

**Äärikud ja nende ühendused.  
Ümmargused äärikud torudele,  
ventiilidele, ühendusdetailidele ja  
lisaseadmetele, PN klassifikatsiooniga.  
Osa 3: Vasesulamist äärikud**

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

## EESTI STANDARDI EESSÕNA

## NATIONAL FOREWORD

<p>Käesolev Eesti standard EVS-EN 1092-3:2003 sisaldab Euroopa standardi EN 1092-3:2003+AC:2004 ingliskeelset teksti.</p> <p>Käesolev dokument on jõustatud 14.10.2003 ja selle kohta on avaldatud teade Eesti standardiorganisatsiooni ametlikus väljaandes.</p> <p>Standard on kättesaadav Eesti standardiorganisatsioonist.</p>	<p>This Estonian standard EVS-EN 1092-3:2003 consists of the English text of the European standard EN 1092-3:2003+AC:2004.</p> <p>This document is endorsed on 14.10.2003 with the notification being published in the official publication of the Estonian national standardisation organisation.</p> <p>The standard is available from Estonian standardisation organisation.</p>
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<p><b>Käsitlusala:</b> This European Standard specifies requirements for circular copper alloy flanges and copper alloy collars combined with loose steel plate flanges in PN designations from PN 6 to PN 40 and nominal sizes from DN 10 to DN 1800 in the types shown in Table 1</p>	<p><b>Scope:</b> This European Standard specifies requirements for circular copper alloy flanges and copper alloy collars combined with loose steel plate flanges in PN designations from PN 6 to PN 40 and nominal sizes from DN 10 to DN 1800 in the types shown in Table 1</p>
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**ICS** 23.040.60

**Võtmesõnad:** circular form, flanges, materials, measurement, pipe couplings, pipes, pipes : tubes, pressure, quality assurance, round flange, size, specification (approval), specifications, temperature, tolerances, tolerances (measurement), valves

ICS 23.040.60

English version

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

Brides et leurs assemblages - Brides circulaires pour tubes,  
appareils de robinetterie, raccords et accessoires,  
désignées PN - Partie 3: Brides en alliages de cuivre

Flansche und ihre Verbindungen - Runde Flansche für  
Rohre, Armaturen, Formstücke und Zubehörteile, nach PN  
bezeichnet - Teil 3: Flansche aus Kupferlegierungen

This European Standard was approved by CEN on 27 June 2003.

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. Up-to-date lists and bibliographical references concerning such national standards may be obtained on application to the Management Centre or to any CEN member.

This European Standard exists 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 Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Czech Republic, Denmark, Finland, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Luxembourg, Malta, Netherlands, Norway, Portugal, Slovakia, Spain, Sweden, Switzerland and United Kingdom.



EUROPEAN COMMITTEE FOR STANDARDIZATION  
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## Foreword

This document (EN 1092-3:2003) 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 March 2004, and conflicting national standards shall be withdrawn at the latest by March 2004.

This document has been prepared under a mandate given to CEN by the European Commission and the European Free Trade Association, and supports essential requirements of the Pressure Equipment Directive (PED)<sup>1</sup>.

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

EN 1092 consists of the following parts:

- Part 1: Steel flanges;
- Part 2: Cast iron flanges;
- Part 3: Copper alloy flanges;
- Part 4: Aluminium alloy flanges.

The annexes A, B, C and ZA are informative.

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

## Introduction

This standard is related to ISO 7005-3 in respect of flanges having the same PN. The types of flanges and their mating dimensions are identical with those flanges of the same DN and PN given in ISO 7005-3, except that certain flange types in accordance with this standard may regularly be supplied with raised face facings.

The mating dimensions of the flanges of this standard are compatible with PN designated flanges of other materials in accordance with the other parts of EN 1092.

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<sup>1</sup>) 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 European Standard specifies requirements for circular copper alloy flanges and copper alloy collars combined with loose steel plate flanges in PN designations from PN 6 to PN 40 and nominal sizes from DN 10 to DN 1800 in the types shown in Table 1.

