SLOVENSKI STANDARD
SIST EN 12560-1:2024

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Nadomešča:
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Prirobnice in prirobnični spoji - Mere tesnil za prirobnice z oznako Class - 1. del: Nekovinska ploščata tesnila z ojačitvijo ali brez nje

Flanges and their joints - Dimensions of gaskets for Class-designated flanges - Part 1: Non-metallic flat gaskets with or without inserts

Flansche und ihre Verbindungen - Maße für Dichtungen für Flansche mit Class-Bezeichnung - Teil 1: Flachdichtungen aus nichtmetallischem Werkstoff mit oder ohne Einlagen

Brides et leurs assemblages - Dimensions des joints pour les brides désignées Class - Partie 1 : Joints plats non-métalliques avec ou sans insert

Ta slovenski standard je istoveten z: **EN 12560-1:2024**

ICS:

23.040.60	Prirobnice, oglavki in spojni elementi	Flanges, couplings and joints
23.040.80	Tesnila za cevne zveze	Seals for pipe and hose assemblies

SIST EN 12560-1:2024 **en,fr,de**

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 12560-1

August 2024

ICS 23.040.80

Supersedes EN 12560-1:2001

English Version

Flanges and their joints - Dimensions of gaskets for Class-designated flanges - Part 1: Non-metallic flat gaskets with or without inserts

Brides et leurs assemblages - Dimensions des joints pour les brides désignées Class - Partie 1 : Joints plats non-métalliques avec ou sans insert

Flansche und ihre Verbindungen - Maße für Dichtungen für Flansche mit Class-Bezeichnung - Teil 1: Flachdichtungen aus nichtmetallischem Werkstoff mit oder ohne Einlagen

This European Standard was approved by CEN on 3 June 2024.

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

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European foreword

This document (EN 12560-1:2024) has been prepared by Technical Committee CEN/TC 74 “Flanges and their joints”, the secretariat of which is held by DIN.

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of an identical text or by endorsement, at the latest by February 2025, and conflicting national standards shall be withdrawn at the latest by February 2025.

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 12560-1:2001.

In comparison with the previous edition EN 12560-1:2001, the following technical modifications have been made:

a) normative references have been updated;

b) terms and definitions have been updated;

c) Clause 4 “Symbols and abbreviations” has been inserted;

d) in Clause 5 information to be supplied by the purchaser has been revised and more details have been added;

e) in Clause 8 table with gasket dimensions have been arranged according gasket types and tolerances for gaskets have been introduced in 8.3;

f) in Clause 9 former content has been incorporated in Clause 8 and markings have been revised;

g) former Annex A “A-deviation” has been incorporated in 5.5;

h) new Annex A “gasket materials” to give guidance how to mark gaskets;

i) the document has been editorially revised.

EN 12560 will consist of the following parts:

— *Part 1: Non-metallic flat gaskets with or without inserts*

— *Part 2: Spiral wound gaskets for use with steel flanges*

— *Part 3: Non-metallic PTFE envelope gaskets*

— *Part 4: Corrugated flat or grooved metallic and filled metallic gaskets for use with steel flanges*

— *Part 5: Metallic ring-joint gaskets for use with steel flanges*

— *Part 6: Covered serrated metal gaskets for use with steel flanges*

— *Part 7: Covered metal jacketed gaskets for use with steel flanges*

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

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Türkiye and the United Kingdom.

Introduction

Dimensions for the internal diameter of gaskets are a compromise between all requirements of EN 1759-1, EN 1759-3 and EN 1759-4 so that a single value is given for each gasket size.

1 Scope

This document specifies the dimensions, types, designation and marking of non-metallic flat gaskets, with or without inserts, for flanges in accordance with EN 1759-1, EN 1759-3 and EN 1759-4, for Class 150, Class 300, Class 600 and Class 900 for nominal sizes DN 15 to DN 600. In addition, this document also gives guidance on typical materials used and how they should be marked.

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 1759-1, *Flanges and their joint — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 1: Steel flanges, NPS 1/2 to 24*

EN 1759-3, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 3: Copper alloy flanges*

EN 1759-4, *Flanges and their joints — Circular flanges for pipes, valves, fittings and accessories, Class designated — Part 4: Aluminium alloy flanges*

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:

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

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

3.1
DN
alphanumeric designation of size for components of a pipework system, which is used for reference purposes, and is comprised of the letters DN followed by a dimensionless whole number which is indirectly related to the physical size, in millimeters, of the bore or outside diameter of the end connections

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

[SOURCE: EN ISO 6708:1995, 2.1, modified – definition made into one statement, recommendation removed from note 1 to entry]

3.2
NPS
alphanumeric designation of size for components of a pipework system, which is used for reference purposes and is comprised of, 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 is not used for calculation purposes except where specified in the relevant standard. See EN ISO 6708.

[SOURCE: EN 1759-3:2004, 3.3, modified – definition made into one statement, recommendation removed from note1 to entry]

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, and is comprised of 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 is not 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 (see below) designations have the same mating dimensions for compatible flange types.

[SOURCE: EN 1759-3:2004, 3.1, modified – definition made into one statement, recommendation removed from Note 1]

4 Symbols and abbreviations

For the purposes of this document, the following notations apply.

Where units are applicable, they are shown in brackets. Where units are not applicable, no indication is given.

CLASS	Pressure Nominal, see 3.3	-
d	Gasket inside diameter	mm
D	Gasket outside diameter	mm
DN	Diameter Nominal, see 3.1	-
FF	Full face	-
IBC	Inside bolt circle	-
K	Gasket bolt circle diameter	mm
L	Gasket bolthole diameter	mm
NPS	Diameter Nominal, see 3.2	-
SR	Spigot and recess	-
t	Thickness of gasket	mm
TG	Tongue and groove	-

5 Classification, designation and coding

5.1 Range of Class designation

Gaskets shall be designated as suitable for use with one or more of the following Class values:

— Class 150

— Class 300