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

GB/T 10944.3-2025

Replacing GB/T 10944.3-2013

**Tool shanks with 7/24 taper for automatic tool changers - Part
3: Retention knobs of forms AD, AF, UD, UF, JD and JF**

自动换刀7:24圆锥工具柄 第3部分：AD、AF、UD、UF、JD 和JF型拉钉

(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 3 of GB/T 10944 "Automatic Tool Changer 7.24 Conical Tool Shank". GB/T 10944 has been published as follows.

part.

---Part 1: Dimensions and markings for type A, AD, AF, U, UD, and UF shanks;

---Part 2: Dimensions and markings for J, JD, and JF type handles;

---Part 3: AD, AF, UD, UF, JD and JF type rivets;

---Part 4: Technical Specifications of the Handle;

---Part 5: Technical requirements for rivets.

This document supersedes GB/T 10944.3-2013 "Automatic Tool Changer 7.24 Conical Tool Shank Part 3: AC, AD, AF, UC, UD".

Compared with GB/T 10944.3-2013, the main technical changes in "UF, JD and JF type zip rivets" are as follows, except for structural adjustments and editorial modifications.

- a) The scope has been changed (see Chapter 1, Chapter 1 of the 2013 edition);
- b) The AC and UC type rivets and related content have been deleted (see section 3.8 of the 2013 edition);
- c) Added dimension specifications for AD type rivets (see Table 1) and JD type rivets (see Table 5);
- d) The process for modifying the surface structure was changed (see Figures 1, 3, and 5; Figures 1, 3, and 5 in the 2013 edition);
- e) The coaxiality of the JD type rivet has been changed (see Figure 5, Figure 5 in the 2013 version).

This document is modified to adopt ISO 7388-3:2016 "Automatic tool changer 7/24 Conical tool shank - Part 3: AD, AF, UD, UF, JD".

And JF type zip rivets.

This document has undergone the following structural adjustments compared to ISO 7388-3:2016.

---A new chapter on "Terms and Definitions" has been added.

The technical differences between this document and ISO 7388-3:2016, and the reasons therefor, are as follows.

---Informative references to ISO 9270 (all parts) (see Chapter 1 of ISO 7388-3:2016) have been removed from the scope to meet national standards.

Actual internal usage requirements;

---The normative reference GB/T 1184 has replaced ISO 2768-2, and GB/T 1804 has replaced ISO 2768-1 and GB/T 4249.

ISO 8015 (see 4.1) has been replaced to adapt to my country's technical conditions;

---ISO 1629 (see Chapter 6) has been replaced with the normatively referenced GB/T 5576 to adapt to my country's technical conditions.

The following editorial changes have been made to this document.

---The symbol "phi" has been added to the coaxiality annotation.

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 by the China Machinery Industry Federation.

This document is under the jurisdiction of the National Technical Committee on Standardization of Cutting Tools (SAC/TC91).

Introduction

With the increasing demands for high-efficiency production and precision machining in modern manufacturing, the level of automation is also deepening. Automatic tool changers...

As a crucial component of CNC machine tools, the performance of the machining system directly impacts the machining center's efficiency and product quality. 7.24 Conical tool shanks are widely used in various milling machines, drilling machines and other metal cutting equipment due to their excellent properties and high positioning accuracy.

GB/T 10944 "Automatic Tool Changer 7.24 Tapered Tool Shank" aims to specify the 7.24 tapered tool shank and puller used in automatic tool changers.

The size, markings, and technical specifications of the rivets are determined to ensure interchangeability and compatibility between tool shanks from different manufacturers and machine tool spindles.

GB/T 10944 is divided into five parts.

---Part 1: Dimensions and markings for A, AD, AF, U, UD, and UF type shanks; intended to improve the quality of A, AD, AF, U, UD...

Interchangeability and compatibility between UF type shanks and machine tool spindles;

---Part 2: Dimensions and markings of J, JD, and JF type shanks; intended to improve the connection between J, JD, and JF type shanks and the machine tool spindle.

Interchangeability and compatibility;

---Part 3: AD, AF, UD, UF, JD, and JF type rivets; intended to provide standard fittings for mounting and securing tool handles;

---Part 4: Technical Specifications for Handles; The purpose is to provide quality assurance for the production and use of tool handles;

---Part 5: Technical specifications for rivets; the purpose is to provide quality assurance for the production and use of rivets.

Parts 1 through 3 are based on the international standard ISO 7388, while Parts 4 and 5 are designed to meet the production needs of domestic enterprises.

I need a setup where the five parts complement each other and work in harmony.

Automatic tool changer 7.24 conical tool shank Part 3: AD, AF, UD, UF, JD and JF type rivets

1 Scope

This document specifies the dimensions, materials, and O-type fittings for AD, AF, UD, UF, JD, and JF type pull studs used in automatic tool changer 7.24 tapered tool shanks.

Sealing rings and markings.

This document applies to the manufacture of AD, AF, UD, UF, JD and JF type pull studs for automatic tool changer 7.24 tapered tool shanks.

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.

GB/T 1184 Geometric Tolerances - Unspecified Tolerance Values (GB/T 1184-1996, ISO 2768-2:1989, EQV) GB/T 1804 General Tolerances - Tolerances for linear and angular dimensions without specified tolerances (GB/T 1804-2000, ISO 2768-1.

1989, EQV)

GB/T 4249 Product Geometry Specification (GPS) - Basic Concepts, Principles and Rules (GB/T 4249-2018, ISO 8015.

2011, MOD)

GB/T 5576 Nomenclature of Rubber and Latex (GB/T 5576-1997, ISO 1629:1995, IDT)

3 Terms and Definitions

This document does not contain any terms or definitions that need to be defined.

4.1 General Provisions

All dimensions and tolerances are in millimeters. Tolerances are in accordance with GB/T 4249, and tolerances not specified shall be in millimeters (m) according to GB/T 1804.

The "k" level is specified in GB/T 1184.