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मानक

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Jawaharlal Nehru

“Step Out From the Old to the New”

IS 11614 (1986): Renewable Threaded Locating Pins [PGD 2: Machine Tool Elements and Holding Devices]



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“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

SPECIFICATION FOR RENEWABLE THREADED LOCATING PINS

1. Scope — Specifies the dimensions and other requirements of renewable threaded locating pins to be fitted in jigs and fixtures for locating or positioning the production job, for use with press fitted headed or headless liner bushes conforming to IS:666 (Part 2)-1972 'Specification for jig bushes: Part 2 Renewable drill bushes (*second revision*)', along with special washer and standard socket head cap screws.

Note — Diamond pin is fixed to give contact at right angles to the line joining the centres of two locating pins, which prevents the radial movement of the workpiece about the axis of round locating pins.

2. Types

- a) *Type A* — Round shaped renewable threaded locating pins, and
- b) *Type B* — Diamond shaped renewable threaded locating pins.

Note — Generally one of each type of pins is used in a pair and fitted in a jig or fixture. Selection of pins is done to suit the sizes and tolerances of two locating holes of workpiece, which are reamed accurately and centre distance of which is toleranced to close limit. Diamond pins take variation of distance between the centres of two locating holes of workpiece and accordingly diamond pin is fixed to give the diamond contacts at right angle to the line joining the centres of two locating pins to prevent radial movement of workpiece about the axis of round pin (*see 3.5*).

3. Dimensions

- 3.1 The dimensions of renewable threaded locating pins shall be as given in Table 1.
- 3.2 Dimensions of the special washer shall be as given in Table 1.
- 3.3 Dimensions for press fit liner bushes (headed or headless) shall be according to Table 2 of IS:666 (Part 2)-1972.
- 3.4 The dimensions of cap screws shall be according to Table 1 of IS:2269-1981 'Specification for hexagon socket head cap screws (*second revision*)'.
- 3.5 Mounting dimensions of the renewable threaded locating pins shall be as shown in Fig. 1.

4. Tolerance — The diameter D of renewable threaded locating pin (*see 3.5*) shall be toleranced to suit the requirements.

5. Material and Hardness

Threaded locating pins — Suitable case hardening steel having hardness 550 to 650 HV to a case depth of 0.4 to 0.6 mm.

Washer — Suitable quality of steel.

6. Designation — A renewable threaded locating pin of diamond shape, type B, having $D = 10$ mm shall be designated as:

Renewable Threaded Locating Pin B 10 IS:11614

7. Finish — The renewable threaded locating pins shall be free from cracks, burrs, pits and other defects.

8. Preservation and Packing

- 8.1 A suitable anti-corrosive surface treatment shall be given to renewable threaded locating pins.
- 8.2 The renewable threaded locating pins shall be packed in accordance with best trade practice.

9. Marking

9.1 Each renewable threaded locating pin shall be marked at an appropriate place with type, size and manufacturer's name or trade-mark.

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

Adopted 28 February 1986

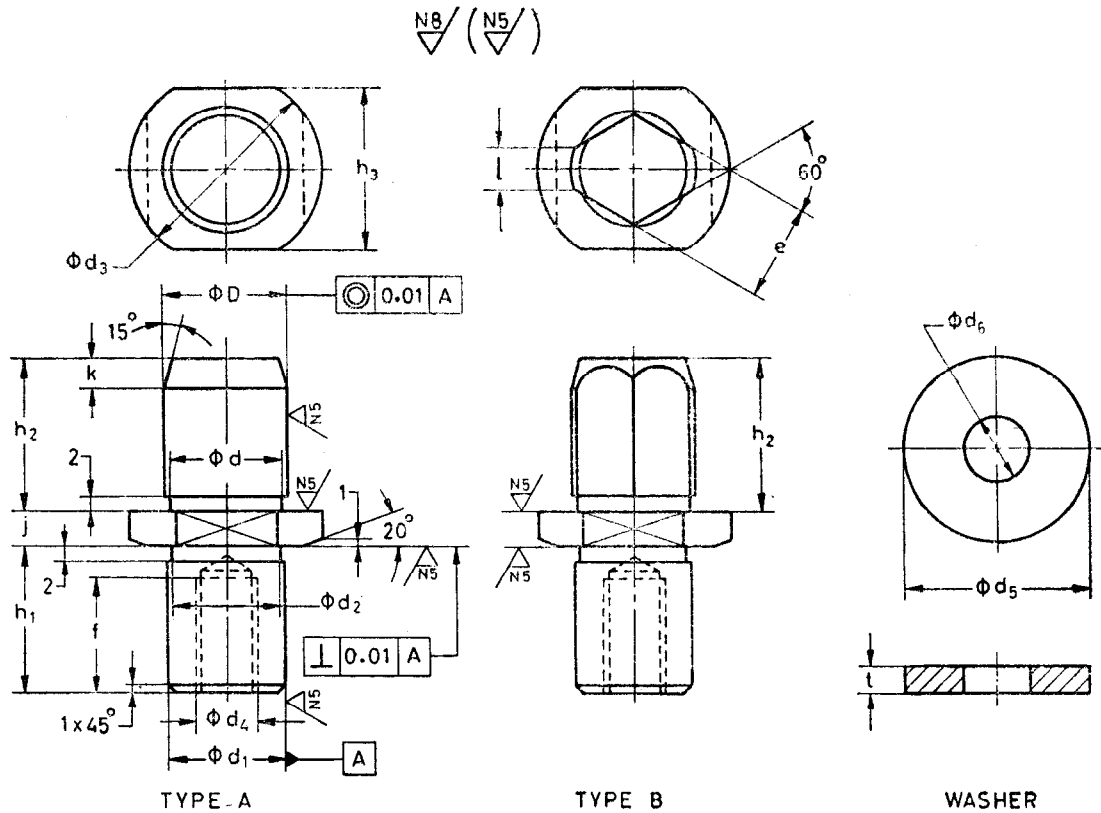
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TABLE 1 DIMENSIONS FOR RENEWABLE THREADED LOCATING PINS

(Clauses 3.1 and 3.2)

All dimensions in millimetres.



