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मानक

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Jawaharlal Nehru

“Step Out From the Old to the New”

IS 9063 (1986): Hook Spanners [PGD 5: Assembly Hand Tools]



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Satyanarayan Gangaram Pitroda

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Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard
**SPECIFICATION FOR
 HOOK SPANNERS**
(First Revision)

1. Scope — Covers requirements for hook spanners, suitable for loosening and tightening of nuts conforming to IS: 6731-1977 'Specification for slotted round nuts'.

2. Types

- a) Type A with lug
- b) Type B with pin

3. Dimensions — Shall be as given in Table 1.

4. Material — Suitable steels meeting the requirements of hardness at 5.

Suitable examples:

40C8 and 45C8 of IS: 1570 (Part 2)-1979 'Specification for carbon steels (unalloyed steels) (first revision)' and 50Cr1V23 of IS: 3930-1979 'Specification for flame and induction hardening steels (first revision)'.

5. Hardness — 345 to 445 HV (\approx 35 to 45 HRC).

6. Surface Protection — The spanners shall be protected against rust by plating with chromium or zinc; or blackening by suitable process.

7. Workmanship and Finish — The body of the hook spanners shall be manufactured in one piece. The spanners shall be free from burrs, cracks or other manufacturing defects and all sharp corners shall be removed.

7.1 The spanners shall be finished smooth all over.

8. Designation — A hook spanner of Type A for nut outside diameter of 25 to 28 mm shall be designated as:

Hook Spanner A 25-28, IS : 9063

9. Sampling — Unless otherwise agreed to between the supplier and the purchaser, the procedure given in IS: 2500 (Part 1)-1973 'Sampling inspection tables: Part 1 Inspection by attributes and by count of defects (first revision)' shall be followed for sampling inspection. For various characteristics the sampling plan as given in 9.1 and 9.2 shall be followed.

9.1 For dimensions, workmanship and finish the sampling plan with inspection level III and acceptable quality level (AQL) 2.5 percent given in Tables 1 and 2 of IS: 2500 (Part 1)-1973 shall be followed.

9.2 For testing hardness, the sampling plan with inspection level I and acceptable quality level (AQL) 2.5 percent given in Tables 1 and 2 of IS: 2500 (Part 1)-1973 shall be followed.

10. Marking — Each hook spanner shall be marked with the type, nut outside diameter range, manufacturer's name, initials and/or recognized trade-mark.

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

Adopted 14 January 1986

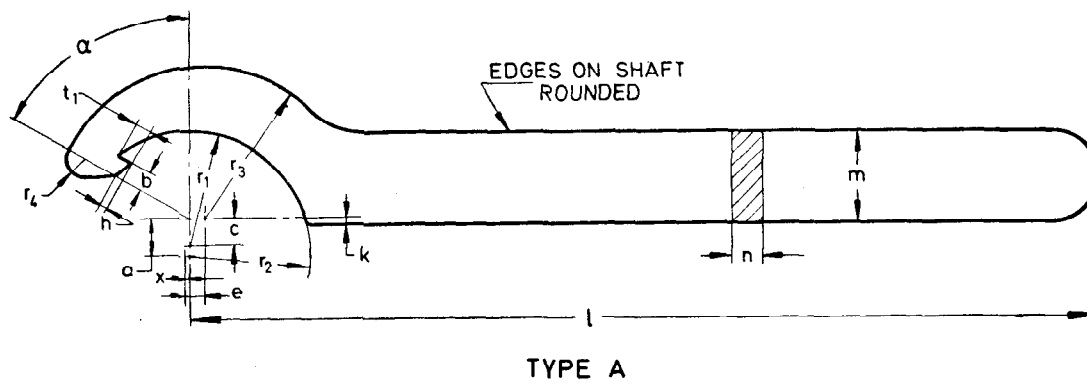
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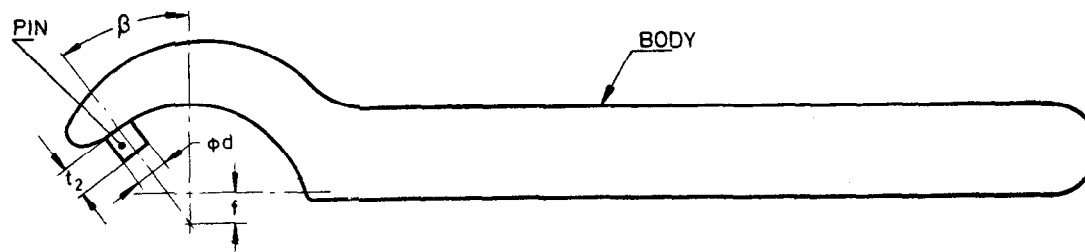
TABLE 1 DIMENSIONS OF HOOK SPANNERS

(Clause 3)

All dimensions in millimetres.



TYPE A



TYPE B

Note — The illustrations are diagrammatic only and are not intended to illustrate the details of design.