This standard also specifies dimensions and tolerances, materials and their associated pressure/temperature (p/T) ratings, flange facings and related surface finish, weld repairs, and marking, together with information on bolting, gaskets, application/installation and approximate flange masses.

The flanges specified, with the exception of integral (type 21) flanges, are for attachment to copper or copper alloy tubes in accordance with EN 12449.

NOTE 1 When the flanges specified in this standard are required for use with copper or copper alloy tubes to EN 1057 in those tube diameters which are different to EN 12449, this should be agreed between the equipment manufacturer and the flange manufacturer.

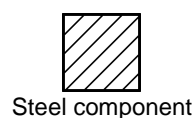
NOTE 2 The size of copper and copper alloy tubes is designated by reference to the outside diameter in millimetres.

NOTE 3 See also annex B.

NOTE 4 Non-gasketed pipe joints are outside the scope of this standard.

**Table 1 — Types of flanges and collars**

Type no.	Description
01	Plate flange in copper alloy for brazing or welding
02	Loose plate flange in steel with a plate collar (type 32) in copper alloy, for brazing or welding.
04	Loose plate flange in steel with a weld-neck collar (type 34) in copper alloy, for welding.
05	Blank flange in copper alloy.
05C	Blank flange in steel clad with a copper alloy jointing face.
07	Loose plate flange in steel with a slip-on collar (type 37) in copper alloy, for soft soldering, brazing or welding.
11	Weld-neck flange in copper alloy for welding.
12	Hubbed slip-on flange in copper alloy, for soft soldering, brazing or welding.
14	Hubbed slip-on flange in copper alloy supplied with tube stops, for soft soldering, brazing or welding.
21	Integral flange in copper alloy as part of some other equipment or component
32	Plate collar in copper alloy
34	Weld-neck collar in copper alloy.
37	Slip-on collar in copper alloy.



**Type 01**  
Plate flange in copper alloy  
for brazing or welding



**Type 02, 32**  
Loose plate flange in steel with a  
plate collar (type 32) in copper alloy  
for brazing and welding



**Type 04, 34**  
Loose plate flange in steel with a  
weld-neck collar (type 34) in copper alloy  
for welding



**Type 05, 05C**  
05 Blank flange in copper alloy  
05C Blank flange in steel clad with  
a copper alloy jointing face



**Type 07, 37**  
Loose plate flange in steel with a  
slip-on collar (type 37) in copper  
alloy, for soft soldering, brazing or  
welding



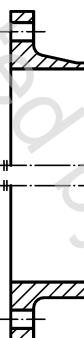
**Type 11**  
Weld-neck flange in copper alloy for  
welding



**Type 12**  
Hubbed slip-on flange in copper  
alloy, for soft soldering, brazing or  
welding



**Type 14**  
Hubbed slip-on flange in copper  
alloy supplied with tube stops, for  
soft soldering, brazing or welding



**Type 21**  
Integral flange in copper alloy as  
part of some other equipment or  
component

**Figure 1 — Types of flanges and collars**

## 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 (including amendments).

EN 1333:1996, *Pipework components — Definition and selection of PN*.

EN 1652, *Copper and copper alloys — Plate, sheet, strip and circles for general purposes*.

EN 1982, *Copper and copper alloys — Ingots and castings*.

EN 10028-2, *Flat products made of steels for pressure purposes — Part 2: Non-alloy and alloy steels with specified elevated temperature properties*.

EN 10222-2, *Steel forgings for pressure purposes — Part 2: Ferritic and martensitic steels with specified elevated temperature properties*.

EN 12420, *Copper and copper alloys — Forgings*.

EN 12449, *Copper and copper alloys — Seamless round tubes for general purposes*.

EN ISO 887, *Plain washers for metric bolts, screws and nuts for general purposes — General plan (ISO 887:2000)*.

EN ISO 4287, *Geometrical Product Specifications (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 standard, the following terms and definitions apply.

### 3.1

#### **DN**

see EN ISO 6708:1995

### 3.2

#### **PN**

see EN 1333:1996

### 3.3

#### **maximum allowable pressure, PS**

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

### 3.4

#### **maximum allowable temperature, TS**

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