

## **BSI Standards Publication**

Small craft - Permanently installed fuel systems (ISO 10088:2013)



BS EN ISO 10088:2017 BRITISH STANDARD

This is a preview of "BS EN ISO 10088:2017". Click here to purchase the full version from the ANSI store.

#### **National foreword**

This British Standard is the UK implementation of EN ISO 10088:2017. It is identical to ISO 10088:2013. It supersedes BS EN ISO 10088:2013, which is withdrawn.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 secretary.

This publication does not purport to include all the necessary provisions of a contract. Users are responsible for its correct application.

© The British Standards Institution 2017 Published by BSI Standards Limited 2017

ISBN 978 0 580 96502 9

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 30 November 2017.

Amendments/corrigenda issued since publication

Date Text affected

#### EN ICO 1000

This is a preview of "BS EN ISO 10088:2017". Click here to purchase the full version from the ANSI store.

### **EUROPÄISCHE NORM**

August 2017

ICS 47.080

Supersedes EN ISO 10088:2013

#### **English Version**

# Small craft - Permanently installed fuel systems (ISO 10088:2013)

Petits navires - Systèmes à carburant installés à demeure (ISO 10088:2013)

Kleine Wasserfahrzeuge - Dauerhaft installierte Kraftstoffsysteme (ISO 10088:2013)

This European Standard was approved by CEN on 9 July 2017.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, 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: Avenue Marnix 17, B-1000 Brussels

#### **European foreword**

The text of ISO 10088:2013 has been prepared by Technical Committee ISO/TC 188 "Small craft" of the International Organization for Standardization (ISO) and has been taken over as EN ISO 10088:2017.

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 February 2018, and conflicting national standards shall be withdrawn at the latest by February 2018.

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 10088:2013.

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

For relationship with EU Directive(s), see informative Annex ZA, which is an integral part of this document.

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, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

#### **Endorsement notice**

The text of 10088:2013 has been approved by CEN as EN ISO 10088:2017 without any modification.

## Annex ZA (informative)

# Relationship between this European Standard and the Essential Requirements of EU Directive 2013/53/EU

This European standard has been prepared under a mandate given to CEN by the European Commission to provide one means of conforming to Essential Requirements of the New Approach Directive 2013/53/EU.

Once this standard is cited in the Official Journal of the European Union under that Directive and has been implemented as a national standard in at least one member state, 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 relevant Essential Requirements of that Directive and associated EFTA regulations.

Table ZA.1: Correspondence between this European Standard and Directive 2013/53/EU

Clauses/sub-clauses of this	<b>Essential Requirements</b>	Qualifying remarks/Notes	
standard	(ERs) of EU Directive 2013/53/EU		
All Clauses	Annex 1 A, Clause 5.2.1, Fuel system -General	This Standard applies to all parts of permanently installed diesel and petrol fuel systems as installed, from the fuel fill opening to the point of connection with the propulsion or auxiliary engine(s) on inboard- and outboard-powered small craft of up to 24 m hull length.  This Standard does not address fuel systems for other types of diesel or petrol burning appliances.	
All Clauses	Annex 1 A, Clause 5.2.2, Fuel system –Fuel tanks	The clauses in this standard address fuel lines and ventilation of petrol tank compartments. The design and construction of fuel tanks is specifically addressed by EN ISO 21487.	
4, 5	Annex 1, Clause 5.6.1 Fire protection - General	The clauses in this standard are limited to the installation of the fuel system to minimise the risk of fire.	

4.1.7, 4.1.8, 4.2.3, 5.2.8	Annex 1 A,	Clause	5.8	This standard addresses the	
	Discharge prevention			prevention of fuel overflow	
				from vent openings and	
				blowback of fuel through fill	
				fittings. It does not address	
				accidental spillage entering	
				the environment.	

**WARNING:** Other requirements and other EU Directives may be applicable to the product(s) falling within the scope of this standard.

Coı	ntent	ts	Page
Fore	word		iv
1	Scop	pe	1
2	Nori	mative references	1
3	Terr	ms and definitions	1
4	Gene 4.1 4.2 4.3	Materials and design Testing Installation	3
5	Fuel 5.1 5.2 5.3 5.4 5.5 5.6 5.7	I pipes, hoses, connections and accessories  Fuel filling lines  Vent lines and components  Fuel distribution, return and balancing lines  Hose fittings and hose clamping  Valves and fittings  Fuel filters  Labelling	
Ann	ex A (n	ormative) <b>Pressure testing</b>	8
Rihl	ingranl	hv	9

#### 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. 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. 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.

The committee responsible for this document is ISO/TC 188, *Small craft*.

This fourth edition cancels and replaces the third edition (ISO 10088:2009), which has been technically revised. The major changes concern 4.1.6, 4.3.2, and 5.5.4.

### Small craft — Permanently installed fuel systems

#### 1 Scope

This International Standard specifies the requirements for the design, materials, construction, installation and testing of permanently installed fuel systems as installed for internal combustion engines.

It applies to all parts of permanently installed diesel and petrol fuel systems as installed, from the fuel fill opening to the point of connection with the propulsion or auxiliary engine(s) on inboard- and outboard-powered small craft of up to 24 m hull length.

Requirements for the design, materials, construction and testing of permanently installed fixed fuel tanks are given in ISO 21487.

#### 2 Normative references

The following referenced documents are indispensable for the application 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 1817, Rubber, vulcanized or thermoplastic — Determination of the effect of liquids

ISO 7840:2013, Small craft — Fire-resistant fuel hoses

ISO 8469:2013, Small craft — Non-fire-resistant fuel hoses

ISO 8846, Small craft — Electrical devices — Protection against ignition of surrounding flammable gases

ISO 10133, Small craft — Electrical systems — Extra-low-voltage d.c. installations

ISO 11105, Small craft — Ventilation of petrol engine and/or petrol tank compartments

ISO 11192, Small craft — Graphical symbols

ISO 13297, Small craft — Electrical systems — Alternating current installations

ISO 21487, Small craft — Permanently installed petrol and diesel fuel tanks

#### 3 Terms and definitions

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

#### 3.1

#### accessible

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

Note 1 to entry: Hatches are not regarded as permanent craft structures in this sense, even if tools such as wrenches or screwdrivers are needed to open them. Hatches for inspection or maintenance of fuel tanks may be covered by uncut carpet, provided that all tank fittings can be inspected and maintained through other openings.

#### 3.2

#### readily accessible

capable of being reached quickly and safely for maintenance or effective use under emergency conditions without the use of tools