

<b>STN</b>	<b>Letectvo a kozmonautika</b> <b>Puzdrá s prírubou zo zliatiny hliníka, so</b> <b>samomaznou vrstvou</b> <b>Rozmery a zaťaženia</b>	<b>STN</b> <b>EN 2286</b>  31 4861
------------	---	---

Aerospace series - Bushes, flanged aluminium alloy, with self-lubricating liner - Dimensions and loads

Táto norma obsahuje anglickú verziu európskej normy.  
This standard includes the English version of the European Standard.

Táto norma bola oznámená vo Vestníku ÚNMS SR č. 10/17

Obsahuje: EN 2286:2017

Oznámením tejto normy sa ruší  
STN EN 2286 (31 4861) z mája 1999

**125353**

Úrad pre normalizáciu, metrológiu a skúšobníctvo Slovenskej republiky, 2017  
Podľa zákona č. 264/1999 Z. z. o technických požiadavkách na výrobky a o posudzovaní zhody a o zmene a doplnení niektorých zákonov v znení neskorších predpisov sa slovenská technická norma a časti slovenskej technickej normy môžu rozmnožovať alebo rozširovať len so súhlasom slovenského národného normalizačného orgánu.

EUROPEAN STANDARD

**EN 2286**

NORME EUROPÉENNE

EUROPÄISCHE NORM

May 2017

ICS 49.030.99

Supersedes EN 2286:1989

English Version

## Aerospace series - Bushes, flanged aluminium alloy, with self-lubricating liner - Dimensions and loads

Série aérospatiale - Bagues à épaulement en alliage d'aluminium, à garniture autolubrifiante - Dimensions et charges

Luft- und Raumfahrt - Buchsen mit Flansch aus Aluminium-Legierung mit selbstschmierender Beschichtung - Maße und Belastungen

This European Standard was approved by CEN on 2 January 2017.

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 CEN-CENELEC 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 CEN-CENELEC Management Centre has the same status as the official versions.

CEN members are the national standards bodies of Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and United Kingdom.



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

**CEN-CENELEC Management Centre: Avenue Marnix 17, B-1000 Brussels**

<b>Contents</b>		Page
<b>European foreword</b> .....		<b>3</b>
<b>1</b>	<b>Scope</b> .....	<b>4</b>
<b>2</b>	<b>Normative references</b> .....	<b>4</b>
<b>3</b>	<b>Required characteristics</b> .....	<b>4</b>
<b>3.1</b>	<b>Configuration — Dimensions — Masses</b> .....	<b>4</b>
<b>3.2</b>	<b>Surface roughness</b> .....	<b>4</b>
<b>3.3</b>	<b>Materials</b> .....	<b>4</b>
<b>3.4</b>	<b>Surface treatment</b> .....	<b>5</b>
<b>4</b>	<b>Designation</b> .....	<b>8</b>
<b>5</b>	<b>Marking</b> .....	<b>8</b>
<b>6</b>	<b>Technical specification</b> .....	<b>8</b>
<b>7</b>	<b>Design recommendation</b> .....	<b>8</b>
<b>Annex A (informative) Standard evolution form</b> .....		<b>10</b>

## European foreword

This document (EN 2286:2017) has been prepared by the Aerospace and Defence Industries Association of Europe - Standardization (ASD-STAN).

After enquiries and votes carried out in accordance with the rules of this Association, this European Standard has received the approval of the National Associations and the Official Services of the member countries of ASD, prior to its presentation to CEN.

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 November 2017, and conflicting national standards shall be withdrawn at the latest by November 2017.

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 2286:1989.

According to the CEN-CENELEC Internal Regulations, the national standards organizations of the following countries are bound to implement this European Standard: Austria, Belgium, Bulgaria, Croatia, Cyprus, Czech Republic, Denmark, Estonia, Finland, Former Yugoslav Republic of Macedonia, France, Germany, Greece, Hungary, Iceland, Ireland, Italy, Latvia, Lithuania, Luxembourg, Malta, Netherlands, Norway, Poland, Portugal, Romania, Serbia, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

## 1 Scope

This document specifies the characteristics of flanged bushes in aluminium alloy with self-lubricating liner and the design recommendation of shafts and housings.

The bushes are intended for operation within the temperature range of  $-55\text{ °C}$  to  $121\text{ °C}$  and assembly with an interference fit into fixed and moving aerospace parts.

## 2 Normative references

The following documents, in whole or in part, are normatively referenced in this document and are indispensable for its application. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

EN 2086, *Aerospace series — Aluminium alloy AL-P2618A — T851 — Hand and die forgings —  $a \leq 150\text{ mm}$*

EN 2101, *Aerospace series — Chromic acid anodizing of aluminium and wrought aluminium alloys*

EN 2284, *Aerospace series — Sulphuric acid anodizing of aluminium and wrought aluminium alloys*

EN 2311, *Aerospace series — Bushes with self-lubricating liner — Technical specification*

EN 2701, *Aerospace series — Aluminium alloy (2024) — Solution treated, water quench, cold worked and naturally aged (T3) — Drawn tube for structures —  $0,6 \leq a \leq 12,5\text{ mm}$ <sup>1)</sup>*

EN 2704, *Aerospace series — Aluminium alloy AL-P2024 — AlCu4Mg1 — T3511 — Drawn bars —  $D_e \leq 75\text{ mm}$ <sup>2)</sup>*

**koniec náhľadu – text ďalej pokračuje v platenej verzii STN**

---

1) Published as ASD-STAN Standard at the date of publication of this European Standard. <http://www.asd-stan.org/>

2) Published as ASD-STAN Prestandard at the date of publication of this European Standard. <http://www.asd-stan.org/>