

Flanges and their joints — Dimensions of gaskets for PN-designated flanges —

Part 8: Polymeric O-Ring gaskets for grooved flanges

The European Standard EN 1514-8:2004 has the status of a
British Standard

ICS 23.040.80

National foreword

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Brides et leurs assemblages - Dimensions des joints pour les brides désignées PN - Partie 8 : Joints d'étanchéité toriques en caoutchouc pour brides à rainures

Flansche und ihre Verbindungen - Maße für Dichtungen für Flansche mit PN-Bezeichnung - Teil 8: Runddichtringe aus Gummi für Nutflansche

This European Standard was approved by CEN on 23 September 2004.

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Contents

	Page
Foreword.....	3
1 Scope	4
2 Normative references	4
3 Terms and definitions	4
4 Designations	5
5 Dimensions.....	6
6 Packaging	6
Annex A (informative) Information to be supplied by the purchaser.....	7

Foreword

This document (EN 1514-8:2004) 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of an identical text or by endorsement, at the latest by May 2005, and conflicting national standards shall be withdrawn at the latest by May 2005.

EN 1514 "*Flanges and their joints – Dimensions of gaskets for PN designated flanges*", consists 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 6: Covered Serrated Metal gaskets for use with steel flanges;*
- *Part 7: Covered metal jacketed gaskets for use with steel flanges;*
- *Part 8: Polymeric O-Ring gaskets for grooved flanges.*

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1 Scope

This document specifies the dimensions of polymeric O-Ring gaskets for use with grooved flanges complying with EN 1092 for PN 10, PN 16, PN 25, PN 40.

NOTE 1 Dimensions of other types of gaskets for use with flanges to EN 1092-1, EN 1092-2, EN 1092-3 and EN 1092-4 are given in EN 1514-1, EN 1514-2, EN 1514-3, EN 1514-4, EN 1514-6 and EN 1514-7.

NOTE 2 Annex A lists information that should be supplied by the purchaser when ordering gaskets in circumstances where the choice of the gasket materials appropriate to the service is left to the supplier.

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.

EN 1092-1, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 1: Steel flanges.*

EN 1092-2, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 2: Cast iron flanges.*

EN 1092-3, *Flanges and their joints - Circular flanges for pipes, valves, fittings and accessories, PN designated - Part 3: Copper alloy flanges.*

EN 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).*

3 Terms and definitions

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

3.1

O-Ring gasket

a rubber O-Ring gasket consists of a solid toroid of rubber which is contained within the grooves of a pair of flange facings according to the series of EN 1092 and which seals the flanges due to a combination of compression of the gasket and the deformation imposed on the gasket by the retained fluid

3.2

DN

see EN ISO 6708

3.3

PN

see EN 1333

4 Designations

4.1 Range of PN designations

Gaskets of the polymeric O-Ring style shall be designated as suitable for use with one or more of the following PN designations of flange:

PN 10, PN 16, PN 25 and PN 40

4.2 Range of DN (nominal sizes)

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

4.3 Information to be supplied by the purchaser

The selection of polymer type from which required O-Ring gaskets are to be made should take into account the fluid and the operating conditions. It is recommended that selection of a gasket for any particular application is made in consultation with the gasket supplier who will advise on the materials required for a particular service (see annex A).

When ordering gaskets the nominal diameter and the PN number shall be given and, after discussion as required with the manufacturer, the polymer type.

Example for the designation of a gasket DN 150, PN 10, polymer type xyz:

Gasket EN 1514-8 — 150 — 10 — xyz

5 Dimensions

The diameters of polymeric O-Ring gaskets shall be as given in Table 1.

Table 1 — Dimensions of polymeric O-Ring gaskets for PN 10 to PN 40 grooved flanges

Nominal Diameter	Inside Diameter d_1	Diameter of Annulus d_2	Tolerance
10	21	5	$\pm 0,4$
15	26		
20	33		
25	40		
32	48		
40	57		
50	69		
65	89		
80	100		
100	122	6	$\pm 0,4$
125	148		
150	176		
(175)	206		
200	232		
250	285		
300	335		
350	385	7	$\pm 0,5$
400	435		
500	535		
600	635		
700	735		
800	835		
900	940		
1000	1040		
1200	1235		
1400	1430		
1600	1625		
1800	1825		
2000	2020		
2200	2220		
2400	2410		
2600	2610		
2800	2800		
3000	3000		

NOTE Nominal diameter in brackets to be avoided.

6 Packaging

The packaging shall be sufficient to protect the gaskets from damage during shipment and subsequent handling before installation.

Annex A (informative)

Information to be supplied by the purchaser

Before ordering a gasket it is recommended that the selection of the gasket type and materials should be made in consultation with the gasket supplier. This selection should take account of the fluid, the properties of the gasket materials, the service temperature and the flange type and flange materials.

The following information should be supplied by the purchaser when ordering gaskets:

- a) the number and part of this document, i.e. EN 1514-8;
- b) the nominal size — DN (see Table 1);
- c) PN designation (see 4.1);
- d) required polymer material or expected operating conditions for applications where the gasket manufacturer is required to select the polymer type.

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