



DPC: 21/30442045 DC

BSI Group Headquarters

389 Chiswick High Road London W4 4AL

Tel: +44 (0)20 8996 9000

Fax: +44 (0)20 8996 7400

www.bsigroup.com

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Interested committees:

Title: Draft BS EN 1759-4 Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, Class designated. Part 4: Aluminium alloy flanges.

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Introduction

This draft standard is based on national and international discussions. Your comments on this draft are invited and will assist in the preparation of the consequent standard.

For international standards, comments will be reviewed by the relevant UK national committee before sending the consensus UK vote and comments to the international committee, which will then decide appropriate action. If the international standard is approved, it is usual for the text to be published as a British Standard.

For national standards, comments will be reviewed by the relevant UK national committee and the resulting standards published as a British Standard.

UK Vote

Please indicate whether you consider the UK should submit a negative (with supporting technical reasons) or positive vote on this draft. Please indicate if you are aware of any reason why this draft standard should not be published as a British Standard.

Submission of Comments

- **Annotated drafts are not acceptable and will be rejected.**
- All comments should be submitted online at <https://standardsdevelopment.bsigroup.com/>. You will need to register in order to comment.

Template for comments and secretariat observations

Date: xx/xx/20xx	Document: ISO/DIS xxxx
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1	2	(3)	4	5	(6)	7
MB	Clause No./ Subclause No./Annex (e.g. 3.1)	Paragraph/Figure/ Table/Note	Type of comment	Commend (justification for change) by the MB	Proposed change by the MB	Secretariat observations on each comment submitted
	3.1	Definition 1	ed	Definition is ambiguous and needs clarifying.	Amend to read '...so that the mains connector to which no connection...'	
	6.4	Paragraph 2	te	The use of the UV photometer as an alternative cannot be supported as serious problems have been encountered in its use in the UK.	Delete reference to UV photometer.	

English Version

Flanges and their joints - Circular flanges for pipes, valves,
fittings and accessories, Class designated - Part 4:
Aluminium alloy flanges

Brides et leurs assemblages - Brides circulaires pour
tubes, appareils de robinetterie, raccords et
accessoires, désignées Class - Partie 4 : Brides en
alliages d'aluminium

Flansche und ihre Verbindungen - Runde Flansche für
Rohre, Armaturen, Formstücke und Zubehörteile, nach
Class bezeichnet - Teil 4: Flansche aus
Aluminiumlegierungen

This draft European Standard is submitted to CEN members for enquiry. It has been drawn up by the Technical Committee CEN/TC 74.

If this draft becomes a European Standard, 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.

This draft European Standard was established by CEN 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.

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Recipients of this draft are invited to submit, with their comments, notification of any relevant patent rights of which they are aware and to provide supporting documentation.

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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 (prEN 1759-4:2021) has been prepared by Technical Committee CEN/TC 74 “Flanges and their joints”, the secretariat of which is held by DIN.

This document is currently submitted to CEN Enquiry.

This document will supersede EN 1759-4:2003.

The main changes compared to EN 1759-4:2003 are:

- update of Annex ZA.

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)¹.

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

EN 1759 consists of the following parts:

- Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 1: Steel flanges (draft stage);
- Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 3: Copper alloy flanges (draft stage);
- Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 4: Aluminium alloy flanges (draft stage).

Annexes A and B are informative.

1 Directive 97/23 EC of the European Parliament and of the Council of 29 May 1997 on the approximation of the Laws of the Member States concerning pressure equipment; OIEC L 181.

1 Scope

This document specifies requirements for Class designated circular flanges for pipes, valves, fittings and accessories made from aluminium alloy in the range of DN 15 to DN 600 (NPS 1/2 to NPS 24) and Class 150 to Class 300 (see Table 1).

This document specifies the types of flanges and their facings, dimensions and tolerances, bolt sizes, surface finish of jointing faces, marking and materials together with associated pressure temperature (p/T) ratings.

The flanges are intended to be used for piping as well as for pressure vessels.

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.

EN 1515-1, *Flanges and their joints — Bolting — Part 1: Selection of bolting*

EN ISO 4287:1998, *Geometrical product specifications (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

EN 12392, *Aluminium and aluminium alloys — Wrought products and cast products — Special requirements for products intended for the production of pressure equipment*

EN 12560 (series), *Flanges and their joints — Gaskets for Class-designated flanges*

EN ISO 4287:1998, *Geometrical product specification (GPS) — Surface texture: Profile method — Terms, definitions and surface texture parameters (ISO 4287:1997)*

EN ISO 6708:1995, *Pipework Components — Definition and selection of DN (nominal size) (ISO 6708:1995)*

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 <https://www.electropedia.org/>

3.1

DN

see EN ISO 6708:1995

3.2

Nominal pipe size

NPS

alphanumeric designation of size for components of a pipework system, which is used for reference purposes. It comprises, for the purpose of Class designated flanges according to this document, the letters NPS followed by a dimensionless number which is indirectly related to the physical size of the bore or outside diameter of the end connections

Note 1 to entry: The number following the letters NPS does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.

Note 2 to entry: The relationship between DN and NPS is given in the tables.

3.3

Class

alphanumeric designation used for reference purposes related to a combination of mechanical and dimensional characteristics of a component of a pipework system. It comprises the word Class followed by a dimensionless whole number

Note 1 to entry: The number following the word Class does not represent a measurable value and should not be used for calculation purposes except where specified in the relevant standard.

Note 2 to entry: The designation Class is not meaningful unless it is related to the relevant component standard number.

Note 3 to entry: It is intended that all components with the same Class and NPS designations shall have the same mating dimensions for compatible flange types.

3.4

R_a , R_z

see EN ISO 4287:1998

3.5

maximum allowable pressure

P_S

P_S means the maximum pressure for which the equipment is designed, as specified by the equipment manufacturer

3.6

maximum allowable temperature

T_S

T_S means the maximum temperature for which the equipment is designed, as specified by the equipment manufacturer

4 Designations

4.1 Range of nominal sizes

The range of DN (NPS) applicable to each Class shall be as given in Table 1.

4.2 Range of Class designations

The range of Class designations shall be as given in Table 1.

4.3 Types of flanges

Figure 1 illustrates flanges identified according to type:

- a) Type 05 Blank flange;
- b) Type 11 Weld-neck flange.