

INTERNATIONAL
STANDARD

ISO
4566

Second edition
1992-12-15

**Small craft with inboard engine —
Propeller shaft ends and bosses with 1:10
taper**

*Navires de plaisance à moteur intérieur — Extrémités d'arbres
porte-hélices et moyeux d'hélices avec une conicité de 1:10*



Reference number
ISO 4566:1992(E)

Foreword

ISO (the International Organization for Standardization) is a worldwide federation of national standards bodies (ISO member bodies). The work of preparing International Standards is normally carried out through ISO technical committees. Each member body interested in a subject for which a technical committee has been established has the right to be represented on that committee. International organizations, governmental and non-governmental, in liaison with ISO, also take part in the work. ISO collaborates closely with the International Electrotechnical Commission (IEC) on all matters of electrotechnical standardization.

Draft International Standards adopted by the technical committees are circulated to the member bodies for voting. Publication as an International Standard requires approval by at least 75 % of the member bodies casting a vote.

International Standard ISO 4566 was prepared by Technical Committee ISO/TC 188, *Small craft*.

This second edition cancels and replaces the first edition (ISO 4566:1985). In table 1, the nominal diameter, D_{nom} , of 22 mm and its associated values are additional, and corrections have been made in the "key" column for nominal diameter, D_{nom} , of 25 mm. Minor editorial corrections have also been made.

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Small craft with inboard engine — Propeller shaft ends and bosses with 1:10 taper

1 Scope

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

2 Normative references

The following standards contain provisions which, through reference in this text, constitute provisions of this International Standard. At the time of publication, the editions indicated were valid. All standards are subject to revision, and parties to agreements based on this International Standard are encouraged to investigate the possibility of applying the most recent editions of the standards indicated below. Members of IEC and ISO maintain registers of currently valid International Standards.

ISO/R 773:1969, *Rectangular or square parallel keys and their corresponding keyways (Dimensions in millimetres)*.

ISO 1947:1973, *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: Conical portion of the shaft end designed to accommodate a key to transmit the full propeller shaft torque to the propeller, while allowing for disassembly.

4 Dimensions

The dimensions shall be those shown in figure 1 and table 1. The "reference dimensions" indicated in the table shall be considered nominal dimensions for guidance only.

Configurations shown in figure 1 not specified by dimensions in table 1 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 figure 1 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.

The length of the thread l_1 shall be equal to thread diameter d_2 . The part of the thread engaged by the propeller nut shall be not less than 80 % of the thread length l_2 .

6 Tolerances

6.1 Shaft end taper small diameter, d_1

The tolerances shall be as given in table 1. The tolerance deviations are calculated from the nominal diameter.

1) ISO 8845 (to be published) will cover propeller shaft ends and bosses machined to a taper of 1:16.