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**NATIONAL STANDARD OF THE
PEOPLE'S REPUBLIC OF CHINA**

GB/T 46152.1-2025

**Tools for pressing - Ball-lock punches - Part 1: Ball-lock
punches for light duty**

冲模 球锁紧凸模 第1部分：轻载球锁紧凸模

(English Translation)

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Foreword

This document complies with the provisions of GB/T 1.1-2020 "Standardization Work Guidelines Part 1: Structure and Drafting Rules of Standardization Documents".

Drafting.

This document is Part 1 of GB/T 46152 "Ball Locking Punch". GB/T 46152 "Ball Locking Punch" has been issued.

The following parts were laid out.

---Part 1: Light-load ball locking punch;

---Part 2: Heavy-duty ball locking punch.

This document is modified to adopt ISO 10071-1:2008 "Ball locking punches - Part 1: Light load ball locking punches".

The following editorial changes have been made to this document.

---In the hardness example, the hardness of cold work alloy steel containing 5%~12% Cr has been changed from "(60±2)HRC" to "(62±2)HRC".

It is consistent with the actual situation in the industry and also maintains the same hardness as the other parts of the punch [see Chapter 5a).

Please note that some content in this document may involve patents. The issuing organization of this document assumes no responsibility for identifying patents.

This document was proposed and is under the jurisdiction of the National Technical Committee on Standardization of Die & Mold (SAC/TC33).

Introduction

GB/T 46152 "Ball Locking Punch" adopts the ISO 10071 series of international standards, and all parts are consistent with the international standards.

It consists of two parts.

---Part 1: Light-load ball locking punch. The purpose is to standardize the dimensional specifications corresponding to various structures of light-load ball locking punches.

---Part 2: Heavy-duty ball locking punch. The purpose is to standardize the dimensional specifications corresponding to various structures of heavy-duty ball locking punches.

Stamping ball locking punch Part 1: Light-load ball locking punch

1 Scope

This document specifies the dimensions and tolerances of the light-load ball locking punch, in millimeters.

This document applies to round, square, rectangular, and oblong ball locking punches with rod diameters ranging from 6mm to 32mm.

Used for punching steel plates or other materials with a thickness of less than 3mm.

This document also provides examples of materials and hardness, and specifies the markings for light-load ball locking punches.

2 Normative references

The contents of the following documents, through normative references within the text, constitute essential provisions of this document. Dated citations are not included.

For references to documents, only the version corresponding to that date applies to this document; for undated references, the latest version (including all amendments) applies.

This document.

ISO 2768-1:1989 General tolerances - Part 1: Tolerances for linear and angular dimensions without specified tolerances (Note: GB/T 1804-2000 General tolerances. Tolerances for linear and angular dimensions without specified tolerances (ISO 2768-1:1989, eqv))

3 Terms and Definitions

The terms and definitions defined in ISO 8695 apply to this document.

4.1 Fixed part dimensions --- ball in locked position

The dimensions and tolerances of the light-load ball locking punch and the ball seat should conform to the values given in Figure 1 and Table 1.