

इंटरनेट

मानक

### Disclosure to Promote the Right To Information

Whereas the Parliament of India has set out to provide a practical regime of right to information for citizens to secure access to information under the control of public authorities, in order to promote transparency and accountability in the working of every public authority, and whereas the attached publication of the Bureau of Indian Standards is of particular interest to the public, particularly disadvantaged communities and those engaged in the pursuit of education and knowledge, the attached public safety standard is made available to promote the timely dissemination of this information in an accurate manner to the public.

“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 2027 (1992): Spanners and sockets - Widths across flats  
[PGD 5: Assembly Hand Tools]



“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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भारतीय मानक

पाने और सॉकेट – फ्लैटों के आरपार की चौड़ाइयाँ

( तीसरा पुनरीक्षण )

*Indian Standard*

SPANNERS AND SOCKETS — WIDTHS  
ACROSS FLATS

( *Third Revision* )

UDC 621·883 : 621·882·17

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

## FOREWORD

This Indian Standard 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.

This standard was first issued in 1962. First revision was done in 1967. The second revision was taken up to bring the standard to make it compatible with the sizes of bolts and nuts as given in ISO 272-1979 'Fasteners—Hexagon products—Width across flats', issued by the International Organization for Standardization (ISO) and taking assistance from ISO 691-1975 'Spanner gaps and sockets—Metric series—Tolerances for general use, and DIN 475 'Width of openings of spanners'. Consequent on revision of both the basic standards ISO 272-1982 and ISO 691-1983; this revision has been taken up to align the dimensions. Sizes 2, 2.5, 3, 3.5, 4.5, and above 210 are not appearing in ISO 691-1983. The details of these sizes are in accordance with DIN 475 ( Part 2 )-1976 'Widths of opening of spanners' issued by Deutsches Institut für Normung (DIN).

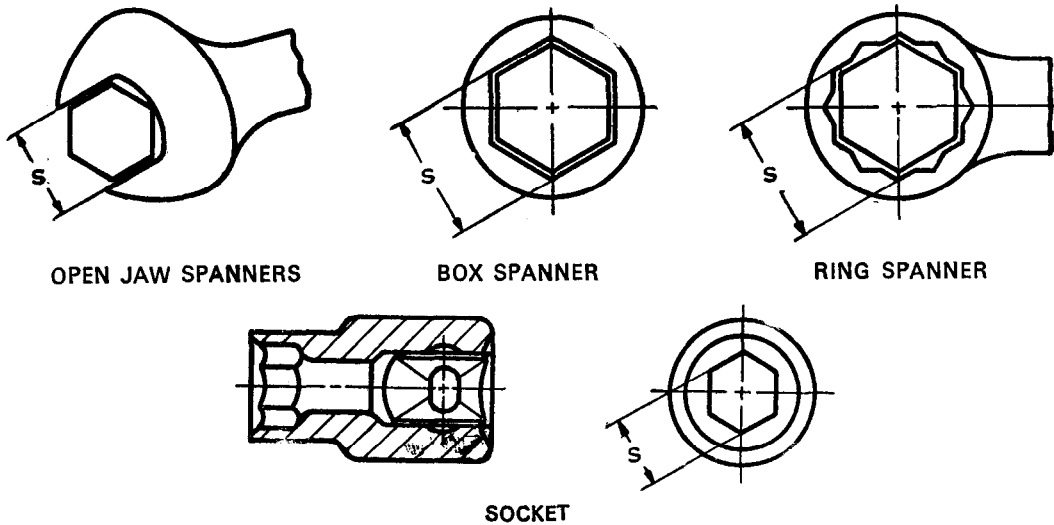
For the purpose of deciding whether a particular requirement of this standard is complied with, the final value, observed or calculated, expressing the result of a test, shall be rounded off in accordance with IS 2 : 1960 'Rules for rounding off numerical values ( *revised* )'. The number of significant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

*Indian Standard*  
**SPANNERS AND SOCKETS — WIDTHS  
 ACROSS FLATS**  
*( Third Revision )*

**1 SCOPE**

This standard covers the dimensions and tolerances for widths across flats for:

- a) Machined spanners and sockets, and
- b) Unmachined spanners and sockets.

**2 DIMENSIONS AND TOLERANCES**

All dimensions in millimetres.

Nominal Widths Across Flats	Tolerances			
	( Closed or Open )	Machined	( Closed )	Unmachined
<i>s</i>	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
2	+0.02	+0.08	—	—
2.5	+0.02	+0.08	—	—
3	+0.02	+0.08	—	—
3.2	+0.02	+0.08	—	—
3.5	+0.02	+0.10	—	—
4	+0.02	+0.12	—	—
4.5	+0.02	+0.12	—	—
5	+0.02	+0.12	—	—
5.5	+0.02	+0.12	—	—
6	+0.03	+0.15	—	—
7	+0.03	+0.15	—	—
8	+0.03	+0.15	+0.03	+0.18

