International Standard

ISO 20929

Tools for pressing — Heel guidings in large stamping and forming dies

Outillage de presse — Plaques de frottement latérales pour grands outils d'emboutissage et de formage

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Contents

Page

Foreword ..... **iv**
Introduction ..... **v**
1 Scope **1**
2 Normative references **1**
3 Terms and definitions **1**
4 Example application **1**
5 Dimensions **1**
6 Material **4**
7 Designation **4**
Bibliography **5**

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Foreword

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This document was prepared by Technical Committee ISO/TC 29, *Small tools*, Subcommittee SC 8, *Tools for pressing and moulding.*

This second edition cancels and replaces the first edition (ISO 20929:2018), which has been technically revised.

The main changes are as follows:

— change of normative reference cited in Clause 6: ISO 683-1 replacing EN 10083-2;

— change of surface roughness symbol;

— addition of a text reference into Bibliography.

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Introduction

This document was developed using Guideline VDI 3387 “Sliding elements in large stamping dies”.

Heel guidings are used in medium and large stamping and forming dies for guiding the upper die towards the lower die.

The heel guidings offer a simple and affordable guidance system which is widely used in medium and large stamping and forming dies made from casting and steel plate in complement of round guiding pillars and bushes.

Heel guidings are designed to guide the upper and lower die to facilitate tool set-up and try out and to retain the clearance (bending or drawing gap) during the service life.

Unlike round guides, guiding plates can also absorb lateral shear forces, see also Figure 1.

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Tools for pressing — Heel guidings in large stamping and forming dies

1 Scope

This document specifies dimensions for heel guidings in large stamping and forming dies. It also gives example applications and an example for ordering.

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 terminology databases for use in standardization at the following addresses:

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

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

4 Example application

If very large lateral forces are generated in the dies, it is advisable to provide a guide plate instead of heel guidings. Heel guidings are ideal for securing upper and lower dies during transportation and thereby preventing accidents.

5 Dimensions

Due to diverse die requirements, a wide variety of heel guidings are needed, ranging from narrow or wide to short or long. Length is particularly important, so a wide range of longitudinal dimensions shall be available. If the die plane is oblique, care shall be taken to ensure that the heel guiding engages with precision, especially in the case of single heel guidings.

The dimensions of a heel guiding shall be in accordance with the indications of Table 1 and Figure 2.

The dimensions for heel guidings mounting shall be in accordance with the indications of Figure 1.

General tolerance: ISO 2768-m

Surface roughness $\sqrt{Rz\ 25}$ ($\sqrt{}$) according to ISO 21920-1

Edges of undefined shape $^{-0,5}_{-0,3}$ ($^{+0,5}_{+0,3}$) according to ISO 13715

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