

ICS 25.060.20

CCS J 52



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

GB/T 31396.3-2020

**Machine tools - Dimensions and geometric tests for
self-centering chucks with two-piece jaws - Part 3:
Power-operated chucks with serrated jaws**

Issued on: April 28, 2020

Implemented on: November 1, 2020

**Issued by: State Administration for Market Regulation, China National
Standardization Administration**

Table of Contents

Foreword

1 Scope

2 Normative references

3 General instructions

3.1 Unit of measurement

3.2 Geometric accuracy inspection

3.3 Inspection items

4 Accuracy class

5 Interchangeable dimensions

Foreword

GB/T 31396 "Inspection of dimensions and geometric accuracy of self-centering chucks for machine tool separation claws" is divided into 3 parts.

--- Part 1. Manual chuck with key and slot fit;

--- Part 2. Power chuck with key and slot fit;

--- Part 3. Comb-tooth-fit power chuck.

This part is Part 3 of GB/T 31396.

This section was drafted in accordance with the rules given in GB/T 1.1-2009.

The translation method used in this part is equivalent to ISO 3442-3..2007 "Self-centering chuck dimensions and geometric accuracy of machine tool separation jaws.

Part 3. Comb-tooth-fit power chuck.

The documents in China that have a consistent correspondence with the normatively cited international documents in this section are as follows.

--- GB/T 2516-2003 ordinary thread limit deviation (ISO 965-3..1998, MOD);

--- GB/T 17421.1-1998 General rules for inspection of machine tools Part 1. Geometric accuracy of machine tools under no-load or finishing conditions

(equivISO 230-1..1996).

The following editorial changes have been made in this section.

--- Deleted the "check error" column in the "Geometric Accuracy Check" table in Chapter 6.

This part is proposed by China Machinery Industry Federation.

This part is under the jurisdiction of the National Metal Cutting Machine Tool Standardization Technical Committee (SAC/TC22).

This section was drafted by. Hohhot Zhonghuan (Group) Co., Ltd., Yantai Global Machine Tool Equipment Co., Ltd.

1 Scope

This part of GB/T 31396 specifies the interchangeable dimensions of 90 ° and 60 ° comb teeth and T-nuts and the separation claw (comb-tooth fit type)

Geometric accuracy inspection and corresponding tolerance of centering power chuck.

This section applies to self-centering power chucks with comb-toothed separation claws.

2 Normative references

The following documents are essential for the application of this document. For dated references, only the dated version applies to this article

Pieces. For the cited documents without date, the latest version (including all amendments) applies to this document.

ISO 230-1:1996 General rules for machine tool inspection Part 1. Geometric accuracy of machine tools under no-load or finishing conditions (Testcode

formachinetools-Part 1.

Geometric accuracy of machines operating under no-load or finishing conditions)

ISO 965-3 ISO General Purpose Metric Thread Tolerance Part 3. Deviation of Structural Threads (ISO general purpose

metricscrewthreads-Tolerances-Part 3. Deviations for constructionalscrewthreads)

3.1 Unit of measurement

All dimensions and tolerances in this section are expressed in millimeters (mm).

3.2 Geometric accuracy inspection

This part only stipulates the inspection of the chuck rotation accuracy and the positioning accuracy of the top jaws. Not applicable to other dynamic performance tests,

Such as balance test or clamping force test.

3.3 Inspection items

When inspecting the chuck, it is not necessary to complete all the inspections specified in this section. The user can select the relevant content for inspection when using this section.

4 Accuracy class

This section only specifies one accuracy level.

5 Interchangeable dimensions

5.1 90 ° comb size

The interchangeable dimensions are shown in Figure 1 and Table 1.