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Ships and marine technology — Flange connection for fuel and lubrication oil bunkering — Basic dimensions and technical requirements

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ISO copyright office
CP 401 • Ch. de Blandonnet 8
CH-1214 Vernier, Geneva
Phone: +41 22 749 01 11
Email: copyright@iso.org
Website: www.iso.org

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Foreword

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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.

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This document was prepared by Technical Committee ISO/TC 8, *Ships and marine technology*, Subcommittee SC 3, *Piping and machinery*.

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.

Ships and marine technology — Flange connection for fuel and lubrication oil bunkering — Basic dimensions and technical requirements

1 Scope

This document specifies the basic dimensions of PN 10 flanged connections for bunker fuel and lubricating oil transfer to ships from bunkering vessels or onshore facilities, and the technical requirements for the design of such connections.

This document is not applicable to connections of the ship's fuel system for the reception of liquefied natural gas.

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 4014, *Hexagon head bolts — Product grades A and B*

ISO 4032, *Hexagon regular nuts (style 1) — Product grades A and B*

ISO 7005-1, *Pipe flanges — Part 1: Steel flanges for industrial and general service piping systems*

ISO 7091, *Plain washers — Normal series — Product grade C*

ISO 7483, *Dimensions of gaskets for use with flanges to ISO 7005*

3 Terms and definitions

No terms and definitions are listed in this document.

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/

4 Classification

4.1 The flange connections are classified as follows depending on the medium:

— Type F – flange connections for bunker fuel reception;

— Type L – flange connections for lubricating oil reception.

4.2 The flange connections are classified as follows depending on the execution (arrangement):

— Execution 1 – blind flange without handle;

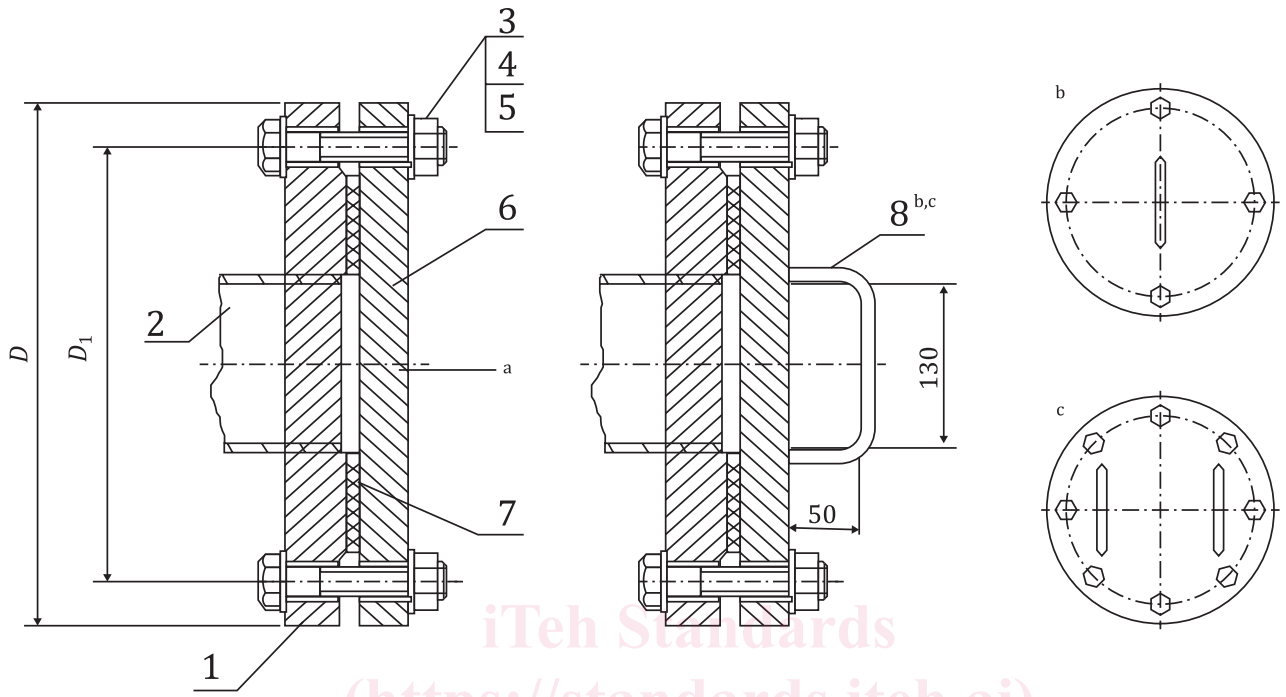
— Execution 2 – blind flange with one handle;

— Execution 3 – blind flange with two handles.

5 Basic dimensions

5.1 The main dimensions of the flange connections shall be as shown in Figure 1 and in Table 1.

Dimensions in millimetres



Key

1	receiving flange	7	gasket
2	pipe	8	handle
3	bolt		
4	nut	a	Execution 1 (blind flange without handle).
5	washer	b	Execution 2 (one handle).
6	blind flange	c	Execution 3 (two handles).

Figure 1 — Flange connections for bunker fuel and lube oil transfer

Table 1 — Basic dimensions of flange connections

Dimensions in millimetres

Execution	Nominal diameter	Outside diameter	Diameter between the centres of the bolt holes	Number of handles on a blind flange	Bolts		
					Number of bolts		Thread
	DN	D	D_1		Type F	Type L	
1	50	165	125	—	4	4	M16
2	100	220	180	1	8	8	
	150	285	240			—	M20
3	200	340	295	2			
	250	395	350		12		
	300	445	400				