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

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

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

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

**Ta slovenski standard je istoveten z: EN 1514-1:1997**

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English version

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

Brides et leurs assemblages - Dimensions des  
joints pour les brides désignées PN - Partie 1:  
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Flansche und ihre Verbindungen - Maße für  
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Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Central Secretariat or to any CEN member.

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# CEN

European Committee for Standardization  
Comité Européen de Normalisation  
Europäisches Komitee für Normung

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## Foreword

This European Standard 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of an identical text or by endorsement, at the latest by October 1997, and conflicting national standards shall be withdrawn at the latest by October 1997.

The annex A is informative and contains "Information to be supplied by the purchaser".

The annex B is informative and contains "A-deviations".

The annex C is informative and contains "Gasket materials".

EN 1514 consists of 4 parts:

Part 1 Specification for non-metallic flat gaskets with or without inserts

Part 2 Specification for spiral wound gaskets for use with steel flanges

Part 3 Specification for non-metallic PTFE envelope gaskets

Part 4 Specification for corrugated, flat or grooved metallic and filled metallic gaskets for use with steel flanges

According to the CEN/CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Denmark, Finland, France, Germany, Greece, Iceland, Ireland, Italy, Luxembourg, Netherlands, Norway, Portugal, Spain, Sweden, Switzerland and the United Kingdom.

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## Introduction

Dimensions for the internal diameter of gaskets are a compromise between all requirements of prEN 1092-1, prEN 1092-2, prEN 1092-3 and prEN 1092-4 so that a single value is given for each gasket size.

**WARNING:** Gaskets made to this standard may contain asbestos. Materials containing asbestos may be subject to legislation that requires precautions to be taken when handling them to ensure that they do not constitute a hazard to health (see annex B). Attention is drawn to the relevant EEC directives.

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## 1 Scope

This European standard specifies the dimensions and marking of non-metallic flat gaskets, with or without inserts, for use with flanges complying with prEN 1092-1, prEN 1092-2, prEN 1092-3 and prEN 1092-4, and pipes and fittings complying with EN 545, EN 598 and EN 969 up to and including PN 63 and up to and including DN 4000.

NOTE 1: Dimensions of other types of gaskets for use with flanges complying with prEN 1092-1, prEN 1092-2, prEN 1092-3 and prEN 1092-4 are given in EN 1514-2, EN 1514-3 and EN 1514-4.

NOTE 2: Annex A lists information that should be supplied by the purchaser when ordering gaskets and annex C lists typical materials for the manufacture of non-metallic flat gaskets.

NOTE 3: Clause 9 gives inside diameters of gaskets specifically for use with flanges complying with EN 545, EN 598 and EN 969, and also with ISO 2531.

NOTE 4: This standard does not provide dimensions to suit PN 100 flanges, as gaskets covered by this standard are not necessarily intended for such applications.

## 2 Normative references

This European Standard incorporates by dated or undated reference, provisions from other publications. These normative references are cited at the appropriate places in the text and the publications are listed hereafter. For dated references, subsequent amendments to or revisions of any of these publications apply to this European Standard only when incorporated in it by amendment or revision. For undated references the latest edition of the publication referred to applies.

EN 545	Ductile iron pipes, fittings, accessories and their joints for water pipelines - Requirements and test methods
EN 598	Ductile iron pipes, fittings, accessories and their joints for sewerage application - Requirements and test methods
EN 969	Ductile iron pipes, fittings, accessories and their joints for gas pipelines - Requirements and test methods
prEN 1092-1	Flanges and their joints - Circular flanges for pipes, valves and fittings Part 1: Steel flanges - PN designated

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prEN 1092-2	Flanges and their joints Part 2: Cast iron flanges
prEN 1092-3	Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories Part 3: Copper alloy and composite flanges - PN designated
prEN 1092-4	Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories - PN designated Part 4: Aluminium alloy flanges
EN 1333	Pipework components - Definition and selection of PN
EN ISO 6708	Pipework components - Definition and selection of DN (nominal size) (ISO 6708: 1995)
ISO 2531	Ductile iron pipes, fittings and accessories for pressure pipelines

### 3 Definitions

For the purposes of this standard, the following definitions apply:

**3.1 DN:** See EN ISO 6708.

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**3.2 PN:** See EN 1333.

### 4 Designations

#### 4.1 Range of PN Designations

Gaskets shall be designated as suitable for use with one or more of the following PN designations of flange:

PN 2,5	PN 25
PN 6	PN 40
PN 10	PN 63
PN 16	



## 4.2 Range of DN (nominal sizes)

Gasket nominal sizes shall be designated in accordance with the ranges specified in table 1.

## 4.3 Gasket types

Gasket types, as defined in clause 6 and as illustrated in figure 2, shall be designated as:

- Type FF : Full face;
- Type IBC : Inside bolt circle;
- Type TG : Tongue and groove;
- Type SR : Spigot and recess.

## 4.4 Information to be supplied by the purchaser

NOTE: For information to be supplied by the purchaser see annex A.

## 5 Gasket designs and materials

Gaskets shall be manufactured in a single material or combination of materials and shall be:

- a) single flat sheet; or
- b) laminated ply; or
- c) moulded.

NOTE 1: Examples of typical materials are given in annex C.

NOTE 2: The selection of the gasket material should take into account the fluid, the operating conditions, the properties of the gasket material, the type and surface finish of the flange facing and the flange bolt loading. It is recommended that selection of gaskets for any particular application is made in consultation with the gasket supplier (see annex A).

NOTE 3: The purchaser should indicate on his enquiry and/or order if gaskets are to be used with water intended for human consumption (see annex A). It shall be noted that the National regulations of both the country of origin and the country of use may be considered relevant.

## 6 Gasket types

Gaskets shall be one of the following types:

- a) Type FF gasket, for use with type A (flat face) or type B (raised face) flange facings (see figures 1 (a) and 2 (a));
- b) Type IBC gasket, for use with type A (flat face) or type B (raised face) flange facings (see figures 1(b) and (2 b));
- c) Type TG gasket, for use with type C/D (tongue/groove) flange facings (see figures 1 (c) and 2 (b));
- d) Type SR gasket, for use with type E/F (spigot/recess) flange facings (see figures 1 (d) and 2 (b));

NOTE 1: The types of flange facings are specified in prEN 1092-1, prEN 1092-2, prEN 1092-3 and prEN 1092-4 and, for information, the facings are shown in figure 3.

NOTE 2: The selection of gasket type should take into account the fluid, the operating conditions, the properties of the gasket materials, the type and surface finish of the flange facing and the flange bolt loading. It is recommended that selection of gasket type for any particular application is made in consultation with the gasket supplier (see annex A).

NOTE 3: Only Type FF and Type IBC gaskets are suitable for use with flanges on pipes and fittings complying with EN 545, EN 598 and EN 969.

NOTE 4: Gaskets of types described in 6 (a), (b), (c) and (d) and having an outside diameter greater than 1 500 mm may be available only in segmental form. The purchaser should consult the gasket manufacturer or supplier as to the forms available for the larger sizes of gaskets (see annex A).