Tools for woodworking - Safety requirements - Part 2: Requirements for the shank of shank mounted milling

EESTI STANDARDIKESKUS
ESTONIAN CENTRE FOR STANDARDISATION

EESTI STANDARDI EESSÕNA

NATIONAL FOREWORD

See Eesti standard EVS-EN 847-2:2013 sisaldab Euroopa standardi EN 847-2:2013 inglisekeelset teksti.	This Estonian standard EVS-EN 847-2:2013 consists of the English text of the European standard EN 847-2:2013.
Standard on jõustunud sellekohase teate avaldamisega EVS Teatajas.	This standard has been endorsed with a notification published in the official bulletin of the Estonian Centre for Standardisation.
Euroopa standardimisorganisatsioonid on teinud Euroopa standardi rahvuslikele liikmetele kättesaadavaks 23.09.2013.	Date of Availability of the European standard is 23.09.2013.
Standard on kättesaadav Eesti Standardikeskusest.	The standard is available from the Estonian Centre for Standardisation.

Tagasisidet standardi sisu kohta on võimalik edastada, kasutades EVS-i veebilehel asuvat tagasiside vormi või saates e-kirja meiliaadressile standardiosakond@evs.ee.

ICS 79.120.10

EUROPEAN STANDARD

NORME EUROPÉENNE

EUROPÄISCHE NORM

EN 847-2

October 2013

ICS 79.120.10

Supersedes EN 847-2:2001

English Version

Tools for woodworking - Safety requirements - Part 2: Requirements for the shank of shank mounted milling

Outils pour le travail du bois - Prescriptions de sécurité - Partie 2: Prescriptions pour les queues des fraise à queue

Maschinen-Werkzeuge für Holzbearbeitung - Sicherheitstechnische Anforderungen - Teil 2: Anforderungen für den Schaft von Fräswerkzeugen

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

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

Ref. No. EN 847-2:2013: E

Contents

Page

Foreword **3**

Introduction **4**

1 Scope **5**

2 Normative references **5**

3 Terms and definitions **5**

4 List of significant hazards **6**

5 Safety requirements **6**
5.1 General requirements for cylindrical shank **6**
5.2 Stability of the shank of mounted tools **6**
5.3 Stability of HSK mounted tools **12**

6 Tool marking **14**

Annex A (informative) **Examples of calculation** **16**
A.1 Example of a calculation of n_{shank} **16**
A.2 Example of a calculation of n_{HSK} **17**

Annex B (informative) **Method of measuring the eccentricity at clamping devices** **18**

Bibliography **19**

Foreword

This document (EN 847-2:2013) has been prepared by Technical Committee CEN/TC 142 “Woodworking machines - Safety”, the secretariat of which is held by UNI.

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 April 2014, and conflicting national standards shall be withdrawn at the latest by April 2014.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN [and/or CENELEC] shall not be held responsible for identifying any or all such patent rights.

This document supersedes EN 847-2:2001.

The following table contains a list of modifications from the previous edition.

EN 847-2:2001	EN 847-2:2013	Reason
1 Scope	1 Scope: Precision of the indent New paragraph: applies also for shank tools with a cutting diameter of less than 16 mm	ed/te
3 Quantities and units	3 Terms and definitions	ed
5 Tool marking	5 Safety requirements: 5.1 General requirements for cylindrical shank 5.2 Stability of the shank of the shank mounted tools 5.3 Stability of HSK mounted tools	te (missing requirements)
6 Safety requirements	6 Tool marking Changed symbol for the free shank length	te
Annex A: Method of measuring the eccentricity at clamping devices	Annex A: Examples of calculation	ed
Annex B: Example of calculation	Annex B: Method of measuring the eccentricity at clamping devices	ed
	New: Bibliography	ed

According to the CEN-CENELEC Internal Regulations, the national standards organisations 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, Slovakia, Slovenia, Spain, Sweden, Switzerland, Turkey and the United Kingdom.

Introduction

The content of this European Standard is aimed at eliminating hazards which can lead to overloading of the shank of shank mounted milling tools for woodworking by excessive rotational speeds.

1 Scope

This European Standard specifies the determination of the maximum speed for given eccentricity at clamping devices for the shank strength of milling tools with cylindrical and taper shank. It also specifies the marking of the tool. Bore mounted tools which are mounted on an arbour should be considered as a shank mounted tool.

This European Standard complements EN 847-1 and applies also for shank tools with a cutting diameter of less than 16 mm.

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 847-1:2013, *Tools for woodworking — Safety requirements — Part 1: Milling tools, circular saw blades*

EN ISO 12100:2010, *Safety of machinery — General principles for design — Risk assessment and risk reduction (ISO 12100:2010)*

ISO 1940-1, *Mechanical vibration — Balance quality requirements for rotors in a constant (rigid) state — Part 1: Specification and verification of balance tolerances*

3 Terms and definitions

For the purposes of this document, the terms and definitions given in EN 847-1:2013 and the following apply.

3.1
7/24 shank
SK
type of toolholder with a 7/24 cone ratio taper that contacts the spindle on two surfaces

Note 1 to entry: Toolholder with a 7/24 cone ratio taper; see Bibliography.

3.2
hollow taper shank
HSK
type of toolholder with a short hollow taper with a high positioning accuracy and high grade of rigidity that contacts the spindle on two surfaces

Note 1 to entry: Toolholder with 1:1,09 cone ratio hollow taper shank; see Bibliography.

3.3
arbour
device to mount in or on the spindle of a machine tool, and which is designed to carry and drive a bore type cutting tool