
International Standard



4566

INTERNATIONAL ORGANIZATION FOR STANDARDIZATION • МЕЖДУНАРОДНАЯ ОРГАНИЗАЦИЯ ПО СТАНДАРТИЗАЦИИ • ORGANISATION INTERNATIONALE DE NORMALISATION

Shipbuilding — Inboard-engined pleasure craft — Propeller shaft ends and bosses

Construction navale — Moteurs intérieurs pour navires de plaisance — Extrémités d'arbres porte-hélices et moyeux d'hélices

First edition — 1985-03-15

ITeH STANDARD PREVIEW
(standards.iteh.ai)

[ISO 4566:1985](https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9f36-127832a09c01/iso-4566-1985)

<https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9f36-127832a09c01/iso-4566-1985>

UDC 621.824 : 629.125.22

Ref. No. ISO 4566-1985 (E)

Descriptors : shipbuilding, ships, marine propellers, propeller shafts, dimensions, designation.

Price based on 4 pages

Shipbuilding — Inboard-engined pleasure craft — Propeller shaft ends and bosses

1 Scope and field of application

This International Standard specifies the dimensions for interchangeability of propeller bosses and propeller shaft ends in the shaft diameter range of 20 to 160 mm with a taper of 1 : 10¹⁾, intended for installation on inboard-engined pleasure craft.

2 References

ISO/R 773, *Rectangular or square parallel keys and their corresponding keyways (Dimensions in millimetres)*.

ISO 1947, *System of cone tolerances for conical workpieces from $C = 1 : 3$ to $1 : 500$ and lengths from 6 to 630 mm*.

3 Definitions

For the purposes of this International Standard, the following definitions apply.

3.1 nominal diameter : Diameter of the large end of the shaft end taper, which is the same as the diameter of the cylindrical shaft, ignoring tolerances.

3.2 taper : The conical portion of the shaft end designed to transmit the full propeller shaft torque to the propeller, while allowing for disassembly.

4 Dimensions

The dimensions shall be those shown in the figure and table. The "reference dimensions" indicated in the table shall be considered nominal dimensions for guidance only.

Configurations shown in the figure not specified by dimensions in the table are not essential to interchangeability and are therefore left to the discretion of the manufacturer.

Nominal diameters without brackets shall be preferred; those in brackets are a second choice.

Thread diameters without brackets shall similarly be preferred; those in brackets are alternatives.

5 Construction details

Details indicated in the figure are not intended to restrict design; nor are they to scale. Types and methods of construction or machining of the key, the keyway and their corner radii, the thread undercut and the thread end, or of other optional details (i.e. safety pin hole, centring point, etc.) are left open for individual methods to comply with the configuration of the coupling and/or particular needs.

Length of the thread G shall be equal to thread diameter T . The part of the thread engaged by the propeller nut shall be not less than 80 % of the thread length G .

6 Tolerances

6.1 Shaft end taper small diameter, A

The tolerances shall be as given in the table. The tolerance deviations are calculated from the nominal diameter.

6.2 Boss taper large diameter, B

The tolerances shall be as given in the table.

1) A future International Standard will cover propellers and shaft ends machined to a taper of 1 : 16.

6.3 Cone angle

The tolerances shall be cone diameter tolerances as in ISO 1947 with tolerance ranges equal to the diameter tolerance ranges specified in 6.1 and 6.2 for diameters *A* and *B* respectively.

6.4 Key and keyway

The tolerances shall be those given for normal keys in ISO/R 773.

6.5 Boss length, *L*

The tolerance shall be $\pm 0,5$ mm.

7 Threads

Threads shall be M fine.

8 Designation

Both shafts and propeller bosses constructed in accordance with these requirements shall be designated by a reference to this International Standard, and the nominal diameter.

