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

GB/T 37891.4-2019

**Cutter arbors with parallel key and tenon drive -- Part 4:
Dimensions and designation of tool holders with 7/24 taper
without automatic tool changers**

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Foreword

GB/T 37891 "Milling cutter with flat key and end key drive" is divided into 6 parts.

--- Part 1. General size;

--- Part 2. Dimensions and markings of hollow cone-shank shanks with flanged contact surfaces;

--- Part 3. Dimensions and markings with 7.24 automatic tool changer taper shank;

--- Part 4. Dimensions and markings with 7.24 manual tool changer taper shank;

--- Part 5. Dimensions and markings of multi-sided taper shank with flanged contact surfaces;

--- Part 6. Dimensions and markings of modular taper shank with steel ball tensioning system.

This part is the fourth part of GB/T 37891.

This part is drafted in accordance with the rules given in GB/T 1.1-2009.

This part uses the redrafting method to modify the ISO 10649-4.2013 milling cutter with flat key and end key drive. Part 4. Belt

7.24 manual tool changer taper shank size and marking.

The technical differences between this part and ISO 10649-4.2013 and their reasons are as follows.

---About the normative reference documents, this section has made technical adjustments to adapt to China's technical conditions, adjustments

It is concentrated in Chapter 2, "Regulatory References", and the specific adjustments are as follows.

- * Replace ISO 2768-2 with GB/T 1184 equivalent to the international standard;
- * Replace ISO 2768-1 with GB/T 1804 equivalent to the international standard;
- * Replace ISO 297 with GB/T 3837 equivalent to international standards;
- * Replace ISO 2780 with GB/T 20329 equivalent to the international standard;
- * Replace ISO 10649-1 with GB/T 37891.1 modified to adopt international standards;
- * Replace ISO 10643 with GB/T 37895 modified to international standards.

--- Revised the drawing method of the bolt in Figure 1, the original international standard drawing method is wrong.

--- Because the size of the drive ring does not match, the value of l1 when the handle 45 of the 45th table in Table 1 is 50 is changed from 65 to 55.

This section has made the following editorial changes.

--- Removed references to international standards.

This part was proposed by the China Machinery Industry Federation.

This part is under the jurisdiction of the National Tool Standardization Technical Committee (SAC/TC91).

This section drafted by. Changzhou Zhengheyuan CNC Tools Co., Ltd., Chengdu Tool Research Institute Co., Ltd.

1 Scope

This part of GB/T 37891 specifies the size and marking of the milling cutter with flat key and end key drive. The handle of the milling cutter is 7.24.

Change the taper shank.

This section applies to 7.24 manual tool changer taper shank with flat key and end key drive.

2 Normative references

The following documents are indispensable for the application of this document. For dated references, only dated versions apply to this article.

Pieces. For undated references, the latest edition (including all amendments) applies to this document.

GB/T 1184 Shape and position tolerances without tolerance values (GB/T 1184-1996, eqvISO 2768-2. 1989)

GB/T 1804 General tolerances No tolerances for linear and angular dimensions (GB/T 1804-2000, eqvISO 2768-1. 1989)

GB/T 3837 7.24 manual tool change tool holder cone (GB/T 3837-2001, eqvISO 297.1988)

GB/T 20329 end-key drive milling cutter and cutter cutter bar interchangeable size (GB/T 20329-2006, ISO 2780-1986, IDT)

GB/T 37891.1 Milling shanks with flat and end key drives - Part 1. General dimensions (GB/T 37891.1-2019, ISO 10649-1.2013, MOD)

GB/T 37895 size with flat key and end key drive milling cutter attachment (GB/T 37895-2019, ISO 10643.2009, MOD)

3.1 General provisions

All dimensions and tolerances are in millimeters, unmarked linear and angular dimensional tolerances are in accordance with GB/T 1804 "m", unfilled shape

And position tolerance according to the "k" level of GB/T 1184.

The interchangeable dimensions of the milling cutter on the milling cutter are in accordance with the provisions of GB/T 20329, and the dimensions of the fastening bolts are in accordance with GB/T 37895.

The cutter cutter tool interface size with flat key and end key drive is as specified in GB/T 37891.1.

The diagram is only a schematic diagram, does not represent the design diagram, just gives the dimensions that need to be met.

See Appendix A for the relationship between the dimensional symbols in this section and the symbols in the ISO 13399 series of standards.

3.2 with 7.24 manual tool change taper shank

The dimensions of the 7.24 manual tool changer with a flat key and end key drive are shown in Figure 1 and Table 1.