INTERNATIONAL STANDARD

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# Small craft — Determination of maximum propulsion power rating using manoeuvring speed —

## Part 2: Craft with a length of hull between 8 m and 24 m

*Petits navires — Détermination de la puissance maximale de propulsion en utilisant la vitesse de manoeuvre —*

*Partie 2: Bateaux d'une longueur de coque comprise entre 8 m et 24 m*

Reference number
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# 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.

The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO documents should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. ISO shall not be held responsible for identifying any or all such patent rights. Details of any patent rights identified during the development of the document will be in the Introduction and/or on the ISO list of patent declarations received (see www.iso.org/patents).

Any trade name used in this document is information given for the convenience of users and does not constitute an endorsement.

For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 188, *Small craft*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 464, *Small craft*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 11592-2:2019), of which it constitutes a minor revision. The changes compared to the previous edition are as follows:

— the dates of the normative references have been corrected in Clause 2 and throughout the standard;

— the text that referenced Figure 1 has been corrected in Clause 7;

— reference to the CIN has been deleted from Clause 8;

— in Clause 10, the first paragraph has been slightly reworded as a Note, so as to clearly make an informative reference to ISO 10240, which has been moved from Clause 2 to the Bibliography.

A list of all parts in the ISO 11592 series can be found on the ISO website.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.


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# Small craft — Determination of maximum propulsion power rating using manoeuvring speed —

# Part 2:
# Craft with a length of hull between 8 m and 24 m

## 1 Scope

This document specifies the requirements for determining the maximum propulsion power rating using manoeuvring speed for engine-driven craft with a length of the hull ($L_H$, as defined in ISO 8666) between 8 m and 24 m.

This document is applicable to craft with a calculated Froude number ($F_n$) ≥ 1,1.

This document is not applicable to:

— inflatable craft, as defined by ISO 6185-4;

— craft designed and constructed solely for competitive racing (racing craft);

— craft primarily designed not to be engine driven.

This document does not specify craft constructional strength requirements related to maximum propulsion power rating and does not guarantee stability under all conditions of seaway, wind, wakes and waves.

## 2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 7010:2019, *Graphical symbols — Safety colours and safety signs — Registered safety signs*

ISO 10087:2019, *Small craft — Craft identification — Coding system*

## 3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

— ISO Online browsing platform: available at https://www.iso.org/obp

— IEC Electropedia: available at http://www.electropedia.org/

**3.1**
**engine power**
engine manufacturer's declared power

Note 1 to entry: Engine power rated as specified in ISO 8665.

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**3.2**
**craft speed**
speed of the craft through the water

**3.3**
**propulsion**
transformation of mechanical power to a force to move the craft through the water

Note 1 to entry: This is normally accomplished with a propeller, but other devices can be used, such as a propulsive nozzle (waterjet).

**3.4**
**Froude number**
$F_n$
speed to length ratio, calculated as follows:

$$F_n = \frac{v_{max}}{\sqrt{g \times L_{WL}}}$$

where

$v_{max}$ is the maximum craft speed, expressed in metres per second (m/s);
$g$ is the gravitational constant, $g$ = 9,8 m/s$^2$;
$L_{WL}$ is the waterline length (as defined in ISO 8666), expressed in metres (m).

**3.5**
**maximum manoeuvring speed**
maximum speed (knots) at which the craft successfully passes all required tests

**3.6**
**maximum craft speed**
$v_{max}$
average maximum speed (knots) of the craft when tested on a straight course in two opposite directions

**3.7**
**maximum test speed limit**
$v_{t\,max}$
maximum speed, limited to 70 knots, at which the craft is tested when $v_{max}$ is greater than $v_{t\,max}$

$$v_{t\,max} = 3L_H + 24$$

where $L_H$ is the length of hull, as defined in ISO 8666.

## 4 General requirements

**4.1** The maximum propulsion power rating shall be derived using the results of the tests specified in Clause 6 and Clause 7. These tests shall be used for determining the maximum manoeuvring speed.

**4.2** Craft fitted with steering means other than a steering wheel shall pass the avoidance line test specified in Clause 7.

**4.3** Craft fitted with a steering wheel shall pass the quick turn test specified in Clause 6.


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