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

GB/T 47766-2026

**Tools for pressing - Spring plungers with helicoidal
compression steel spring or gas spring**

冲模 钢制螺旋压缩弹簧或氮气弹簧弹顶销

(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".

This document is equivalent to ISO 20928:2018 "Steel spiral compression springs or nitrogen spring ejector pins for punching dies".

The following minimal editorial changes have been made to this document.

---Added content to the notes in Chapter 1;

---Added content to the footnotes in Table 2.

Introduction

This document is equivalent to ISO 20928:2018, which is based on VDI/Guideline 3004, "Steel helical compression springs or nitrogen spring top pins".

It was formulated on the basis of [the relevant principles/relevant regulations].

1 Scope

This document specifies the dimensions, stroke, and ejection force of the steel helical compression spring or nitrogen spring ejector pin used for unloading after stamping, and also provides examples of application and installation of steel helical compression springs or nitrogen spring top pins are presented.

Note: Without causing confusion, "steel helical compression spring" in this document is referred to as "helical spring".

2 Normative references

This document has no normative references.

4 General Principles

When using helical springs or nitrogen spring top pins, lateral force should be avoided as much as possible. The air inlet of the nitrogen spring top pin is set vertically.

The bottom surface of the cylinder (injected without passing through the piston rod).

5 Design Requirements

The maximum operating speed of the nitrogen spring top pin should not exceed 0.8 m/s; other design requirements are the same as those in the ISO 11901 series standards.

The recommended maximum working stroke is 90% L₂ (see Table 2).

6.1 Helical Spring Top Pin

The dimensions of the spring top pin of the helical spring shall conform to the specifications in Figure 1 and Table 1.