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**BSI Standards Publication**

## **Small craft — Steering gear — Cable over pulley systems**

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## National foreword

This British Standard is the UK implementation of EN ISO 8847:2021. It is identical to ISO 8847:2021. It supersedes BS EN ISO 8847:2017, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee GME/33, Small craft.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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For the Great Britain market (England, Scotland and Wales), if UK Government has designated this publication for conformity with UKCA marking (or similar) legislation, it may contain an additional National Annex. Where such a National Annex exists, it shows the correlation between this publication and the relevant UK legislation. If there is no National Annex of this kind, the relevant Annex ZA or ZZ in the body of the European text will indicate the relationship to UK regulation applicable in Great Britain. References to EU legislation may need to be read in accordance with the UK designation and the applicable UK law. Further information on designated standards can be found at [www.bsigroup.com/standardsandregulation](http://www.bsigroup.com/standardsandregulation).

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UK Government is responsible for legislation. For information on legislation and policies relating to that legislation, consult the relevant pages of [www.gov.uk](http://www.gov.uk).

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Published by BSI Standards Limited 2021

ISBN 978 0 539 04708 0

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ICS 47.080

**Compliance with a British Standard cannot confer immunity from legal obligations.**

This British Standard was published under the authority of the Standards Policy and Strategy Committee on 31 August 2021.

**Amendments/corrigenda issued since publication**

Date	Text affected
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EUROPÄISCHE NORM

July 2021

ICS 47.080

Supersedes EN ISO 8847:2017

English Version

## Small craft - Steering gear - Cable over pulley systems (ISO 8847:2021)

Petits navires - Appareils à gouverner -  
Systèmes à câble sur poulie (ISO 8847:2021)

Kleine Wasserfahrzeuge - Steuerungssystem -  
Kabel- und Seilzugsteuerung (ISO 8847:2021)

This European Standard was approved by CEN on 5 March 2021.

CEN members are bound to comply with the CEN/CENELEC Internal Regulations which stipulate the conditions for giving this European Standard the status of a national standard without any alteration. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the CEN-CENELEC Management Centre or to any CEN member.

This European Standard exists in three official versions (English, French, German). A version in any other language made by translation under the responsibility of a CEN member into its own language and notified to the CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
COMITÉ EUROPÉEN DE NORMALISATION  
EUROPÄISCHES KOMITEE FÜR NORMUNG

**CEN-CENELEC Management Centre: Rue de la Science 23, B-1040 Brussels**

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## European foreword

This document (EN ISO 8847:2021) has been prepared by Technical Committee ISO/TC 188 "Small craft" in collaboration with Technical Committee CEN/TC 464 "Small Craft" the secretariat of which is held by SIS.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by January 2022, and conflicting national standards shall be withdrawn at the latest by January 2022.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN ISO 8847:2017.

This document has been prepared under a Standardization Request given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of EU Directive(s) / Regulation(s).

For the relationship with EU Directive(s) / Regulation(s), see informative [Annex ZA](#), which is an integral part of this document.

Any feedback and questions on this document should be directed to the users' national standards body/national committee. A complete listing of these bodies can be found on the CEN websites.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Republic of North Macedonia, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

### Endorsement notice

The text of ISO 8847:2021 has been approved by CEN as EN ISO 8847:2021 without any modification.

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## Annex ZA (informative)

### Relationship between this European Standard and the essential requirements of Directive 2013/53/EU aimed to be covered

This European Standard has been prepared under a Commission's standardization request M/542/C(2015) 8736 final to provide one voluntary means of conforming to essential requirements of Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive, compliance with the normative clauses of this standard given in [Table ZA.1](#) confers, within the limits of the scope of this standard, a presumption of conformity with the corresponding essential requirements of that Directive, and associated EFTA regulations.

**Table ZA.1 — Correspondence between this European Standard and Annex I of Directive 2013/53/EU**

Essential Requirements of Directive 2013/53/EU	Clause(s)/sub-clause(s) of this EN	Remarks/Notes
Annex I, Clause 5.4.1, Steering system, general.	4, 5, 6, 7 and 9	This standard specifies requirements for cable over pulley steering systems only from the helm to the connection to the rudder or out-board engine.  This Standard does not address an emergency means of steering.  This standard does not address propulsion control systems.
Annex I, Clause 2.5, Owner's Manual	8	In respect of information for cable over pulley steering systems only.
Annex II, Components of watercraft (3) Steering wheels, steering mechanisms and cable assemblies.	4, 5, 6, 7 and 9	In respect of cable over pulley steering systems and their major components only.  Steering wheels supplied as components are excluded from this standard.

**WARNING 1** — Presumption of conformity stays valid only as long as a reference to this European Standard is maintained in the list published in the Official Journal of the European Union. Users of this standard should consult frequently the latest list published in the Official Journal of the European Union.

**WARNING 2** — Other Union legislation may be applicable to the product(s) falling within the scope of this standard.

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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](http://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](http://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](http://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 third edition cancels and replaces the second edition (ISO 8847:2004), which has been technically revised.

The main changes compared to the previous edition are as follows:

- update of the scope to clarify application on small craft with and without propulsion engine(s);
- addition to the scope of small craft with outboard engines up to and including 37 kW total power;
- update of the definitions;
- update of requirements to meet state of the art;
- addition of informative [Annexes A](#) and [B](#).

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](http://www.iso.org/members.html).

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# Small craft — Steering gear — Cable over pulley systems

## 1 Scope

This document specifies the requirements for the design, installation and testing of cable over pulley steering systems on small craft with or without a propulsion engine(s), and on small craft with outboard engine(s) up to and including 37 kW total power.

It specifies the requirements for the design and testing of all components of a cable over pulley steering system, from the steering mechanism to the mechanical interface with the rudder shaft or the outboard engine. It applies to cable over pulley steering systems, whether for pedestal or bulkhead types.

This document does not address emergency means of steering the craft.

## 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 2408:2017, *Steel wire ropes — Requirements*

## 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

#### **accessible**

capable of being reached for operation, inspection or maintenance without removal of permanent structure of the craft

### 3.2

#### **cable**

flexible mechanical means of transmitting tension forces from one location to another

Note 1 to entry: This cable can be metallic or non-metallic.

### 3.3

#### **cable drum**

circular feature of the *steering mechanism* (3.10) over which the steering *cable* (3.2) is routed to provide the required cable travel

### 3.4

#### **cable over pulley steering system**

steering system in which rotation of the steering wheel transmits movement to either the steering arm quadrant fastened to the rudder shaft, or to the outboard engine steering arm, by mechanical means including flexible cable over pulleys mounted to the structure of the craft