SLOVENSKI STANDARD
SIST EN 4609:2020

01-januar-2020

Aeronavtika - Spiralni pogoni za navojne pritrdilne elemente - Geometrijska opredelitev in tehnične zahteve

Aerospace series - Spiral drive recesses for threaded fasteners - Geometrical definition and technical requirements

Luft- und Raumfahrt - Spiral-Innenantrieb für Schrauben - Definition der Geometrie und Technische Anforderungen

Série aérospatiale - Empreintes spiral pour vis - Définition géométrique et exigence technique

Ta slovenski standard je istoveten z: **EN 4609:2019**

ICS:

49.030.01	Vezni elementi na splošno	Fasteners in general

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EUROPEAN STANDARD

NORME EUROPÉENNE

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English Version

Aerospace series - Spiral drive recesses for threaded fasteners - Geometrical definition and technical requirements

Série aérospatiale - Empreintes en spirale pour éléments de fixation filetés - Définition géométrique et exigences techniques

Luft- und Raumfahrt - Spiral-Innenantrieb für Schrauben - Definition der Geometrie und Technische Anforderungen

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EUROPEAN COMMITTEE FOR STANDARDIZATION
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European foreword

This document (EN 4609:2019) 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 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of an identical text or by endorsement, at the latest by May 2020, and conflicting national standards shall be withdrawn at the latest by May 2020.

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.

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Introduction

Aerospace and Defence Standardisation (ASD-STAN) draws attention to the fact that it is claimed that compliance with this document may involve the use of a patent “Spiral Drive System for Threaded Fasteners” EP1025370B1.

ASD-STAN takes no position concerning the evidence, validity and scope of this patent right.

The holder of this patent right has assured ASD-STAN that he/she is willing to negotiate licences under reasonable and non-discriminatory terms and conditions with applicants throughout the world. In this respect, the statement of the holder of this patent right is registered with ASD-STAN. Information may be obtained from:

Phillips Screw Company

301 Edgewater Place, Suite 320

Wakefield, Massachusetts 01880

U.S.A.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights other than those identified above. ASD-STAN shall not be held responsible for identifying any or all such patent rights.

1 Scope

This European Standard specifies dimensions, tolerances, characteristics and qualification requirements for MORTORQ Spiral Drive Recesses[1].

2 Normative references

There are no normative references in this document.

3 Terms and definitions

No terms and definitions are listed in this document.

ISO and IEC maintain terminological databases for use in standardization at the following addresses:

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

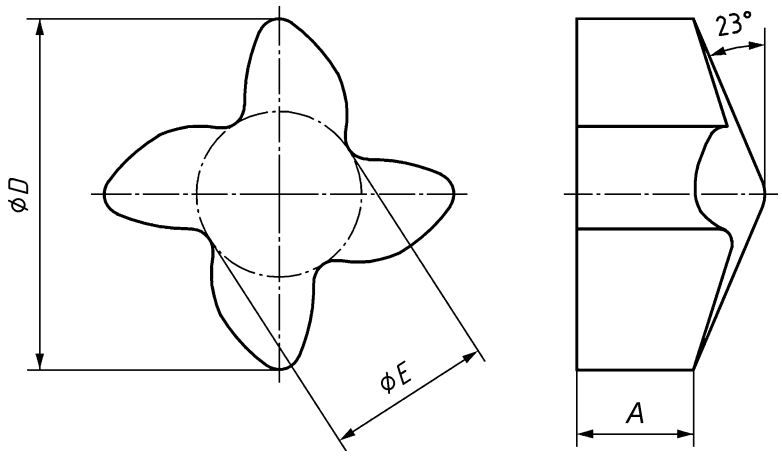
— IEC Electropedia: available at http://www.electropedia.org/

4 Required characteristics: configuration — dimensions — tolerances

Configuration shall be in accordance with Figure 1.

Dimensions and tolerances shall be according to Figure 1 and Table 1 and are expressed in millimetres.

1 MORTORQ® is the trade name of a product supplied by licensees of the Phillips Screw Company. This information is given for the convenience of users of this European Standard and does not constitute an endorsement by ASD-STAN nor CEN of the product named. Equivalent products may be used if they can be shown to lead to the same results.



Key

øD Dimension recess diameter
øE Dimension root diameter
A Penetration depth is individual per each fastener's part standard. Guidance on specifying this depth will be provided by the Phillips Screw Company. The depth should be measured using a Gauge as shown in Figure 3.

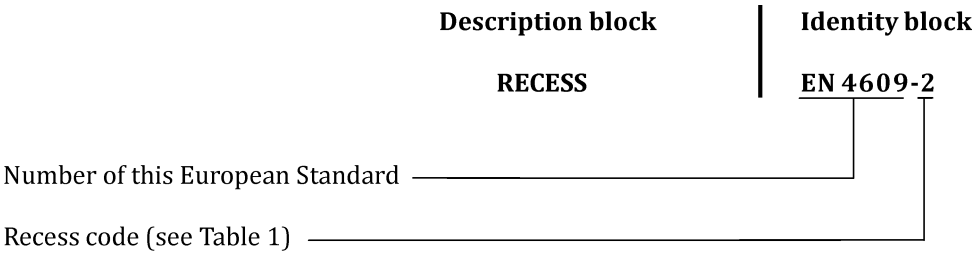
Figure 1 — Spiral drive recess form

Table 1 — Recess dimensions

Drive size	Recess code	*øD* Recess diameter max.	*øE* Root diameter Nom.
MT-000	000	1,905	0,902
MT-00	00	3,124	1,486
MT-0	0	4,379	2,085
MT-1	1	6,160	2,898
MT-2	2	7,874	3,708
MT-3	3	9,035	4,257
MT-4	4	10,935	5,156
MT-5	5	12,911	6,093
MT-6	6	15,133	7,140
MT-7	7	20,378	9,619

5 Designation

EXAMPLE



6 Recess gauging

Two varieties of penetration gauges for acceptance inspection purposes should be used to gauge the recess, the hand plug type as depicted in Figure 2, with the dimensions shown in Table 2 and the dial indicating type as shown in Figure 4 and Figure 5, with the dimensions shown in Table 3.

Penetration dial type gauge: Using the appropriate size penetration gauge, check the zero adjustment against a known flat piece of steel stock. Insert the penetration element into the recess and firmly push the top of the recess against the bottom of the gauge body. Measure and record the gauge penetration. The reading shall be within acceptable limits per application part standard.

Hand plug type gauges: Using light finger pressure only, place the appropriate GO gauge into the recess until resistance is felt. The GO element should enter and bottom in the recess. Using light finger pressure only attempt to place the appropriate NO-GO gauge element into the recess. The NO-GO gauge element should not enter beyond the acceptable fall away limit at the head surface of the screw.