 1968, under the title 'Shortened single ended open jaw spanners'. This revision has been taken up in order to align the standard with the work done at the International level. While revising this standard following alterations have been made:

- a) Title of the specification has been changed since this product is commonly known as open ended slugging spanners;
- b) Hardness values have been modified;
- c) Spanners of nominal sizes 27 to 36, 220 and 230 mm have been included. Dimensions have also been modified; and
- d) Torque requirement have been deleted since lower and upper ranges of the hardness specified takes care of it.

For ring slugging wrenches (spanners), refer IS 4509 : 1992.

While revising this standard, considerable assistance has been taken from DIN 133-1982 'Slugging wrenches, open end' issued by Deutsches Institut für Normung (DIN).

For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values (revised)'. The number of significant places retained in the rounded off value should be the same as that of the specified value in this standard.

**AMENDMENT NO. 2 JANUARY 2003
TO
IS 4508 : 1992 OPEN ENDED SLUGGING WRENCHES
(SPANNERS) — SPECIFICATION**

(First Revision)

[*Page 1, clause 4, (see also Amendment No. 1)*] — Substitute the following for the existing:

4 MATERIAL — Suitable alloyed or unalloyed steels meeting the requirements laid down in 5. Some of the suitable steels are T40Ni6Cr4Mo3 or T50Cr4V2 conforming to IS 3748 : 1990 and 35C4* or 40C8* conforming to IS 2004 : 1991.*

(*Page 2, Table 1*):

- a) Delete 'a₂' in figure and delete column 'a₂' in Table.
- b) Substitute 'a' for 'a₁' in figure and table.

The words conforming to IS 2004:1991 have been deleted since this Indian Standard is not having these designations. The final amendment will be as given above the line.

(BP 05)

AMENDMENT NO. 1 JUNE 1996
TO
IS 4508 : 1992 OPEN ENDED SLUGGING
WRENCHES (SPANNERS) — SPECIFICATION
(First Revision)

(Page 1, clause 2.1) — Substitute the following for the existing clause:

‘2.1 The following standards contain provision which through reference in this text, constitute provision of this standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below:

<i>IS No.</i>	<i>Title</i>
2004 : 1991	Carbon steel forgings for general engineering purposes (<i>third revision</i>)
2027 : 1992	Spanners and sockets — Width across flats (<i>third revision</i>)
3748 : 1990	Tool and die steels (<i>second revision</i>)
4190 : 1984	Eye bolts with collars (<i>first revision</i>)
6131 : 1980	Technical requirements for hand-operated wrenches (spanners) and sockets (<i>first revision</i>)’

(Page 1, clause 4) — Substitute the following for the existing clause:

‘4 MATERIAL

Suitable alloyed or unalloyed steels meeting the requirements laid down in 5. One of the suitable alloy steels is T50Cr4V23 conforming to IS 3748 : 1990 and carbon steels is 35C4 or 40C8 conforming to IS 2004 : 1991.’

(Page 1, clause 7.1) — Substitute the following for the existing clause:

‘7.1 Spanners shall be given protective treatment against rust such as Mn-Phosphating or black oxidizing, etc. If no protective treatment is given, these may be covered with grease or mineral jelly for rust proofing.’

(PE 05)

Reprography Unit, BIS, New Delhi, India

Indian Standard

OPEN ENDED SLUGGING WRENCHES (SPANNERS) — SPECIFICATION (*First Revision*)

1 SCOPE

Covers the requirements for forged open ended slugging wrenches also known as shortened single ended open jaw spanners.

2 REFERENCES

2.1 Following Indian Standards are necessary adjuncts to this standard:

<i>IS No.</i>	<i>Title</i>
IS 2004 : 1978	Carbon steel forgings for general engineering purposes (<i>second revision</i>)
IS 2027 : 1980	Width across flats for spanners and sockets (<i>second revision</i>)
IS 3749 : 1978	Tool and die steels for cold work (<i>first revision</i>)
IS 6131 : 1980	Technical requirement for hand-operated wrenches (spanners) and sockets (<i>first revision</i>)

3 DIMENSIONS

3.1 The dimensions of spanners shall be as given in Table 1.

3.2 The tolerances on width across flats for the spanners shall be in accordance with IS 2027 : 1980 as specified for forged and subsequently machined spanners.

4 MATERIAL

Suitable alloyed or unalloyed steels meeting the requirements laid down in 5. One of the suitable alloy steels for torque series C Wrenches is T50Cr4V23 of IS 3749 : 1978 and carbon steels for torque series D wrenches are 35C4 or 40C8 as specified in IS 2004 : 1978.

5 HARDNESS

For nominal sizes 34 to 40 *HRC* (\approx 340 to 390 *HV*)

For nominal sizes 50 and above 30 to 36 *HRC* (\approx 300 to 350 *HV*)

6 MANUFACTURE, WORKMANSHIP AND FINISH

6.1 The spanner shall be well forged to shape and finished smooth all over. All sharp corners shall be removed. The spanners shall be free from burrs, cracks, seams or other manufacturing defects.