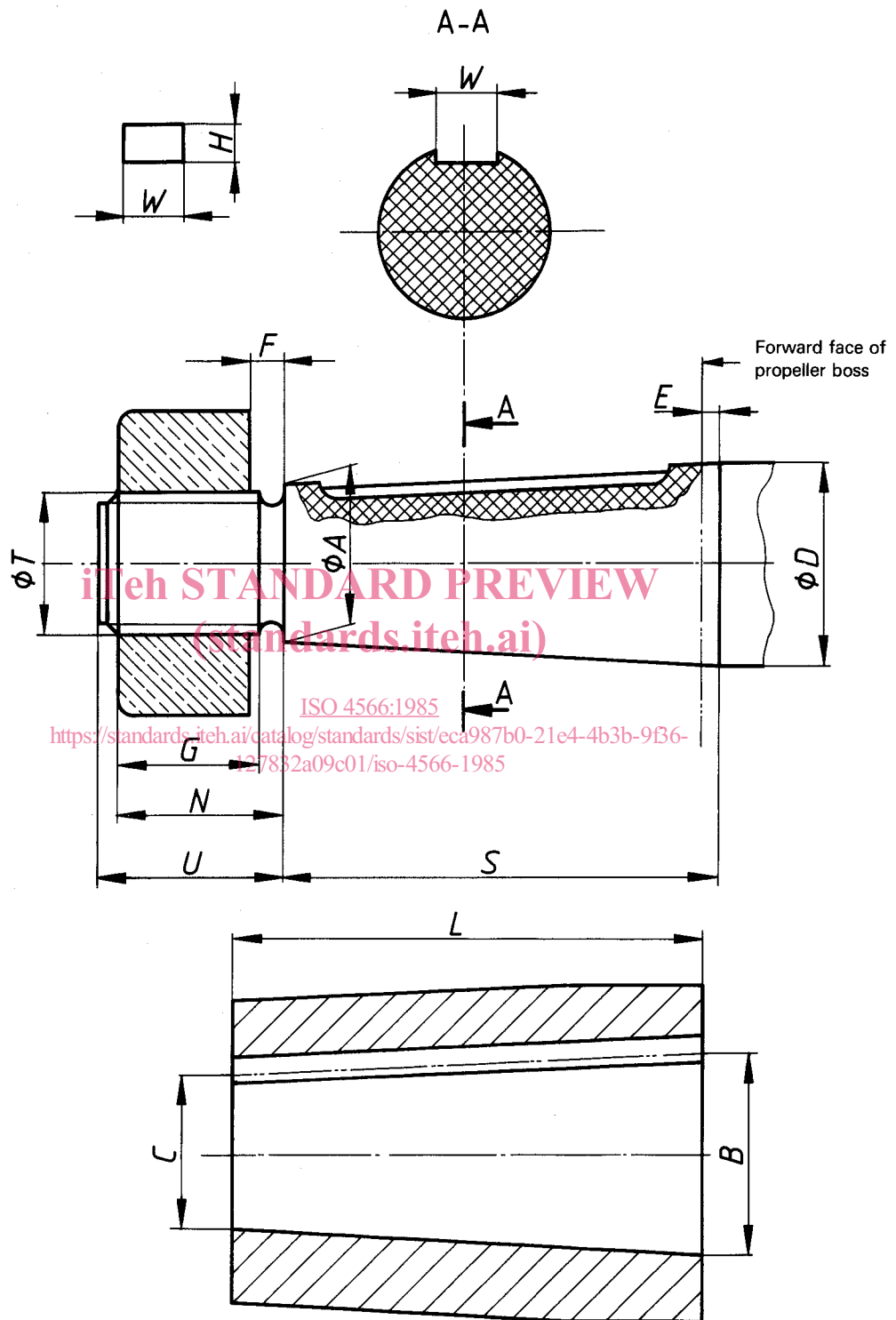
Example :

Propeller boss ISO 4566-35

iTeh STANDARD PREVIEW
(standards.iteh.ai)

[ISO 4566:1985](https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9f36-127832a09c01/iso-4566-1985)

<https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9f36-127832a09c01/iso-4566-1985>



NOTE — G (thread length) = T
 Part of thread engaged by nut $0,8 G$.
 See clause 5.

Figure

Table

Dimensions in millimetres

Nominal diameter <i>D</i>	Boss			Shaft taper		Thread				Key		Reference dimension ¹⁾			
	Length <i>L</i>	Bore bigger diameter <i>B</i>		Small diameter <i>A</i>		Diameter <i>T</i>	Pitch <i>P</i>	End		<i>W</i>	<i>H</i>	<i>S</i>	<i>F</i>	<i>E</i>	<i>C</i>
		min.	max.	max.	min.			<i>N</i>	<i>U</i>						
20	50	20	20,052	15,5	15,448	14	1,5	20	25	6	6	45	5	0	15
25	60	25	25,052	19,5	19,448	16	1,5	20	25	6	6	55	5	0	19
30	80	30	30,052	22,5	22,448	20	1,5	25	30	8	7	75	5	0	22
35	90	35	35,062	26,5	26,448	24	2	30	35	10	8	85	5	0	26
40	100	40	40,062	30,5	30,448	24	2	30	35	12	8	95	5	0	30
45	110	45	45,062	34,5	34,438	30	2	35	40	14	9	105	5	0	34
50	120	50	50,062	38,5	38,438	36 (30)	3	40	45	14	9	115	5	0	38
(55)	130	55	55,074	43,0	42,926	36	3	40	45	16	10	120	10	0	42
60	140	60	60,074	47,0	46,926	42	3	50	55	18	11	130	10	0	46
(65)	150	65	65,074	51,0	50,926	42	3	50	55	18	11	140	10	0	50
70	160	70	70,074	55,0	54,926	48	3	55	60	20	12	150	10	0	54
(75)	170	74,5	74,574	58,5	58,426	48	3	55	60	20	12	165	10	5	57
80	180	79,5	79,574	62,5	62,426	56	4	65	70	22	14	175	10	5	61
(85)	190	84,5	84,587	66,5	66,413	56	4	65	70	22	14	185	10	5	65
90	200	89,5	89,587	71,0	70,913	64 (56)	4	70	75	25	14	190	15	5	69
(95)	210	94,5	94,587	75,0	74,913	64 (56)	4	70	75	25	14	200	15	5	73
100	220	99	99,087	78,5	78,413	72 (64)	4	80	85	28	16	215	15	10	77
110	240	109	109,087	86,5	86,413	80 (72)	4	85	90	28	16	235	15	10	85
120	260	119	119,087	94,5	94,413	90 (80)	4	90	95	32	18	255	15	10	93
130	280	129	129,100	102,5	102,413	100 (90)	4	100	105	32	18	275	15	10	101
140	300	139	139,100	110,5	110,413	100 (90)	4	100	105	36	20	295	15	10	109
150	320	149	149,100	118,5	118,413	110 (100)	4	110	115	36	20	315	15	10	117
160	340	159	159,100	126,5	126,413	120 (110)	4	120	125	40	22	335	15	10	125

1) For guidance only : see clause 4.

ISO 4566:1985
<https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9b36-127832a09c01/iso-4566-1985>

iTeh STANDARD PREVIEW
(standards.iteh.ai)

ISO 4566:1985

<https://standards.iteh.ai/catalog/standards/sist/eca987b0-21e4-4b3b-9f36-127832a09c01/iso-4566-1985>