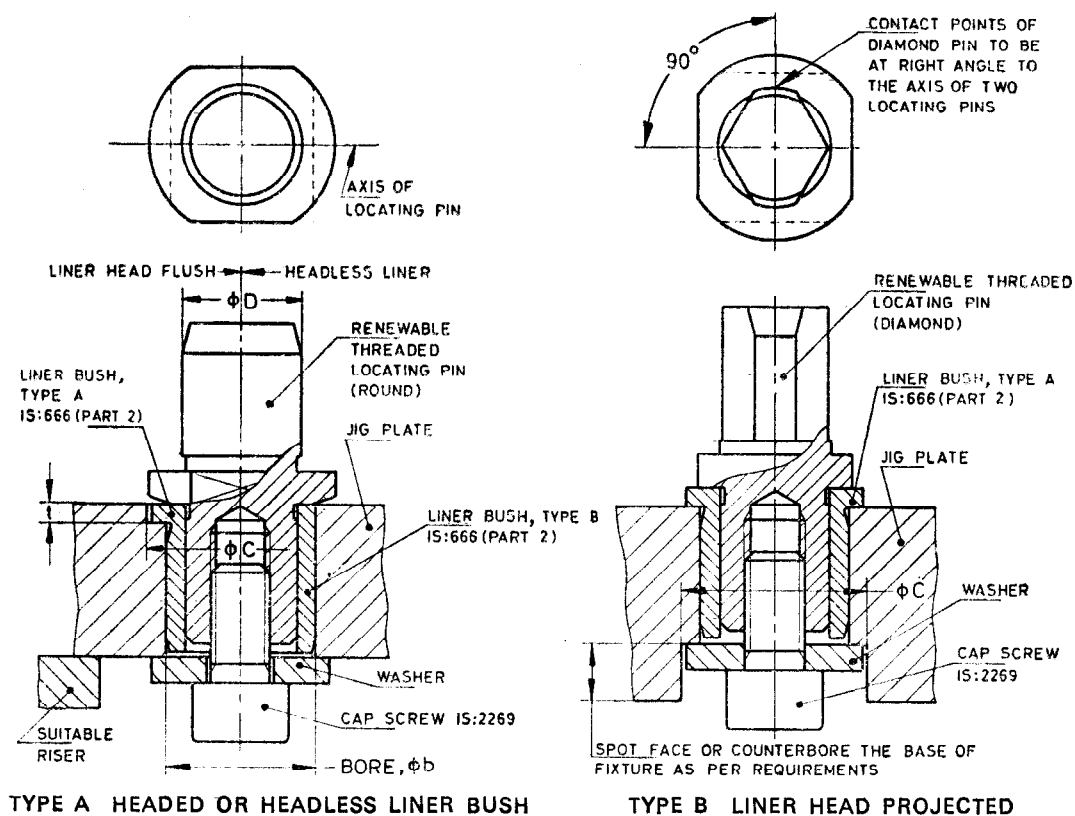
Renewable Threaded Locating Pin														Liner Bush*		Washer				
D†		d	d ₁ js6	d ₂	d ₃	d ₄	e	f	h ₁	h ₂		h ₃ Min	j	k	l‡	Type A	d ₅	d ₆ H12	t	
Over	Up to									Type A	Type B					Type A	Type B			
5	8	D-(0.5)	8	7.5	16	M6	0.76 D	9	12	13	10	13	3.2	2	1/3 of D	8×12.5	16	5.3	2.5	
8	12	D-(0.5)	10	9.5	19	M6		15	15.5	17	14	17	3.5	4		10×16	19	6.4	3	
12	18	D-(1.0)	15	14	25	M8		15	19	23	20	21	4.5	4		15×20	24	8.4	3.5	
18	26	D-(2.0)	22	20	33	M10		18	24	29	26	30	6.0	6		22×25	32	10.5	4	

Note — Dimensional deviations for untoleranced dimensions: Medium class according to IS:2102 (Part 1)-1980 'General tolerances for dimensions and form and position: Part 1 General tolerances for linear and angular dimensions (second revision)'.

*See also 3.3.

†See also 4.

‡Applicable for diamond shaped threaded locating pins only.



D^*		b H7	Liner Bush Flush†		Cap Screw‡
Over	Up to		C	t	
5	8	12	17	2	M5 × 10
8	12	15	20	2	M6 × 16
12	18	20	25	2.5	M8 × 16
18	26	28	33	2.5	M10 × 20

Note — Dimensional deviations for untoleranced dimensions: Medium class according to IS:2102 (Part 1)-1980.

*See also 4.

†See also 3.3.

‡See also 3.4.

All dimensions in millimetres.

FIG. 1 MOUNTING DIMENSIONS OF RENEWABLE THREADED LOCATING PINS

EXPLANATORY NOTE

This standard has been prepared based upon the experience of our industry. It was felt necessary to reduce variety and rationalize the sizes. The sizes covered in this standard are generally used in our industry.