7 PRESERVATION AND PACKING

7.1 Spanners shall be given protective treatment against rust, such as plating, oxidizing, phosphating, etc. If no protective treatment is given, these may be covered with grease or mineral jelly for rust-proofing.

7.2 Each spanner or a number of spanners shall be wrapped in non-absorbent paper and packed suitably as agreed to between the supplier and the purchaser.

8 SAMPLING

8.1 Sampling shall be as given in IS 6131 : 1980.

9 DESIGNATION

9.1 The spanners shall be designated by its commonly used name, nominal size and number of this standard.

Example:

An open ended slugging spanner of nominal size 100 mm, shall be designated as:

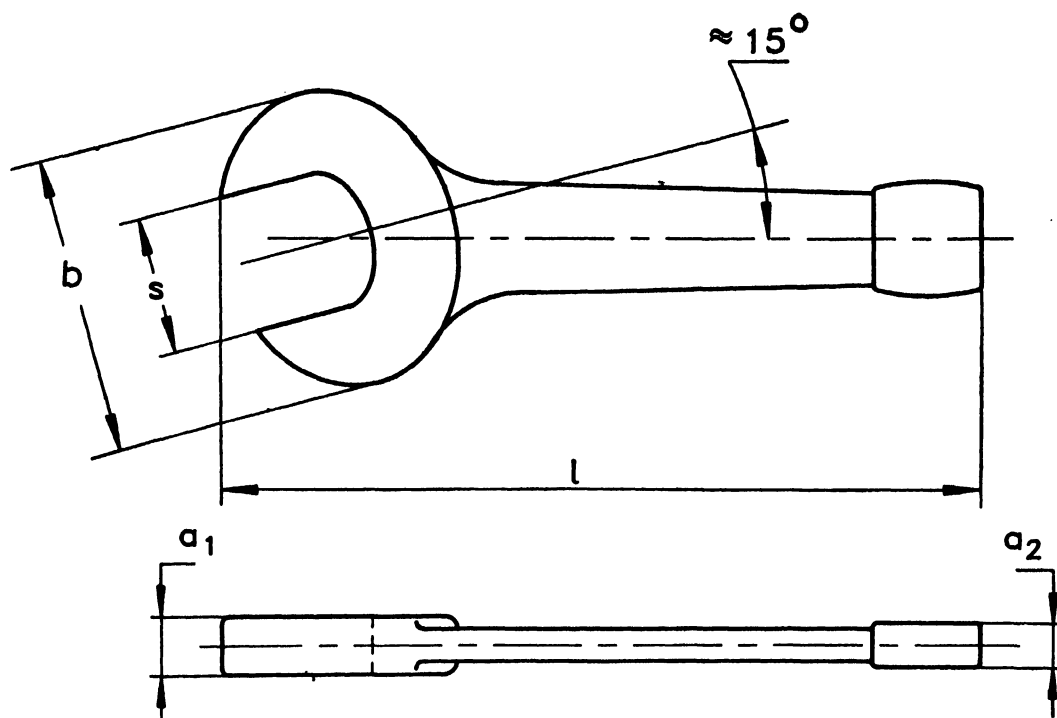
Slugging Spanner Ring — 100 — IS 4508

10 MARKING

Each spanner shall be legibly and indelibly marked with nominal size and the manufacturer's name, initials or recognized trade-mark.

Table 1 Dimensions for Open Ended Slugging Wrenches (Spanners)
(Clause 3.1)

All dimensions in millimetres.



Nominal Size s	a_1		b Max	l		a_2
	Max	Min		Max	Min	
27	17	15	58	185	170	14
30	18	16	66	200	185	14
32	18	16	68	200	185	15
34	18	16	73	210	195	15
36	20	18	78	220	200	15
41	20	18	90	240	220	17
46	22	19.5	100	260	240	17
50	22	19.5	110	285	265	18
55	25	22.5	120	315	295	19
60	25	22.5	130	325	305	19
65	30	27	142	355	335	20
70	32	28.5	156	380	360	21
75	32	28.5	164	400	365	22
80	35	31.5	175	415	390	23
85	35	31.5	175	415	390	23
90	40	36	197	460	435	26
95	40	36	197	460	435	26
100	48	43	230	500	475	30
105	48	43	230	500	475	30
110	50	45	238	525	500	30
115	56	50	250	525	500	34
120	56	50	258	550	525	34
130	56	50	278	580	555	36
135	56	50	278	580	555	36
145	62	52.5	308	650	625	40
150	62	52.5	308	650	625	40
155	62	52.5	308	650	625	40
165	70	63	345	725	700	45
170	70	63	345	725	700	45
180	70	63	345	725	700	50
185	75	67.5	385	775	750	50
190	75	67.5	385	775	750	50
200	75	67.5	405	775	750	50
210	80	72	425	850	825	55
220	80	72	445	850	825	55
230	80	72	475	850	825	55

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