Nominal Nut Outside Diameter		a	c	e	k	l	m	n Min	r ₁	r ₂	r ₃	r ₄	Type A					Type B			
From	Up to												β	b	h	t ₁	x	β	d a11	f	t ₂
12	14	1.6	0	1.9	1.0	100	10	3	6.0	7.0	11	1.5	60°	1.5	0.5	1.2	0.4	42°	2.0	0.8	2.0
16	18	4.0	2.5	1.5	1.0	100	10	3	8.0	9.0	11	1.5	—	—	—	—	—	32°	2.5	3.2	2.5
16	20	4.9	2.5	1.5	1.0	100	10	3	8.0	10.0	11	1.5	60°	2.0	0.5	1.5	—	—	—	—	—
20	22	5.7	4.5	1.5	1.0	100	10	3	10.0	11.0	11	1.5	—	—	—	—	—	26°	2.5	5.1	2.5
25	28	2.6	0	2.4	1.0	120	12	4	12.5	14.0	20	2.5	60°	2.5	0.8	2.0	0.4	42°	3.0	1.3	3.0
30	32	4.9	3.5	2.2	1.0	120	12	4	15.0	16.0	20	2.5	60°	2.5	0.8	2.0	0.2	37°	4.0	4.2	3.0
34	36	1.7	0	3.3	1.5	150	15	5	17.0	18.0	27	3.0	55°	3.0	0.8	2.5	0.3	47°	4.0	0.8	3.5
40	42	5.3	4	3.3	1.5	150	15	5	20.0	21.0	27	3.0	55°	3.0	0.8	2.5	0.3	42°	4.0	4.6	3.5
45	50	4.0	0	4.8	2.0	180	18	6	22.5	25.0	35	3.5	55°	3.5	1.0	3.0	0.8	42°	5.0	2.0	4.0
52	55	7.0	4.7	4.5	2.0	180	18	6	26.0	27.5	35	3.5	55°	3.5	1.0	3.0	0.5	37°	5.0	5.8	4.0
58	62	3.4	0	6.1	3.0	210	21	7	29.0	31.0	43	4.0	55°	4.0	1.0	3.5	0.6	46.5°	5.0	1.7	5.0
68	75	13.5	7.0	5.9	3.0	210	21	7	34.0	37.5	43	4.0	55°	4.0	1.0	3.5	0.4	37°	6.0	9.3	5.0
80	90	8.0	0	8.9	4.0	240	24	8	40.0	45.0	57	5.0	50°	5.0	1.5	4.0	1.9	42.5°	6.0	4.0	6.0
95	100	13.0	7.0	7.6	4.0	240	24	8	47.5	50.0	57	5.0	50°	5.0	1.5	4.0	0.6	37°	8.0	10.0	6.0
110	115	4.2	0	10.5	5.0	280	28	10	55.0	57.5	76	6.0	50°	5.0	1.5	4.0	1.0	42°	8.0	2.1	8.0
120	130	14.0	7.0	11.0	5.0	280	28	10	60.0	65.0	76	6.0	50°	5.0	1.5	4.0	1.5	37°	8.0	10.5	8.0
135	145	8.5	0	14.0	6.0	320	32	12	67.5	72.5	92	7.0	50°	6.0	1.5	5.0	2.0	44°	8.0	4.2	8.0
155	165	20.5	13.5	13.5	6.0	320	32	12	77.5	82.5	92	7.0	50°	6.0	1.5	5.0	1.5	45°	8.0	1.7	8.0
180	195	13.0	0	18.0	8.0	380	38	14	90.0	97.5	122	8.0	50°	6.0	1.5	5.0	2.5	44°	10.0	6.5	8.0
205	220	28.0	17.5	18.5	8.0	380	38	14	102.5	110.0	122	8.0	50°	6.0	1.5	5.0	3.0	37°	10.0	23.0	8.0
230	245	13.0	0	21.5	10.0	460	46	16	115.0	122.5	152	10.0	50°	8.0	2.0	7.0	2.5	44.5°	10.0	6.5	10.0
260	270	28.0	21.0	20.5	10.0	460	46	16	130.0	135.0	152	10.0	50°	8.0	2.0	7.0	1.5	39°	10.0	24.5	10.0
280	300	17.0	0	28.0	10.0	550	58	16	140.0	150.0	190	12.0	50°	10.0	2.5	10.0	3.0	X			
300	320	17.0	0	23.5	10.0	550	58	16	150.0	160.0	200	12.0	50°	10.0	2.5	10.0	3.5				
320	345	22.0	0	30.0	13.0	550	58	16	160.0	172.5	205	11.0	50°	10.0	2.5	10.0	5.0				
350	375	37.0	20.0	30.0	10.0	585	60	16	175.0	187.5	220	11.0	50°	10.0	3.0	10.0	2.0				
380	400	48.0	30.0	36.0	15.0	620	70	16	190.0	200.0	250	15.0	45°	14.0	4.0	12.0	2.0				
480	500	45.0	30.0	36.0	17.0	800	70	20	240.0	250.0	300	16.0	45°	14.0	4.0	12.0	3.0				

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EXPLANATORY NOTE

The hook spanners of Type A are used for operating locknuts having open slots covered in IS : 6731-1977, whereas Type B spanners are used for nuts having blind holes on the periphery. The range of diameters and dimensions of Type A and Type B have been grouped for economical reasons in such a way that both types of spanners can be made from the same blank.

This specification was first issued in 1976, based on DIN 1810-1967. While revising the dimensions have been modified and dimension 'x' which was not there earlier, has been included.

This revision has been taken up in order to align the specification with the revised DIN 1810-1979 Hook wrenches, issued by Deutsches Institut für Normung (DIN).