Nominal Widths Across Flats <i>s</i>	Tolerances			
	( Closed or Open )	Machined	( Closed )	Unmachined
	<i>Min</i>	<i>Max</i>	<i>Min</i>	<i>Max</i>
9	+0.03	+0.15	+0.03	+0.18
10	+0.04	+0.19	+0.04	+0.24
11	+0.04	+0.19	+0.04	+0.24
12	+0.04	+0.24	+0.04	+0.30
13	+0.04	+0.24	+0.04	+0.30
14	+0.05	+0.27	+0.05	+0.35
15	+0.05	+0.27	+0.05	+0.35
16	+0.05	+0.27	+0.05	+0.35
17	+0.05	+0.30	+0.05	+0.40
18	+0.05	+0.30	+0.05	+0.40
19	+0.06	+0.36	+0.06	+0.46
20	+0.06	+0.36	+0.06	+0.46
21	+0.06	+0.36	+0.06	+0.46
22	+0.06	+0.36	+0.06	+0.46
23	+0.06	+0.36	+0.06	+0.46
24	+0.06	+0.36	+0.06	+0.46
25	+0.06	+0.36	+0.06	+0.46
26	+0.08	+0.48	+0.08	+0.58
27	+0.08	+0.48	+0.08	+0.58
28	+0.08	+0.48	+0.08	+0.58
30	+0.08	+0.48	+0.08	+0.58
32	+0.08	+0.48	+0.08	+0.58
34	+0.10	+0.60	+0.10	+0.70
36	+0.10	+0.60	+0.10	+0.70
41	+0.10	+0.60	+0.10	+0.70
46	+0.10	+0.60	+0.10	+0.70
50	+0.10	+0.60	+0.10	+0.70
55	+0.12	+0.72	+0.12	+0.92
60	+0.12	+0.72	+0.12	+0.92
65	+0.12	+0.72	+0.12	+0.92
70	+0.12	+0.72	+0.12	+0.92
75	+0.15	+0.85	+0.15	+1.15
80	+0.15	+0.85	+0.15	+1.15
85	+0.15	+0.85	+0.15	+1.15
90	+0.15	+0.85	+0.15	+1.15
95	+0.15	+0.85	+0.15	+1.15
100	+0.15	+0.85	+0.15	+1.15
105	+0.20	+1.00	+0.20	+1.40
110	+0.20	+1.00	+0.20	+1.40
115	+0.20	+1.00	+0.20	+1.40
120	+0.20	+1.00	+0.20	+1.40
130	+0.20	+1.00	+0.20	+1.40
135	+0.20	+1.00	+0.20	+1.40
145	+0.20	+1.00	+0.20	+1.40
150	+0.25	+1.25	—	—

Nominal Width Across Flats <i>s</i>	Tolerances			
	( Closed or Open ) <i>Min</i>	Machined <i>Max</i>	( Closed ) <i>Min</i>	Unmachined <i>Max</i>
155	+0.25	+1.25	—	—
165	+0.25	+1.25	—	—
170	+0.25	+1.25	—	—
175	+0.25	+1.25	—	—
180	+0.25	+1.25	—	—
185	+0.25	+1.25	—	—
190	+0.25	+1.25	—	—
200	+0.25	+1.25	—	—
210	+0.25	+1.25	—	—
220	+0.30	+1.50	—	—
230	+0.30	+1.50	—	—
235	+0.30	+1.50	—	—
245	+0.30	+1.50	—	—
255	+0.30	+1.50	—	—
265	+0.30	+1.50	—	—
270	+0.30	+1.50	—	—
280	+0.30	+1.50	—	—
290	+0.30	+1.50	—	—
300	+0.40	+1.80	—	—
310	+0.40	+1.80	—	—
320	+0.40	+1.80	—	—
330	+0.40	+1.80	—	—
340	+0.40	+1.80	—	—
350	+0.40	+1.80	—	—
365	+0.40	+1.80	—	—
380	+0.40	+1.80	—	—
395	+0.40	+1.80	—	—
410	+0.50	+2.10	—	—
425	+0.50	+2.10	—	—
440	+0.50	+2.10	—	—
455	+0.50	+2.10	—	—
470	+0.50	+2.10	—	—
480	+0.50	+2.10	—	—
495	+0.50	+2.10	—	—
510	+0.50	+2.10	—	—
525	+0.50	+2.10	—	—



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Doc : No. PE 05 ( 0015 )

### Amendments Issued Since Publication

Amend No.	Date of Issue	Text Affected

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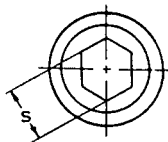
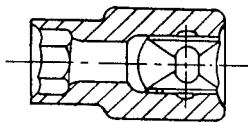
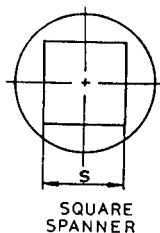
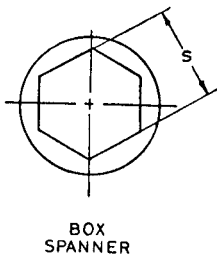
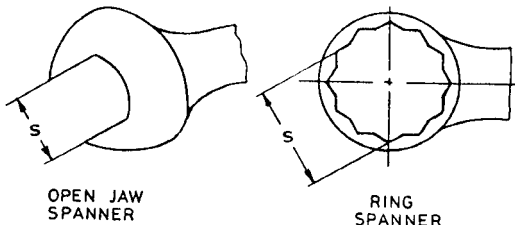
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AMENDMENT NO. 1 FEBRUARY 2003  
TO  
IS 2027 : 1992 SPANNERS AND SOCKETS — WIDTHS  
ACROSS FLATS

(Third Revision)

( Page 1, clause 2, figures ) — Substitute the following for the existing figures:



SOCKET

( BP 05 )